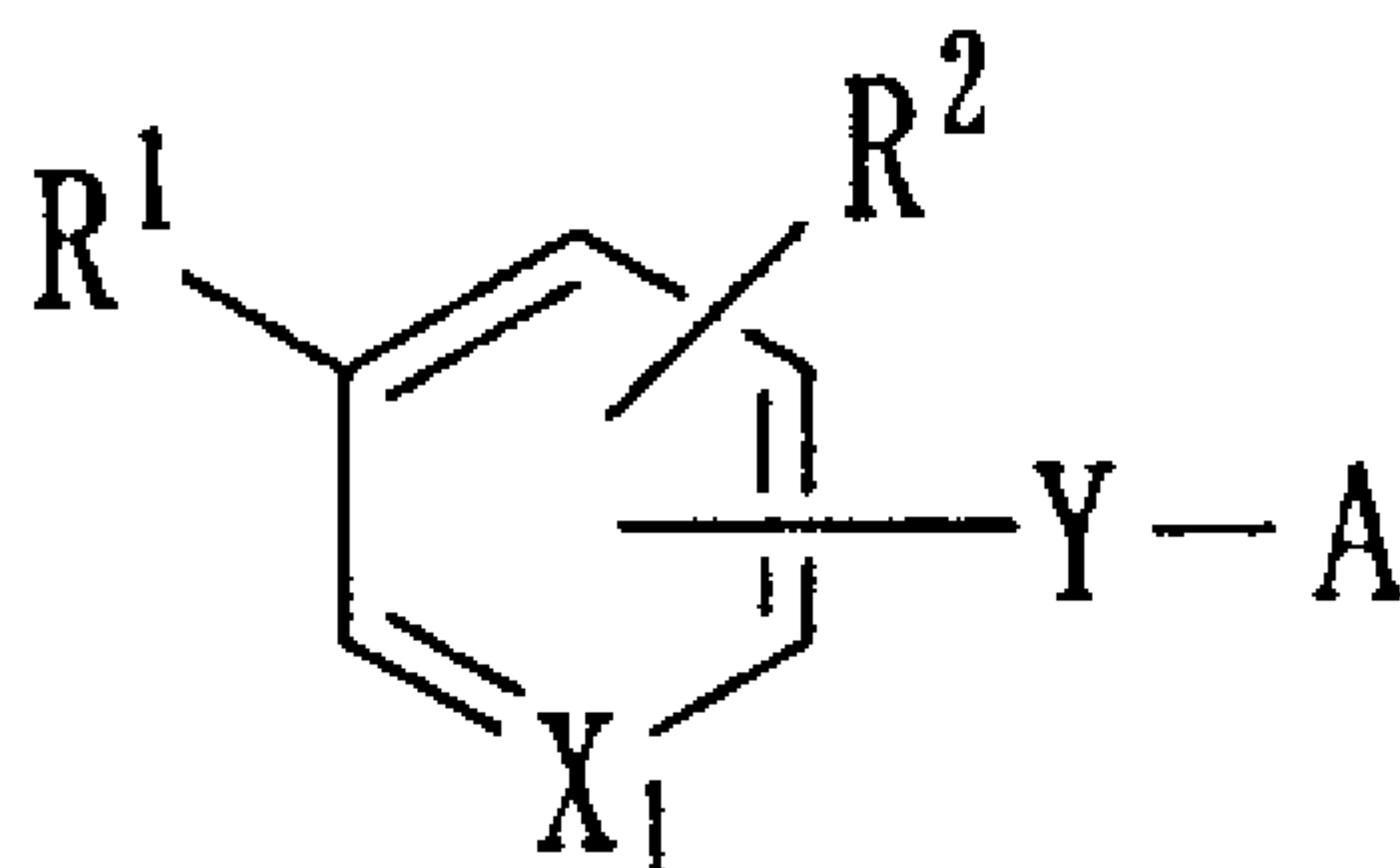




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(54) Titre : COMPOSE AROMATIQUE
(54) Title: AROMATIC COMPOUND



(1)

(57) Abrégé/Abstract:

The present invention provides a novel compound, which has an excellent effect of suppressing the generation of collagen and less side effects, with being excellent in terms of safety. The compound of the present invention is represented by the following general formula (1): [wherein X₁ represents a nitrogen atom or a group -CH=; R¹ represents a group -Z-R⁶, wherein Z represents a group -CO-, a group -CH(OH)-, or the like, and R⁶ represents a 5- to 15-membered monocyclic, dicyclic, or tricyclic, saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen atoms, or sulfur atoms; R² represents a hydrogen atom, a halogen atom or a lower alkylene group; Y represents a group -O-, a group -CO-, a group -CH(OH)-, a lower alkylene group, or the like; and (A) represents a group or the like, wherein R³ represents a hydrogen atom, a lower alkoxy group, or the like, p represents 1 or 2, and R⁴ represents an imidazolyl lower alkyl group or the like.

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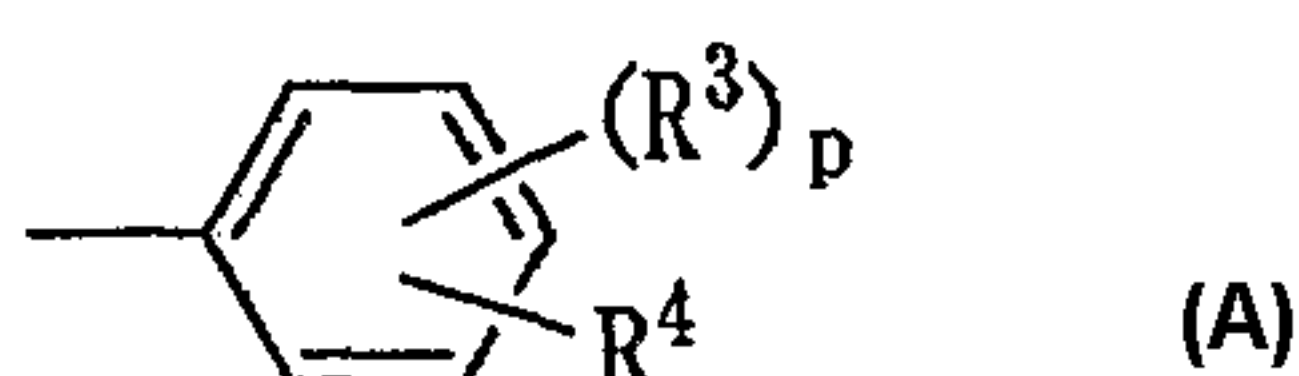
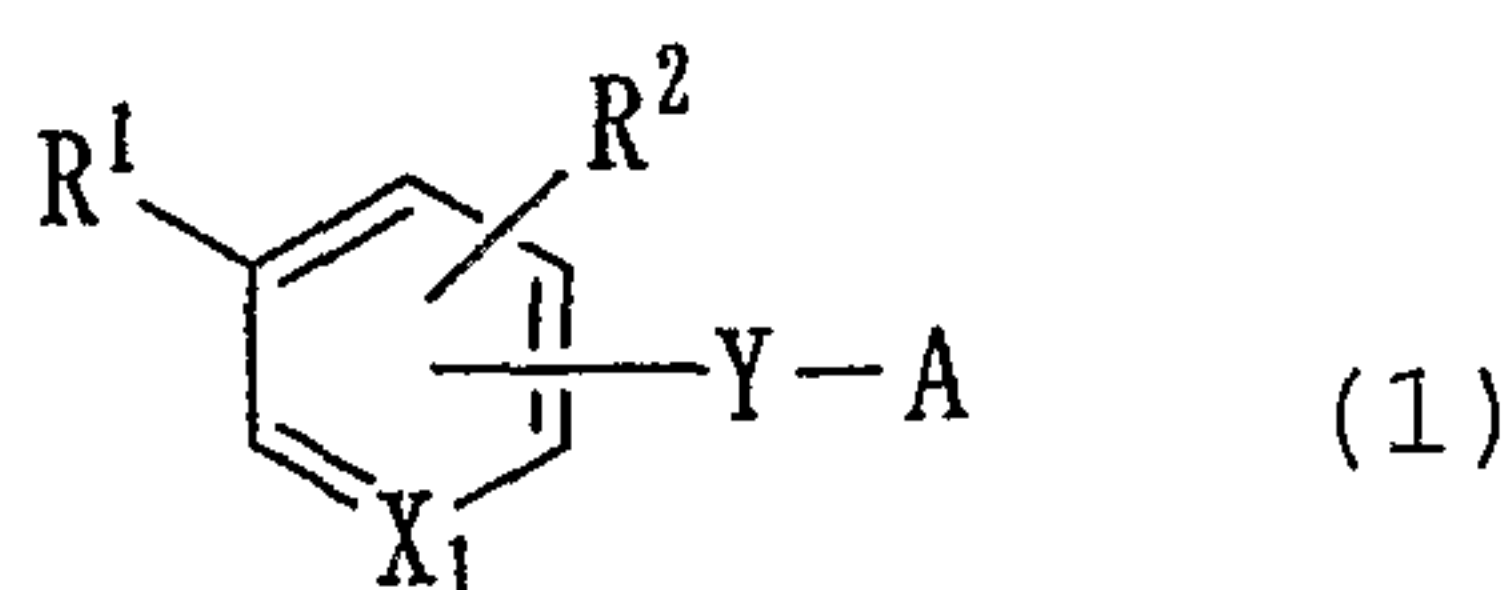
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(54) Title: AROMATIC COMPOUNDS



(57) Abstract: The present invention provides a novel compound, which has an excellent effect of suppressing the generation of collagen and less side effects, with being excellent in terms of safety. The compound of the present invention is represented by the following general formula (1): [wherein X_1 represents a nitrogen atom or a group $-CH=$; R^1 represents a group $-Z-R^6$, wherein Z represents a group $-CO-$, a group $-CH(OH)-$, or the like, and R^6 represents a 5- to 15-membered monocyclic, dicyclic, or tricyclic, saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen atoms, or sulfur atoms; R^2 represents a hydrogen atom, a halogen atom or a lower alkylene group; Y represents a group $-O-$, a group $-CO-$, a group $-CH(OH)-$, a lower alkylene group, or the like; and (A) represents a group or the like, wherein R^3 represents a hydrogen atom, a lower alkoxy group, or the like, p represents 1 or 2, and R^4 represents an imidazolyl lower alkyl group or the like.

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DESCRIPTION

AROMATIC COMPOUND

TECHNICAL FIELD

The present invention relates to an aromatic compound.

5

BACKGROUND ART

Currently, it is said that the disease known as fibrosis includes 130 types or more of diseases, if rare diseases are also included therein.

10 Representative examples of such fibrosis include lung fibrosis, hepatic fibrosis, and glomerulosclerosis.

In general, lung fibrosis refers to a group of diseases associated with loss of lung functions due to a lesion regarding the reconstruction of an alveolar
15 region, which is caused by the phenomenon whereby the alveolar structure is destroyed by an inflammatory reaction, and as a result, growth of fibroblasts and an excessive increase in extracellular matrix mainly composed of collagen take place, so that the lung
20 becomes hardened.

Moreover, hepatic fibrosis refers to a pathologic condition associated with fibrosis of the liver, which is caused by the phenomenon whereby hepatic cells are necrotized by various types of
25 hepatopathy such as chronic viral hepatitis or alcoholic hepatitis, and thereafter, extracellular

matrix increases to replenish the necrotized portion,
resulting in such fibrosis of the liver. This
pathologic condition finally leads to hepatic
cirrhosis, in which the entire hepatic fibers shrink
5 and become hardened.

In order to suppress the aforementioned
hepatic fibrosis, drugs such as Penicillamine or
Lufironil have been used. Penicillamine has been known
as a drug for treating Wilkinson's disease that is
10 developed as a result of accumulation of copper in the
liver due to abnormality of copper metabolism.
Lufironil has been studied for its use as a proline
hydroxylase inhibitor.

However, taking into consideration their side
15 effects and effectiveness, the aforementioned drugs do
not sufficiently function as drugs for preventing
fibrosis of the liver. Thus, as a matter of fact,
neither therapeutic agents nor methods for treating
fibrosis, which are effective for fibrosis, including
20 hepatic fibrosis as a representative example, have been
established to date. A method of specifically
inhibiting a process of developing fibrosis has become
a focus of attention in the research field.

As stated above, it has been known that an
25 excessive increase in extracellular matrix mainly
composed of collagen takes place during a process of
development of fibrosis in the lung tissues or hepatic
tissues. Moreover, it has also been known that such an

increase in extracellular matrix in hepatic cells takes place mainly in sinusoidal wall Disse's space, and that Ito cells that are mesenchymal cells in the liver are main sources for production of such extracellular
5 matrix.

Accordingly, in order to suppress fibrosis occurring in the liver, the lung, or other organs, it is important to suppress an excessive increase in extracellular matrix (namely, collagen).

10 JP-A-2002-507601 and JP-A-2001-89450 disclose that a certain type of pyridine derivative has an effect of suppressing the generation of collagen and thus is effective for fibrosis. JP-A-2001-89412 discloses that a certain type of benzene derivative has
15 an effect of suppressing the production of collagen and thus is effective for fibrosis.

However, the effect of suppressing the generation of collagen of the compounds described in JP-A-2002-507601, JP-A-2001-89450, and JP-A-2001-89412
20 are insufficient, or these compounds have serious side effects. Accordingly, it has strongly been desired that a compound, which has a superior effect of suppressing the production of collagen, less side effects, and excellent safety, will be developed.

25 DISCLOSURE OF THE INVENTION

It is an object of the present invention to provide a novel compound, which has a superior effect

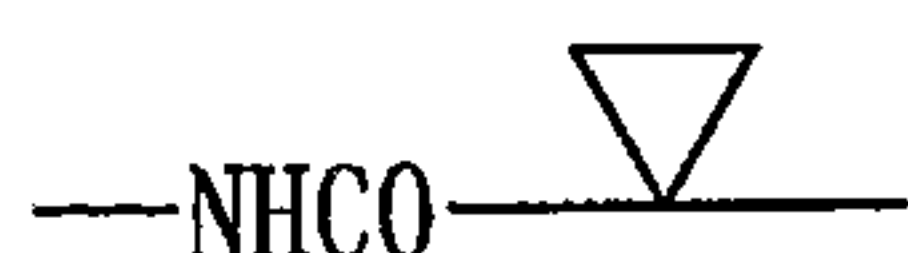
of suppressing the generation of collagen, for example,
 a pharmaceutical composition being useful for
 preventing and treating fibrosis such as lung fibrosis,
 hepatic fibrosis, glomerulosclerosis and the like, with
 5 less side effects, and excellent safety.

As a result of intensive studies directed
 towards achieving the aforementioned object, the
 present inventors have found that an aromatic compound
 represented by the following general formula (1) and a
 10 salt thereof have a superior effect of suppressing the
 generation of collagen, less side effects, and
 excellent safety. The present invention has been
 completed based on these findings.

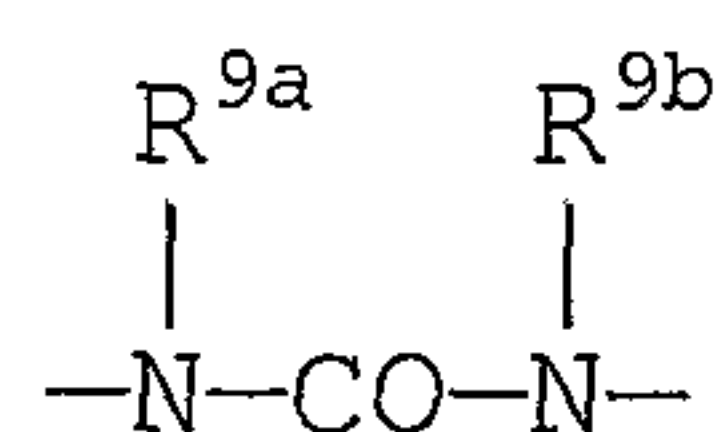
The present invention provides an aromatic
 15 compound represented by the general formula (1) or a
 salt thereof:



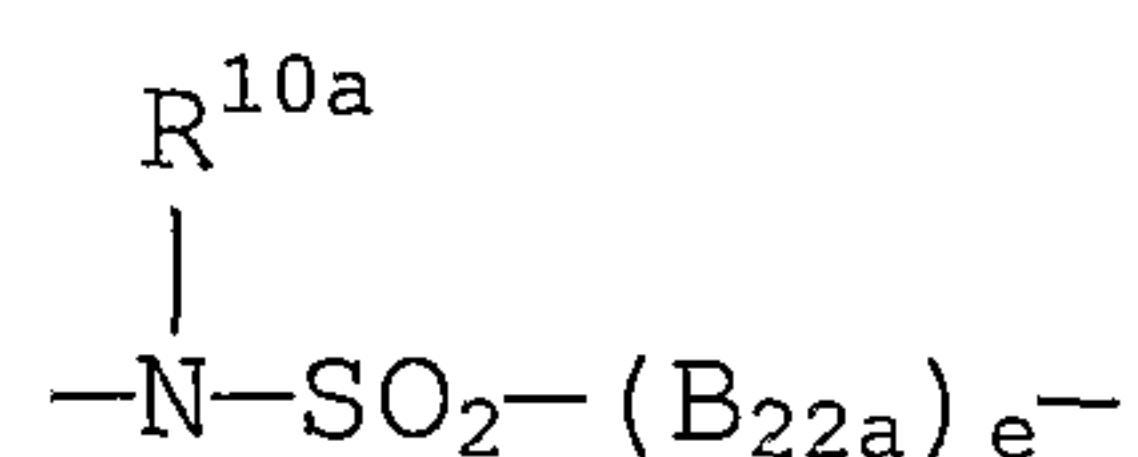
[wherein X_1 represents a nitrogen atom or a group $-\text{CH}=\text{}$,
 R^1 represents a group $-\text{Z}-\text{R}^6$,
 Z represents a group $-\text{N}(\text{R}^8)-\text{B}-$, a group $-\text{B}-\text{N}(\text{R}^8)-$, a
 20 group $-\text{B}_0-\text{O}-$, a group



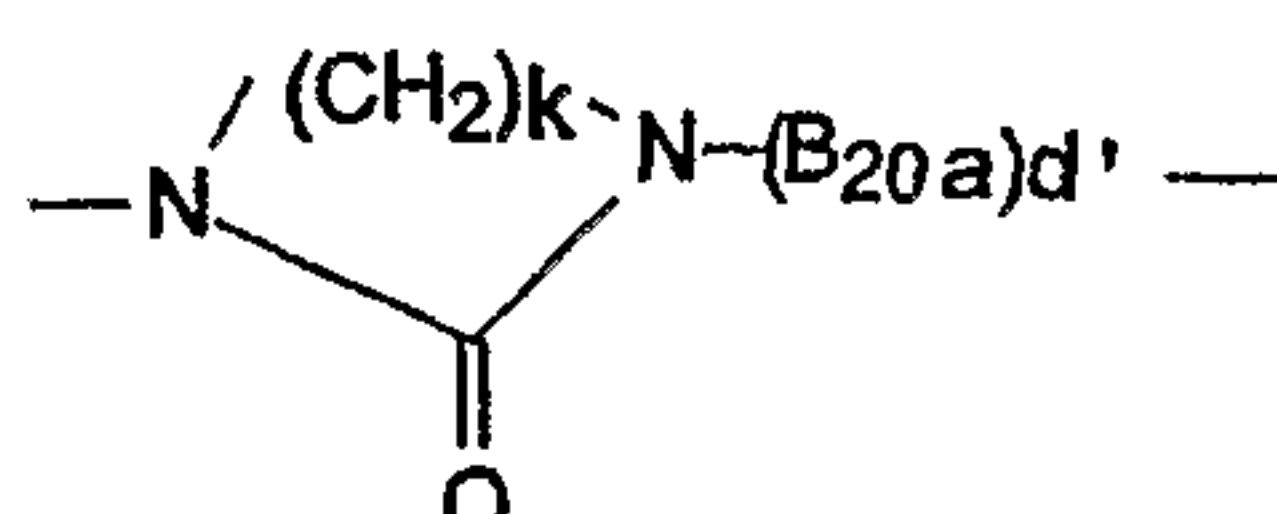
a group $-\text{CO}-$, a group $-\text{CH}(\text{OH})-$, a group



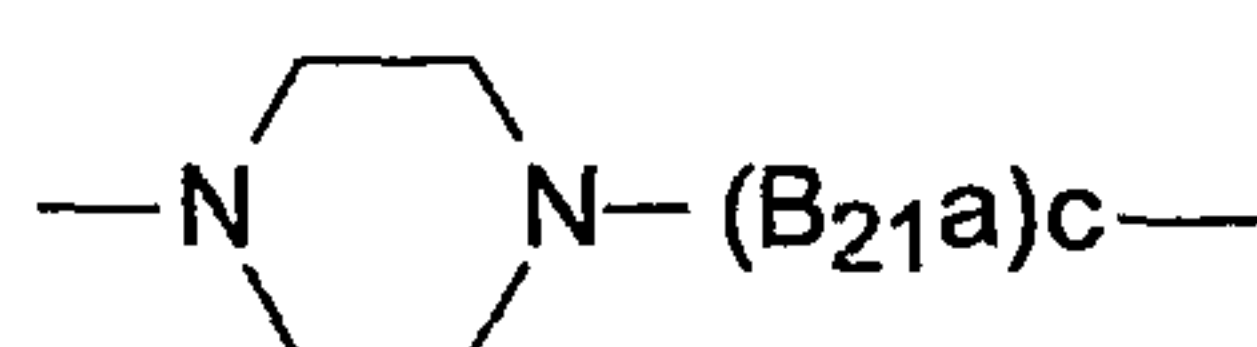
a group $-N=CH-$, a group



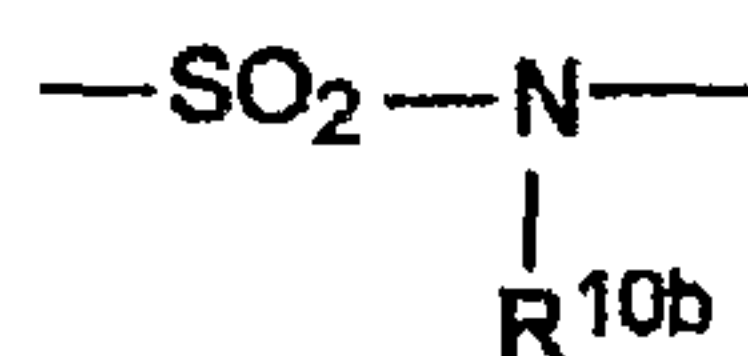
a lower alkenylene group, a group $-\text{NHCO}-\text{B}_1-$, a group $-\text{NHCO}-\text{B}_2-(\text{W})\text{u}-$, a group $-\text{B}_0-\text{O}-\text{B}_{19\text{a}}-$, a group



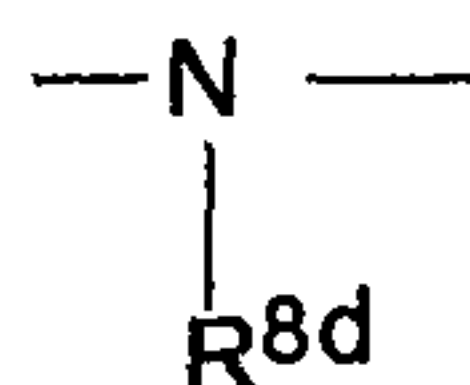
a group



5 a group



a group -S-, a lower alkynylene group, a lower alkylene group, a group



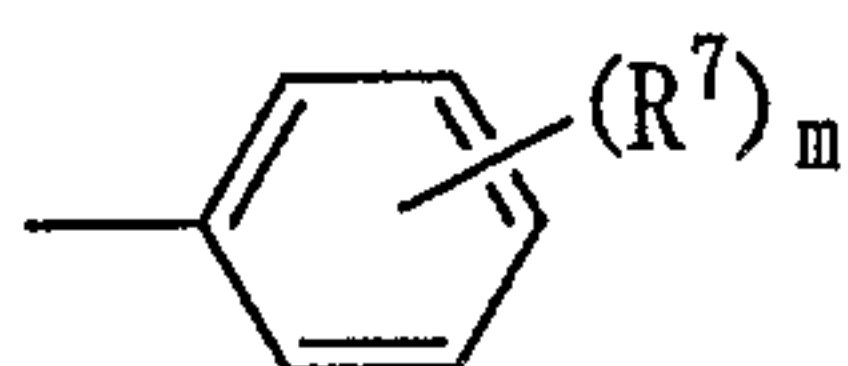
or a group $\text{---CO---NH---B}_{18}\text{a---}$,

wherein R⁸ represents a hydrogen atom, a lower alkyl
10 group that may have a lower alkoxy group as a
substituent, a lower alkanoyl group, a phenyl lower
alkyl group, or a lower alkylsulfonyl group,

- B represents a group -CO- or a lower alkylene group,
B₀ represents a lower alkylene group,
each of R^{9a} and R^{9b}, which are identical or different,
represents a hydrogen atom or a lower alkyl group
5 R^{10a} represents a hydrogen atom or a lower alkyl group,
B_{22a} represents a lower alkylene group or a lower
alkenylene group,
e represents 0 or 1,
B₁ represents a lower alkenylene group that may have a
10 phenyl group as a substituent,
B₂ represents a lower alkylene group that may be
substituted by a group selected from the group
consisting of a lower alkoxy group and a phenyl group,
W represents an oxygen atom, a group -NH-, or a sulfur
15 atom,
u represents 0 or 1,
B_{18a} represents a lower alkylene group,
B_{19a} represents a lower alkylene group,
B_{20a} represents a lower alkylene group,
20 B_{21a} represents a lower alkylene group,
R^{8d} represents a hydrogen atom or a lower alkyl group,
k represents 2 or 3,
c represents 0 or 1,
d' represents 0 or 1,
25 R^{10b} represents a hydrogen atom or a lower alkyl group,
R⁶ represents a 5- to 15-membered monocyclic, dicyclic,
or tricyclic saturated or unsaturated heterocyclic
group having 1 to 4 nitrogen atoms, oxygen atoms, or

sulfur atoms (wherein, the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of an oxo group; an optionally halogenated lower alkoxy group; an optionally halogenated lower alkyl group; a halogen atom; a lower alkylsulfonyl group; a phenyl group that may be substituted, on the phenyl ring, by an optionally halogenated lower alkyl group; a lower alkylthio group; a pyrrolyl group; a benzoyl group; a lower alkanoyl group; a lower alkoxycarbonyl group; and an amino group that may have a group selected from the group consisting of a lower alkyl group and a lower alkanoyl group as a substituent), an adamantyl group, a naphthyl group (wherein, the naphthalene ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group, a halogen atom, and an amino group that may have a group selected from the group consisting of a lower alkyl group and a lower alkanoyl group as a substituent), an alkyl group that may have a lower alkoxy group as a substituent, a cycloalkyl group that may be substituted, on the cycloalkyl ring, by a group selected from the group consisting of an amino-substituted lower alkyl group that may have a lower alkyl group on the amino group and a lower alkyl group that may have a halogen atom as a substituent, a lower alkenyl group that may have a halogen atom as a substituent, a lower alkanoyl group, a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3

groups selected from the group consisting of a lower alkyl group that may have a halogen atom as a substituent and a halogen atom, a group



, a halogen atom-substituted lower alkyl group, or a
 5 cycloalkyl lower alkyl group,
 R^7 represents a hydrogen atom, a phenyl group, a carboxy group, a hydroxyl group, a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, a phenoxy group, a lower alkoxy group that may have a
 10 halogen atom as a substituent, a lower alkylenedioxy group, an amino group that may have, as a substituent, a group selected from the group consisting of a lower alkyl group, a lower alkanoyl group, a benzoyl group, and a cycloalkyl group, a cyano group, a lower alkanoyl
 15 group that may have a halogen atom as a substituent, a lower alkylsulfonyl group, an aminosulfonyl group, a lower alkoxy carbonyl group, a lower alkanoyloxy group, a 5- or 6-membered saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen
 20 atoms, or sulfur atoms (wherein the heterocyclic ring may be substituted, by an oxo group), or a lower alkoxy carbonyl lower alkyl group,
 m represents an integer between 1 and 5, wherein when m represents 2 to 5, two to five R^7 's may be identical or
 25 different,

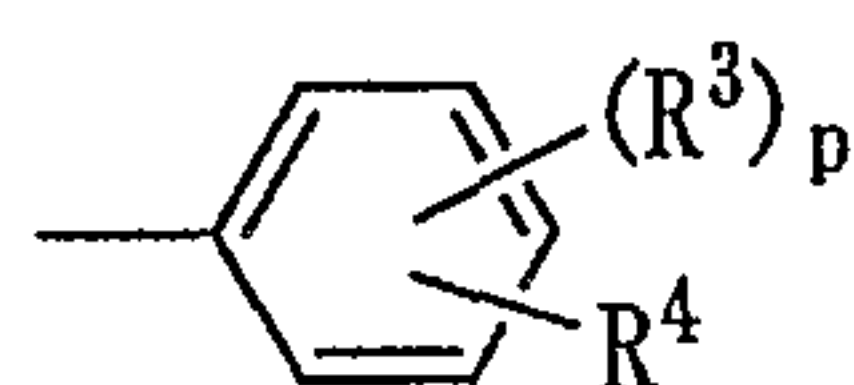
R^2 represents a hydrogen atom, a halogen atom, or a lower alkyl group,

Y represents a group $-O-$, a group $-N(R^5)-$, a group $-CO-$, a group $-CH(OH)-$, a lower alkylene group, a group $-S(O)_n-$, or a group $-C(=N-OH)-$,

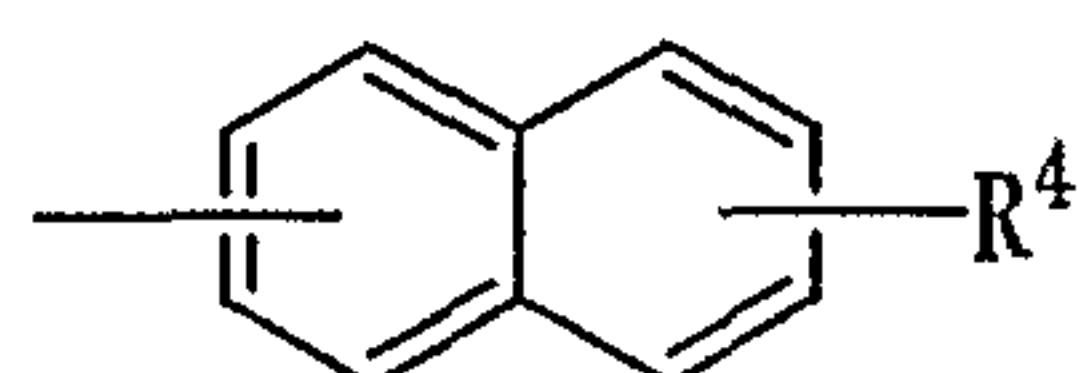
R^5 represents a hydrogen atom, a lower alkyl group, a lower alkanoyl group, a benzoyl group, a phenyl lower alkyl group, or a cycloalkyl group,

n represents 0, 1, or 2,

10 A represents a group



or a group



p represents 1 or 2,

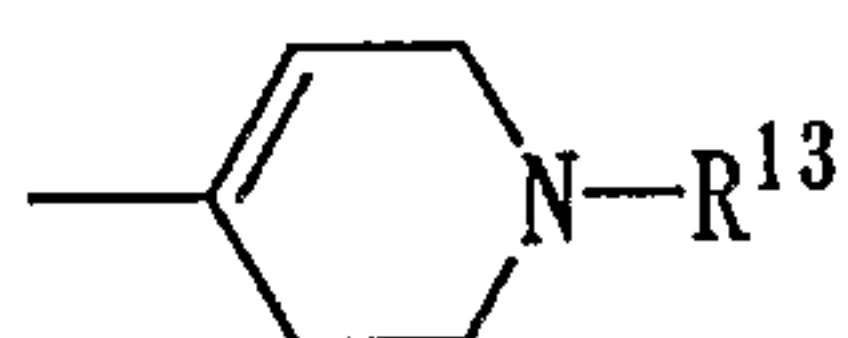
R^3 represents a hydrogen atom, a lower alkoxy group, a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkoxycarbonyl group, a carboxy group, a group $-CONR^{11}R^{12}$, or a cyano group,

wherein each of R^{11} and R^{12} , which are identical or different, represents a hydrogen atom, a lower alkyl group, a cycloalkyl group, or a phenyl group, or R^{11} and R^{12} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen

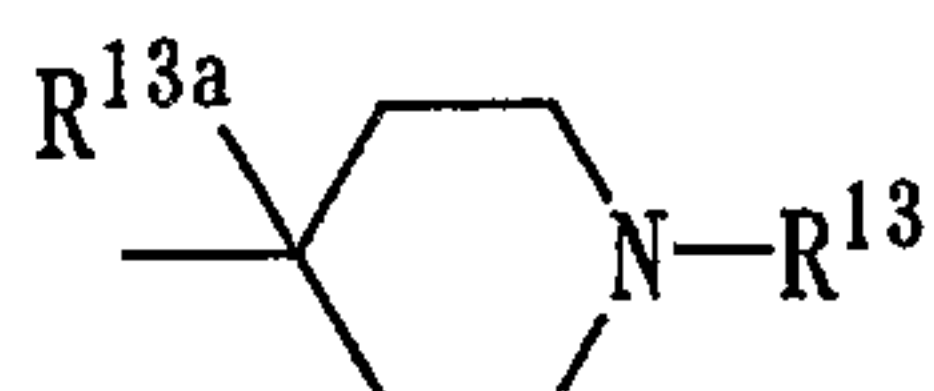
10

atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring,

R^4 represents an imidazolyl lower alkyl group, a 1,2,4-triazolyl lower alkyl group, a 1,2,3-triazolyl lower alkyl group, a 1,2,5-triazolyl lower alkyl group, a pyrazolyl lower alkyl group, a pyrimidinyl lower alkyl group that may have an oxo group as a substituent on the pyrimidine ring, a 3,5-dioxoisoxazolidin-4-ylidene lower alkyl group, a 1,2,4-oxadiazolyl lower alkyl group that may have a lower alkyl group as a substituent on the 1,2,4-oxadiazole ring, a thiazolidinyl lower alkyl group that may have an oxo group as a substituent on the thiazolidine ring, a group



15 a group



or a group $-(T)_1-N(R^{14})R^{15}$,

R^{13} represents a hydrogen atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkanoyl group that may have a halogen atom as a substituent, a lower alkoxy carbonyl group, a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, an imidazolyl lower alkyl group, a lower alkoxy carbonyl

lower alkyl group, a carboxy lower alkyl group, a benzoyl group, a morpholino-substituted lower alkanoyl group, a piperazinyl carbonyl lower alkyl group that may be substituted, on the piperazine ring, by a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, a piperazinyl lower alkanoyl group that may be substituted, on the piperazine ring, by a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, a morpholinocarbonyl-substituted lower alkyl group, or an imidazolyl lower alkanoyl group, R^{13a} represents a hydrogen atom or a hydroxyl group, T represents a lower alkylene group, a group $-N(R^{17})-B_3-$ CO-, a group $-B_{19}-N(R^{18})-CO-$, a group $-B_4-CO-$, a group $-Q-B_5-CO-$, a group $-B_6-N(R^{19})-B_7-CO-$, a group $-CO-B_8-$, a group $-CH(OH)-B_9-$, a group $-CO-B_{10}-CO-$, a group $-CH(OH)-B_{11}-CO-$, a group $-CO-$, a group $-SO_2-$, or a group $-B_{23a}-CO-CO-$,
wherein R^{17} represents a hydrogen atom, a lower alkyl group, a cycloalkyl group, a cycloalkylcarbonyl group, a lower alkanoyl group that may have a halogen atom as a substituent, a lower alkenyl group, an amino-substituted lower alkanoyl group that may have a lower alkyl group as a substituent, or a lower alkylsulfonyl group,
 B_3 represents a lower alkylene group,
 B_{19} represents a lower alkylene group,

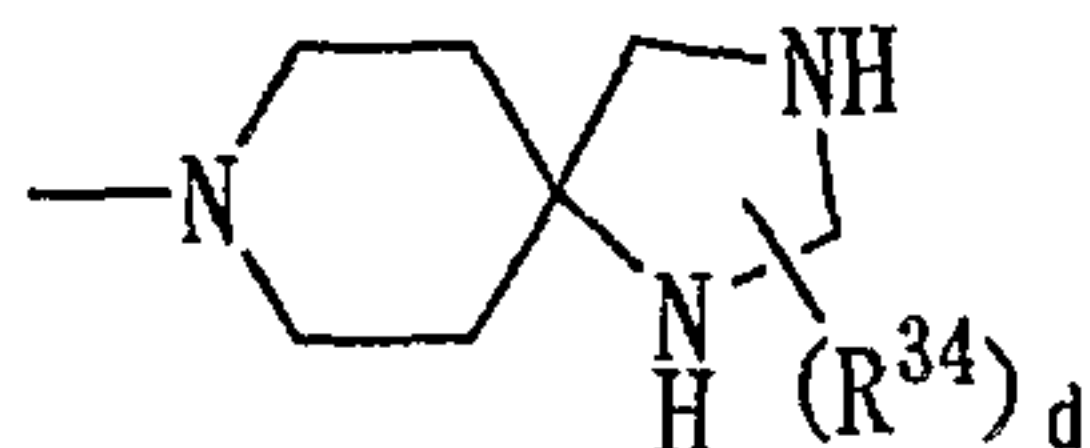
- R^{18} represents a hydrogen atom or a lower alkyl group,
 B_4 represents a lower alkenylene group or a lower
alkylene group that may have a hydroxyl group as a
substituent,
- 5 Q represents an oxygen atom or a group $-S(O)_n-$ (wherein
 n has the same meanings as described above),
 B_5 represents a lower alkylene group,
 B_6 represents a lower alkylene group,
 R^{19} represents a hydrogen atom or a lower alkanoyl
10 group,
 B_7 represents a lower alkylene group,
 B_8 represents a lower alkylene group,
 B_9 represents a lower alkylene group,
 B_{10} represents a lower alkylene group,
15 B_{11} represents a lower alkylene group,
 B_{23a} represents a lower alkylene group,
 l represents 0 or 1,
 R^{14} represents a hydrogen atom or an alkyl group that
may have a hydroxyl group as a substituent,
- 20 R^{15} represents (2) a hydroxyl group-substituted alkyl
group, (3) a cycloalkyl group that may have a group
selected from the group consisting of a hydroxyl group
and a lower alkyl group as a substituent, (4) a phenoxy
lower alkyl group, (5) a phenyl group that may be
25 substituted, on the phenyl ring, by 1 to 3 groups
selected from the group consisting of a lower alkyl
group; a lower alkoxy group that may have a halogen
atom as a substituent; a halogen atom; an amino lower

alkoxy group that may have a lower alkyl group as a substituent; a hydroxyl group-substituted lower alkyl group; a phenyl lower alkyl group; a lower alkynyl group; an amino group that may have a lower alkylsulfonyl group as a substituent; a lower alkylthio group; a cycloalkyl group; a phenylthio group; an adamantyl group; an anilino group that may have a halogen atom as a substituent on the phenyl ring; a lower alkoxy carbonyl group; a piperazinyl group that may have a lower alkyl group as a substituent on the piperazine ring; a pyrrolidinyl group that may have an oxo group as a substituent on the pyrrolidine ring; a lower alkanoylamino group; a cyano group; and a phenoxy group, (6) a phenoxy group, (7) a phenyl lower alkyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a halogen atom, a lower alkoxy group that may have a halogen atom as a substituent, and a lower alkyl group, (8) a phenyl lower alkyl group that has a lower alkylenedioxy group as a substituent on the phenyl ring, (10) a lower alkoxy carbonyl-substituted lower alkyl group, (11) a carboxy-substituted lower alkyl group, (12) an amino group that may have a lower alkanoyl group as a substituent, (13) a 1,2,3,4-tetrahydroquinolyl group that may have 1 to 3 groups selected from the group consisting of an oxo group, a lower alkoxy group, and a lower alkylenedioxy group as a substituent(s) on the tetrahydroquinoline ring, (14)

a cycloalkyl lower alkyl group, (15) a piperazinyl lower alkanoyl group that may be substituted, on the piperazine ring, by a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on
5 the phenyl ring, (16) a pyridyl lower alkyl group, (17) an amino group-substituted lower alkyl group that may have a group selected from the group consisting of a lower alkyl group and a lower alkanoyl group as a substituent, (18) a lower alkoxy lower alkyl group,
10 (19) an imidazolyl group, (20) an imidazolyl lower alkyl group, (21) a 1,2,3,4-tetrahydroisoquinolyl-carbonyl-substituted lower alkyl group, (22) a piperidinylcarbonyl group that may have a group selected from the group consisting of a lower
15 alkoxy carbonyl group, a phenyl lower alkyl group, and a furyl lower alkyl group as a substituent on the piperidine ring, (23) a thiazolidinyl lower alkanoyl group that may have an oxo group as a substituent on the thiazolidine ring, (24) a piperidinyl group that
20 may be substituted, on the piperidine ring, by a group selected from the group consisting of a lower alkoxy carbonyl group, a phenyl lower alkyl group, a lower alkyl group, a benzoyl group, and a furyl lower alkyl group, (25) a carbonyl lower alkyl group
25 substituted by a group



, (26) a carbonyl lower alkyl group substituted by a group



, (27) a group $\text{-CO-B}_{20}\text{-N(R}^{36}\text{)R}^{37}$, (26a) a pyrrolidinyl lower alkyl group, (27a) a morpholino lower alkyl group, (28a) a phenyl lower alkenyl group, (29a) an anilinocarbonyl lower alkyl group that may have a lower alkyl group as a substituent on the phenyl ring, (30a) an indolyl group, (31a) a piperazinyl lower alkyl group that may have, as a substituent on the piperazine ring, a group selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, (32a) an amidino lower alkyl group that may have a lower alkyl group as a substituent, (33a) a fluorenyl group, (34a) a carbazolyl group that may have a lower alkyl group as a substituent on the carbazole ring, (35a) an amidino group that may have a lower alkyl group as a substituent, (36a) a piperazinyl-substituted oxalyl group that may have 1 to 3 groups selected from the group consisting of a phenyl lower alkyl group (that may have 1 to 3 groups selected from the group consisting of a lower alkylenedioxy group and a lower alkoxy group as a substituent(s) on the phenyl ring) and a pyridyl lower alkyl group as a substituent(s) on the piperazine ring, or (37a) a

cyano-substituted lower alkyl group,

R^{34} represents an oxo group or a phenyl group,

d represents an integer between 0 and 3,

B_{20} represents a lower alkylene group,

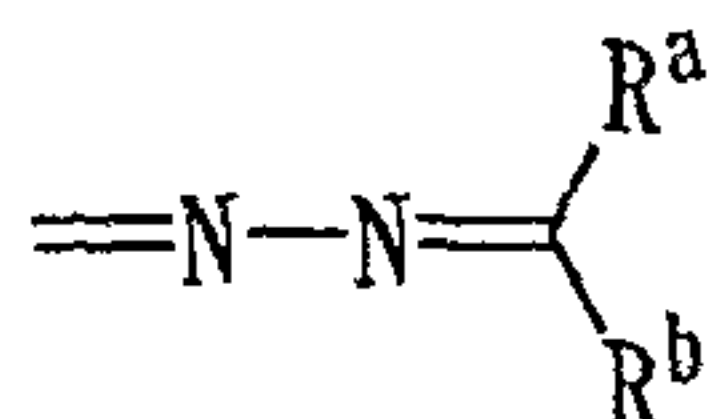
- 5 R^{36} and R^{37} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic group may be substituted by 1 to 3 phenyl
- 10 lower alkyl groups that may have a lower alkylenedioxy group as a substituent on the phenyl ring,
- R^{14} and R^{15} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5-
- 15 to 10-membered saturated or unsaturated heterocyclic ring; or a group



- wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of (28)
- a phenyl-substituted lower alkyl group, which has 1 to
- 20 2 phenyl groups and which may have a pyridyl group on the lower alkyl group, wherein the phenyl ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkanoyl group, an amino group that may have a lower alkanoyl group as a substituent,
- 25 a lower alkoxycarbonyl group, a cyano group, a nitro

group, a phenyl group, a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkoxy group that may have a halogen atom as a substituent, a phenyl lower alkoxy group, a hydroxyl group, and a lower alkylenedioxy group, (29) a carbamoyl group, (30) a pyridyl lower alkyl group that may have, as a substituent(s) on the pyridine ring, 1 to 3 groups selected from the group consisting of a hydroxyl group and a lower alkyl group that may have a hydroxyl group as a substituent, (31) a pyrrolyl lower alkyl group that may have 1 to 3 lower alkyl groups as a substituent(s) on the pyrrole ring, (32) a benzoxazolyl lower alkyl group, (33) a benzothiazolyl lower alkyl group, (34) a furyl lower alkyl group, (35) a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a cyano group, an amino group that may have a lower alkylsulfonyl group as a substituent, a halogen atom, a lower alkoxy group, a lower alkyl group that may have a halogen atom as a substituent, a thiazolidinyl lower alkyl group that may have an oxo group as a substituent on the thiazolidine ring, a thiazolidinylidene lower alkyl group that may have an oxo group as a substituent on the thiazolidine ring, and a lower alkylenedioxy group, (36) a pyrimidinyl group, (37) a pyrazinyl group, (38) a pyridyl group, (39) a lower alkoxycarbonyl group, (40) a thiazolidinyl lower alkanoyl group that may be substituted, on the

thiazolidine ring, by a group selected from the group consisting of an oxo group and a group



(wherein each of R^a and R^b represents a lower alkyl group), (41) a lower alkyl group that may have a group
 5 selected from the group consisting of a hydroxyl group and a halogen atom as a substituent, (42) a lower alkanoyl group that may have a halogen atom as a substituent, (43) a phenyl group that may be substituted, on the phenyl ring, by 1 to 3 groups
 10 selected from the group consisting of a carbamoyl group that may have a group selected from the group consisting of a lower alkoxy lower alkyl group and a lower alkyl group, a lower alkoxy carbonyl group, a carboxy group, a cyano group, a phenyl group, a halogen
 15 atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkoxy group that may have a halogen atom as a substituent, a benzoyl group that may have a halogen atom as a substituent on the phenyl ring, a phenyl lower alkyl group that may have a
 20 halogen atom as a substituent on the phenyl ring, and a hydroxyl group, (44) a phenyl group that may have a lower alkylendioxy group as a substituent on the phenyl ring, (45) a naphthyl lower alkyl group, (46) a phenoxy group that may be substituted, on the phenyl
 25 ring, by 1 to 3 groups selected from the group

consisting of a cyano group, a lower alkyl group that may have a halogen atom as a substituent, and a lower alkoxy group that may have a halogen atom as a substituent, (47) a phenoxy lower alkyl group, (48) a phenyl lower alkoxy group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, and a lower alkoxy group that may have a halogen atom as a substituent, (49) a group $-(B_{12}CO)t-N(R^{20})R^{21}$, (50) a group $-(CO)o-B_{13}-N(R^{22})R^{23}$, (51) a 1,2,3,4-tetrahydronaphthyl-substituted lower alkyl group that may be substituted, on the 1,2,3,4-tetrahydronaphthalene ring, by 1 to 5 lower alkyl groups as a substituent(s), (52) a cycloalkyl group that may have a hydroxyl group as a substituent, (53) a piperidinyl group that may be substituted, on the piperidine ring, by 1 to 3 lower alkyl groups as a substituent(s), (54) a quinolyl lower alkyl group, (55) a 1,2,3,4-tetrazolyl lower alkyl group that may have a group selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group as a substituent on the tetrazole ring, (56) a thiazolyl lower alkyl group that may have a phenyl group as a substituent on the thiazole ring, (57) a benzoyl lower alkyl group that may have 1 to 3 groups selected from the group consisting of a lower alkoxy group and a halogen atom as a substituent(s) on the phenyl ring,

(58) a piperidinyl lower alkyl group that may have a lower alkyl group as a substituent on the piperidine ring, (59) an imidazolyl group that may have 1 to 3 phenyl groups as a substituent(s) on the imidazole ring, (60) a benzimidazolyl group that may have 1 to 3 lower alkyl groups as a substituent(s) on the benzimidazole ring, (61) a pyridyl lower alkoxy group, (62) a 1,2,3,4-tetrahydroquinolyl lower alkyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (63) a 1,3,4-oxadiazolyl lower alkyl group that may have an oxo group as a substituent on the 1,3,4-oxadiazole ring, (64) a cycloalkyl lower alkyl group, (65) a tetrahydropyranyl group, (66) a thienyl lower alkyl group, (67) a pyrimidinylcarbonyl group that may have an oxo group as a substituent on the pyrimidine ring, (68) a hydroxyl group, (69) a carboxy group, (70) a lower alkoxy lower alkyl group, (71) a lower alkoxy lower alkoxy group, (72) a benzoyloxy group, (73) a lower alkoxycarbonyl lower alkoxy group, (74) a carboxy lower alkoxy group, (75) a phenoxy lower alkanoyl group, (76) a 1,2,3,4-tetrahydroquinolylcarbonyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (77) a phenylsulfonyl group, (78) an imidazolyl lower alkanoyl group, (79) an imidazolyl lower alkyl group, (80) a pyridylcarbonyl group, (81) an imidazolylcarbonyl group, (82) a lower alkoxycarbonyl lower alkyl group, (83) a carboxy lower alkyl group,

(84) a group $-(O-B_{15})_s-CO-N(R^{26})R^{27}$, (85) a group $-N(R^{28})-CO-B_{16}-N(R^{29})R^{30}$, (86) a group $-N(R^{31})-B_{17}-CO-N(R^{32})R^{33}$, (87) a benzoxazolyl group, (88a) a benzothienyl group, (89a) an oxo group, and (90a) a 1,2,3,4-tetrahydroquinolyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, B_{12} represents a lower alkylene group, t represents 0 or 1, each of R^{20} and R^{21} , which are identical or different, represents a hydrogen atom; a cycloalkyl group; an amino group that may have a lower alkoxy carbonyl group as a substituent; a benzoyl group that may have 1 to 3 lower alkoxy groups as a substituent(s) on the phenyl ring; a lower alkyl group; a lower alkyl group having 1 to 2 phenyl groups that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a lower alkoxy carbonyl group, a cyano group, a nitro group, a phenyl group, a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkoxy group that may have a halogen atom as a substituent, and a lower alkylthio group; a phenyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a lower alkoxy group that may have a halogen atom as a substituent and a lower alkyl group that may have a halogen atom as a substituent; a lower alkoxy carbonyl group; a cycloalkyl lower alkyl group; a pyrrolidinyl lower alkyl group that may have 1 to 3

lower alkyl groups that may have a hydroxyl group as a substituent on the pyrrolidine ring; an amino-substituted lower alkyl group that may have a group selected from the group consisting of a phenyl group and a lower alkyl group as a substituent; a 1,2,3,4-tetrahydronaphthyl-substituted lower alkyl group that may have 1 to 5 lower alkyl groups as a substituent(s) on the 1,2,3,4-tetrahydronaphthalene ring; a naphthyl lower alkyl group; a pyridyl lower alkyl group; a quinolyl lower alkyl group; a 1,2,3,4-tetrazolyl lower alkyl group that may have 1 to 3 groups selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group as a substituent(s) on the tetrazole ring; a 1,2,4-triazolyl lower alkyl group; a tetrahydrofuryl lower alkyl group that may have a hydroxyl group as a substituent on the lower alkyl group; a phenoxy lower alkyl group that may have 1 to 3 groups selected from the group consisting of a lower alkyl group and a nitro group as a substituent(s) on the phenyl ring; a phenyl lower alkanoyl group; a lower alkanoyl group that may have a halogen atom as a substituent; an imidazolyl lower alkanoyl group; a lower alkoxycarbonyl lower alkyl group; a pyridyl group; or a carboxy lower alkyl group, or R^{20} and R^{21} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic

ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group, a phenyl group that may have 1 to 3 groups selected from the group consisting of a halogen atom and a lower alkyl group that may have a halogen atom as a substituent(s) on the phenyl ring, and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring,
o represents 0 or 1,

10 B₁₃ represents a lower alkylene group,
each of R²² and R²³, which are identical or different, represents a hydrogen atom, a lower alkyl group, a benzoyl group that may have 1 to 3 lower alkoxy groups as a substituent(s) on the phenyl ring, a phenoxy lower
15 alkyl group that may have a lower alkyl group as a substituent on the phenyl ring, a phenyl lower alkyl group, or a phenyl group, or R²² and R²³, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or
20 sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group that may have a lower alkylenedioxy group
25 as a substituent on the phenyl ring,
B₁₅ represents a lower alkylene group,
s represents 0 or 1,
each of R²⁶ and R²⁷, which are identical or different,

represents a hydrogen atom, a lower alkyl group, a phenyl lower alkyl group, or an imidazolyl lower alkyl group, or R^{26} and R^{27} , together with the nitrogen atom to which they bind, may bind to each other, directly or
5 via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 phenyl lower alkyl groups that may have a lower alkylenedioxy group as a substituent on the phenyl
10 ring, as a substituent(s),
 R^{28} represents a hydrogen atom or a lower alkyl group,
 B_{16} represents a lower alkylene group,
 R^{29} and R^{30} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a
15 nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group, a phenyl group, and a phenyl lower alkyl group
20 that may have a lower alkylenedioxy group as a substituent on the phenyl ring,
 R^{31} represents a hydrogen atom or a lower alkyl group,
 B_{17} represents a lower alkylene group,
 R^{32} and R^{33} , together with the nitrogen atom to which
25 they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups

selected from the group consisting of a lower alkyl group, a phenyl group, and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring,

5 provided that the above described aromatic compound or a salt thereof satisfy the following requirements (i) to (v):

(i) when X_1 represents a group $-\text{CH}=\text{}$, then R^3 represents a hydrogen atom;

10 (ii) when X_1 represents a group $-\text{CH}=\text{}$, 1 represents 1, T represents $-\text{CO}-$, and R^{14} represents a hydrogen atom or an alkyl group that may have a hydroxyl group as a substituent, then R^{15} represents the group (24) described above;

15 (iii) when X_1 represents a group $-\text{CH}=\text{}$, 1 represents 1, and T represents $-\text{N}(R^{17})-\text{B}_3-\text{CO}-$, then R^{14} and R^{15} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5-
20 to 10-membered saturated or unsaturated heterocyclic ring, wherein the heterocyclic ring is substituted by 1 to 3 groups of (28) described above;

(iv) when X_1 represents a nitrogen atom, and 1 represents 0, or when X_1 represents a nitrogen atom, 1
25 represents 1, and T represents $-\text{CO}-$ or $-\text{SO}_2$, then R^{15} is not the group being any one of (5), (7), (19), and (20) described above; and

(v) when R^6 represents a cycloalkyl group

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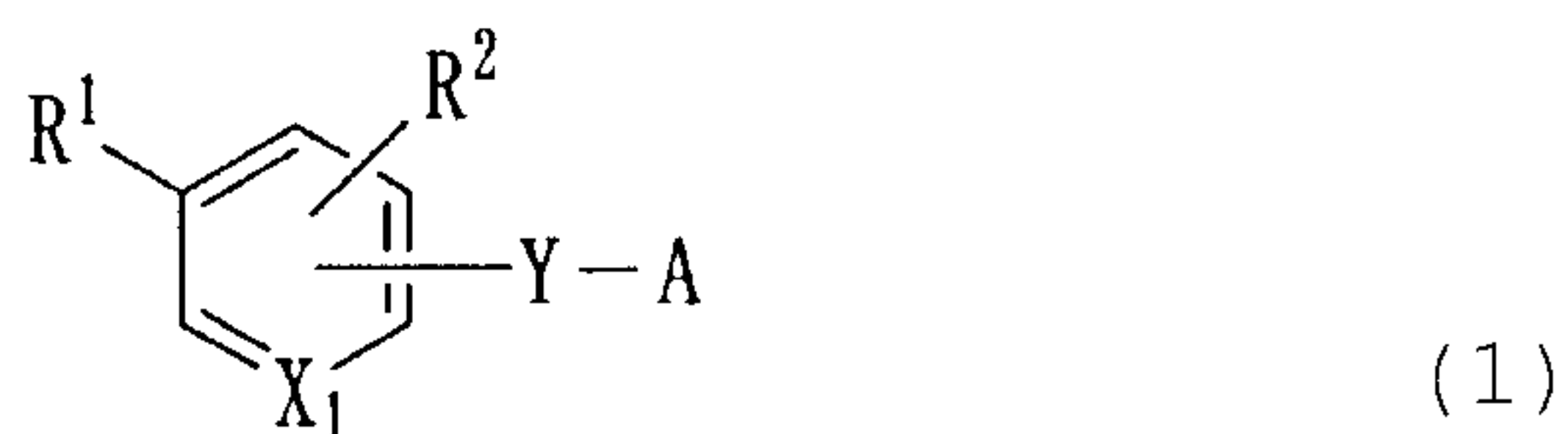
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- wherein the cycloalkyl ring may be substituted by a group selected from the group consisting of an amino-substituted lower alkyl group that may have a lower alkyl group and a lower alkyl group that may have a halogen atom as a substituent, then
- 5 R^{14} represents a group $-(T)_1-N(R^{14})R^{15}$ (wherein T and 1 have the same meanings as described above, and R^{14} and R^{15} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 10-membered saturated heterocyclic ring; or R^{14}
- 10 and R^{15} form a group



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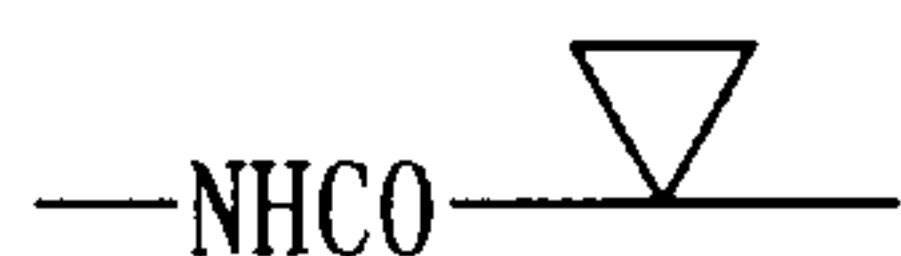
- More particularly, the invention relates to an aromatic compound represented by the following general formula
- 15 (1) or a salt thereof:



wherein X_1 represents a nitrogen atom or a group $-CH=$,

R^1 represents a group $-Z-R^6$,

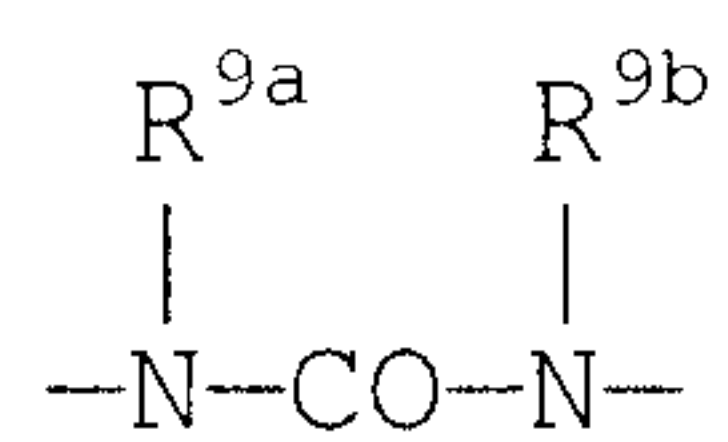
- 20 Z represents a group $-N(R^8)-B-$, a group $-B-N(R^8)-$, a group $-B_0-O-$, a group



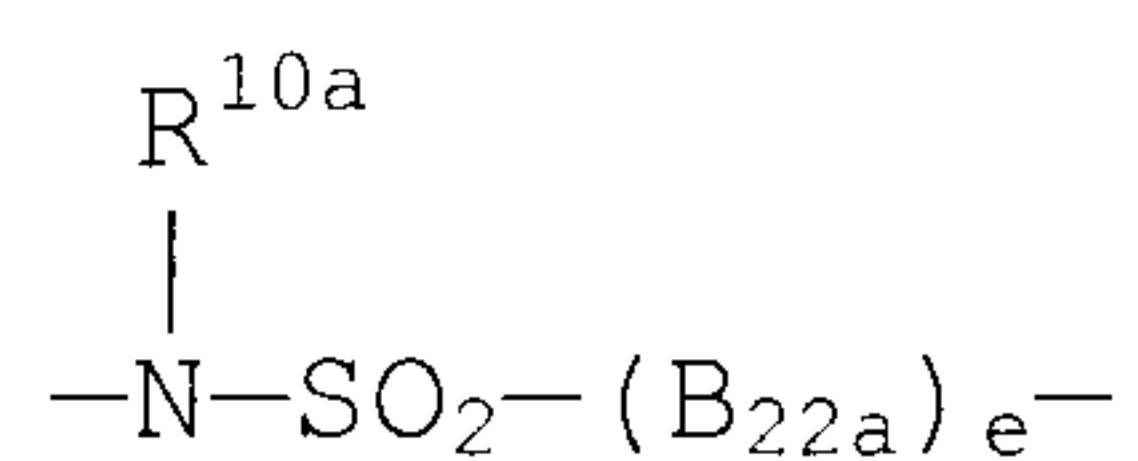
a group $-CO-$, a group $-CH(OH)-$, a group

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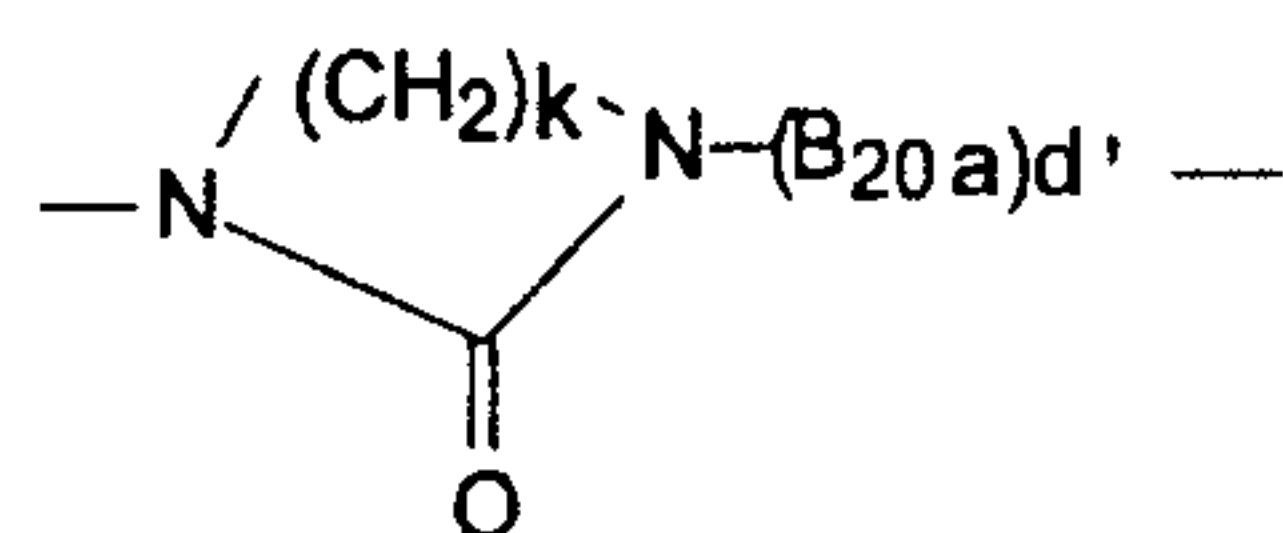
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a group $-\text{N}=\text{CH}-$, a group

5

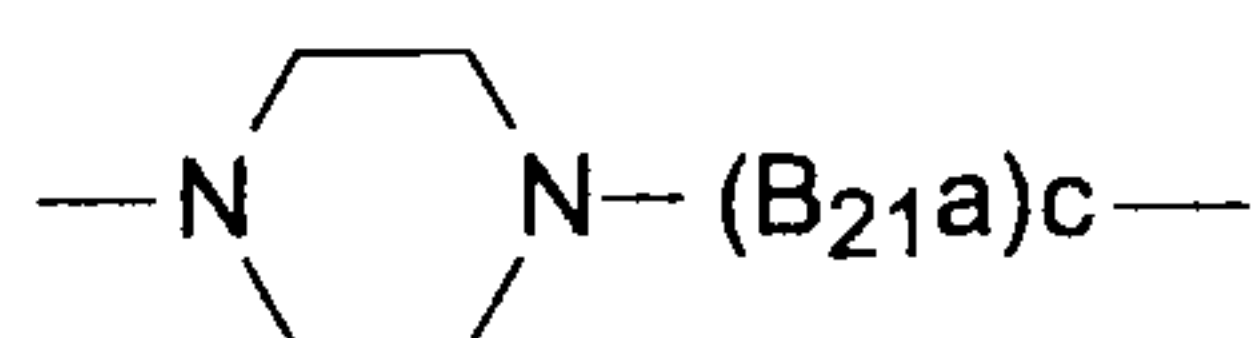
a $\text{C}_2\text{-C}_6$ alkenylene group, a group $-\text{NHCO}-\text{B}_1-$, a group
 $-\text{NHCO}-\text{B}_2-(\text{W})_u-$, a group $-\text{B}_0-\text{O}-\text{B}_{19a}-$, a group

10

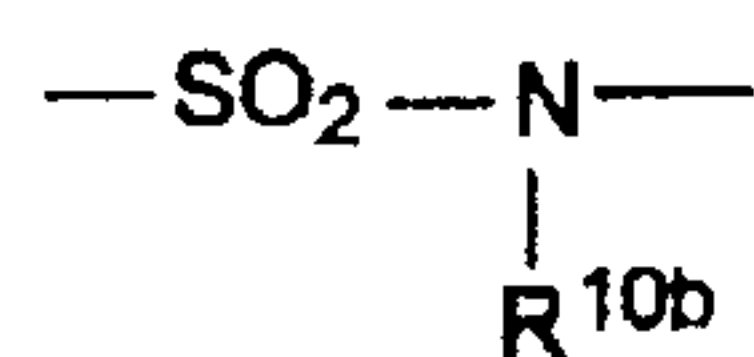
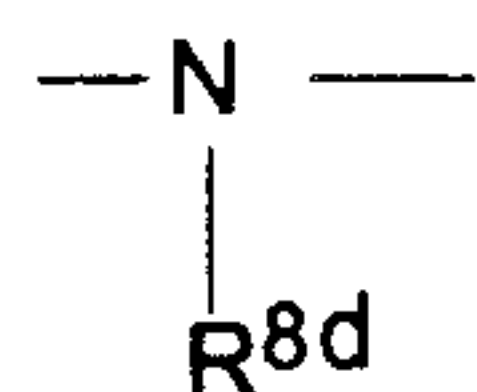


a group

a group



15

a group $-\text{S}-$, a $\text{C}_2\text{-C}_6$ alkynylene group, a $\text{C}_1\text{-C}_6$ alkylene group, a
group20 or a group $\text{---CO---NH---B}_{18a}\text{---}$,

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26b

wherein R^8 represents a hydrogen atom, a C_1 - C_6 alkyl group that may have a C_1 - C_6 alkoxy group as a substituent, a C_1 - C_6 alkanoyl group, a phenyl C_1 - C_6 alkyl group, or a C_1 - C_6 alkylsulfonyl group,

5 B represents a group $-CO-$ or a C_1 - C_6 alkylene group,

B_0 represents a C_1 - C_6 alkylene group,

each of R^{9a} and R^{9b} , which are identical or different, represents a hydrogen atom or a C_1 - C_6 alkyl group

R^{10a} represents a hydrogen atom or a C_1 - C_6 alkyl group, B_{22a}

10 represents a C_1 - C_6 alkylene group or a C_1 - C_6 alkenylene group,

e represents 0 or 1,

B_1 represents a C_1 - C_6 alkenylene group that may have a phenyl group as a substituent,

B_2 represents a C_1 - C_6 alkylene group that may be substituted by
15 a group selected from the group consisting of a C_1 - C_6 alkoxy group and a phenyl group,

W represents an oxygen atom, a group $-NH-$, or a sulfur atom,

u represents 0 or 1,

B_{18a} represents a C_1 - C_6 alkylene group,

20 B_{19a} represents a C_1 - C_6 alkylene group,

B_{20a} represents a C_1 - C_6 alkylene group,

B_{21a} represents a C_1 - C_6 alkylene group,

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26c

R^{8d} represents a hydrogen atom or a C_1 - C_6 alkyl group,

k represents 2 or 3,

c represents 0 or 1,

d' represents 0 or 1,

5 R^{10b} represents a hydrogen atom or a C_1 - C_6 alkyl group,

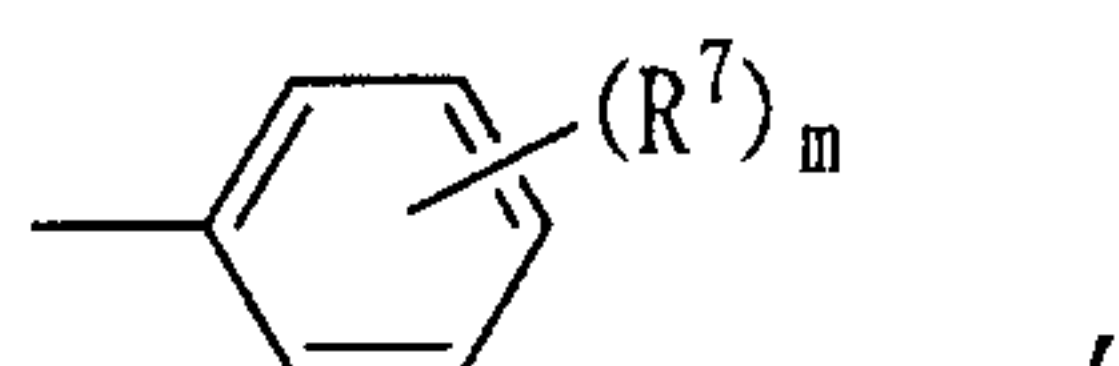
R^6 represents a 5- to 15-membered monocyclic, dicyclic, or tricyclic saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen atoms, or sulfur atoms (wherein, the heterocyclic ring may be substituted by 1 to 3 groups

- 10 selected from the group consisting of an oxo group; an optionally halogenated C_1 - C_6 alkoxy group; an optionally halogenated C_1 - C_6 alkyl group; a halogen atom; a C_1 - C_6 alkylsulfonyl group; a phenyl group that may be substituted, on the phenyl ring, by an optionally halogenated C_1 - C_6 alkyl
- 15 group; a C_1 - C_6 alkylthio group; a pyrrolyl group; a benzoyl group; a C_1 - C_6 alkanoyl group; a C_1 - C_6 alkoxycarbonyl group; and an amino group that may have a group selected from the group consisting of a C_1 - C_6 alkyl group and a C_1 - C_6 alkanoyl group as a substituent), an adamantyl group, a naphthyl group (wherein,
- 20 the naphthalene ring may be substituted by 1 to 3 groups selected from the group consisting of a C_1 - C_6 alkyl group, a halogen atom, and an amino group that may have a group selected from the group consisting of a C_1 - C_6 alkyl group and a C_1 - C_6 alkanoyl group as a substituent), an alkyl group that may have
- 25 a C_1 - C_6 alkoxy group as a substituent, a C_3 - C_{16} cycloalkyl group that may be substituted, on the C_3 - C_{16} cycloalkyl ring, by a group selected from the group consisting of an amino-

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26d

substituted C₁-C₆ alkyl group that may have a C₁-C₆ alkyl group on the amino group and a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a C₂-C₆ alkenyl group that may have a halogen atom as a substituent, a C₁-C₆ alkanoyl group, a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group that may have a halogen atom as a substituent and a halogen atom, a group



- 10 a halogen atom-substituted C₁-C₆ alkyl group, or a C₃-C₁₆ cycloalkyl C₁-C₆ alkyl group,

R⁷ represents a hydrogen atom, a phenyl group, a carboxy group, a hydroxyl group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a phenoxy group, a C₁-C₆

- 15 alkoxy group that may have a halogen atom as a substituent, a C₁-C₄ alkylenedioxy group, an amino group that may have, as a substituent, a group selected from the group consisting of a C₁-C₆ alkyl group, a C₁-C₆ alkanoyl group, a benzoyl group, and a C₃-C₁₆ cycloalkyl group, a cyano group, a C₁-C₆ alkanoyl group

- 20 that may have a halogen atom as a substituent, a C₁-C₆ alkylsulfonyl group, an aminosulfonyl group, a C₁-C₆ alkoxycarbonyl group, a C₂-C₆ alkanoyloxy group, a 5- or 6-membered saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen atoms, or sulfur atoms (wherein the heterocyclic ring may be substituted, by an oxo group), or a C₁-C₆ alkoxycarbonyl C₁-C₆ alkyl group,

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26e

m represents an integer between 1 and 5, wherein when m represents 2 to 5, two to five R⁷'s may be identical or different,

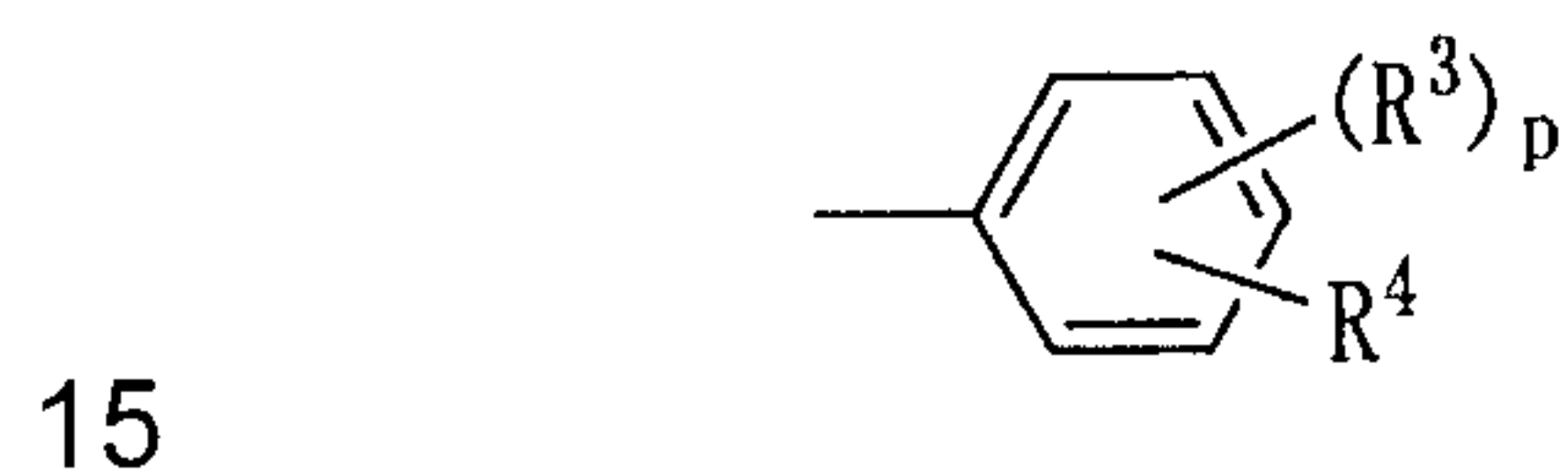
5 R² represents a hydrogen atom, a halogen atom, or a C₁-C₆ alkyl group,

Y represents a group -O-, a group -N(R⁵)-, a group -CO-, a group -CH(OH)-, a C₁-C₆ alkylene group, a group -S(O)_n-, or a group -C(=N-OH)-,

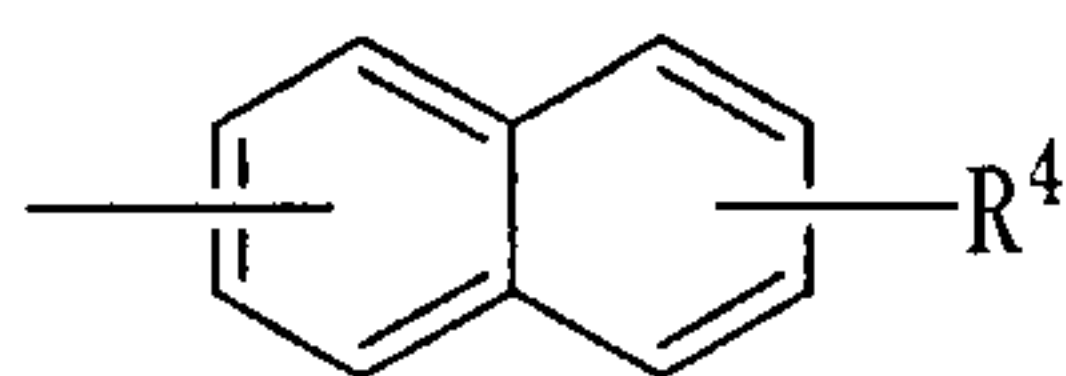
10 R⁵ represents a hydrogen atom, a C₁-C₆ alkyl group, a C₁-C₆ alkanoyl group, a benzoyl group, a phenyl C₁-C₆ alkyl group, or a C₃-C₁₆ cycloalkyl group,

n represents 0, 1, or 2,

A represents a group



or a group



p represents 1 or 2,

20 R³ represents a hydrogen atom, a C₁-C₆ alkoxy group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a C₁-C₆ alkoxycarbonyl group, a carboxy group, a group -CONR¹¹R¹², or a cyano group,

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26f

wherein each of R^{11} and R^{12} , which are identical or different, represents a hydrogen atom, a C_1 - C_6 alkyl group, a C_3 - C_{16} cycloalkyl group, or a phenyl group, or R^{11} and R^{12} , together with the nitrogen atom to which they bind, may bind to each
 5 other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring,

R^4 represents a group $-(T)_1-N(R^{14})R^{15}$,

T represents a C_1 - C_6 alkylene group, a group $-N(R^{17})-B_3-CO-$, a group $-B_{19}-N(R^{18})-CO-$, a group $-B_4-CO-$, a group
 10 $-Q-B_5-CO-$, a group $-B_6-N(R^{19})-B_7-CO-$, a group $-CO-B_8-$, a group $-CH(OH)-B_9-$, a group $-CO-B_{10}-CO-$, a group $-CH(OH)-B_{11}-CO-$, a group $-CO-$, a group $-SO_2-$, or a group $-B_{23a}-CO-CO-$,

wherein R^{17} represents a hydrogen atom, a C_1 - C_6 alkyl group, a C_3 - C_{16} cycloalkyl group, a C_3 - C_{16} cycloalkylcarbonyl group, a
 15 C_2 - C_6 alkanoyl group that may have a halogen atom as a substituent, a C_2 - C_6 alkenyl group, an amino-substituted C_2 - C_6 alkanoyl group that may have a C_1 - C_6 alkyl group as a substituent, or a C_1 - C_6 alkylsulfonyl group,

B_3 represents a C_1 - C_6 alkylene group,

20 B_{19} represents a C_1 - C_6 alkylene group,

R^{18} represents a hydrogen atom or a C_1 - C_6 alkyl group,

B_4 represents a C_2 - C_6 alkenylene group or a C_1 - C_6 alkylene group that may have a hydroxyl group as a substituent,

Q represents an oxygen atom or a group $-S(O)_n-$ (wherein n has
 25 the same meanings as described above),

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26g

B₅ represents a C₁-C₆ alkylene group,

B₆ represents a C₁-C₆ alkylene group,

R¹⁹ represents a hydrogen atom or a C₁-C₆ alkanoyl group,

B₇ represents a C₁-C₆ alkylene group,

5 B₈ represents a C₁-C₆ alkylene group,

B₉ represents a C₁-C₆ alkylene group,

B₁₀ represents a C₁-C₆ alkylene group,

B₁₁ represents a C₁-C₆ alkylene group,

B_{23a} represents a C₁-C₆ alkylene group,

10 1 represents 0 or 1,

R¹⁴ and R¹⁵, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 10-membered saturated or unsaturated heterocyclic ring; or a group

15



wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of (28) a phenyl-substituted C₁-C₆ alkyl group, which has 1 to 2 phenyl groups and which may have a pyridyl group on the C₁-C₆ alkyl group, wherein the phenyl ring may be substituted by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkanoyl group,

20

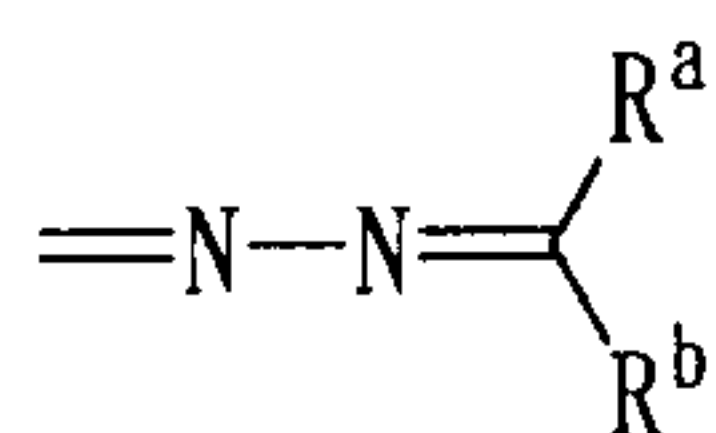
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26h

an amino group that may have a C₁-C₆ alkanoyl group as a substituent, a C₁-C₆ alkoxycarbonyl group, a cyano group, a nitro group, a phenyl group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a C₁-C₆ alkoxy group that may have a halogen atom as a substituent, a phenyl C₁-C₆ alkoxy group, a hydroxyl group, and a C₁-C₄ alkylenedioxy group, (29) a carbamoyl group, (30) a pyridyl C₁-C₆ alkyl group that may have, as a substituent(s) on the pyridine ring, 1 to 3 groups selected from the group consisting of a hydroxyl group and a C₁-C₆ alkyl group that may have a hydroxyl group as a substituent, (31) a pyrrolyl C₁-C₆ alkyl group that may have 1 to 3 C₁-C₆ alkyl groups as a substituent(s) on the pyrrole ring, (32) a benzoxazolyl C₁-C₆ alkyl group, (33) a benzothiazolyl C₁-C₆ alkyl group, (34) a furyl C₁-C₆ alkyl group, (35) a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a cyano group, an amino group that may have a C₁-C₆ alkylsulfonyl group as a substituent, a halogen atom, a C₁-C₆ alkoxy group, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a thiazolidinyl C₁-C₆ alkyl group that may have an oxo group as a substituent on the thiazolidine ring, a thiazolidinylidene C₁-C₆ alkyl group that may have an oxo group as a substituent on the thiazolidine ring, and a C₁-C₄ alkylenedioxy group, (36) a pyrimidinyl group, (37) a pyrazinyl group, (38) a pyridyl group, (39) a C₁-C₆ alkoxycarbonyl group, (40) a thiazolidinyl C₁-C₆ alkanoyl group that may be substituted, on the thiazolidine ring, by a group selected from the group consisting of an oxo group and a group

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26i



(wherein each of R^a and R^b represents a $\text{C}_1\text{-C}_6$ alkyl group),

(41) a $\text{C}_1\text{-C}_6$ alkyl group that may have a group selected from the group consisting of a hydroxyl group and a halogen atom as

5 a substituent, (42) a $\text{C}_2\text{-C}_6$ alkanoyl group that may have a halogen atom as a substituent, (43) a phenyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a carbamoyl group that may have a group selected from the group consisting of a $\text{C}_1\text{-C}_6$ alkoxy $\text{C}_1\text{-C}_6$ alkyl

10 group and a $\text{C}_1\text{-C}_6$ alkyl group, a $\text{C}_1\text{-C}_6$ alkoxycarbonyl group, a carboxy group, a cyano group, a phenyl group, a halogen atom, a $\text{C}_1\text{-C}_6$ alkyl group that may have a halogen atom as a

substituent, a $\text{C}_1\text{-C}_6$ alkoxy group that may have a halogen atom as a substituent, a benzoyl group that may have a halogen atom

15 as a substituent on the phenyl ring, a phenyl $\text{C}_1\text{-C}_6$ alkyl group that may have a halogen atom as a substituent on the phenyl ring, and a hydroxyl group, (44) a phenyl group that may have a $\text{C}_1\text{-C}_4$ alkylenedioxy group as a substituent on the phenyl ring,

(45) a naphthyl $\text{C}_1\text{-C}_6$ alkyl group, (46) a phenoxy group that

20 may be substituted, on the phenyl ring, by 1 to 3 groups

selected from the group consisting of a cyano group, a $\text{C}_1\text{-C}_6$ alkyl group that may have a halogen atom as a substituent, and a $\text{C}_1\text{-C}_6$ alkoxy group that may have a halogen atom as a

substituent, (47) a phenoxy $\text{C}_1\text{-C}_6$ alkyl group, (48) a phenyl

25 $\text{C}_1\text{-C}_6$ alkoxy group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a

halogen atom, a $\text{C}_1\text{-C}_6$ alkyl group that may have a halogen atom as a substituent, and a $\text{C}_1\text{-C}_6$ alkoxy group that may have a

halogen atom as a substituent, (49) a group $-(\text{B}_{12}\text{CO})\text{t}-\text{N}(\text{R}^{20})\text{R}^{21}$,

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- (50) a group $-(CO)O-B_{13}-N(R^{22})R^{23}$, (51) a 1,2,3,4-tetrahydronaphthyl-substituted C_1-C_6 alkyl group that may be substituted, on the 1,2,3,4-tetrahydronaphthalene ring, by 1 to 5 C_1-C_6 alkyl groups as a substituent(s), (52) a C_3-C_{16} cycloalkyl group that may have a hydroxyl group as a substituent, (53) a piperidinyl group that may be substituted, on the piperidine ring, by 1 to 3 C_1-C_6 alkyl groups as a substituent(s), (54) a quinolyl C_1-C_6 alkyl group, (55) a 1,2,3,4-tetrazolyl C_1-C_6 alkyl group that may have a group selected from the group consisting of a C_1-C_6 alkyl group and a phenyl C_1-C_6 alkyl group as a substituent on the tetrazole ring, (56) a thiazolyl C_1-C_6 alkyl group that may have a phenyl group as a substituent on the thiazole ring, (57) a benzoyl C_1-C_6 alkyl group that may have 1 to 3 groups selected from the group consisting of a C_1-C_6 alkoxy group and a halogen atom as a substituent(s) on the phenyl ring, (58) a piperidinyl C_1-C_6 alkyl group that may have a C_1-C_6 alkyl group as a substituent on the piperidine ring, (59) an imidazolyl group that may have 1 to 3 phenyl groups as a substituent(s) on the imidazole ring, (60) a benzimidazolyl group that may have 1 to 3 C_1-C_6 alkyl groups as a substituent(s) on the benzimidazole ring, (61) a pyridyl C_1-C_6 alkoxy group, (62) a 1,2,3,4-tetrahydroquinolyl C_1-C_6 alkyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (63) a 1,3,4-oxadiazolyl C_1-C_6 alkyl group that may have an oxo group as a substituent on the 1,3,4-oxadiazole ring, (64) a C_3-C_{16} cycloalkyl C_1-C_6 alkyl group, (65) a tetrahydropyranyl group, (66) a thienyl C_1-C_6 alkyl group, (67) a pyrimidinylcarbonyl group that may have an oxo group as a substituent on the pyrimidine ring, (68) a hydroxyl group, (69) a carboxy group, (70) a C_1-C_6 alkoxy C_1-C_6

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alkyl group, (71) a C₁-C₆ alkoxy C₁-C₆ alkoxy group, (72) a benzoyloxy group, (73) a C₁-C₆ alkoxycarbonyl C₁-C₆ alkoxy group, (74) a carboxy C₁-C₆ alkoxy group, (75) a phenoxy C₂-C₆ alkanoyl group, (76) a 1,2,3,4-tetrahydroquinolylcarbonyl group
 5 that may have an oxo group as a substituent on the tetrahydroquinoline ring, (77) a phenylsulfonyl group, (78) an imidazolyl C₂-C₆ alkanoyl group, (79) an imidazolyl C₁-C₆ alkyl group, (80) a pyridylcarbonyl group, (81) an imidazolylcarbonyl group, (82) a C₁-C₆ alkoxycarbonyl C₁-C₆ alkyl group, (83) a
 10 carboxy C₁-C₆ alkyl group, (84) a group $-(O-B_{15})_s-CO-N(R^{26})R^{27}$, (85) a group $-N(R^{28})-CO-B_{16}-N(R^{29})R^{30}$, (86) a group $-N(R^{31})-B_{17}-CO-N(R^{32})R^{33}$, (87) a benzoxazolyl group, (88a) a benzothienyl group, (89a) an oxo group, and (90a) a 1,2,3,4-tetrahydroquinolyl group that may have an oxo group as a
 15 substituent on the tetrahydroquinoline ring,

B₁₂ represents a C₁-C₆ alkylene group,

t represents 0 or 1,

each of R²⁰ and R²¹, which are identical or different,
 represents a hydrogen atom; a C₃-C₁₆ cycloalkyl group; an amino
 20 group that may have a C₁-C₆ alkoxycarbonyl group as a substituent; a benzoyl group that may have 1 to 3 C₁-C₆ alkoxy groups as a substituent(s) on the phenyl ring; a C₁-C₆ alkyl group; a C₁-C₆ alkyl group having 1 to 2 phenyl groups that may be substituted, on the phenyl ring, by 1 to 3 groups selected
 25 from the group consisting of a C₁-C₆ alkoxycarbonyl group, a cyano group, a nitro group, a phenyl group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a C₁-C₆ alkoxy group that may have a halogen atom

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as a substituent, and a C₁-C₆ alkylthio group; a phenyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkoxy group that may have a halogen atom as a substituent and a C₁-C₆ alkyl group that may have a halogen atom as a substituent; a C₁-C₆ alkoxycarbonyl group; a C₃-C₁₆ cycloalkyl C₁-C₆ alkyl group; a pyrrolidinyl C₁-C₆ alkyl group that may have 1 to 3 C₁-C₆ alkyl groups that may have a hydroxyl group as a substituent on the pyrrolidine ring; an amino-substituted C₁-C₆ alkyl group that may have a group selected from the group consisting of a phenyl group and a C₁-C₆ alkyl group as a substituent; a 1,2,3,4-tetrahydronaphthyl-substituted C₁-C₆ alkyl group that may have 1 to 5 C₁-C₆ alkyl groups as a substituent(s) on the 1,2,3,4-tetrahydronaphthalene ring; a naphthyl C₁-C₆ alkyl group; a pyridyl C₁-C₆ alkyl group; a quinolyl C₁-C₆ alkyl group; a 1,2,3,4-tetrazolyl C₁-C₆ alkyl group that may have 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group and a phenyl C₁-C₆ alkyl group as a substituent(s) on the tetrazole ring; a 1,2,4-triazolyl C₁-C₆ alkyl group; a tetrahydrofuryl C₁-C₆ alkyl group that may have a hydroxyl group as a substituent on the C₁-C₆ alkyl group; a phenoxy C₁-C₆ alkyl group that may have 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group and a nitro group as a substituent(s) on the phenyl ring; a phenyl C₂-C₆ alkanoyl group; a C₂-C₆ alkanoyl group that may have a halogen atom as a substituent; an imidazolyl C₂-C₆ alkanoyl group; a C₁-C₆ alkoxycarbonyl C₁-C₆ alkyl group; a pyridyl group; or a carboxy C₁-C₆ alkyl group, or R²⁰ and R²¹, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5-

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26m

to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group, a phenyl group that may have 1 to 3 groups selected from the group

- 5 consisting of a halogen atom and a C₁-C₆ alkyl group that may have a halogen atom as a substituent(s) on the phenyl ring, and a phenyl C₁-C₆ alkyl group that may have a C₁-C₄ alkylenedioxy group as a substituent on the phenyl ring,

o represents 0 or 1,

- 10 B₁₃ represents a C₁-C₆ alkylene group,

each of R²² and R²³, which are identical or different, represents a hydrogen atom, a C₁-C₆ alkyl group, a benzoyl group that may have 1 to 3 C₁-C₆ alkoxy groups as a substituent(s) on the phenyl ring, a phenoxy C₁-C₆ alkyl group

15 that may have a C₁-C₆ alkyl group as a substituent on the phenyl ring, a phenyl C₁-C₆ alkyl group, or a phenyl group, or R²² and R²³, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated

- 20 heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group and a phenyl C₁-C₆ alkyl group that may have a C₁-C₄ alkylenedioxy group as a substituent on the phenyl ring,

- 25 B₁₅ represents a C₁-C₆ alkylene group,

s represents 0 or 1,

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26n

- each of R^{26} and R^{27} , which are identical or different, represents a hydrogen atom, a C_1-C_6 alkyl group, a phenyl C_1-C_6 alkyl group, or an imidazolyl C_1-C_6 alkyl group, or R^{26} and R^{27} , together with the nitrogen atom to which they bind, may bind to
- 5 each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 phenyl C_1-C_6 alkyl groups that may have a C_1-C_4 alkylenedioxy group as a substituent on the phenyl ring, as a substituent(s),
- 10 R^{28} represents a hydrogen atom or a C_1-C_6 alkyl group,
- B_{16} represents a C_1-C_6 alkylene group,
- R^{29} and R^{30} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated
- 15 heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a C_1-C_6 alkyl group, a phenyl group, and a phenyl C_1-C_6 alkyl group that may have a C_1-C_4 alkylenedioxy group as a substituent on the phenyl ring,
- 20 R^{31} represents a hydrogen atom or a C_1-C_6 alkyl group,
- B_{17} represents a C_1-C_6 alkylene group,
- R^{32} and R^{33} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated
- 25 heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting

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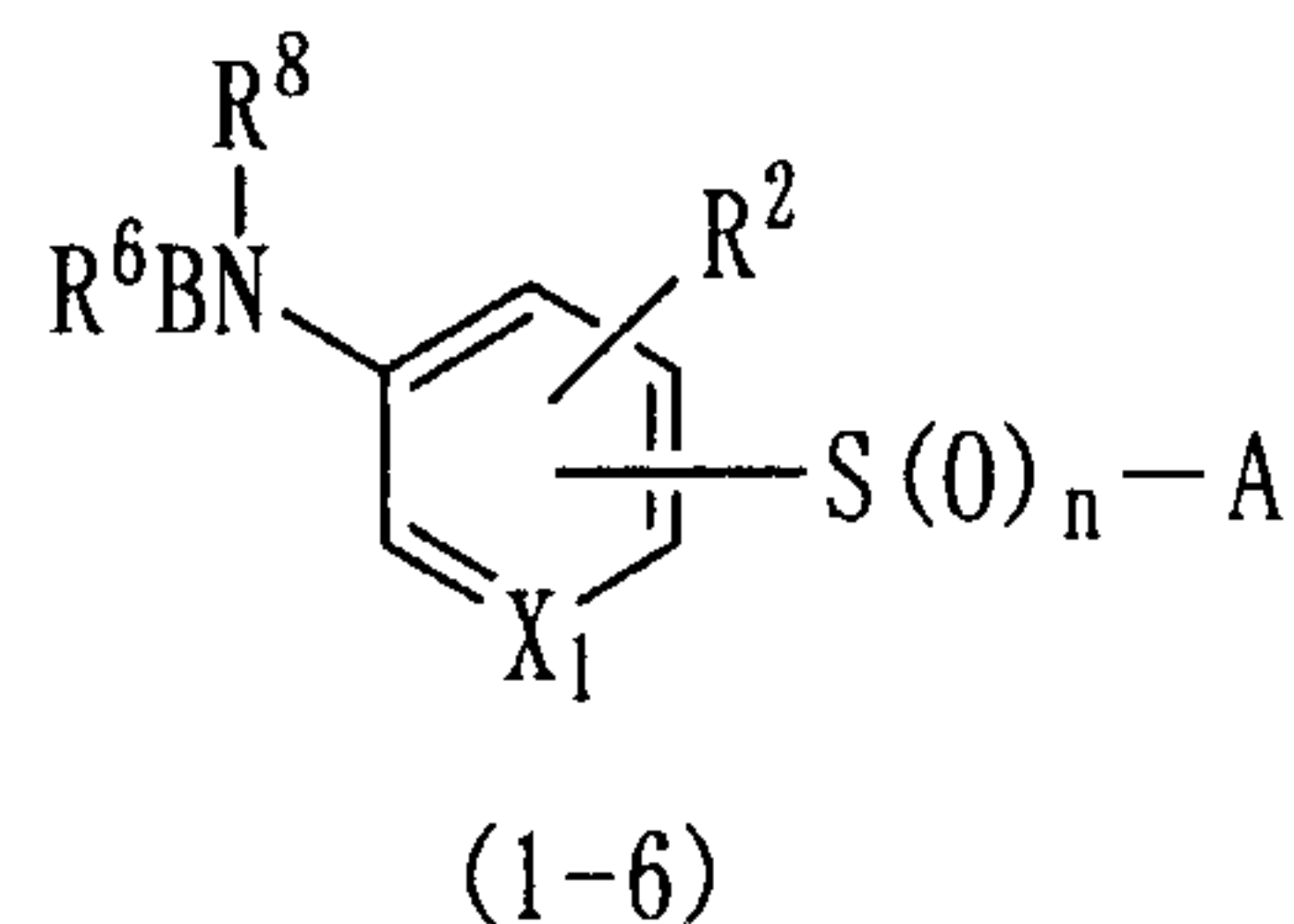
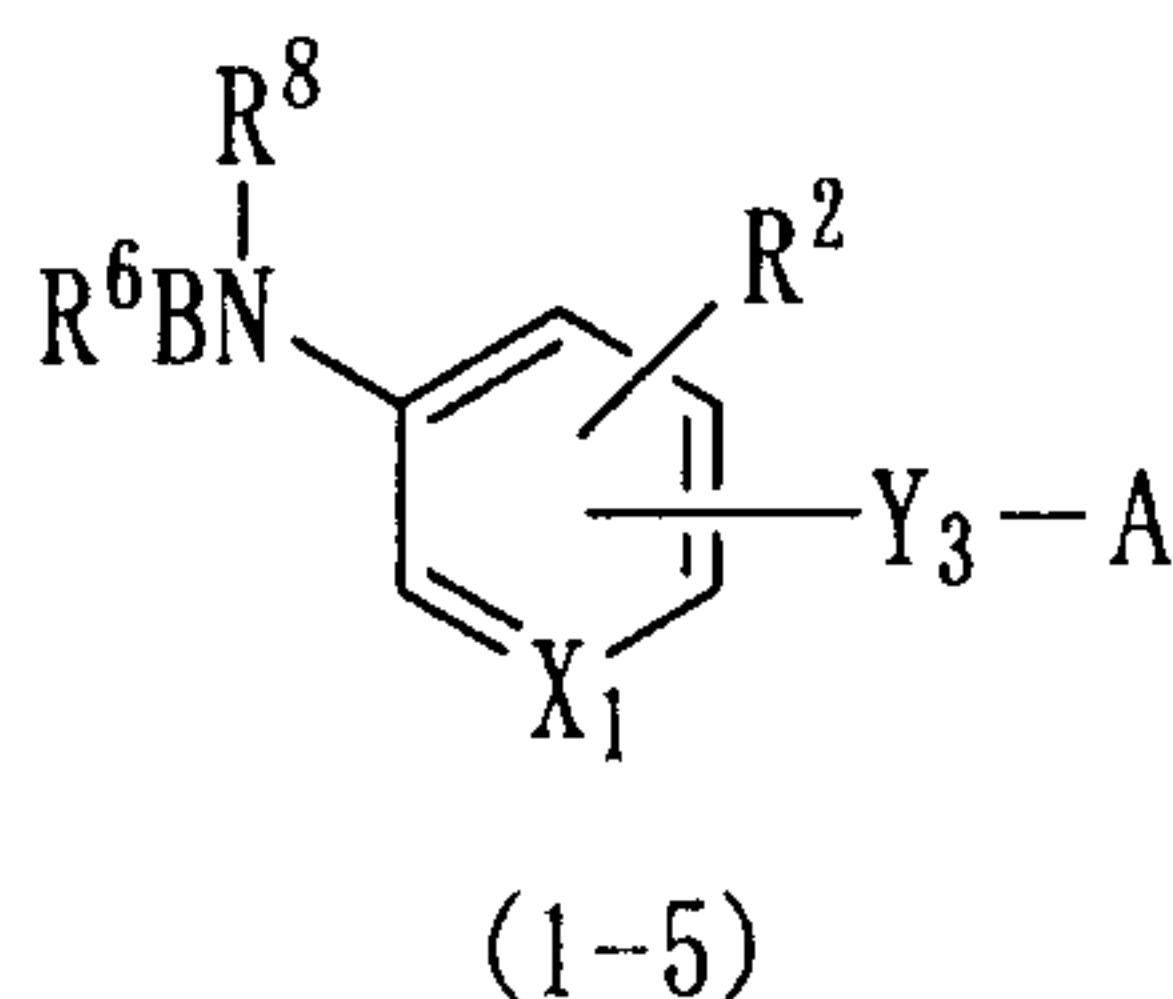
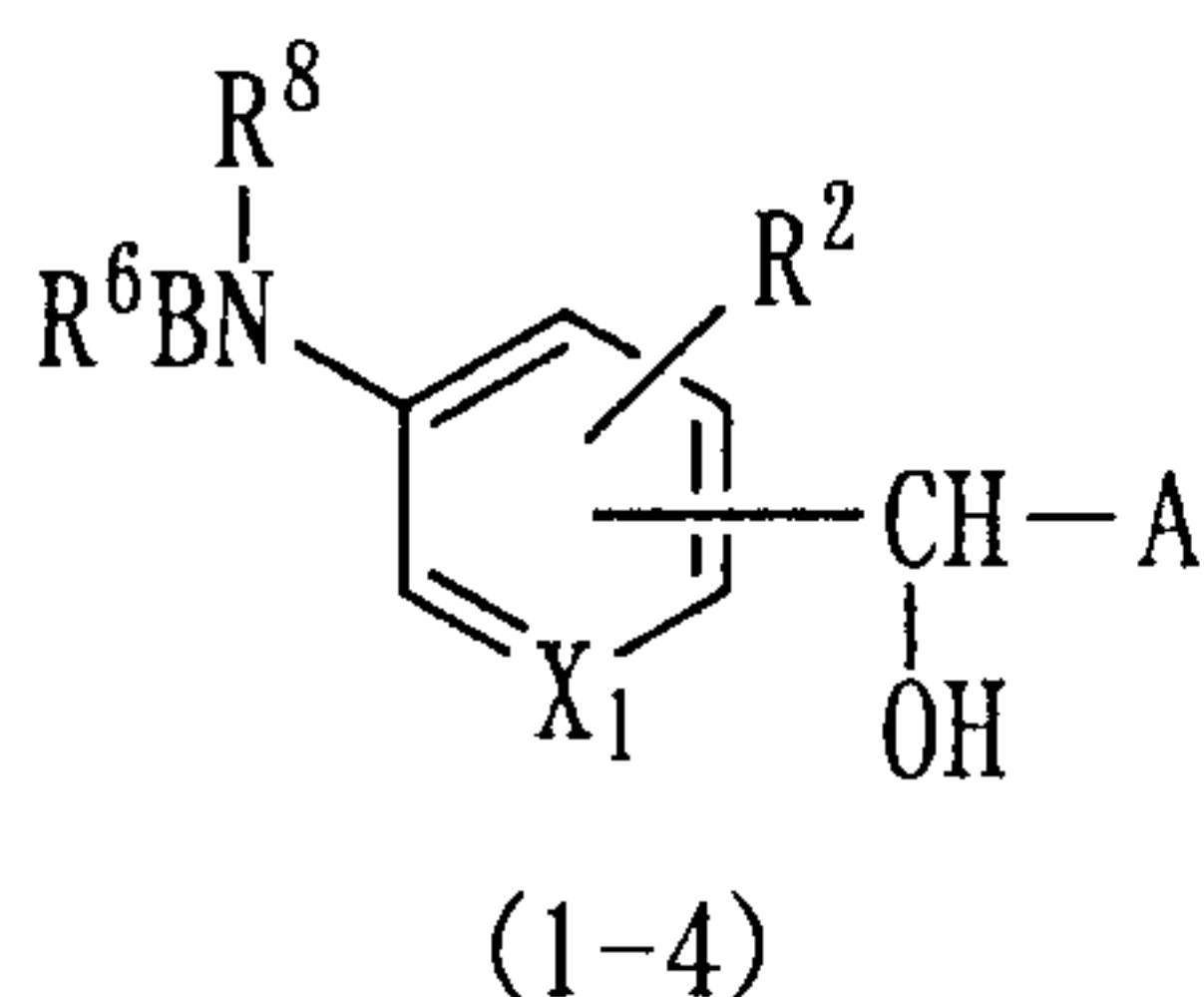
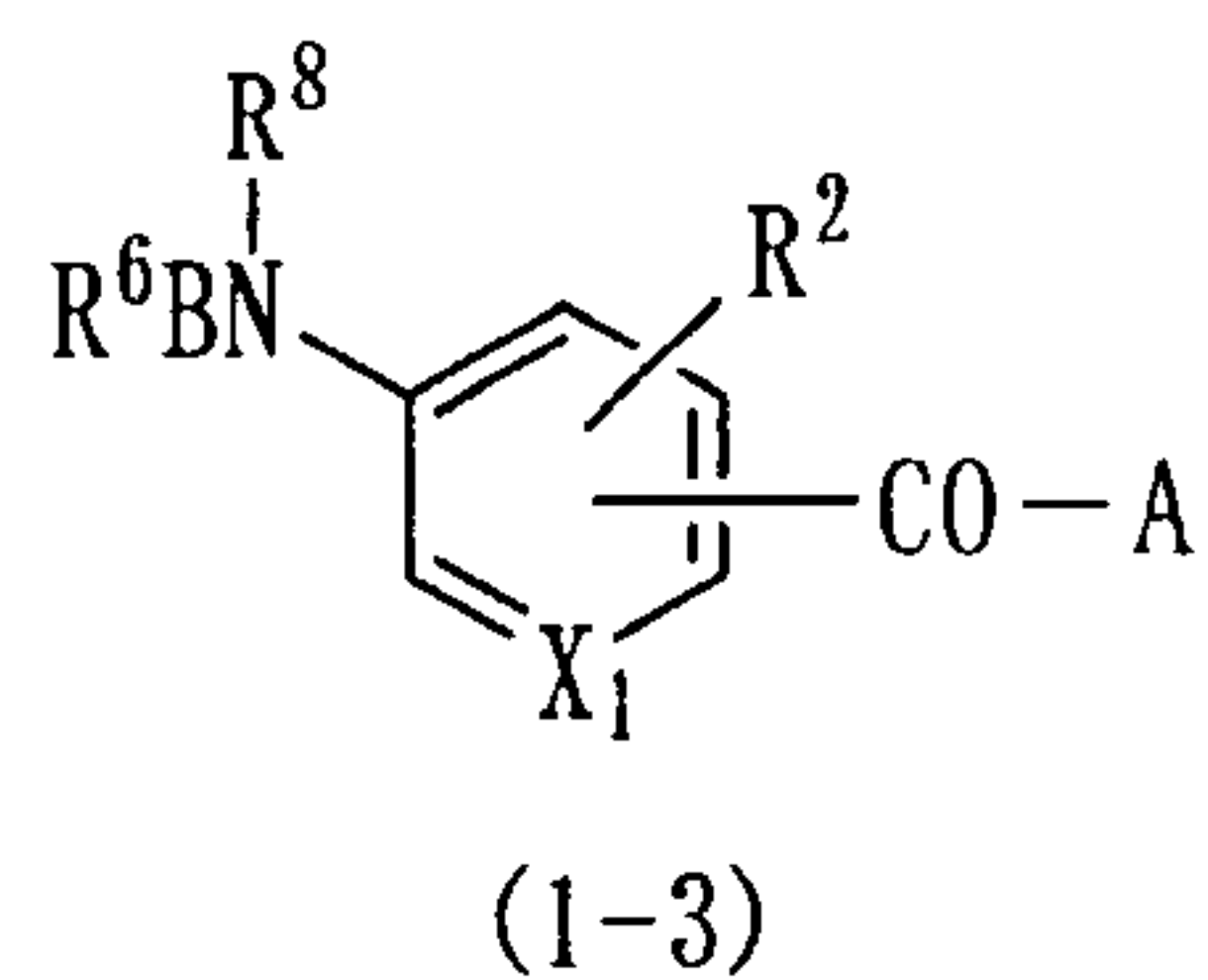
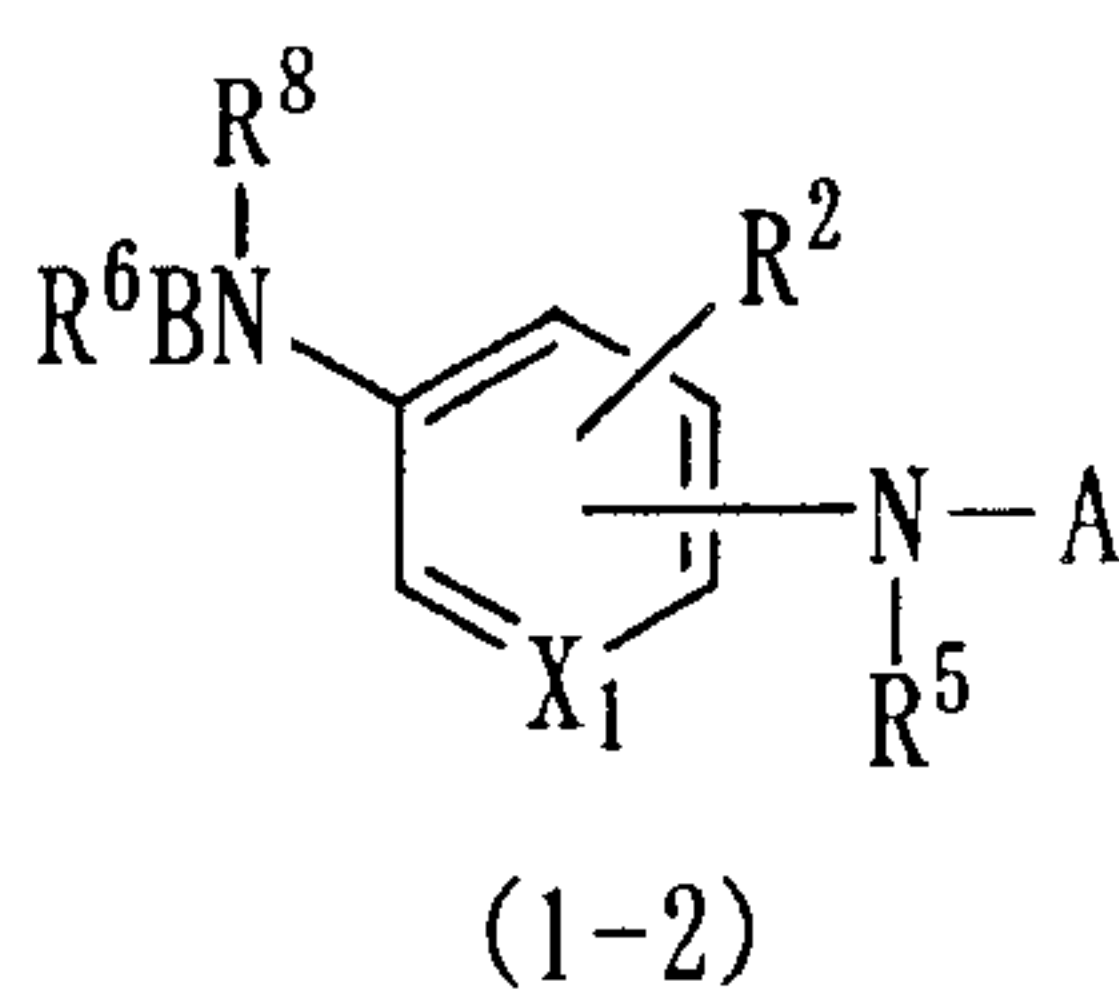
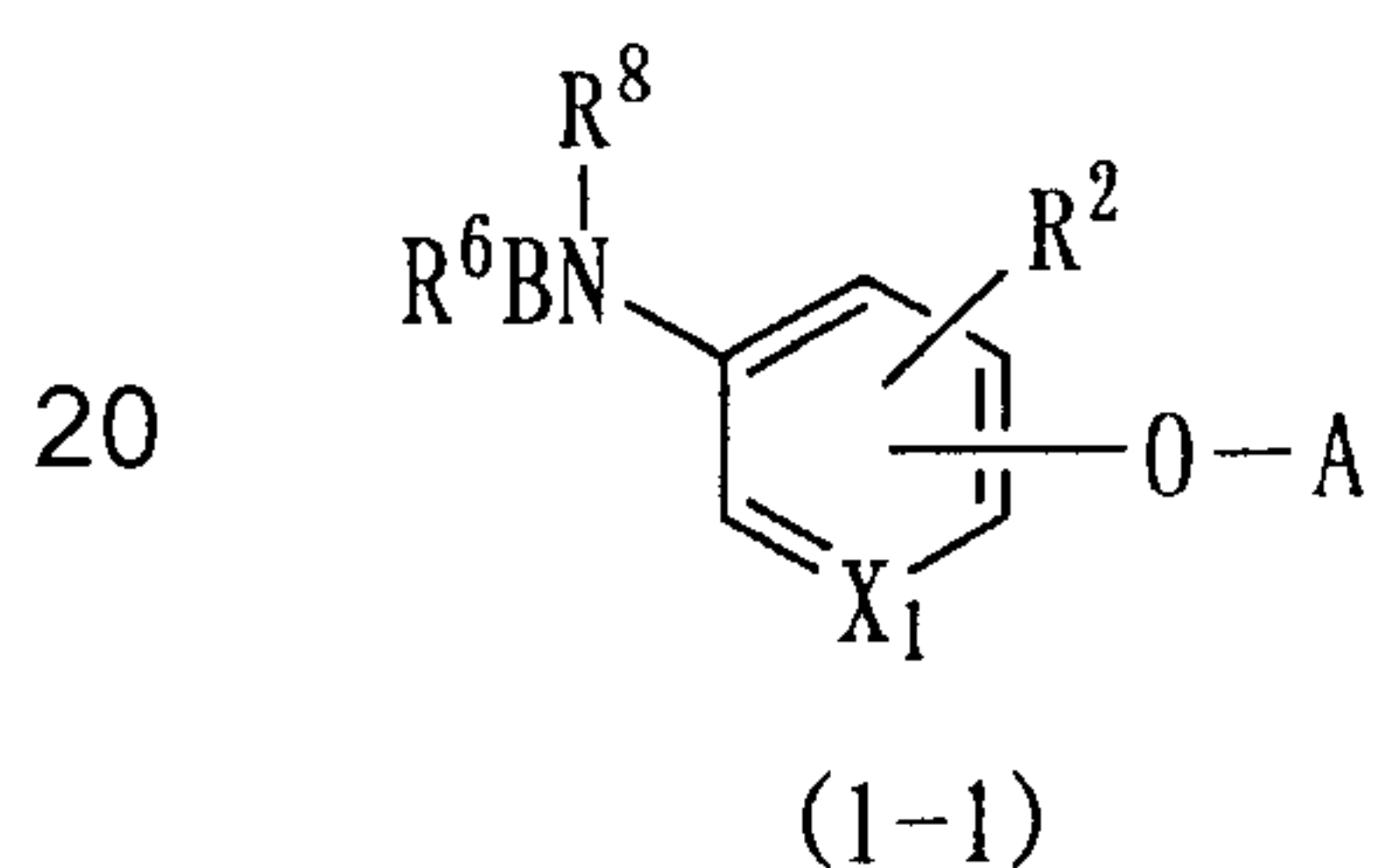
of a C₁-C₆ alkyl group, a phenyl group, and a phenyl C₁-C₆ alkyl group that may have a C₁-C₄ alkylenedioxy group as a substituent on the phenyl ring,

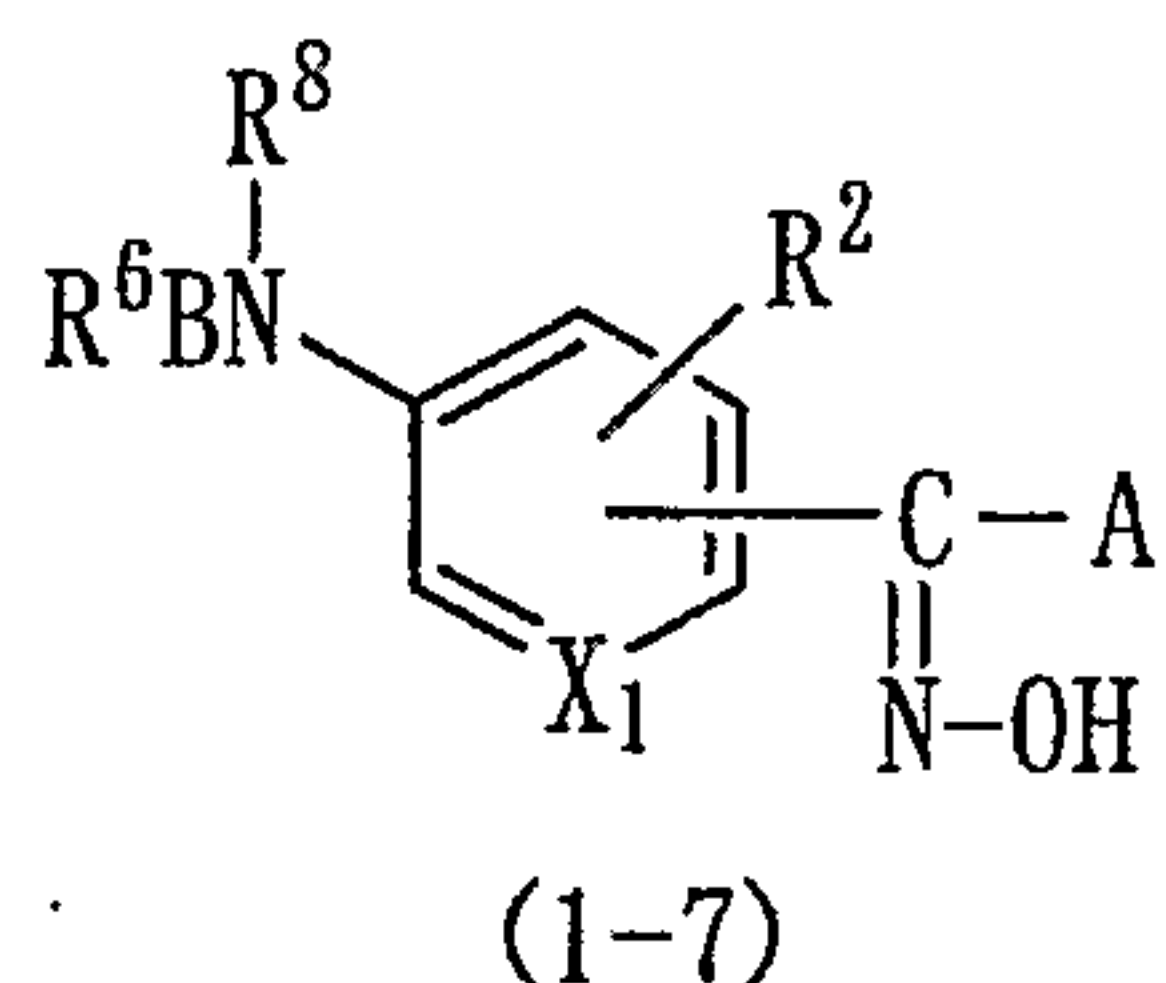
provided that the above described aromatic compound or a salt thereof satisfy the following requirements (i) and (ii):

(i) when X₁ represents a group -CH=, then R³ represents a hydrogen atom; and

(ii) when X₁ represents a group -CH=, 1 represents 1, and T represents -N(R¹⁷)-B₃-CO-, then R¹⁴ and R¹⁵, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 10-membered saturated or unsaturated heterocyclic ring, wherein the heterocyclic ring is substituted by 1 to 3 groups of (28) described above.

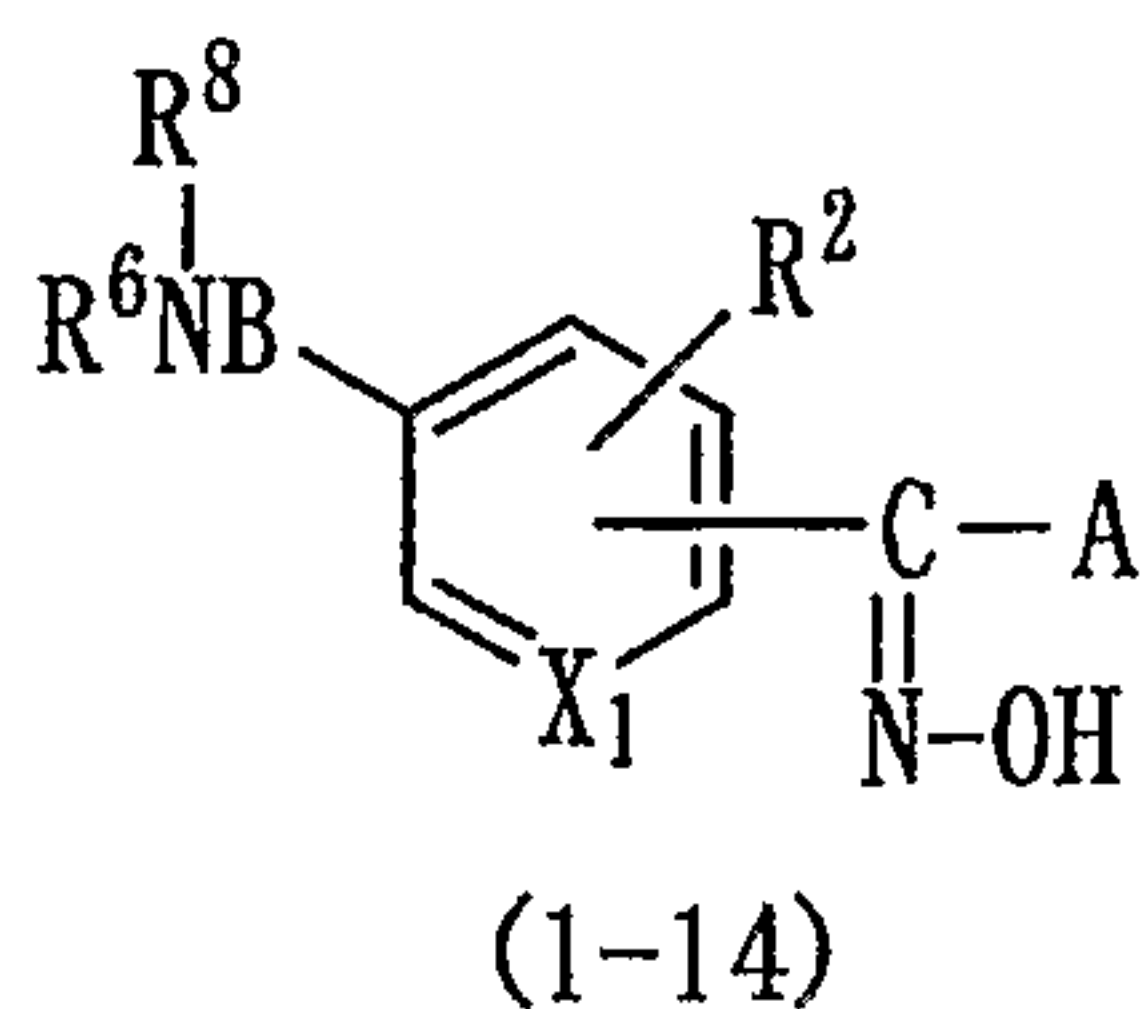
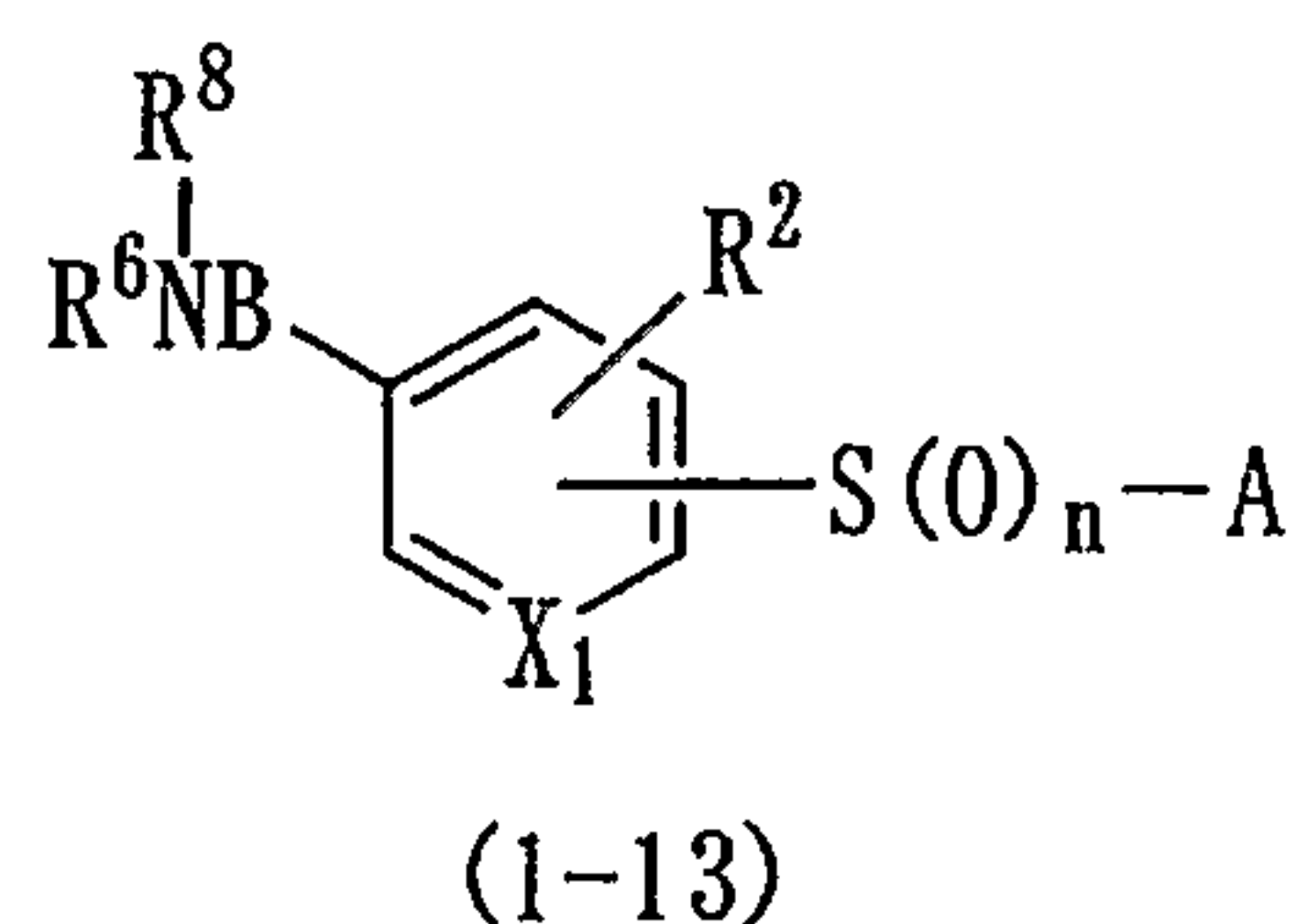
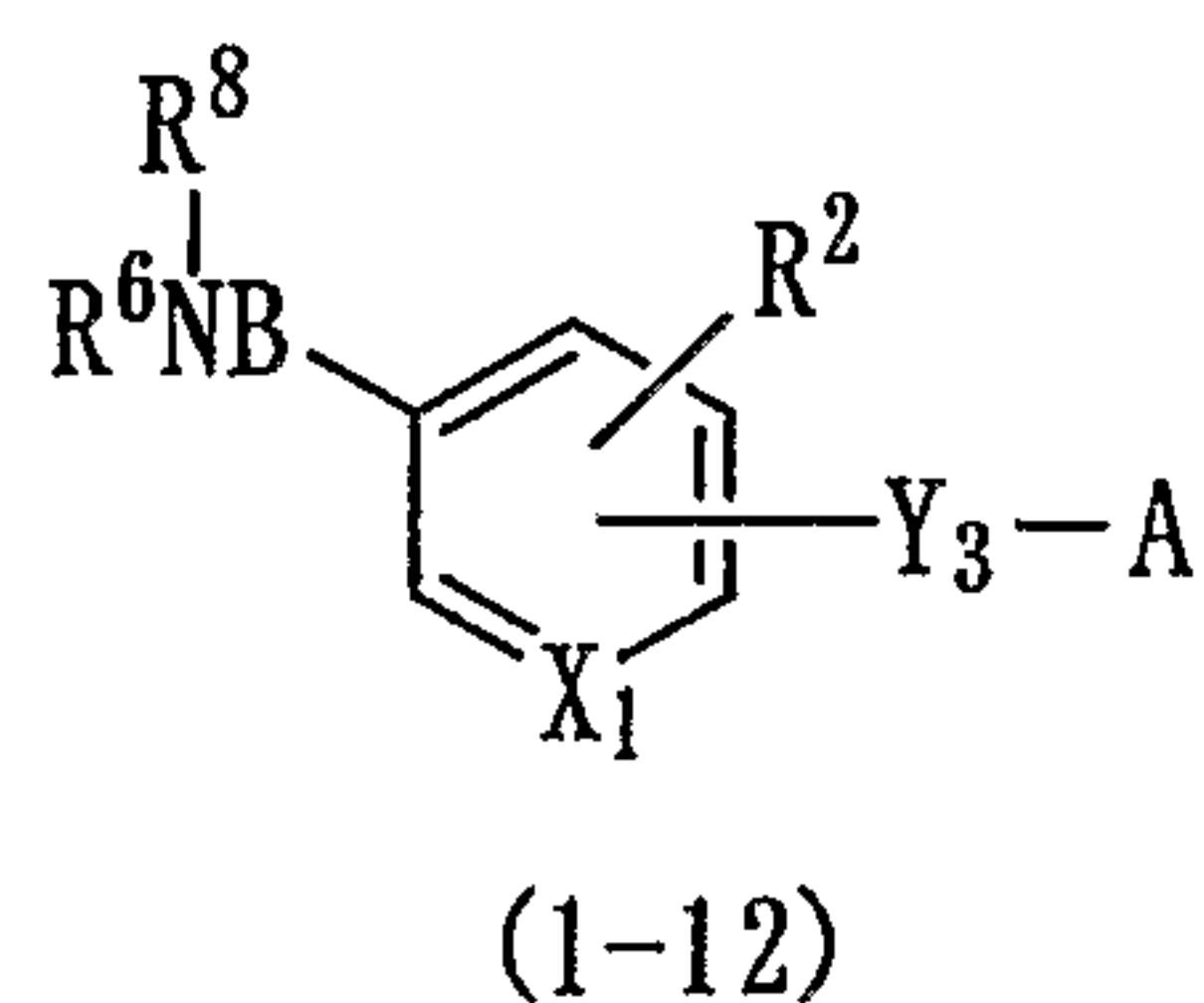
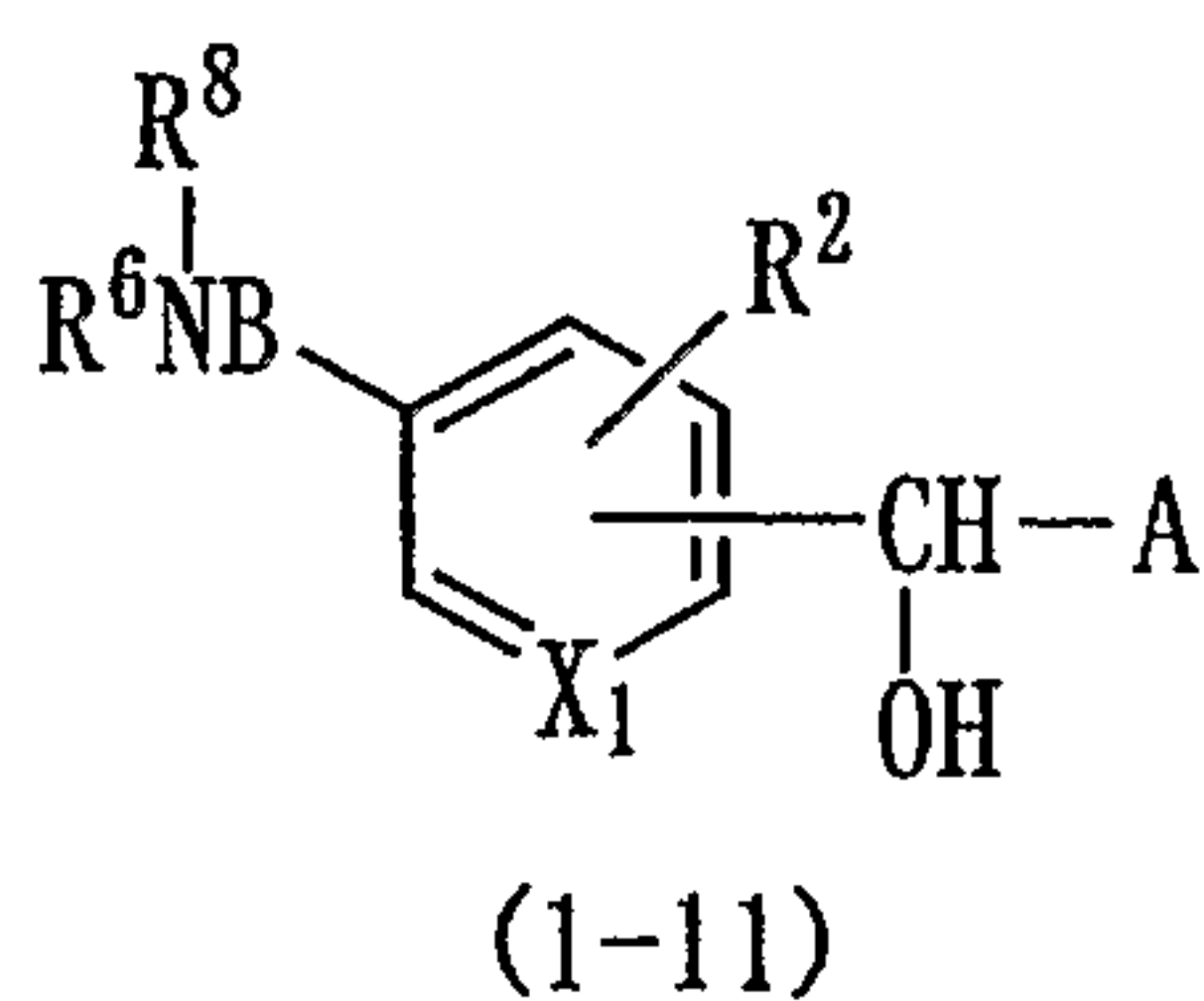
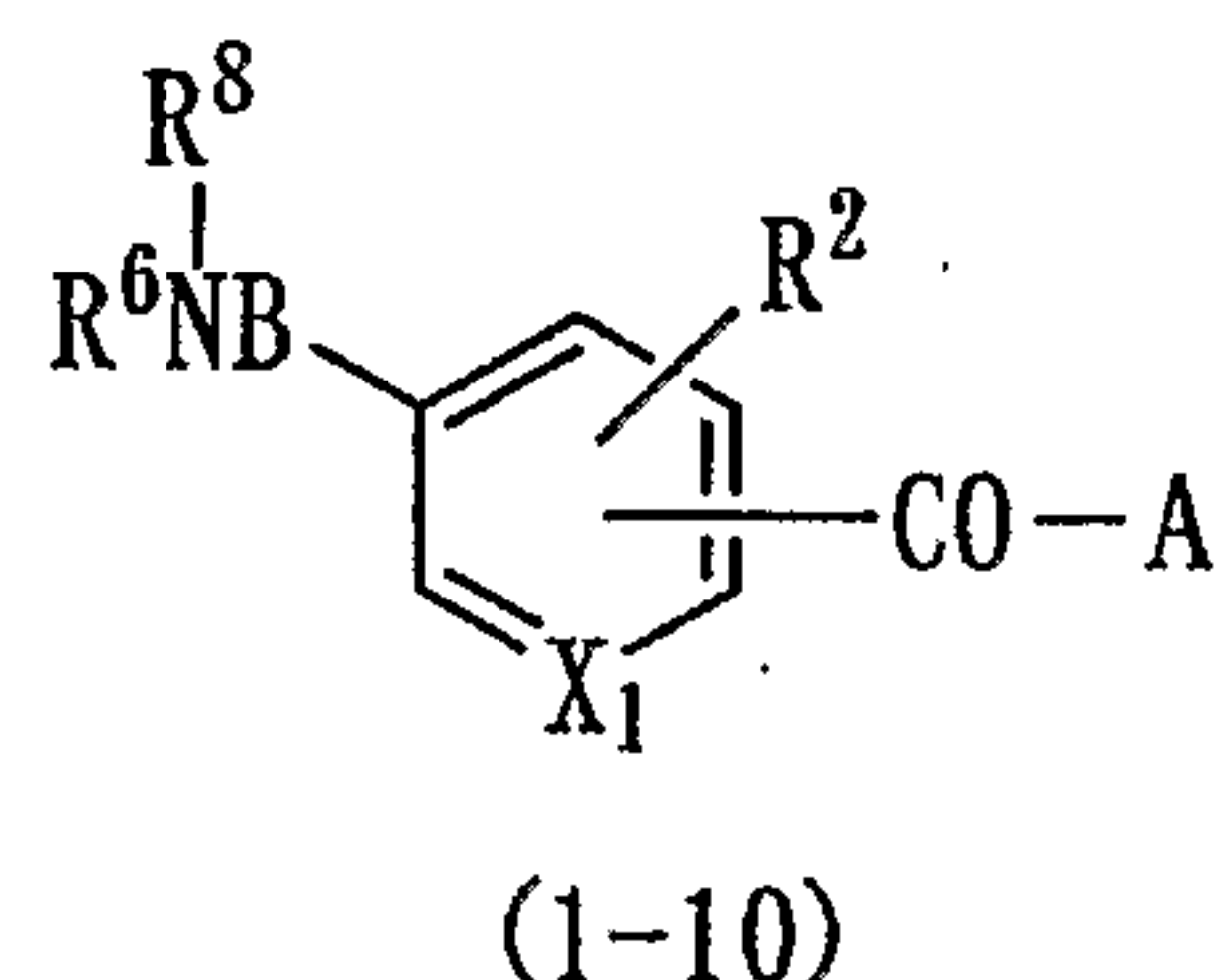
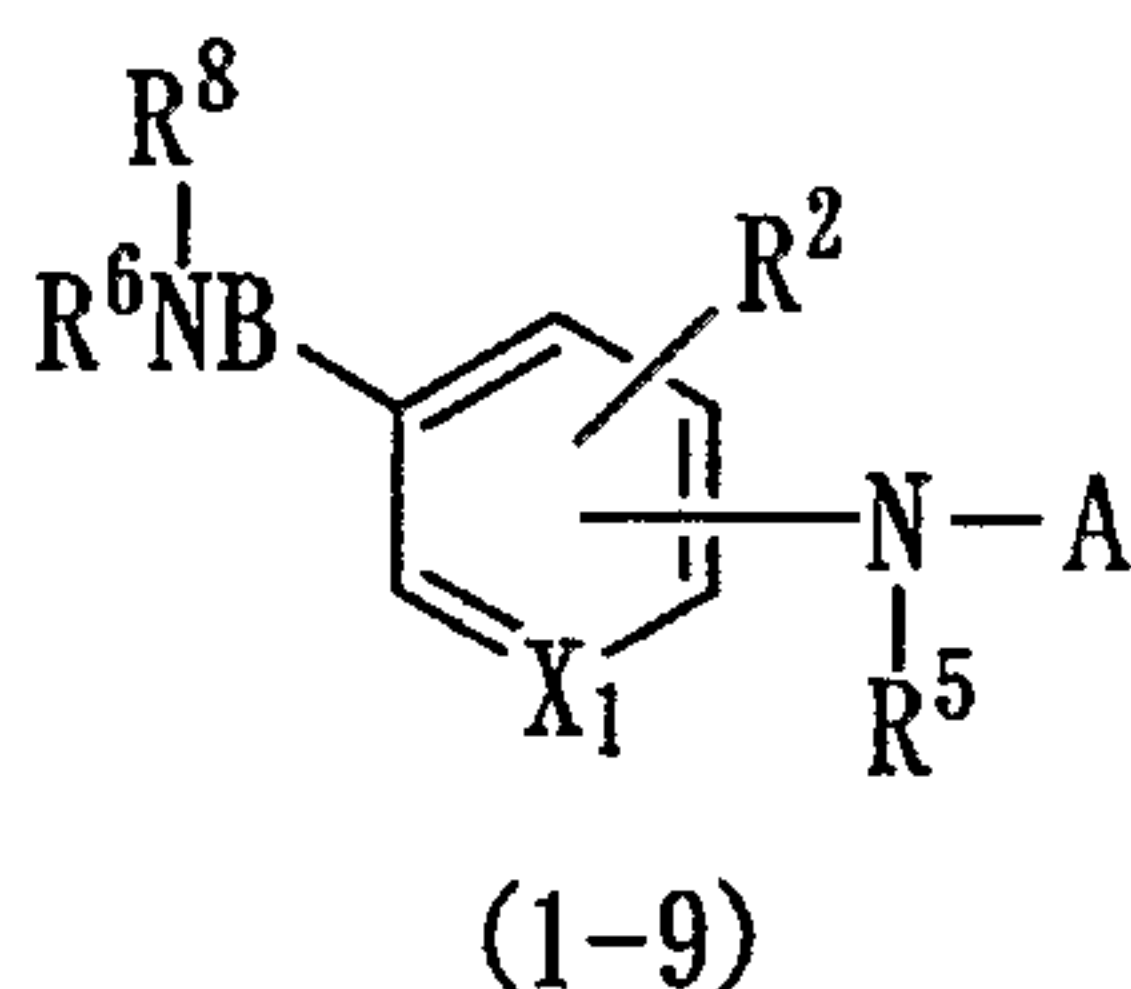
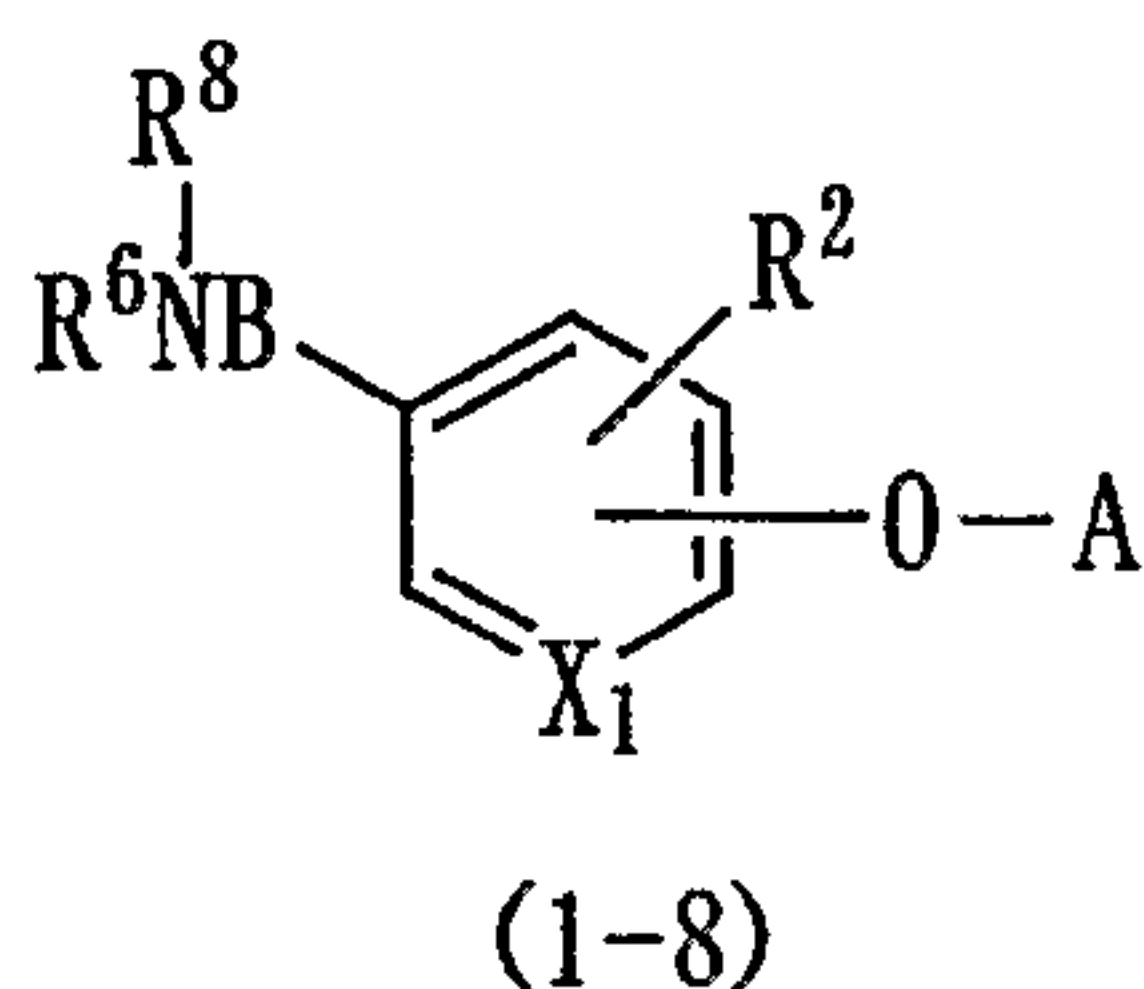
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-1) to (1-7):





[wherein, in said general formulas (1-1) to (1-7), R^6 , B, R^8 , R^2 , R^5 , n, X_1 , and A have the same meanings as described above, and Y_3 represents a lower alkylene group].

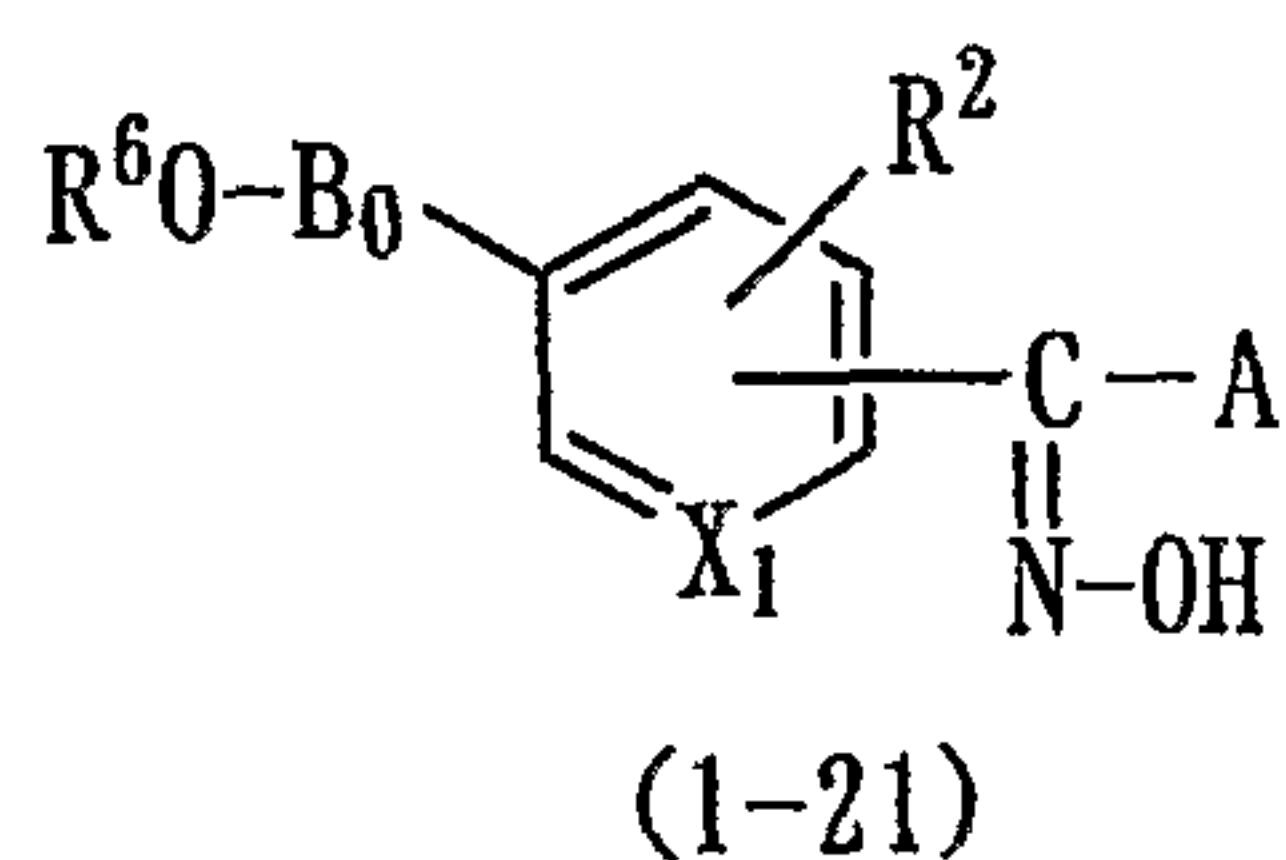
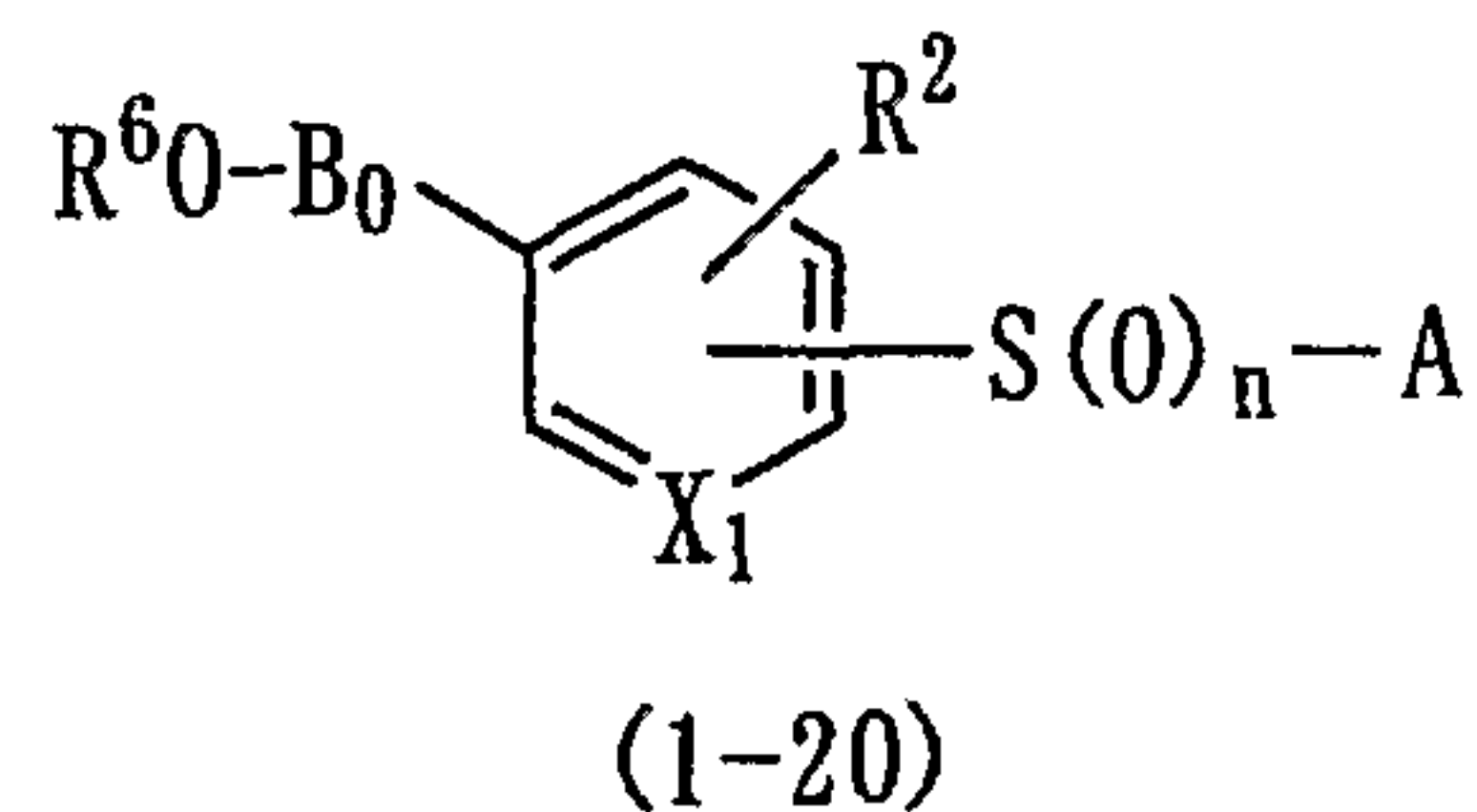
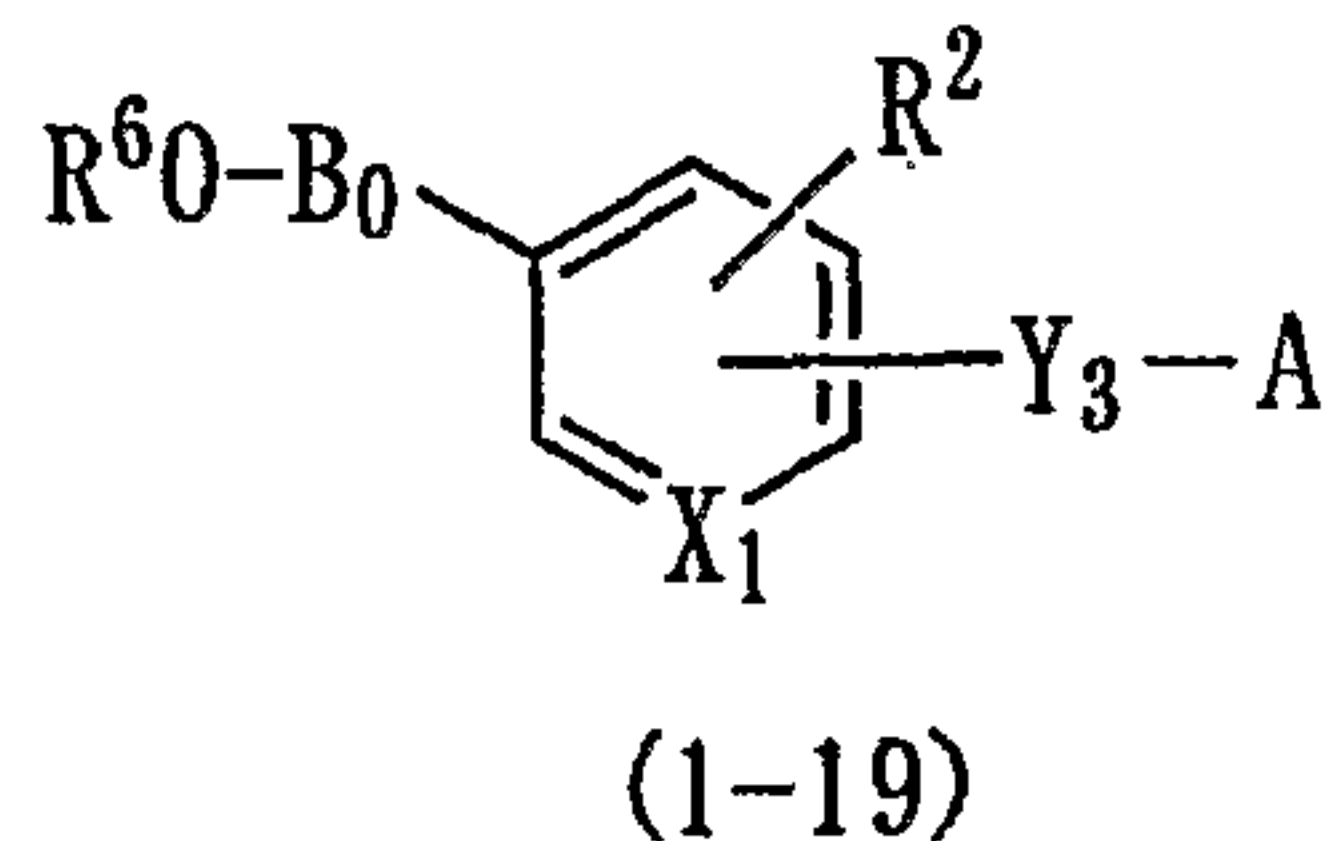
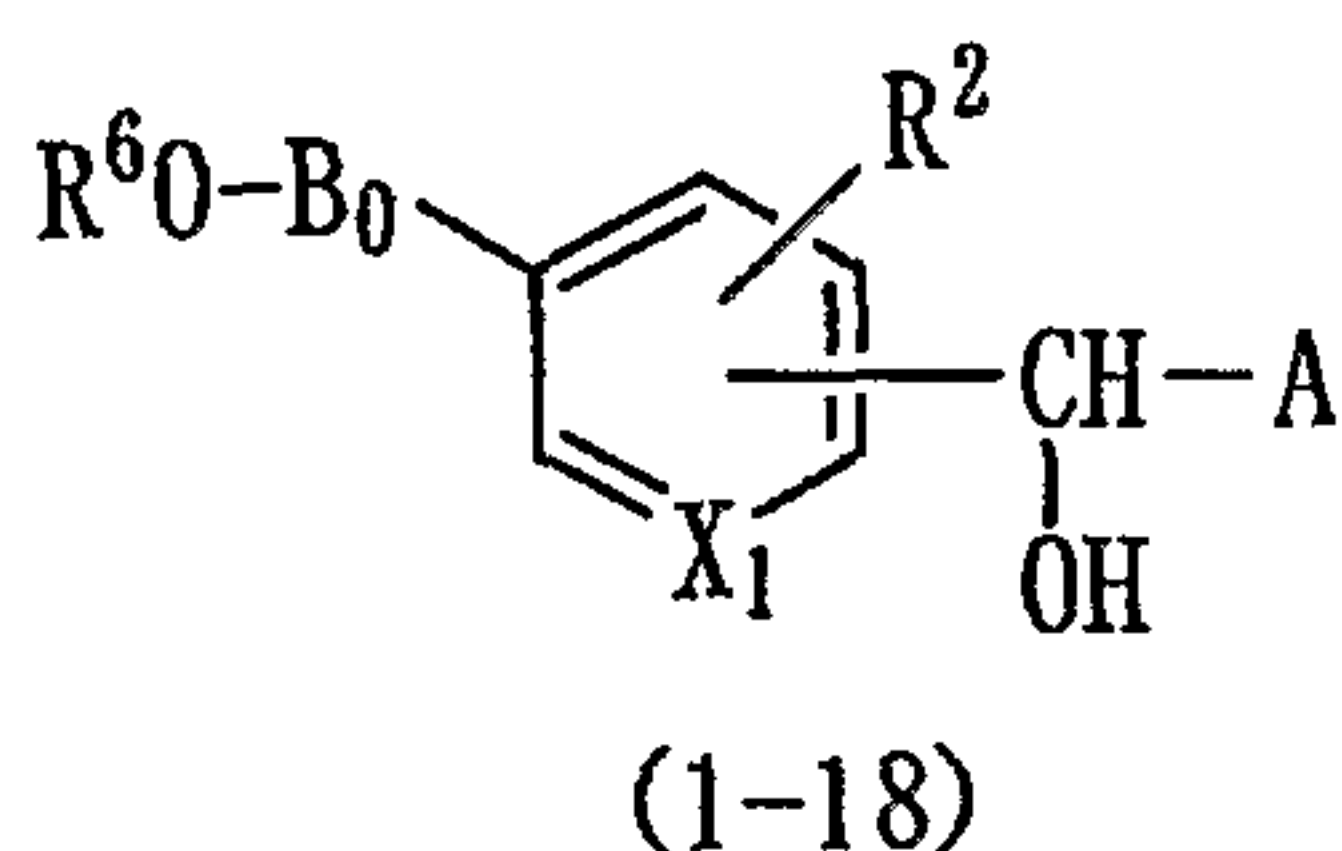
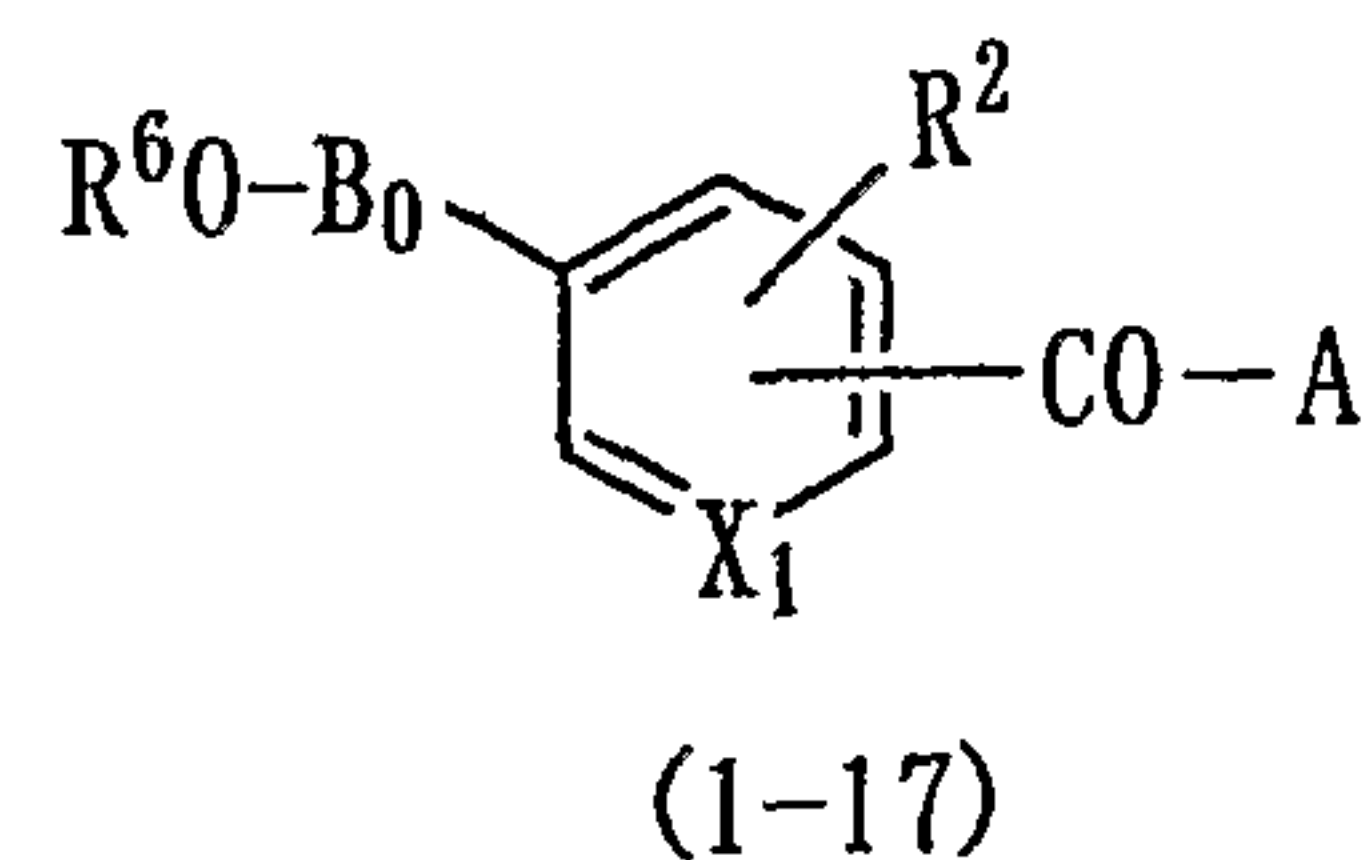
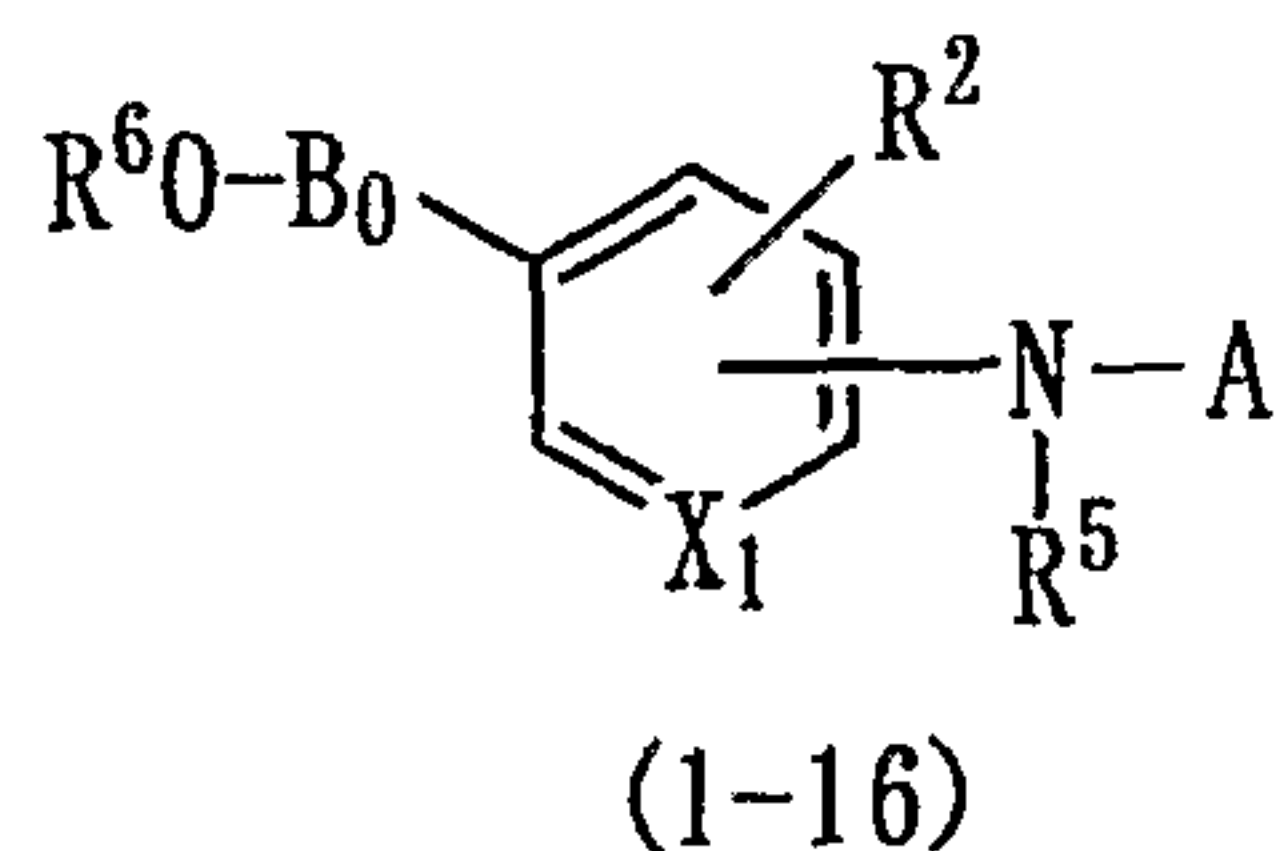
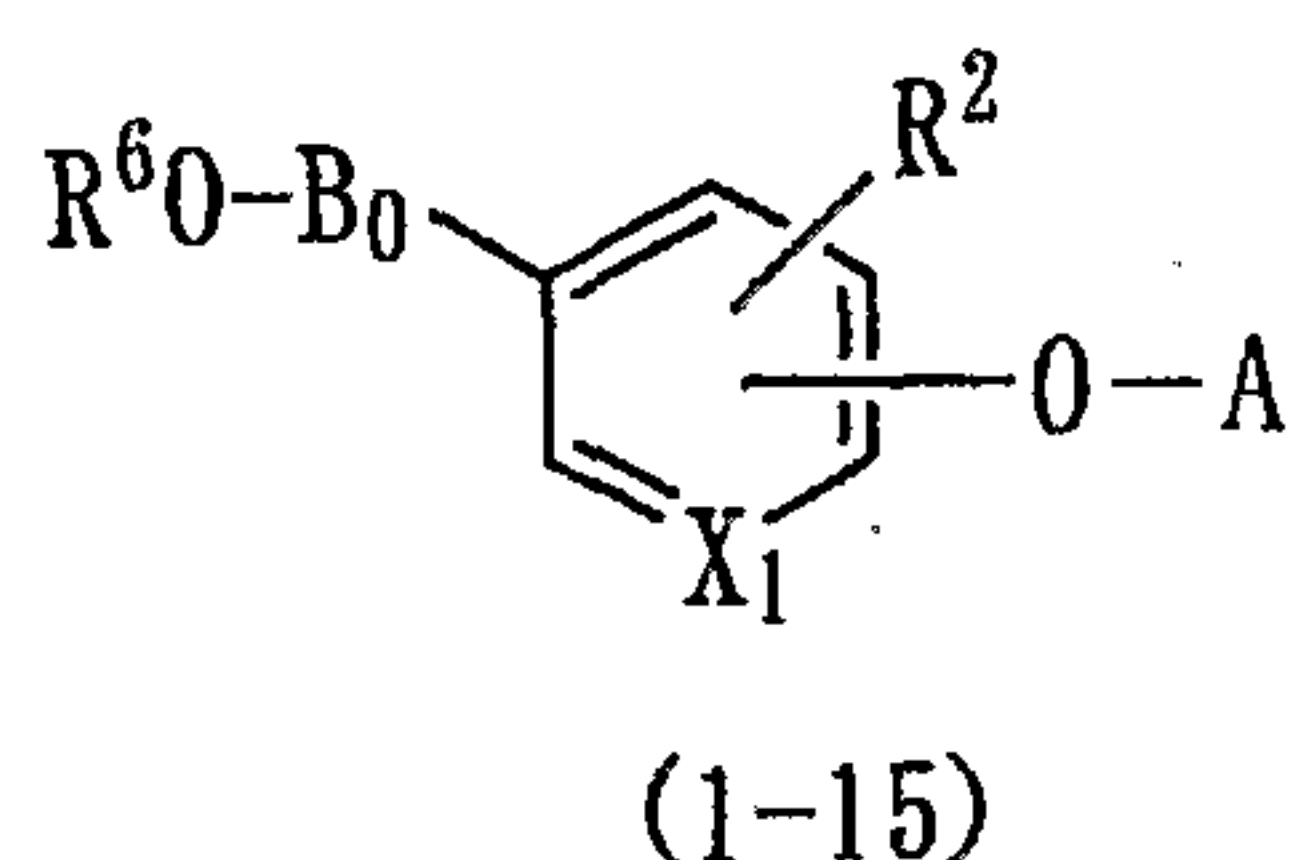
5 The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-8) to (1-14):



[wherein, in said general formulas (1-8) to (1-14), R^6 ,

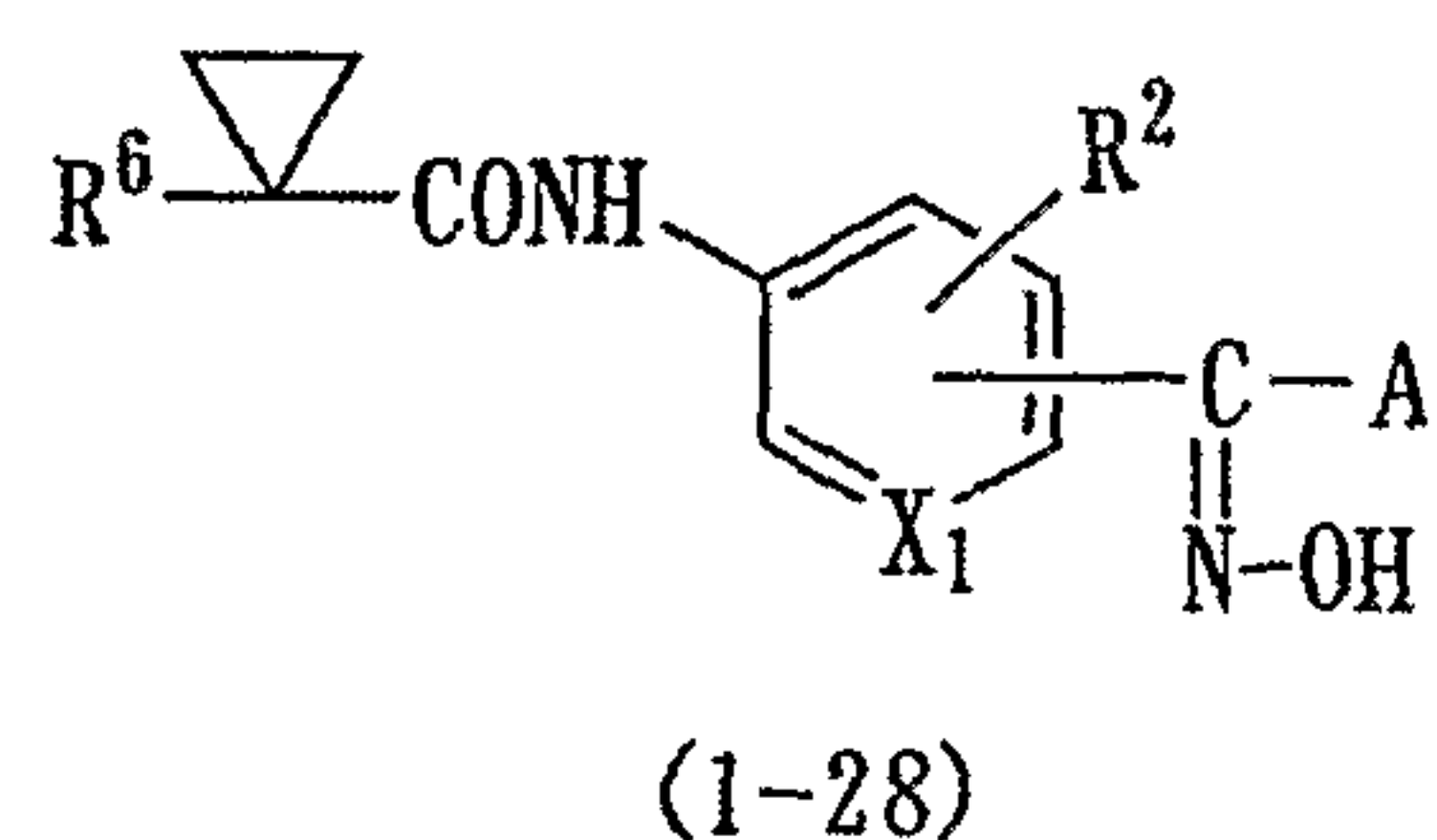
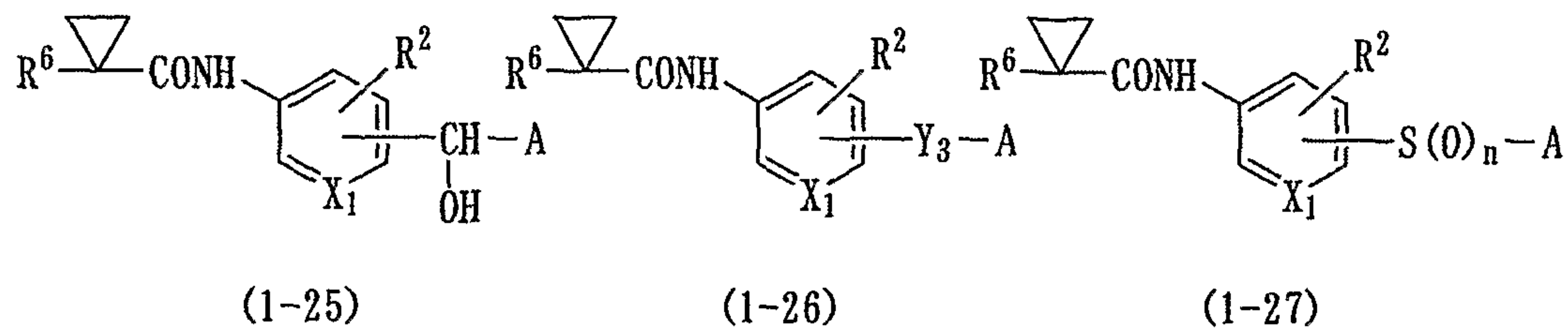
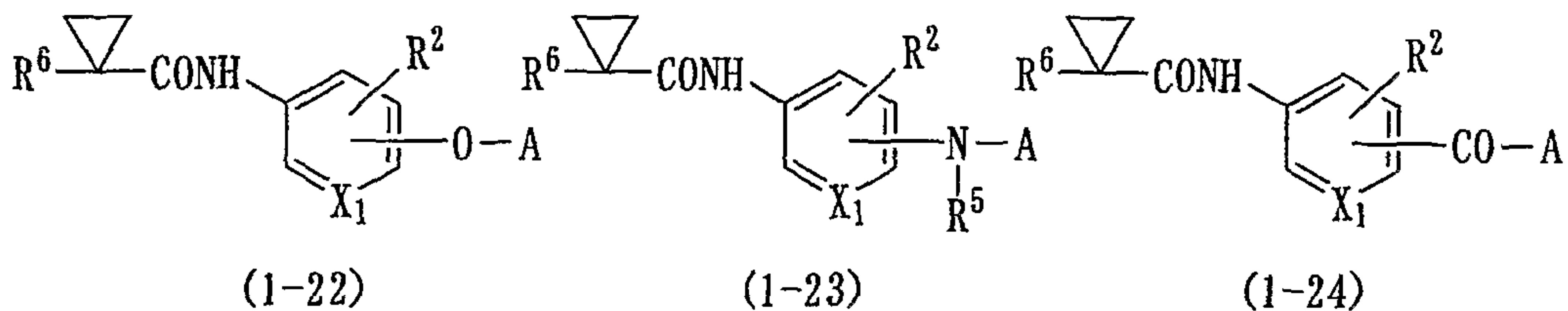
B, R^8 , R^2 , R^5 , n, X_1 , A and Y_3 have the same meanings as described above].

The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-15) to (1-21):



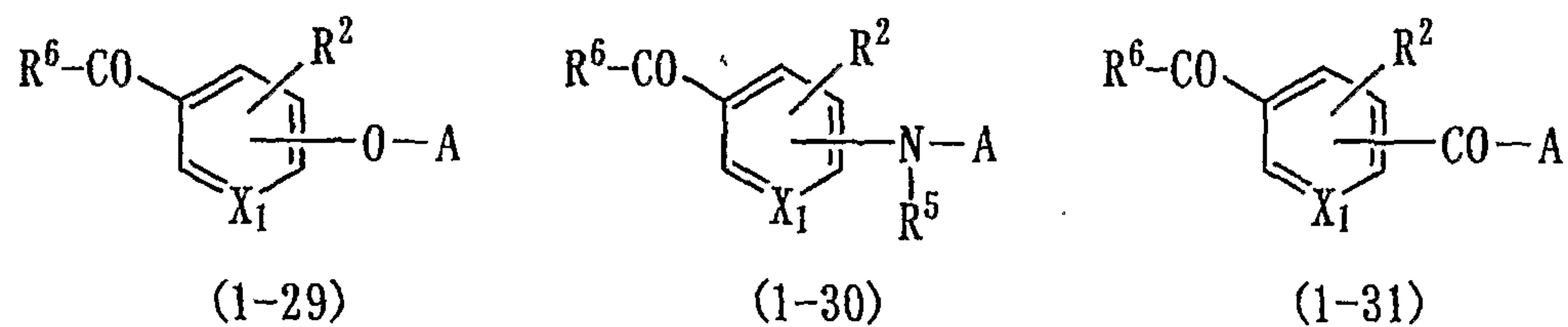
[wherein, in said general formulas (1-15) to (1-21), R^6 , B_0 , R^2 , R^5 , n, X_1 , A and Y_3 have the same meanings as described above].

The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-22) to (1-28):

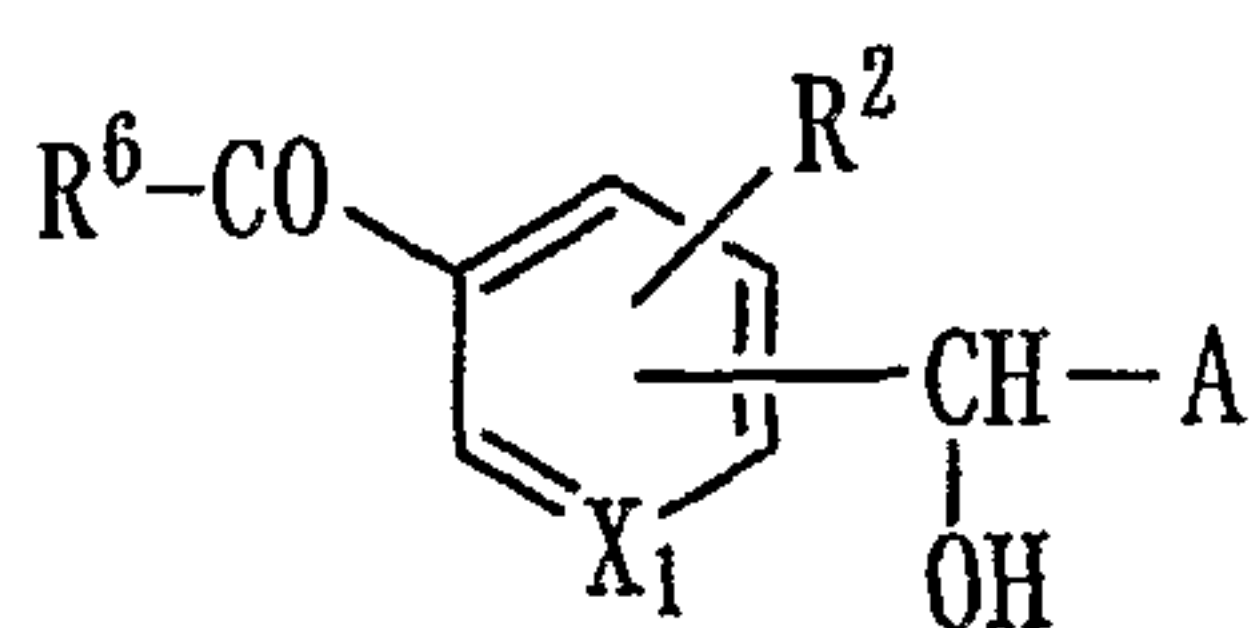


[wherein, in said general formulas (1-22) to (1-28), R^6 , R^2 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above].

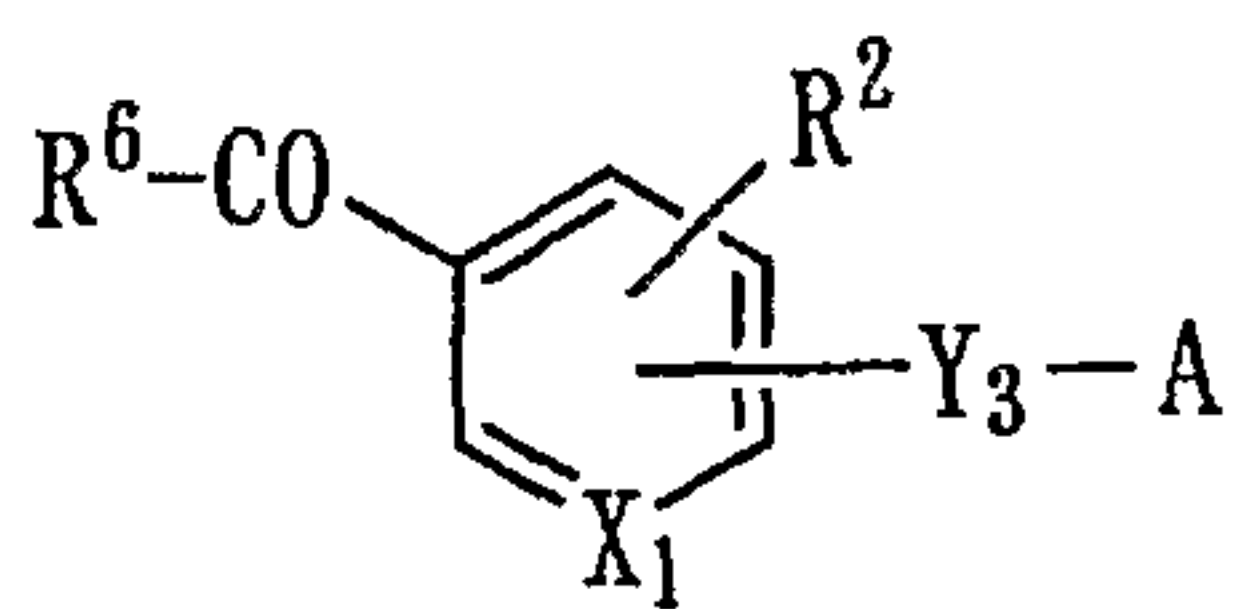
The above aromatic compound represented by
 5 the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-29) to (1-35):



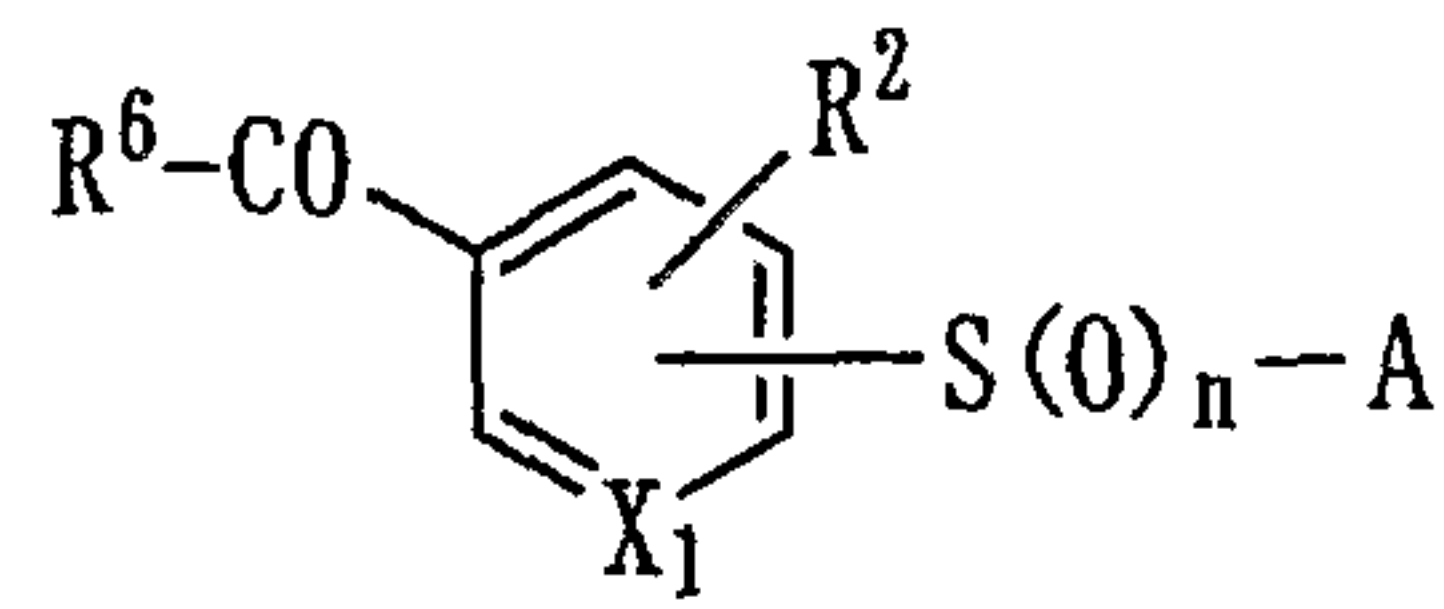
30



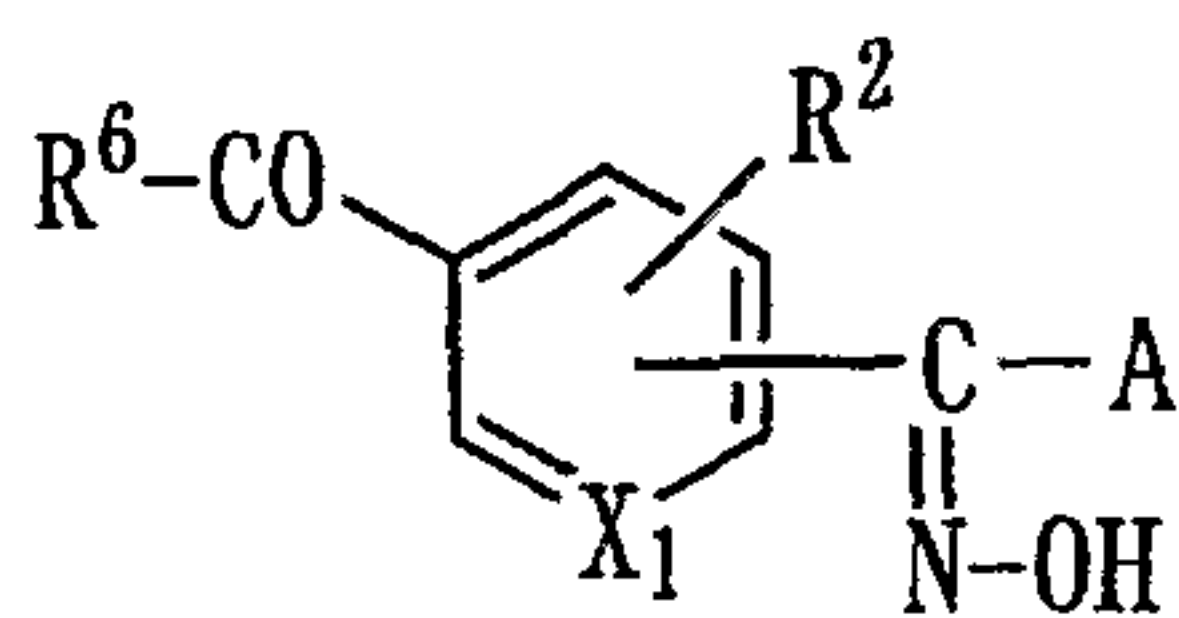
(1-32)



(1-33)



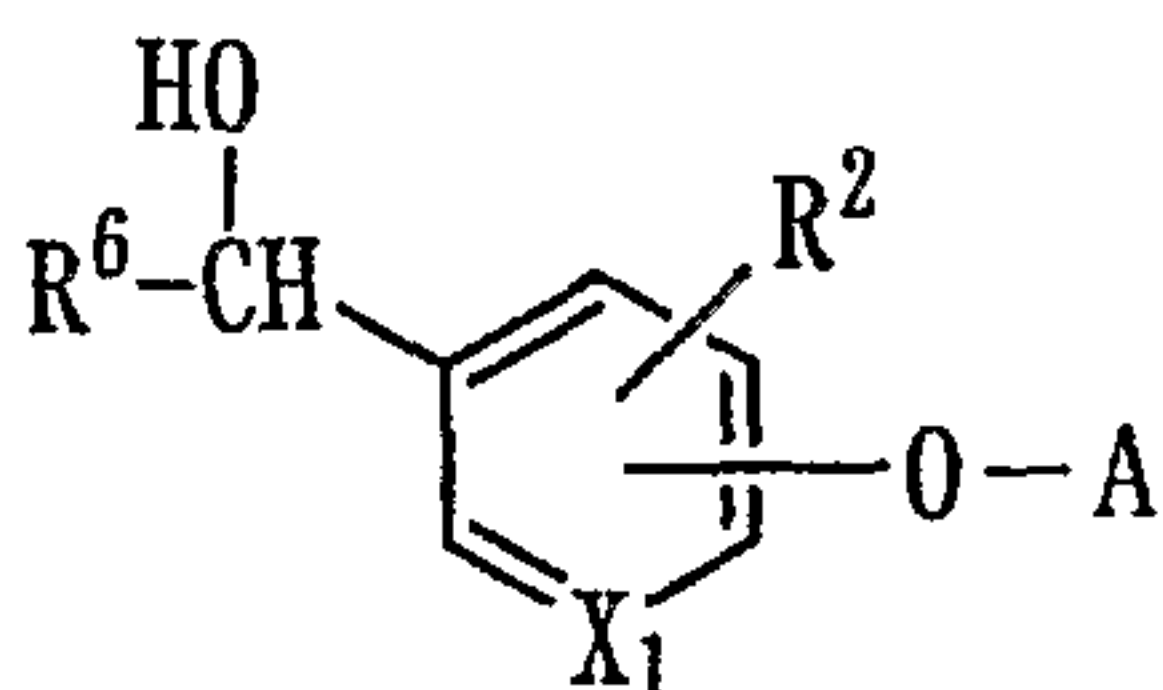
(1-34)



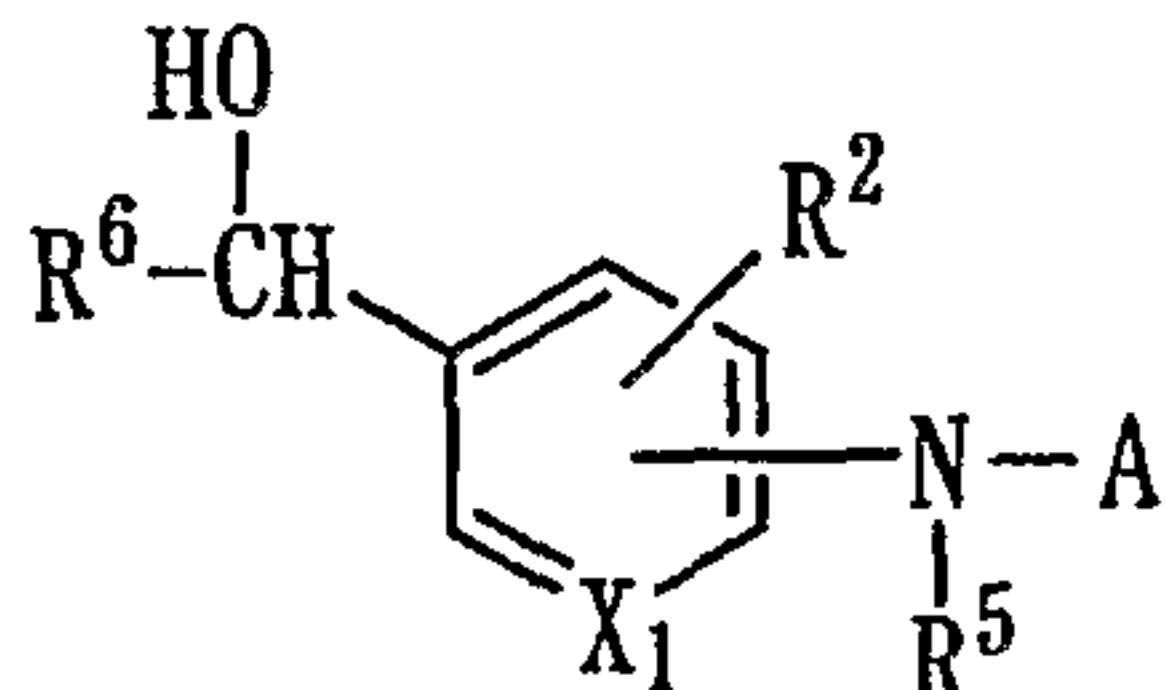
(1-35)

[wherein, in said general formulas (1-29) to (1-35), R^6 , R^2 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above].

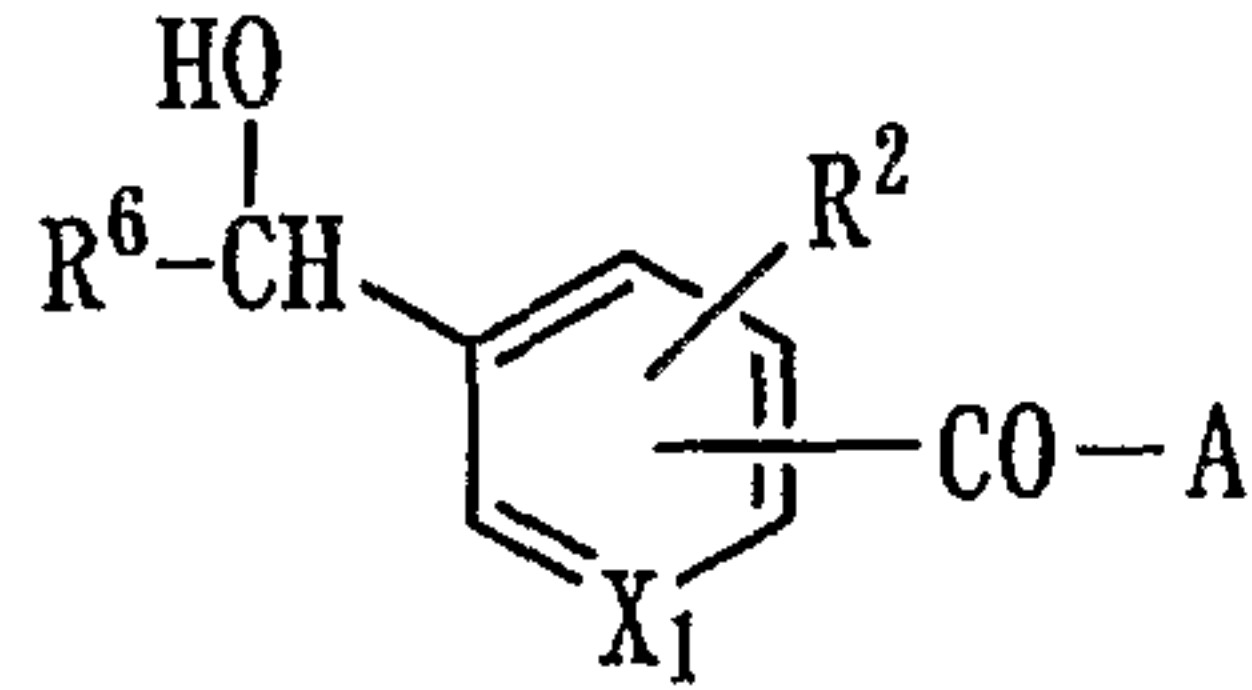
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-36) to (1-42):



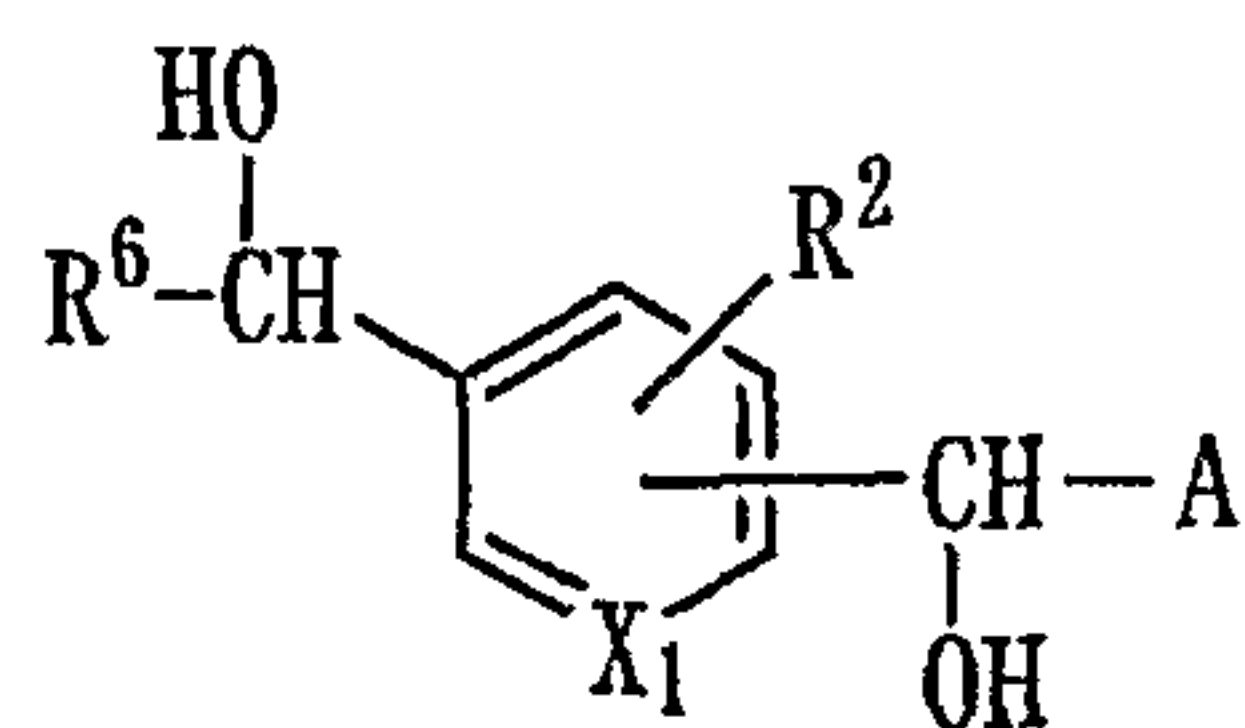
(1-36)



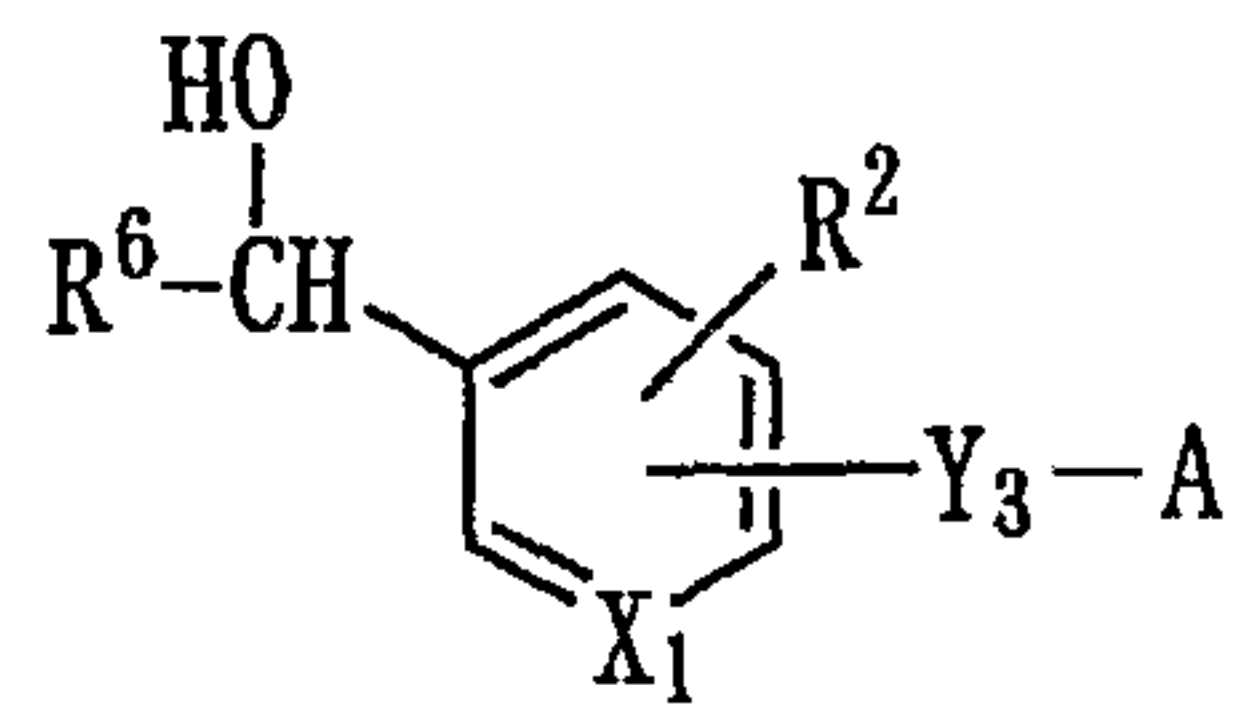
(1-37)



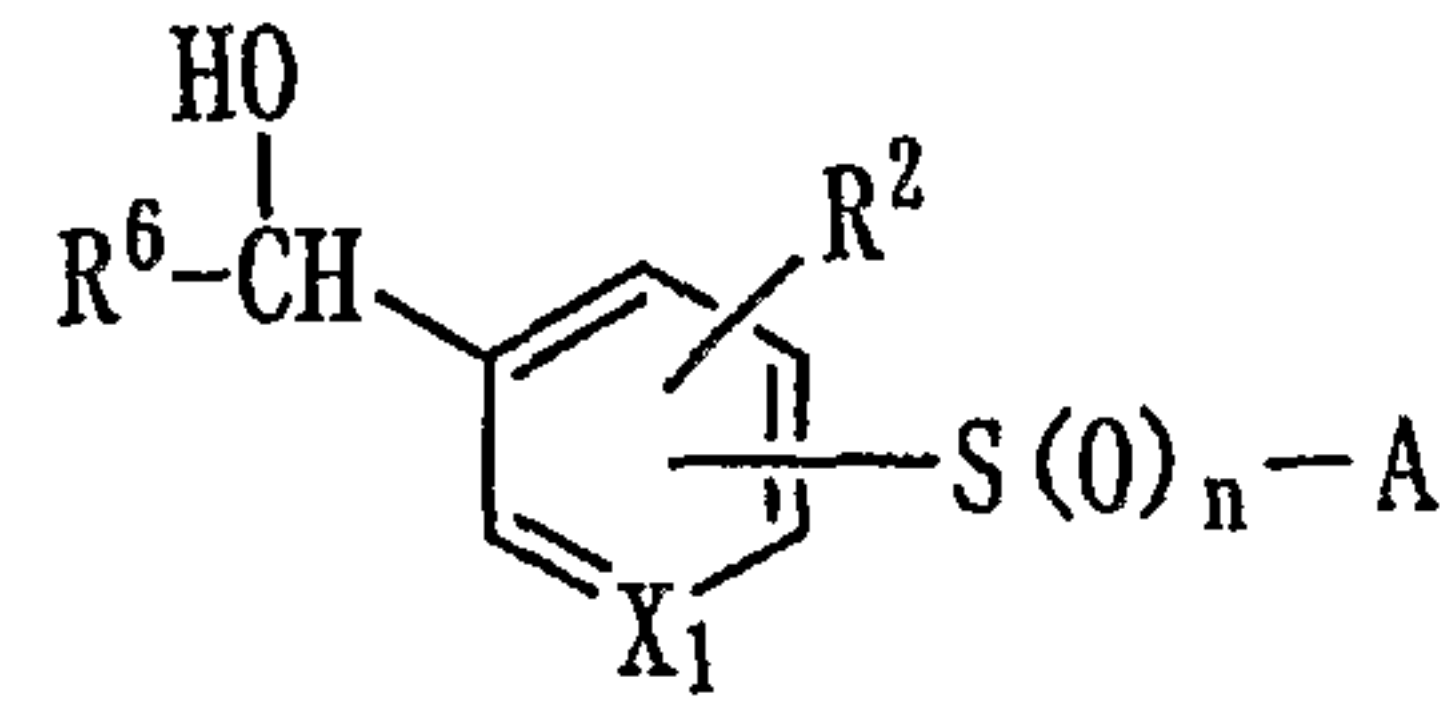
(1-38)



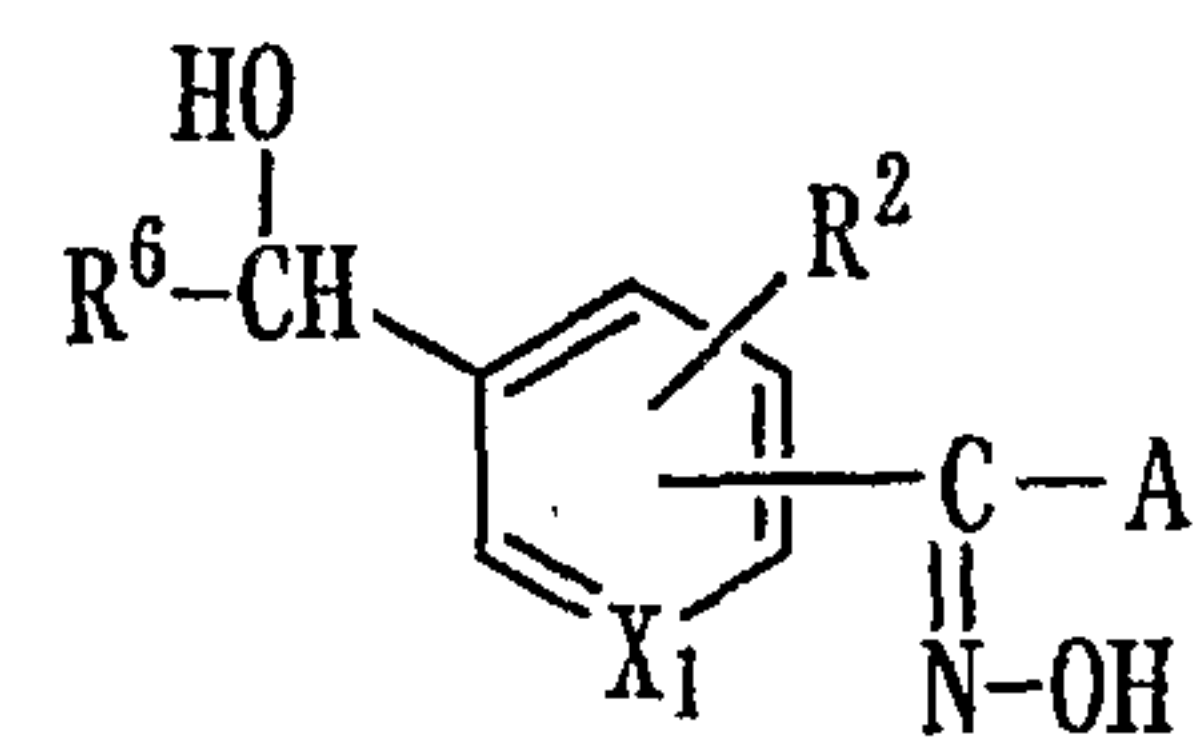
(1-39)



(1-40)



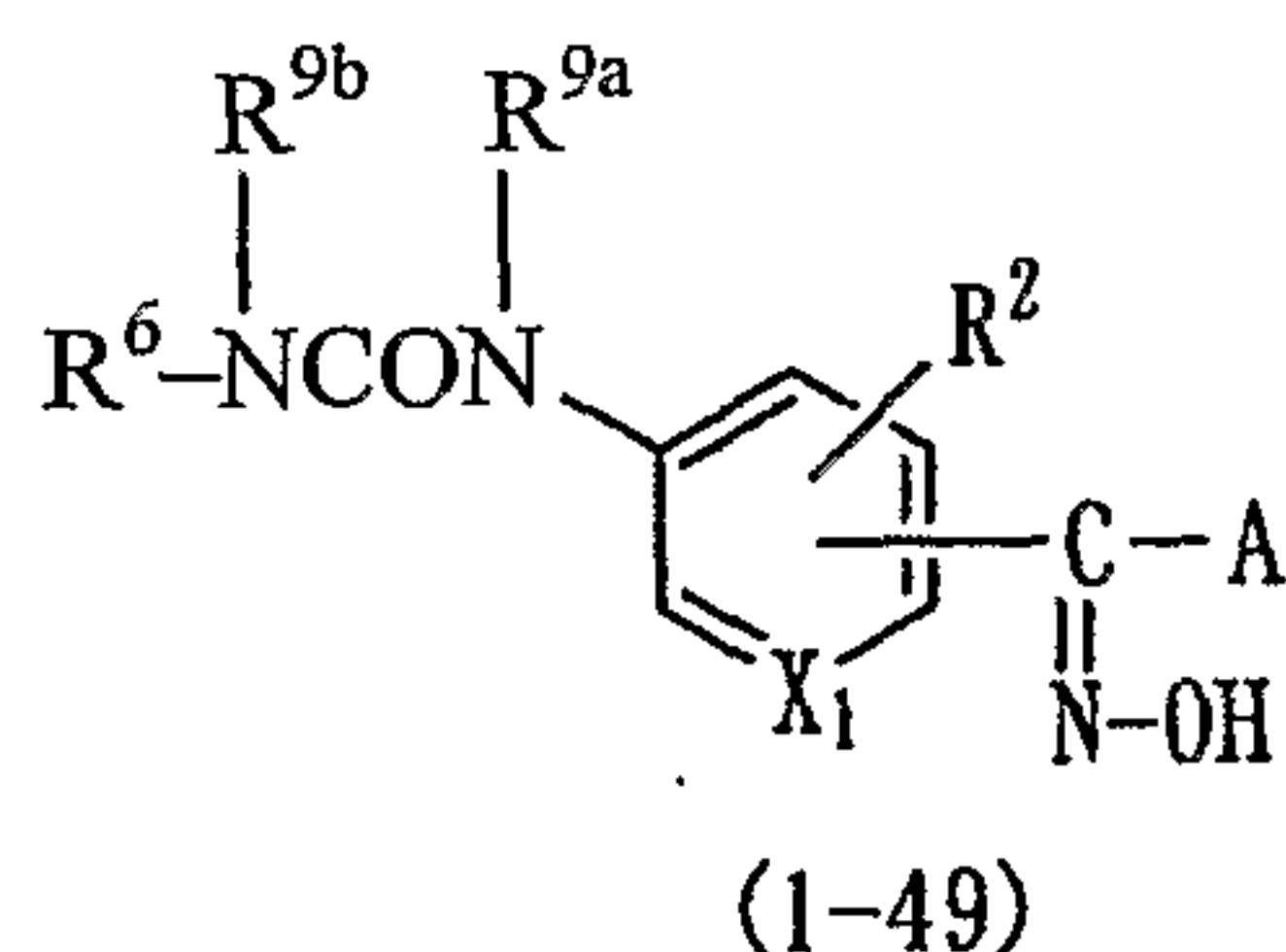
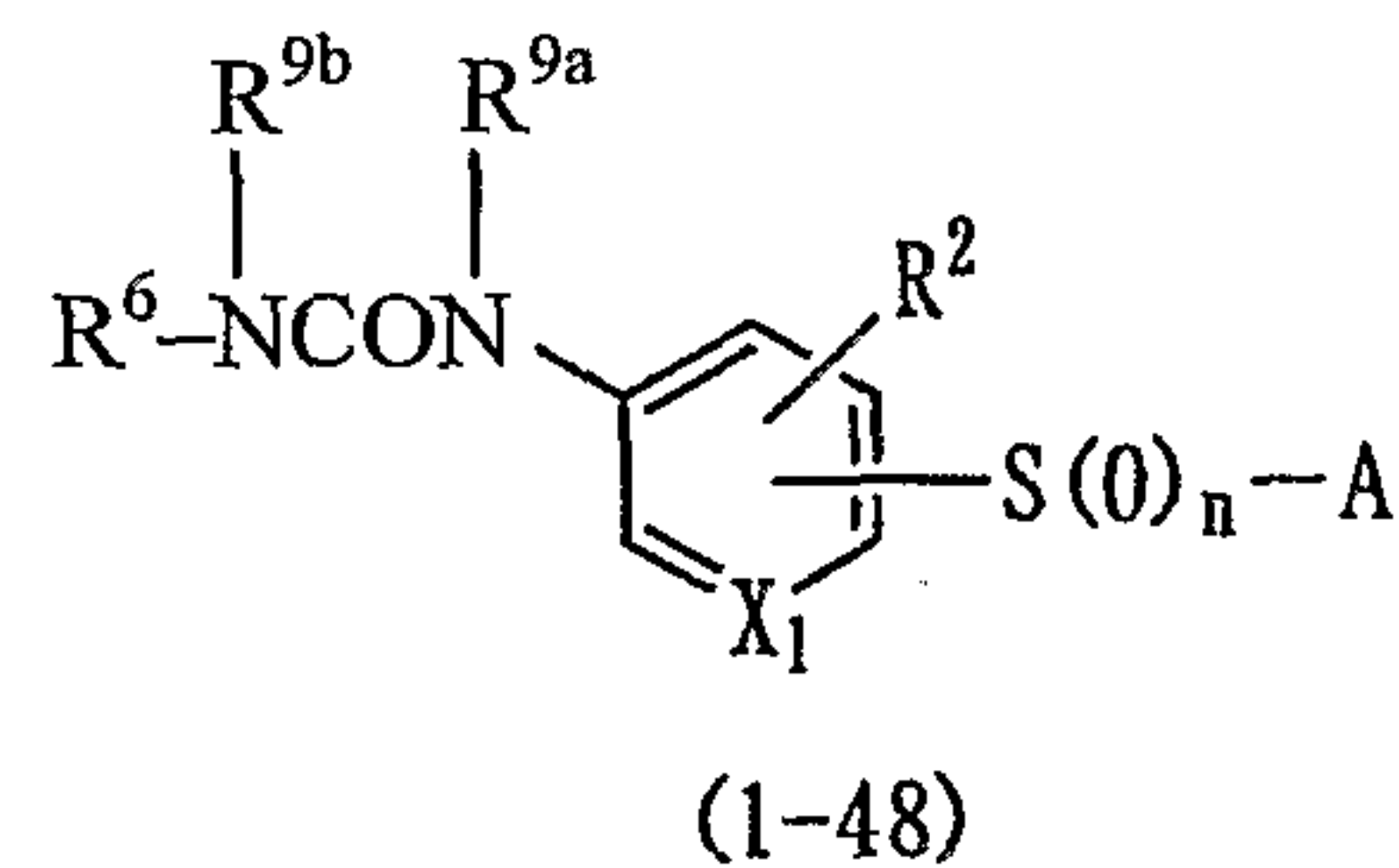
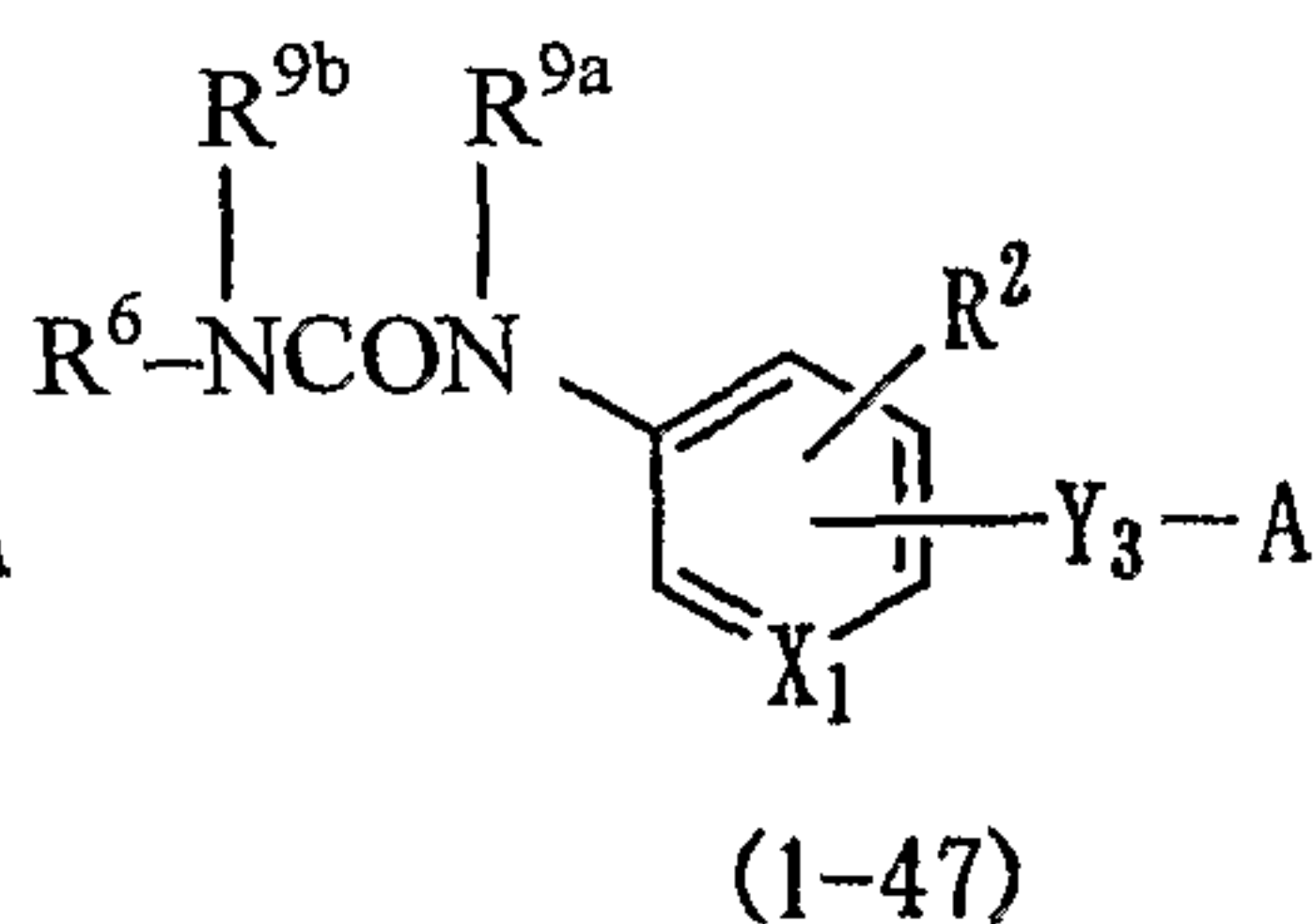
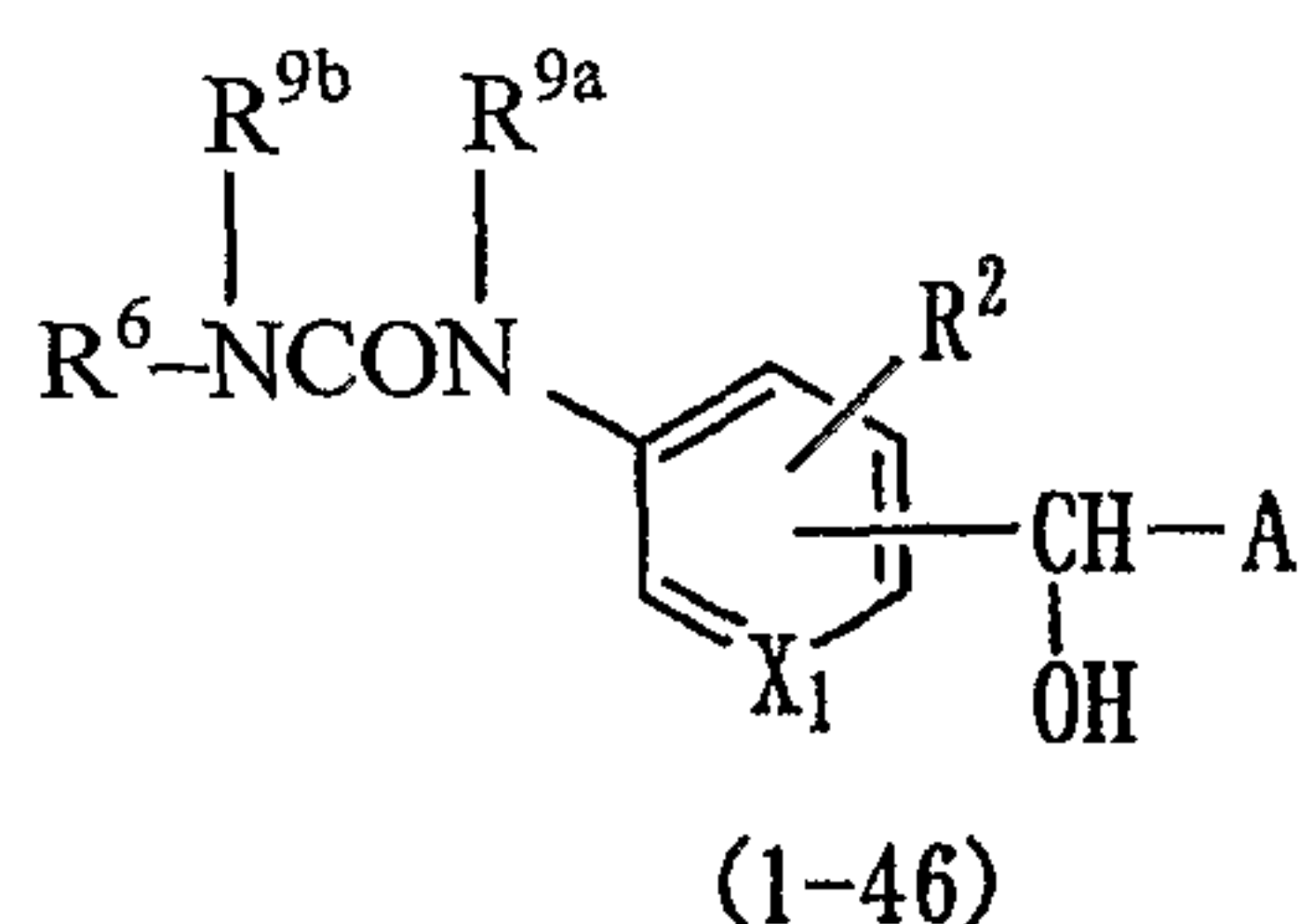
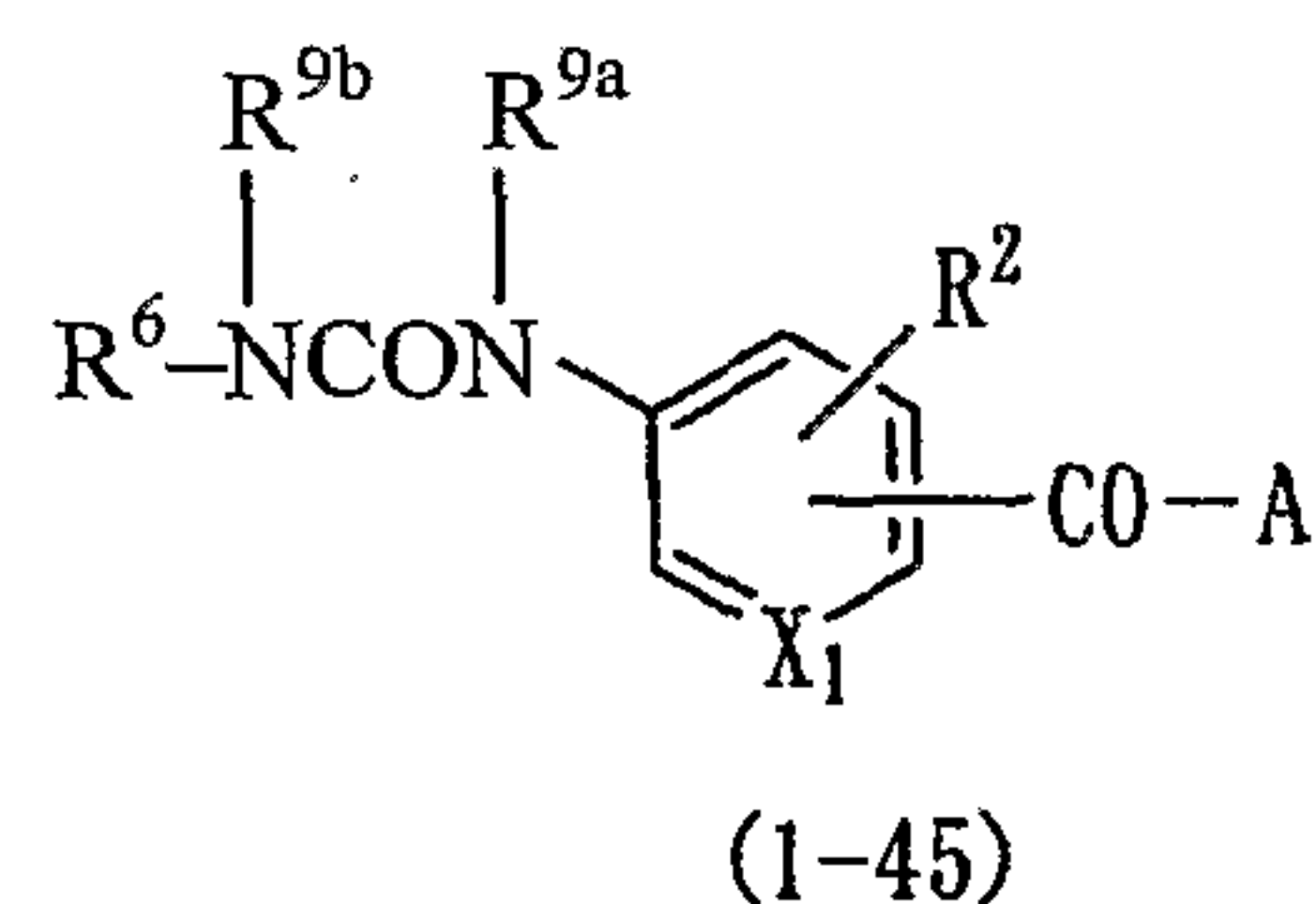
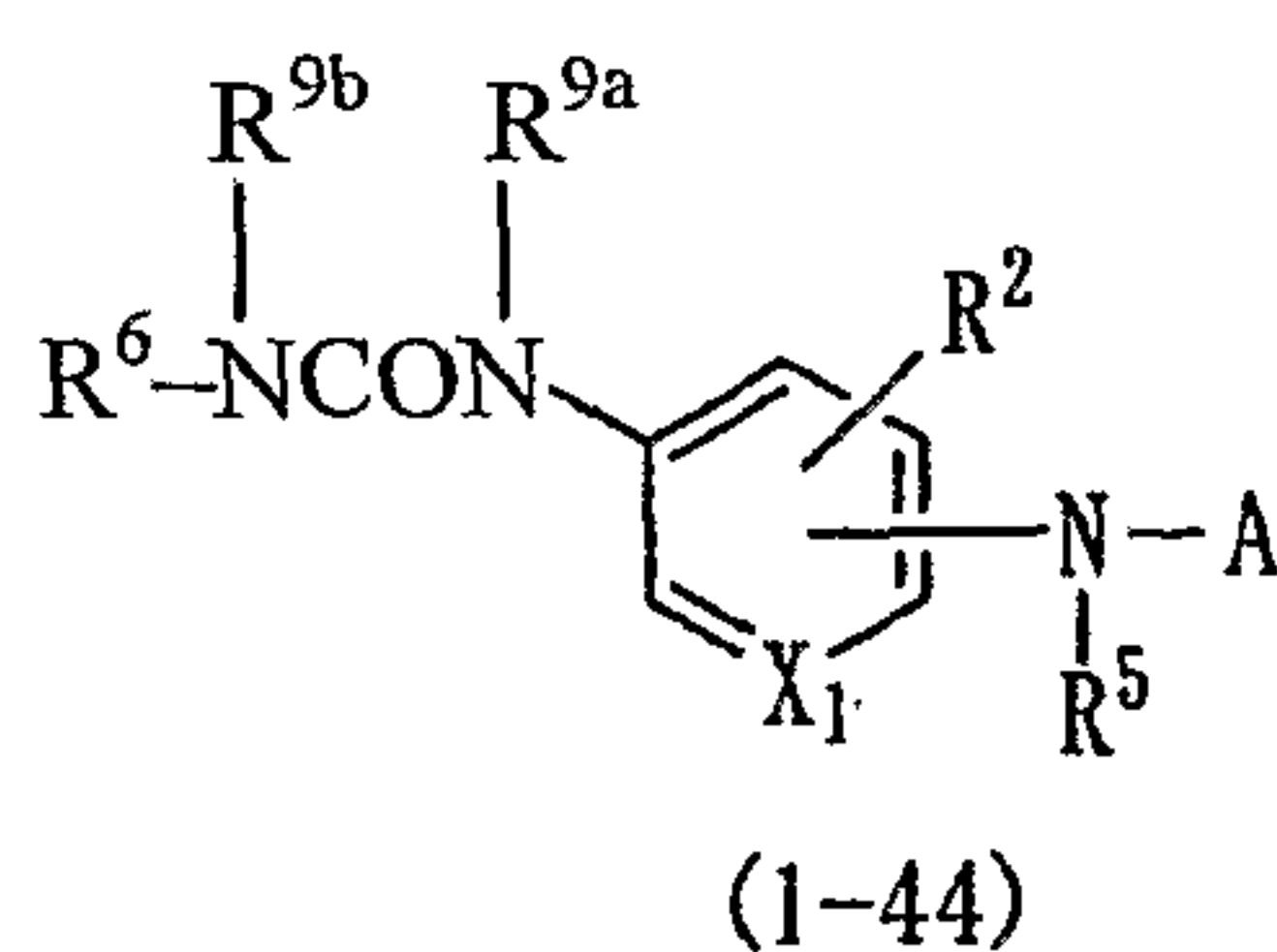
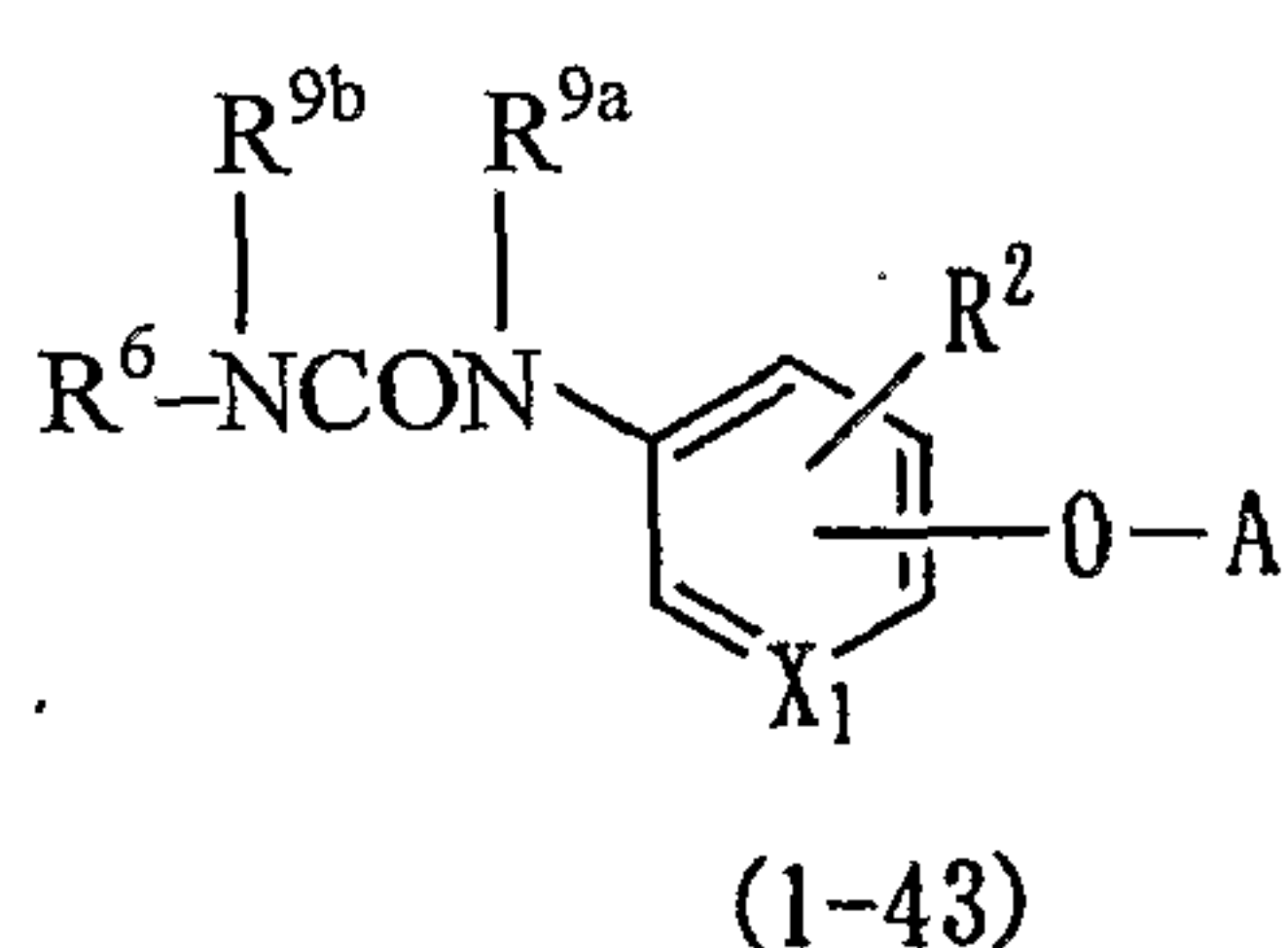
(1-41)



(1-42)

[wherein, in said general formulas (1-36) to (1-42), R^6 , R^2 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above].

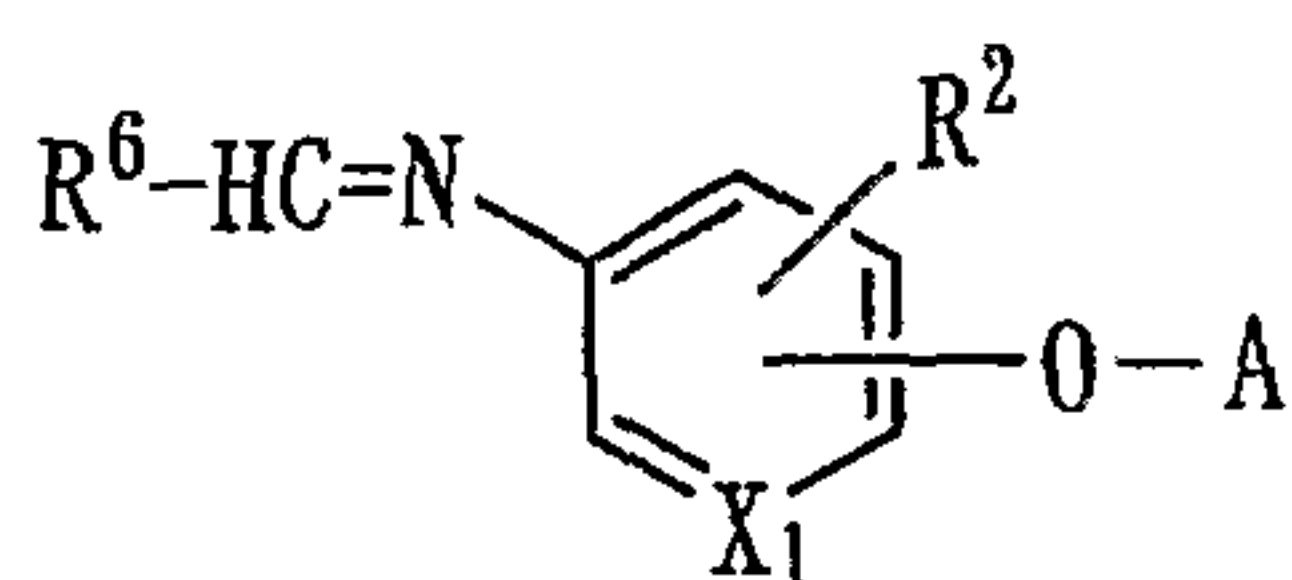
The above aromatic compound represented by
5 the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-43) to (1-49):



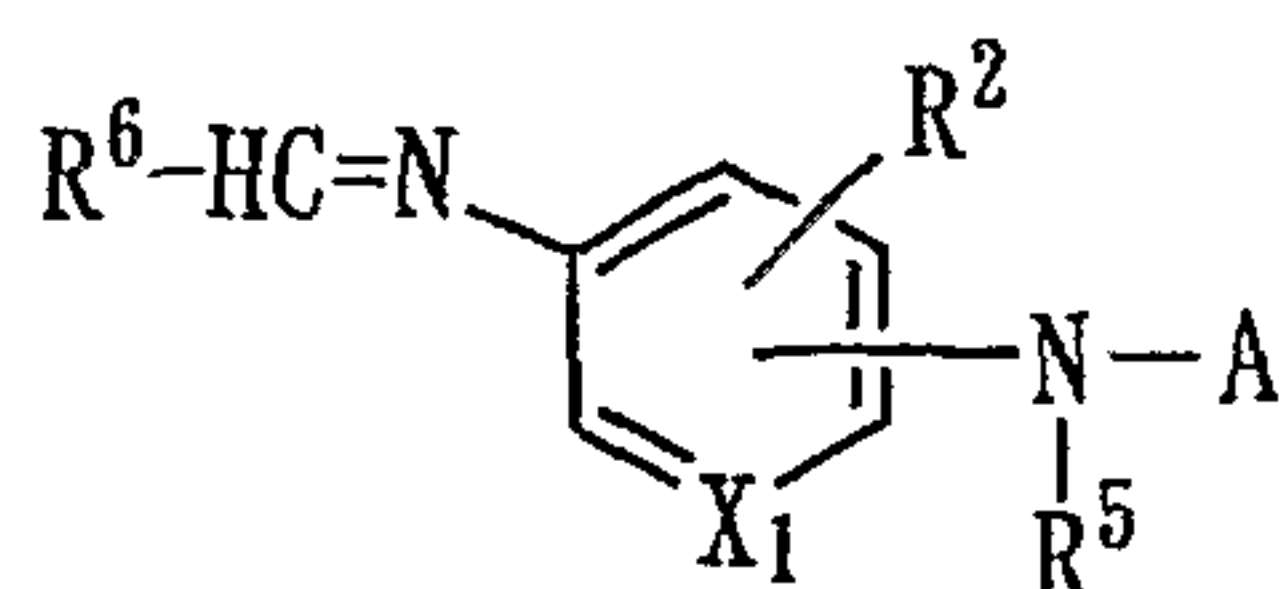
[wherein, in said general formulas (1-43) to (1-49), R^6 , R^2 , R^5 , n , X_1 , A , R^{9a} , R^{9b} and Y_3 have the same meanings
10 as described above].

The above aromatic compound represented by
the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-50) to (1-56):

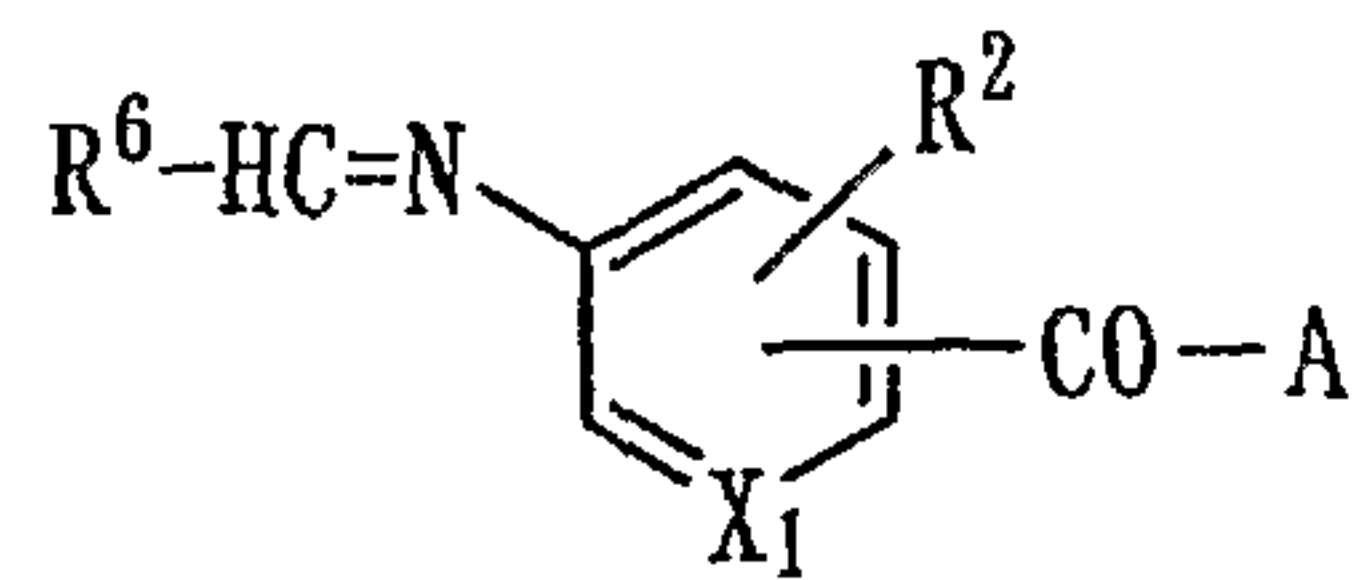
32



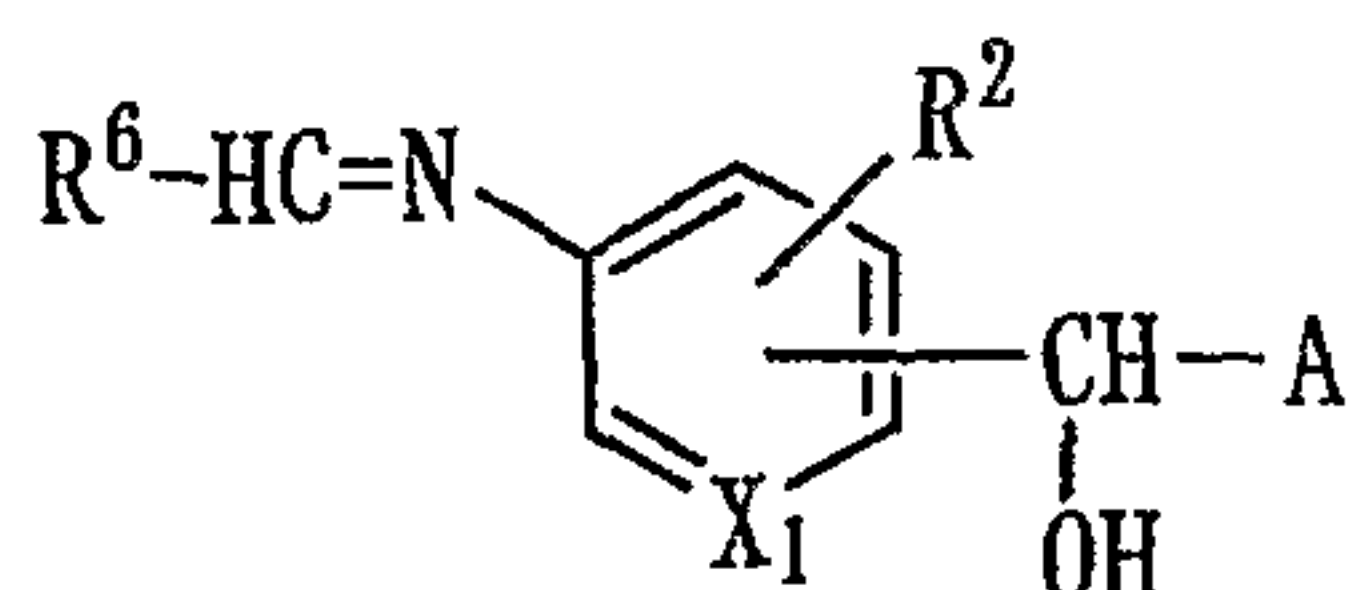
(1-50)



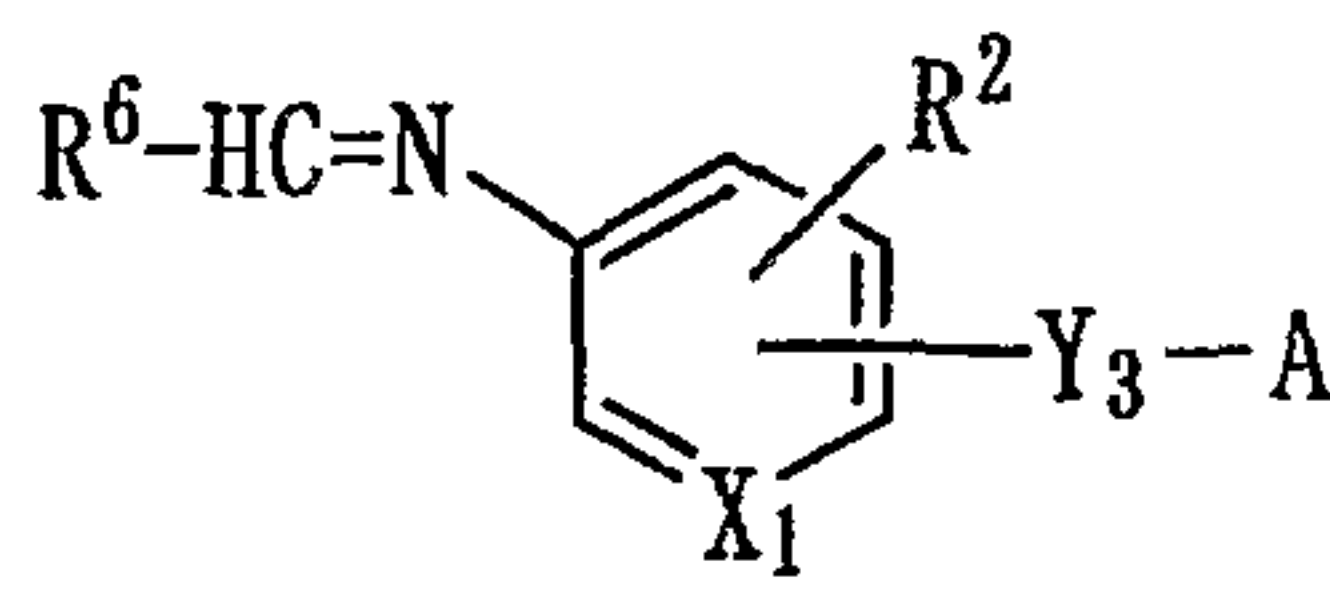
(1-51)



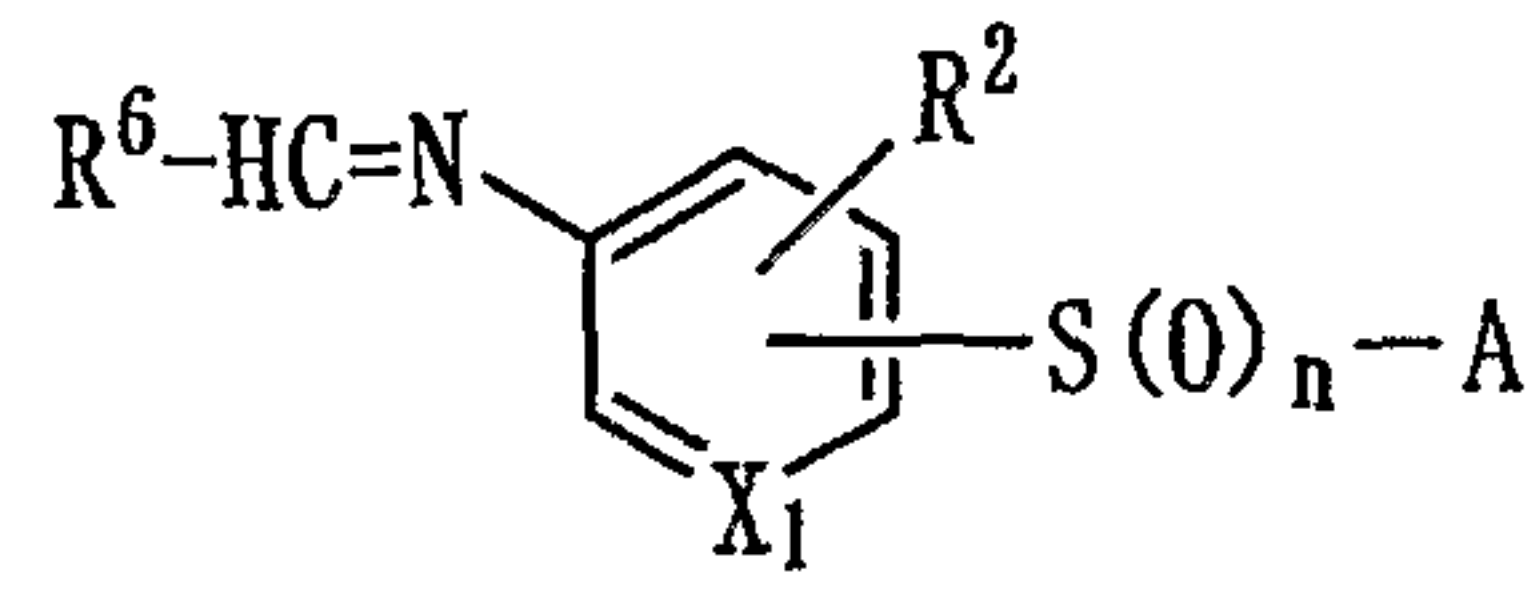
(1-52)



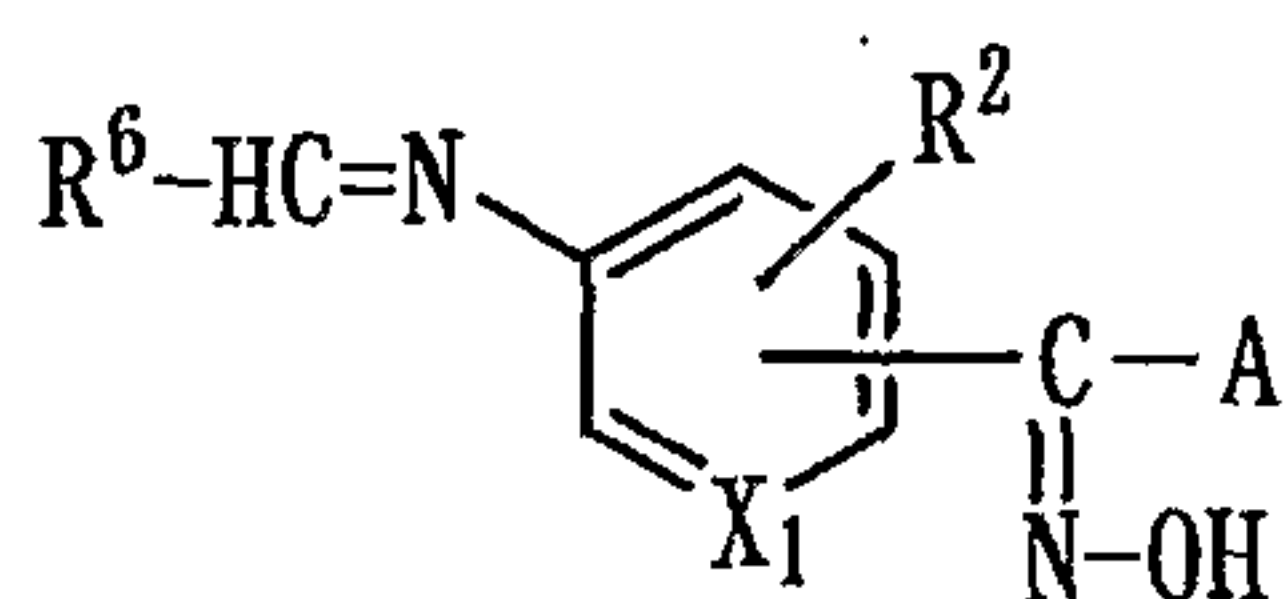
(1-53)



(1-54)



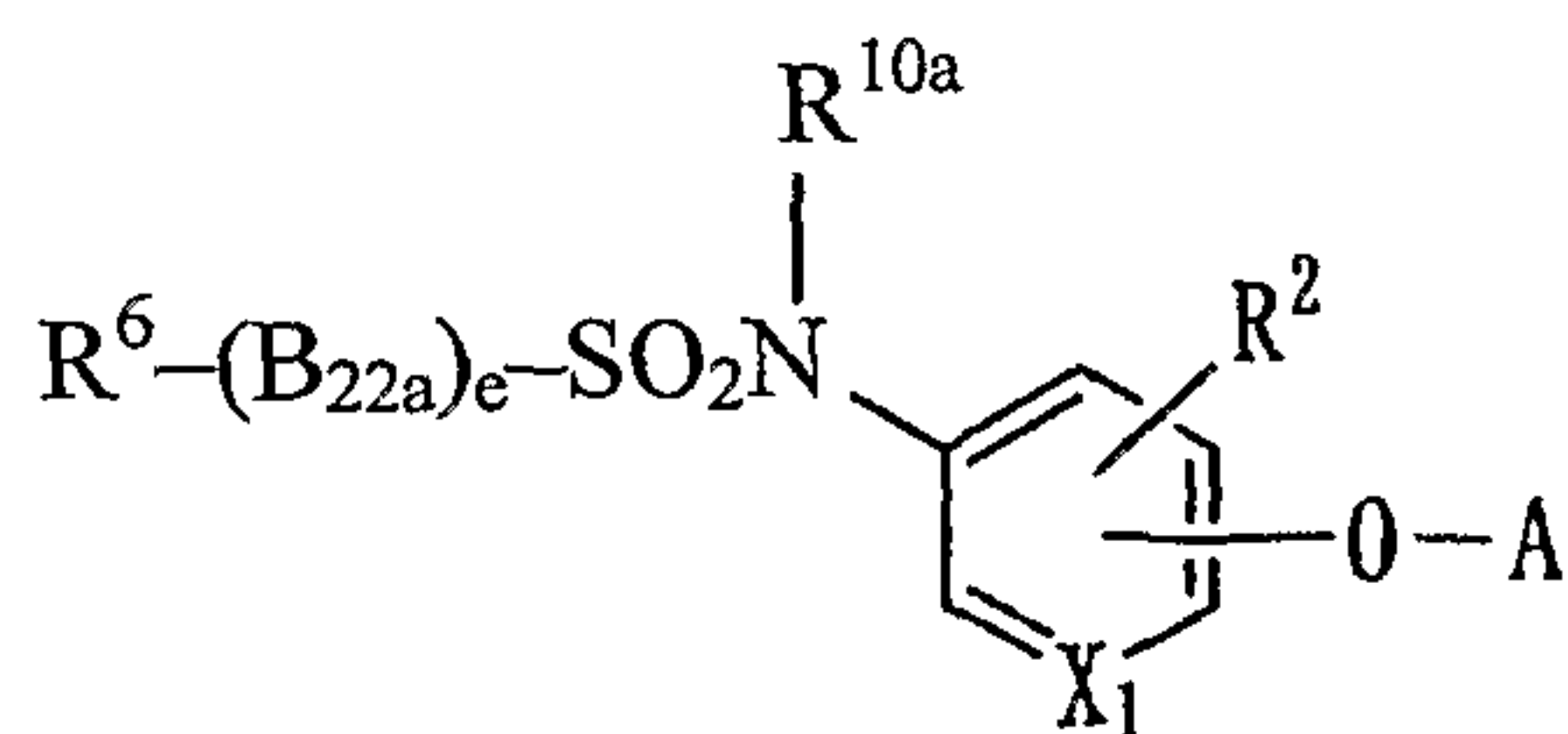
(1-55)



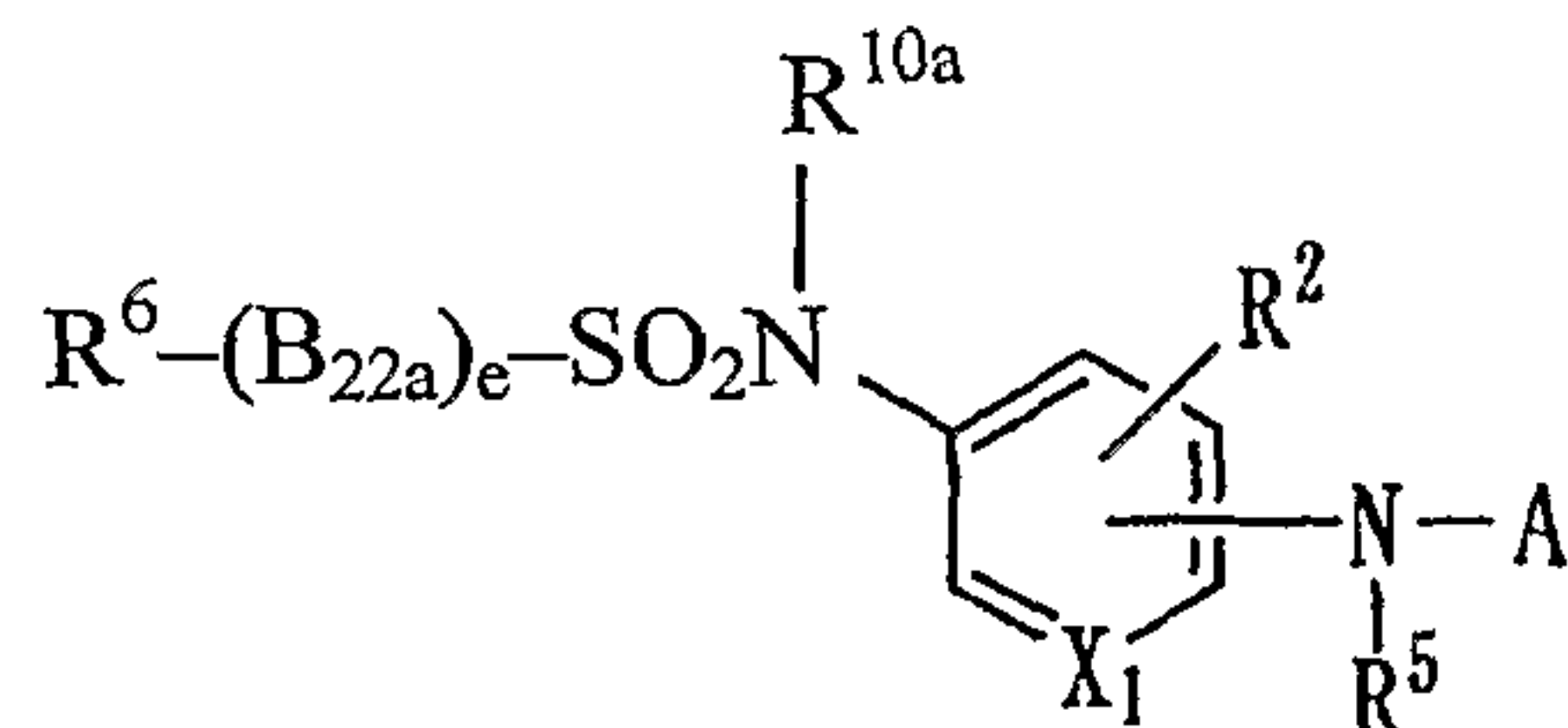
(1-56)

[wherein, in said general formulas (1-50) to (1-56), R^6 , R^2 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above].

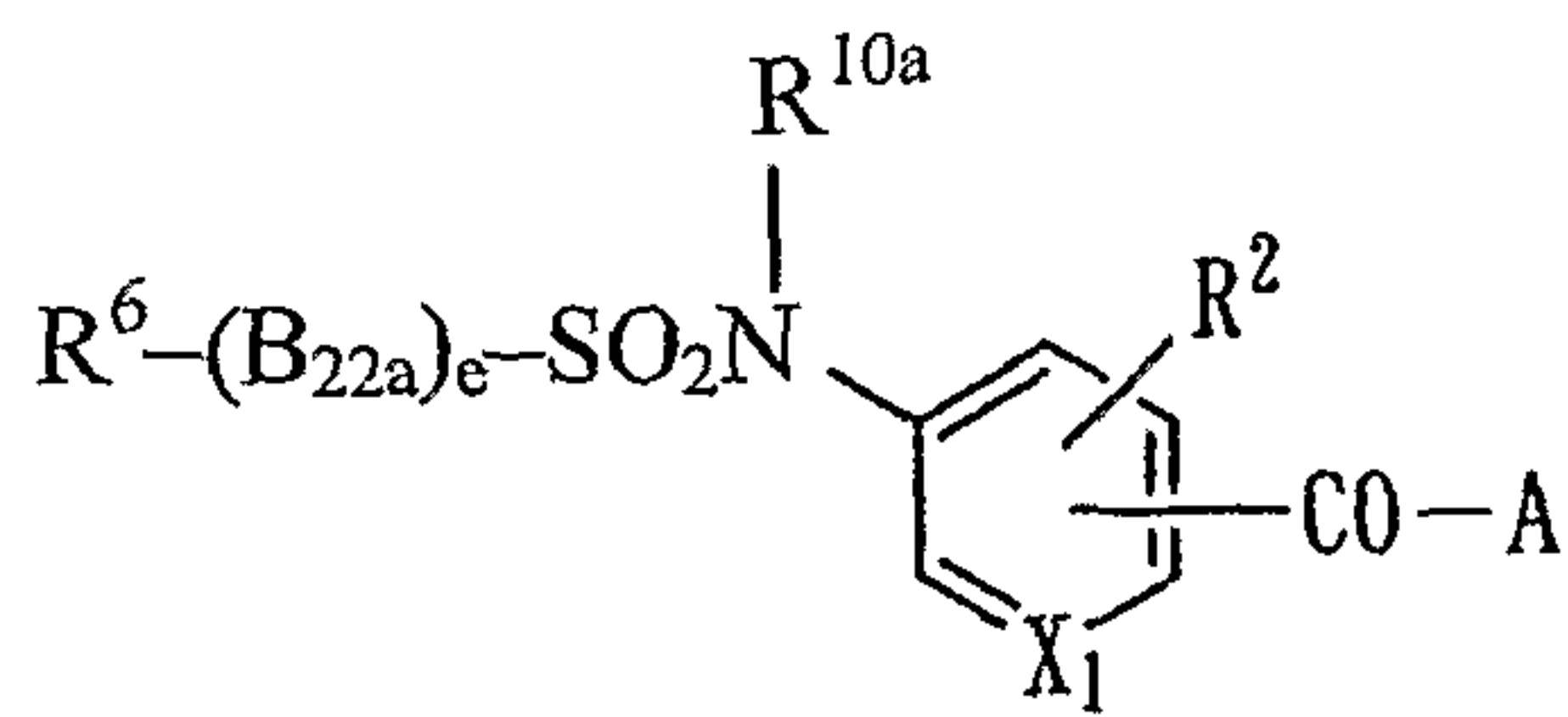
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds or salts thereof represented by the general formulas (1-57) to (1-63):



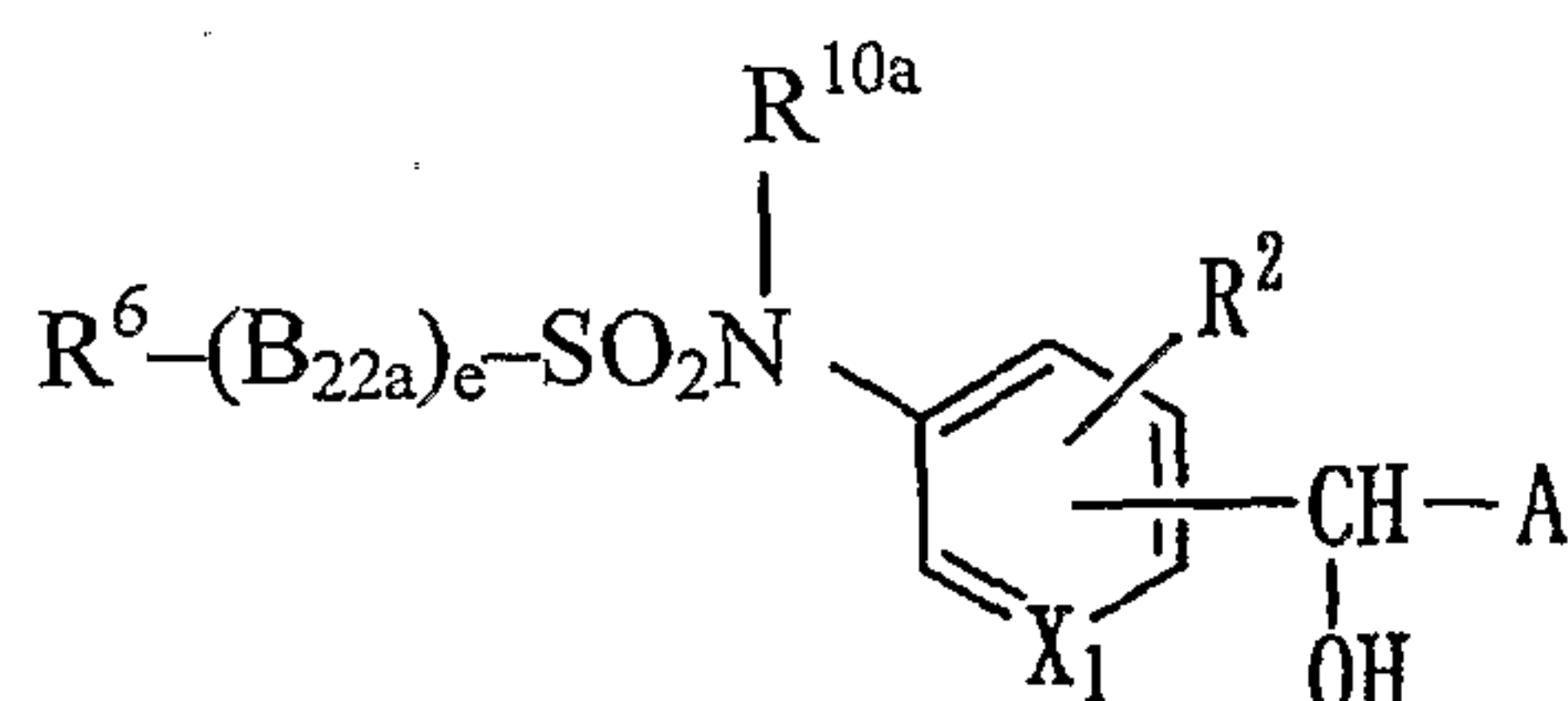
(1-57)



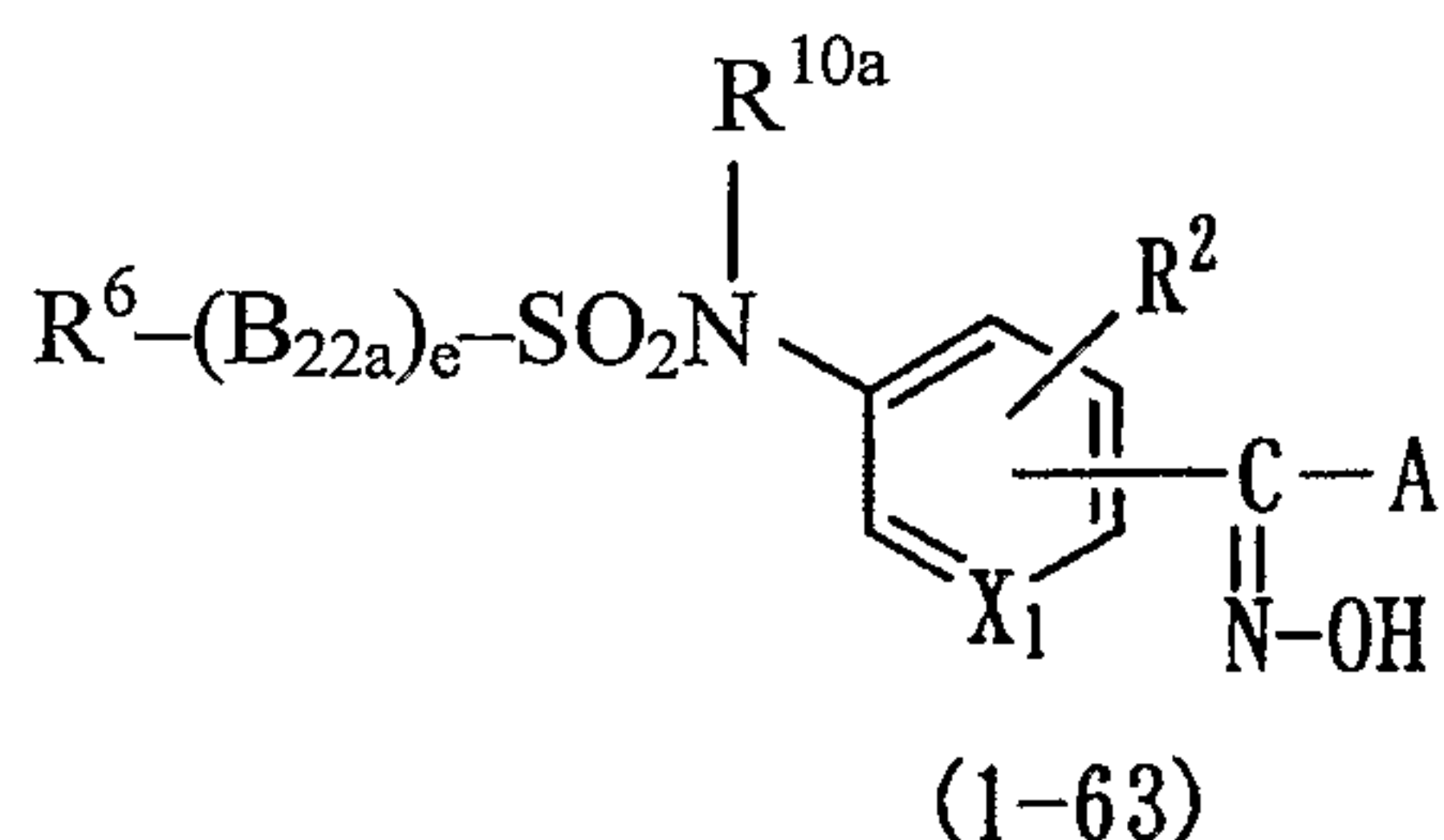
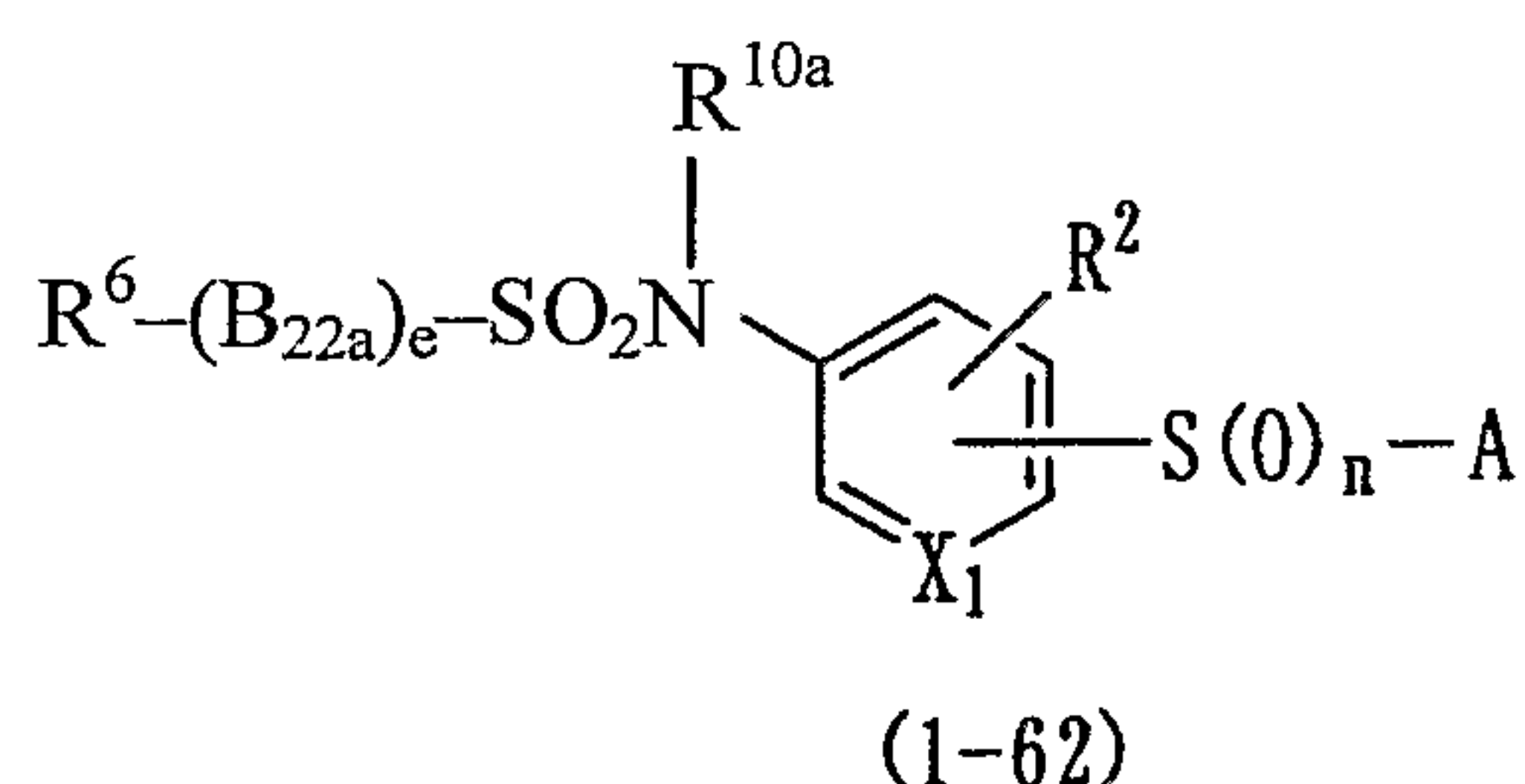
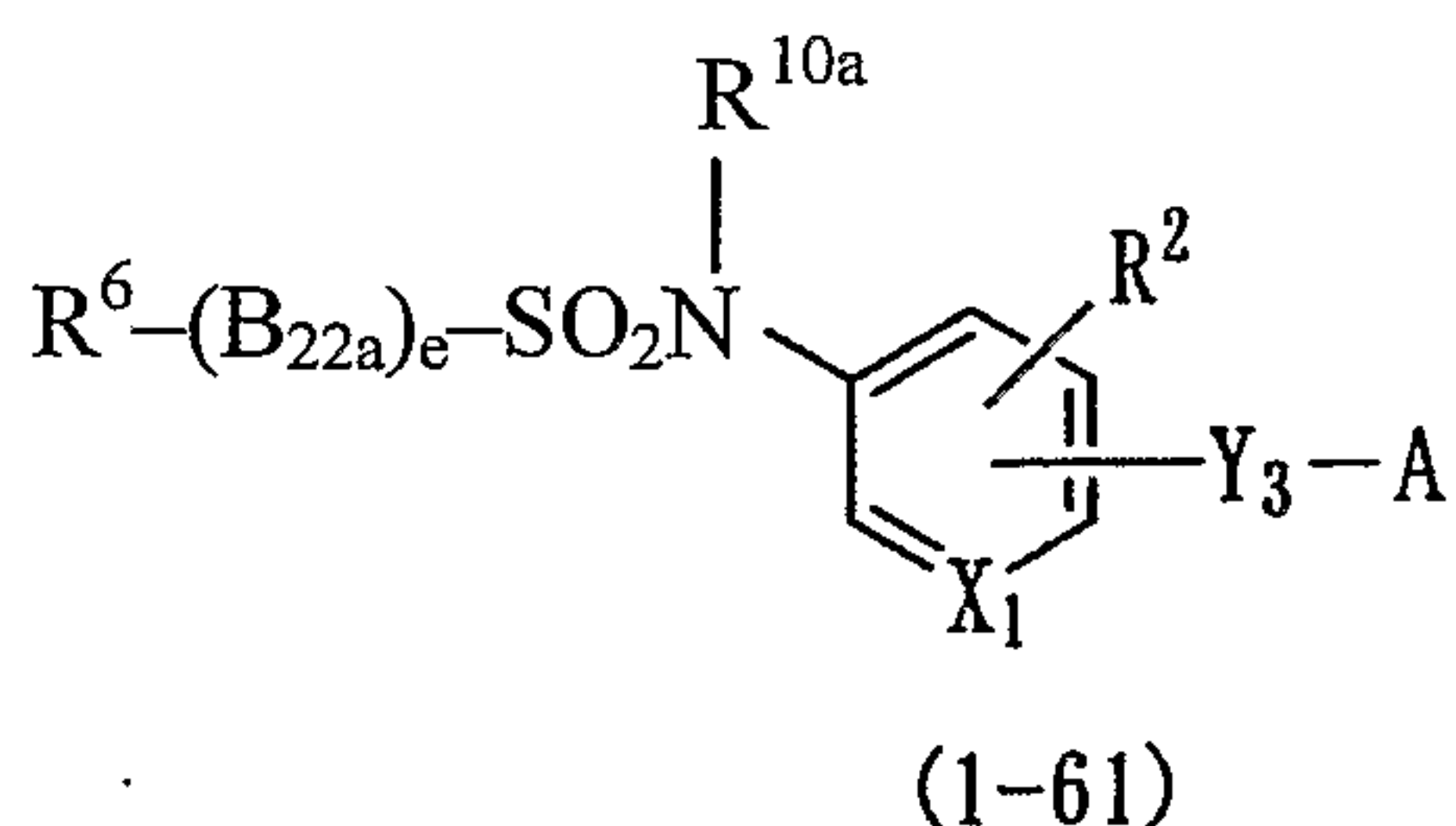
(1-58)



(1-59)

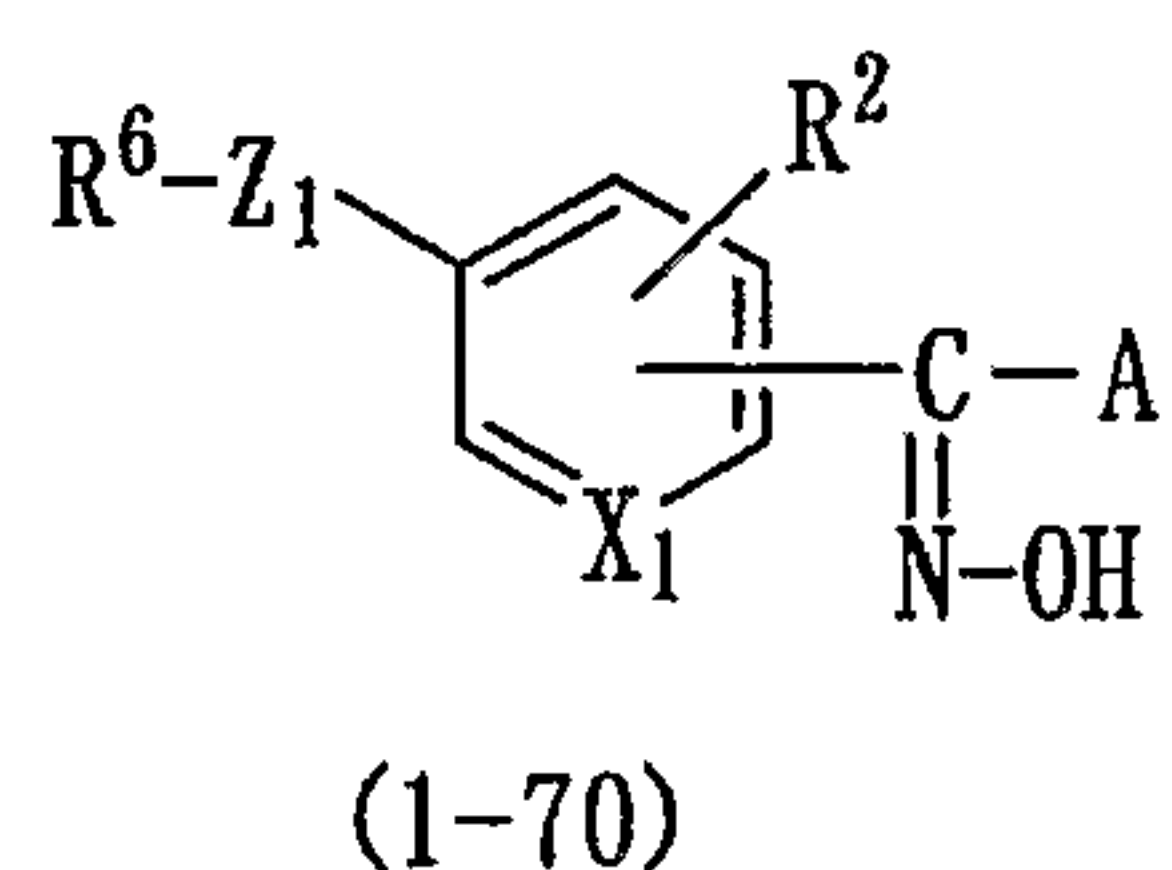
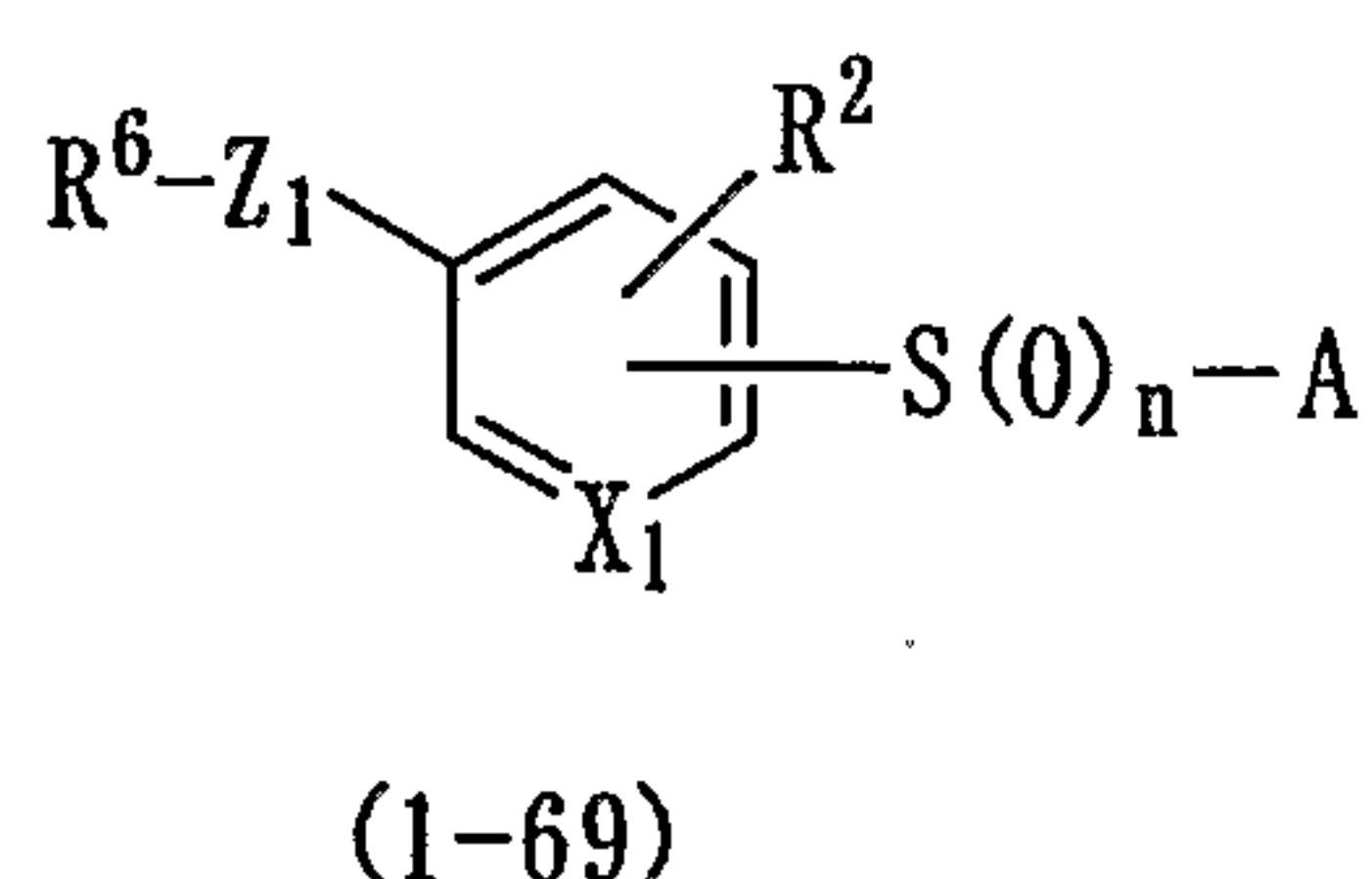
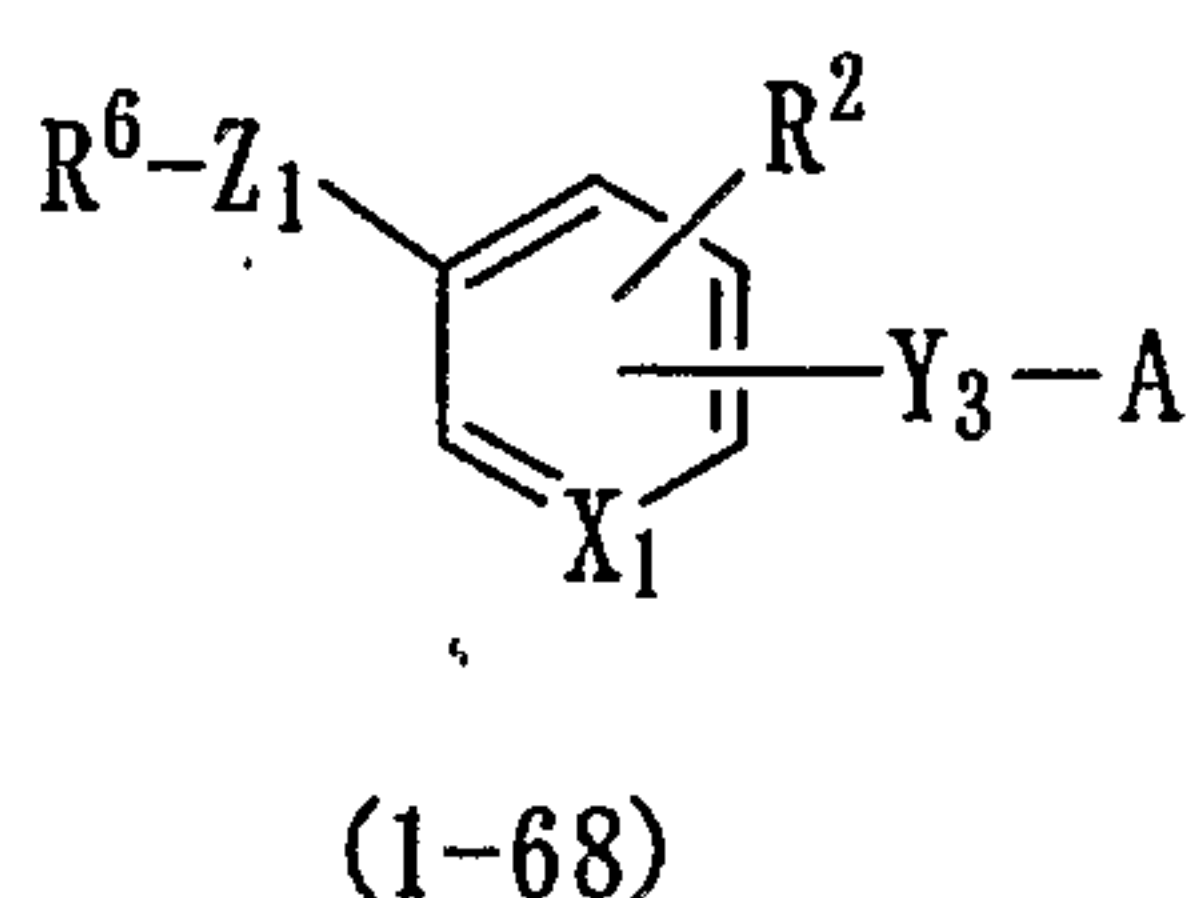
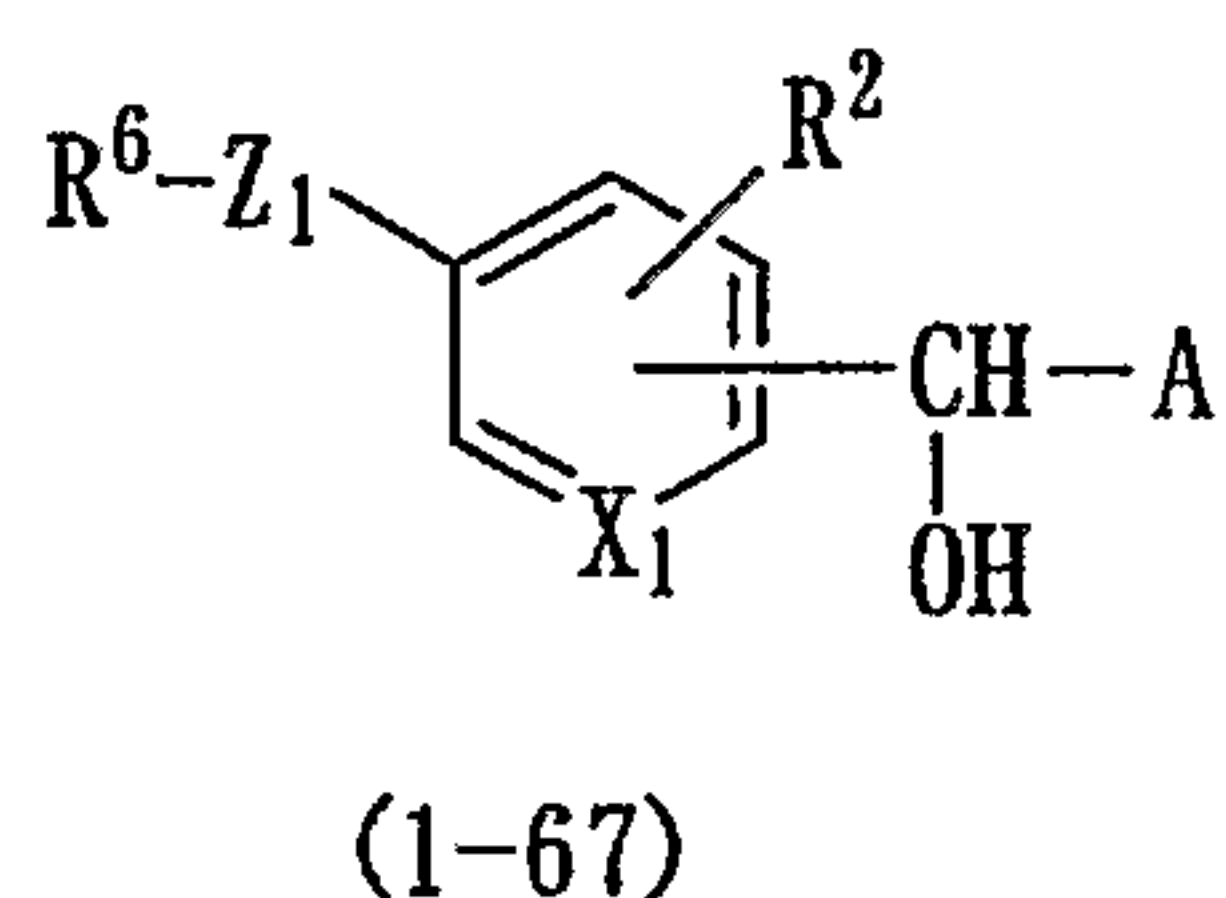
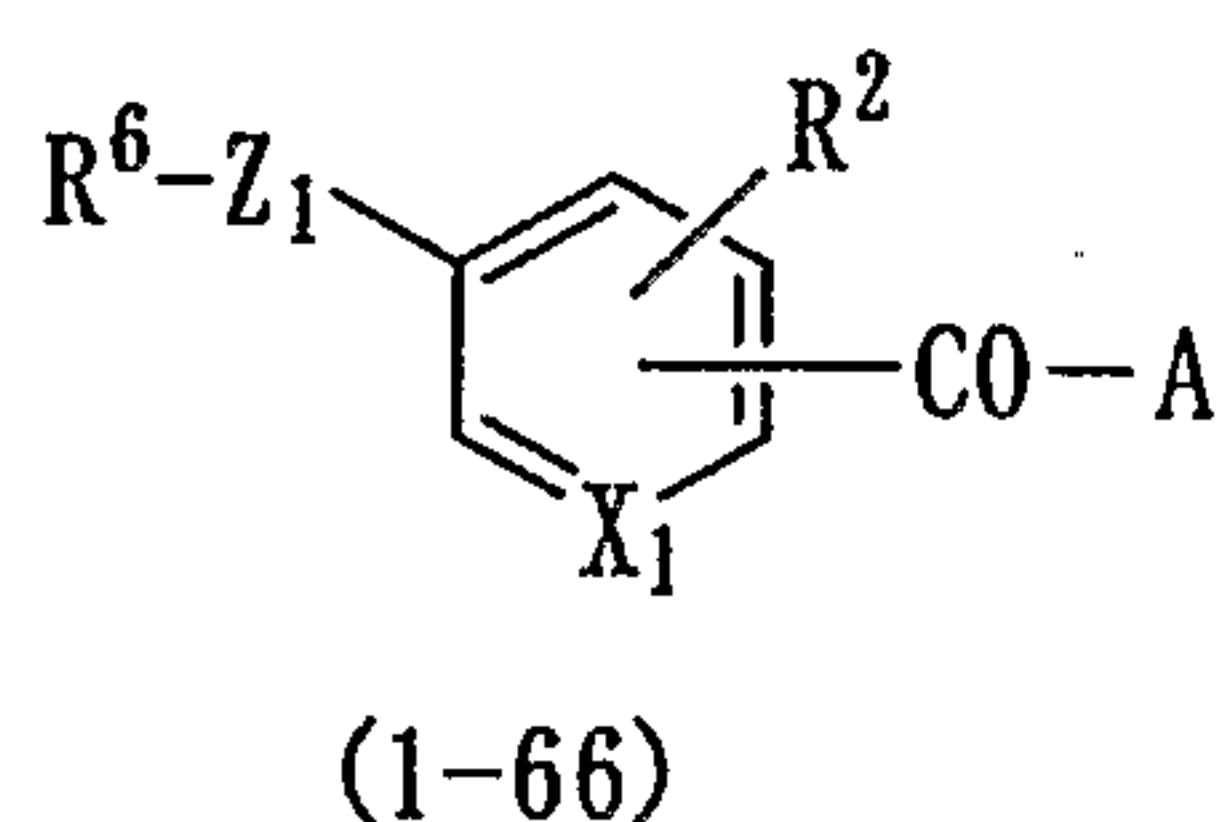
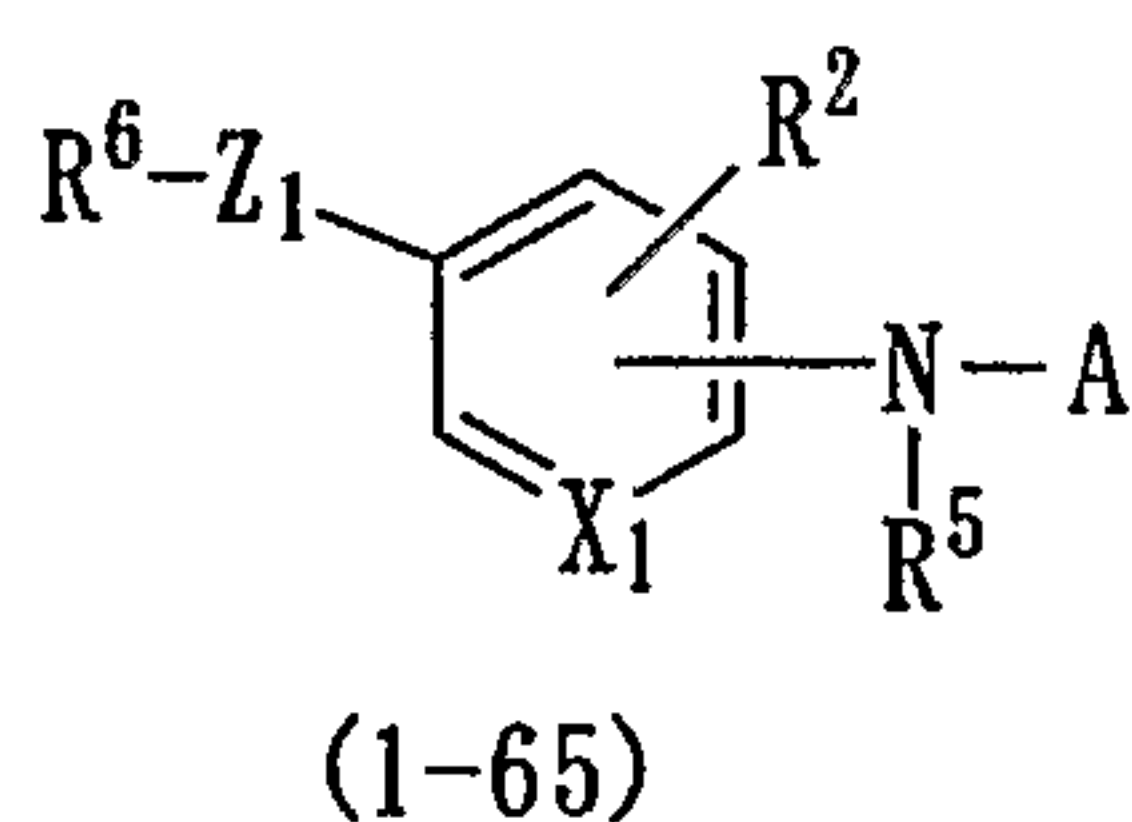
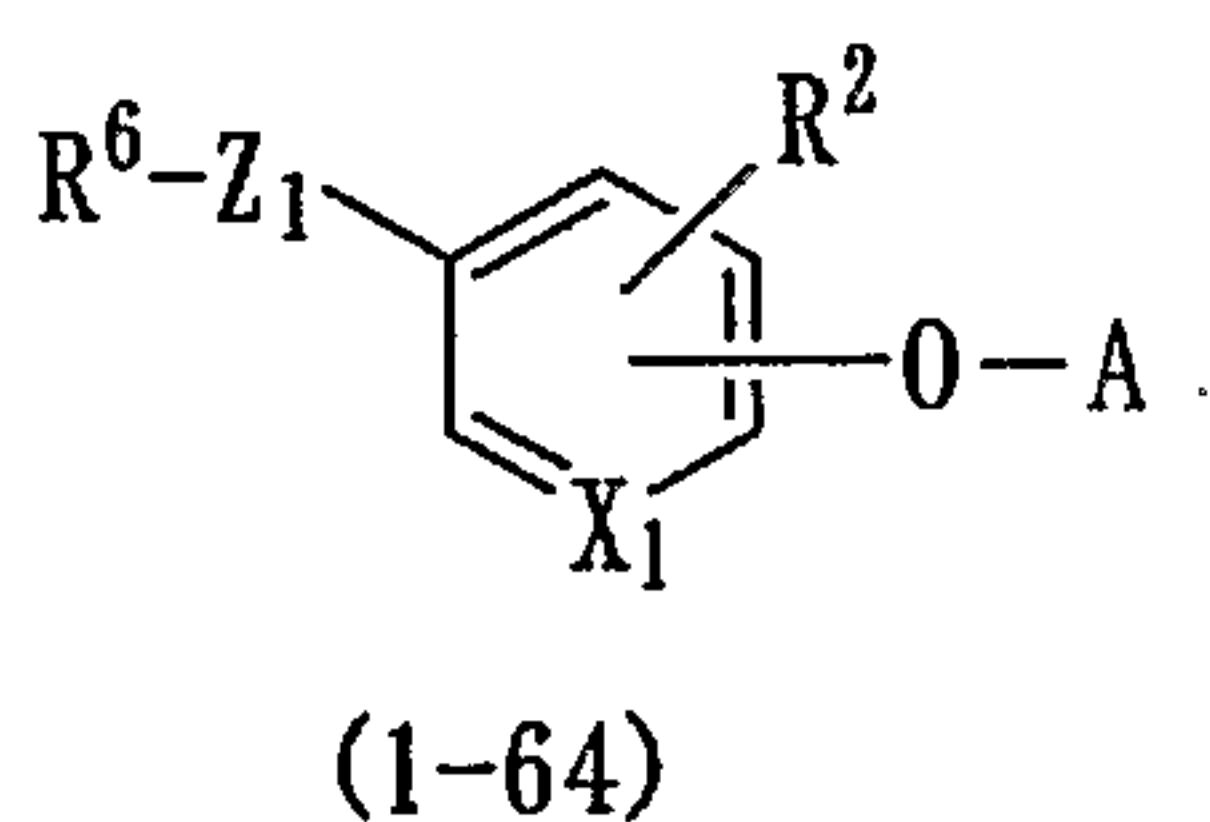


(1-60)



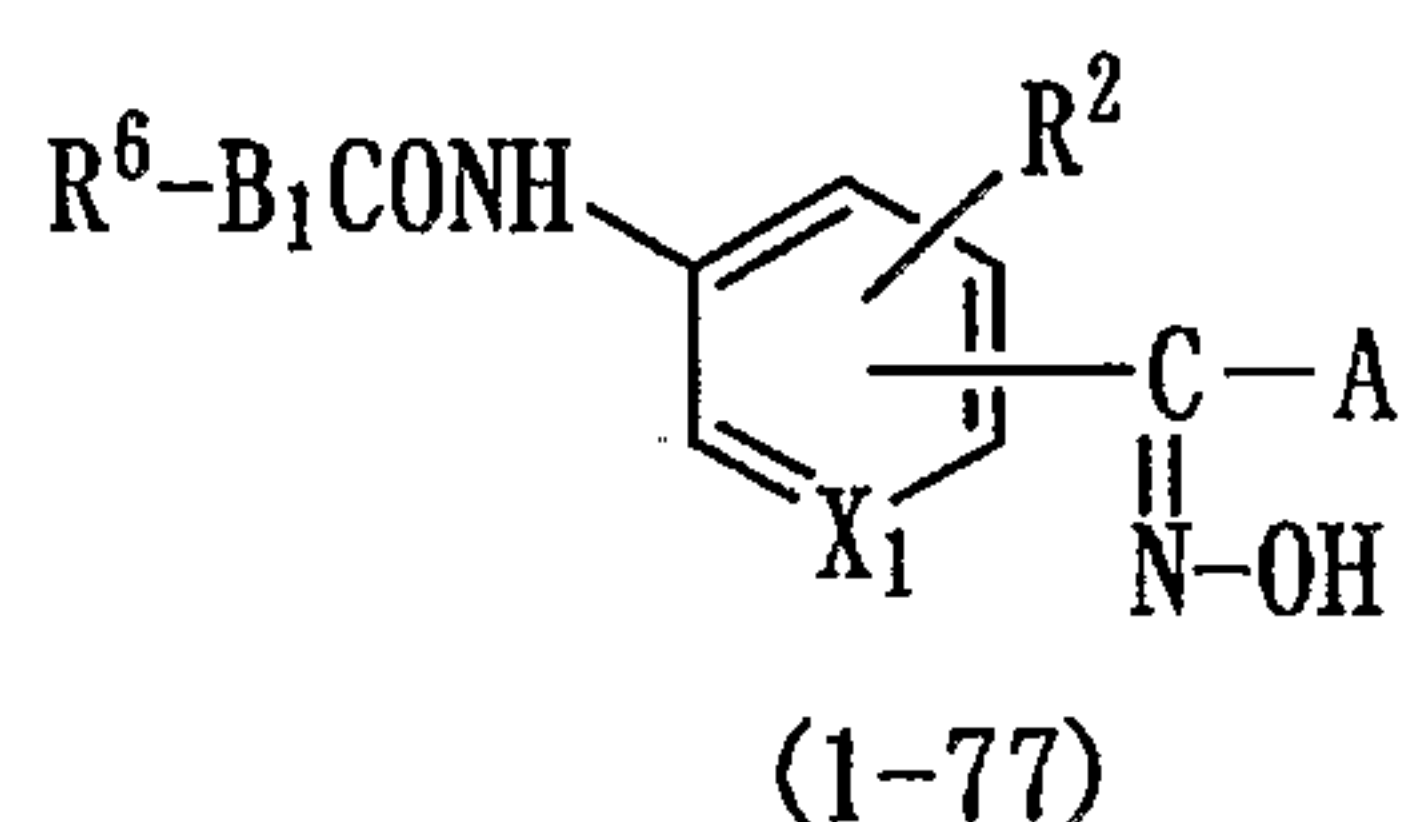
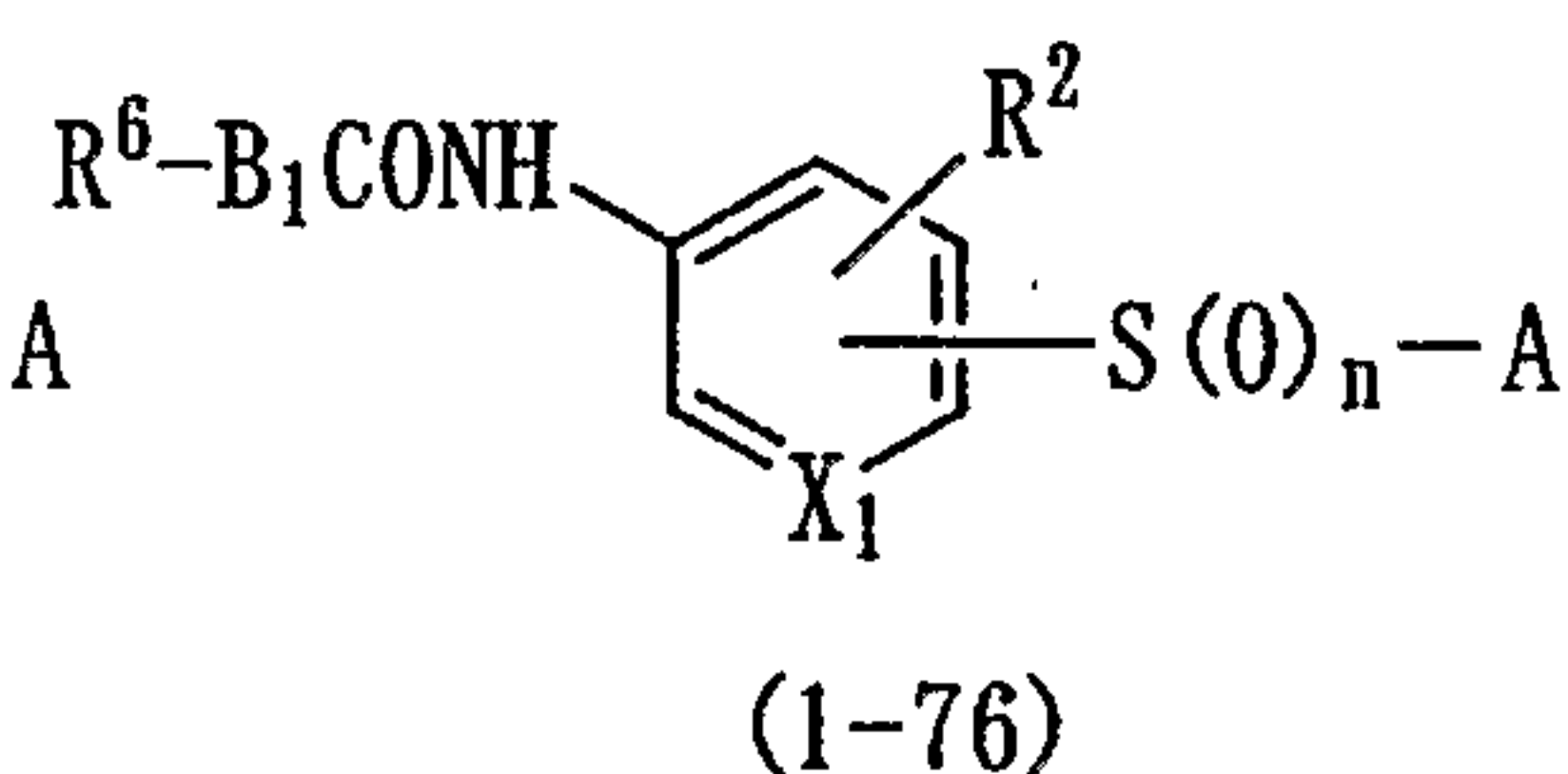
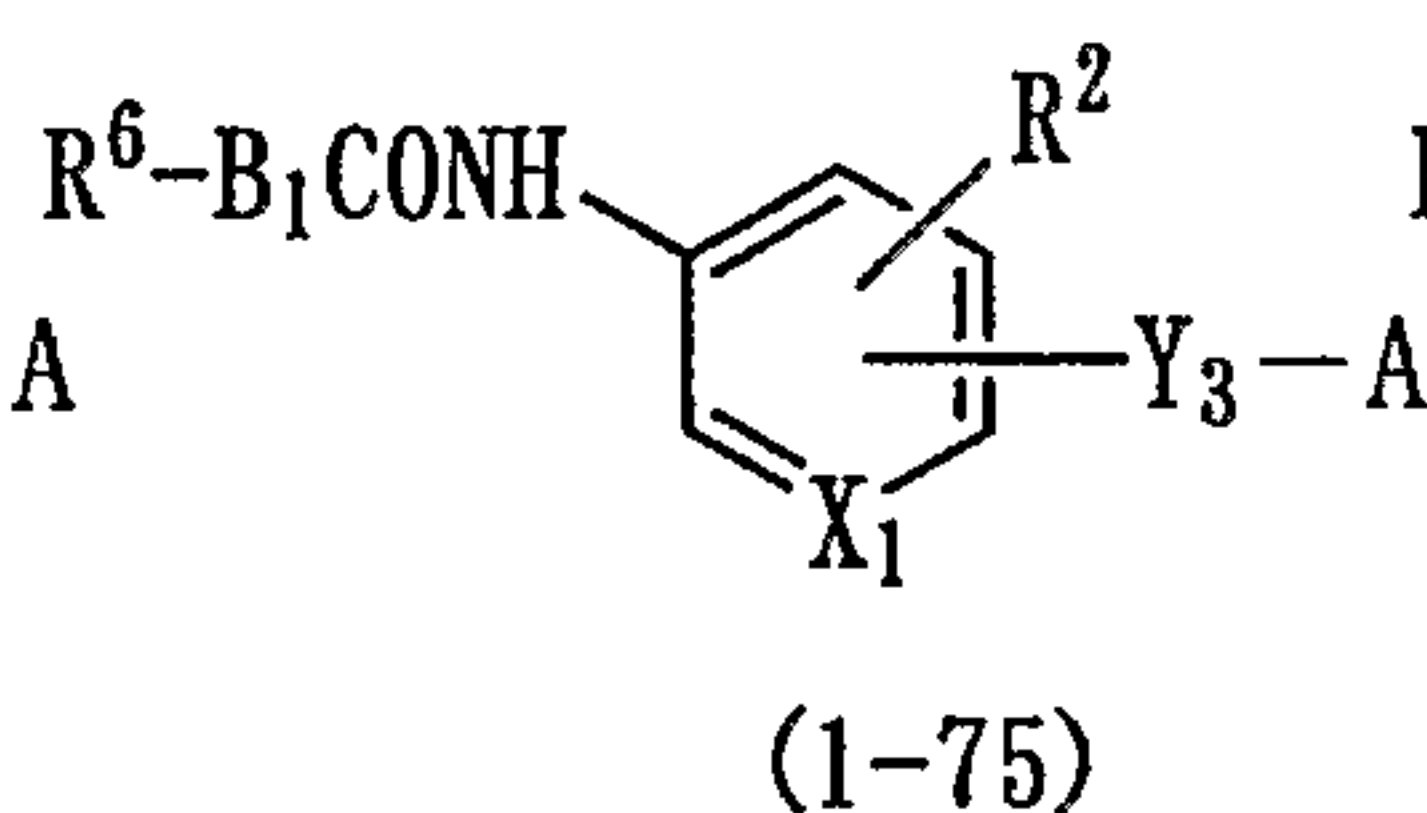
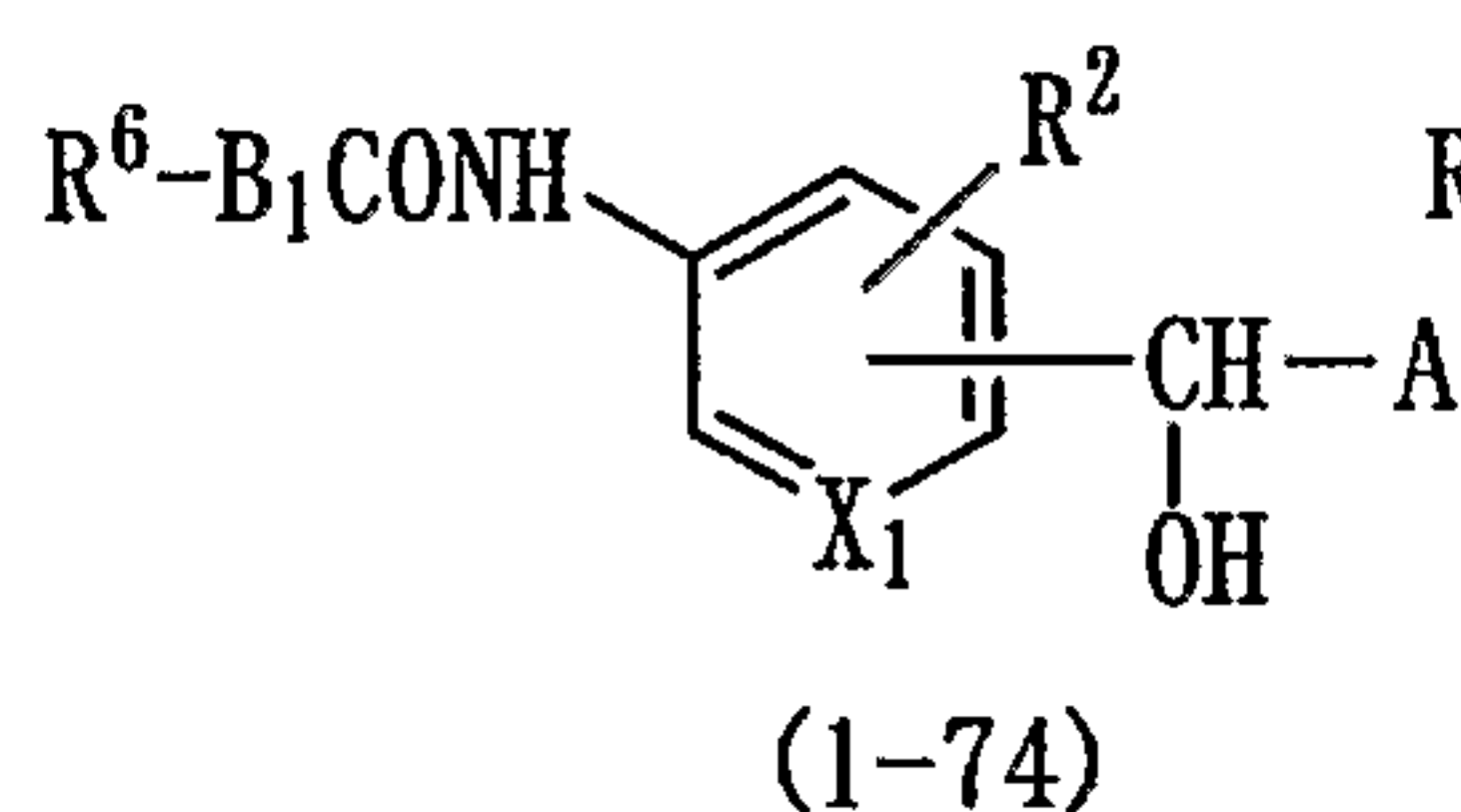
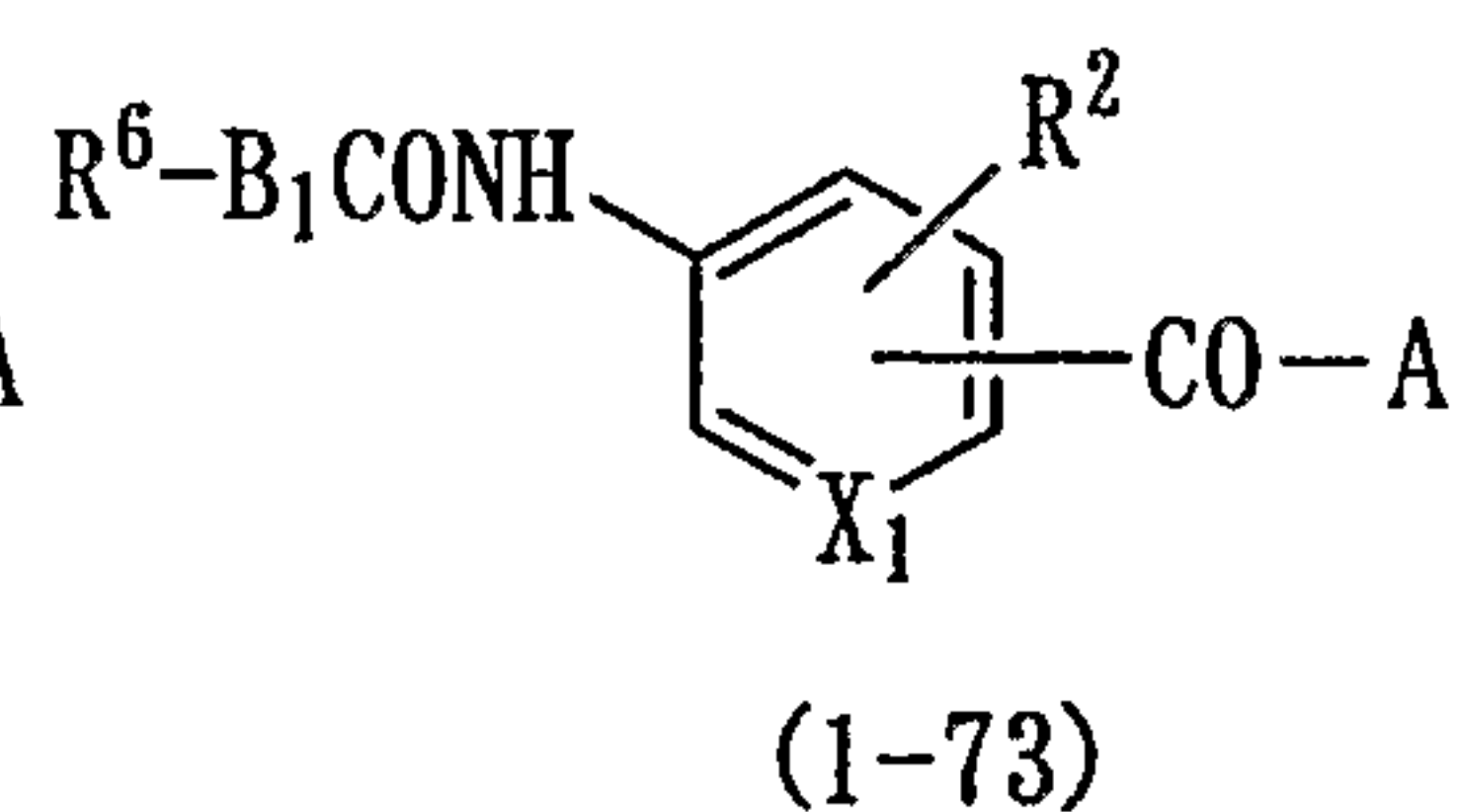
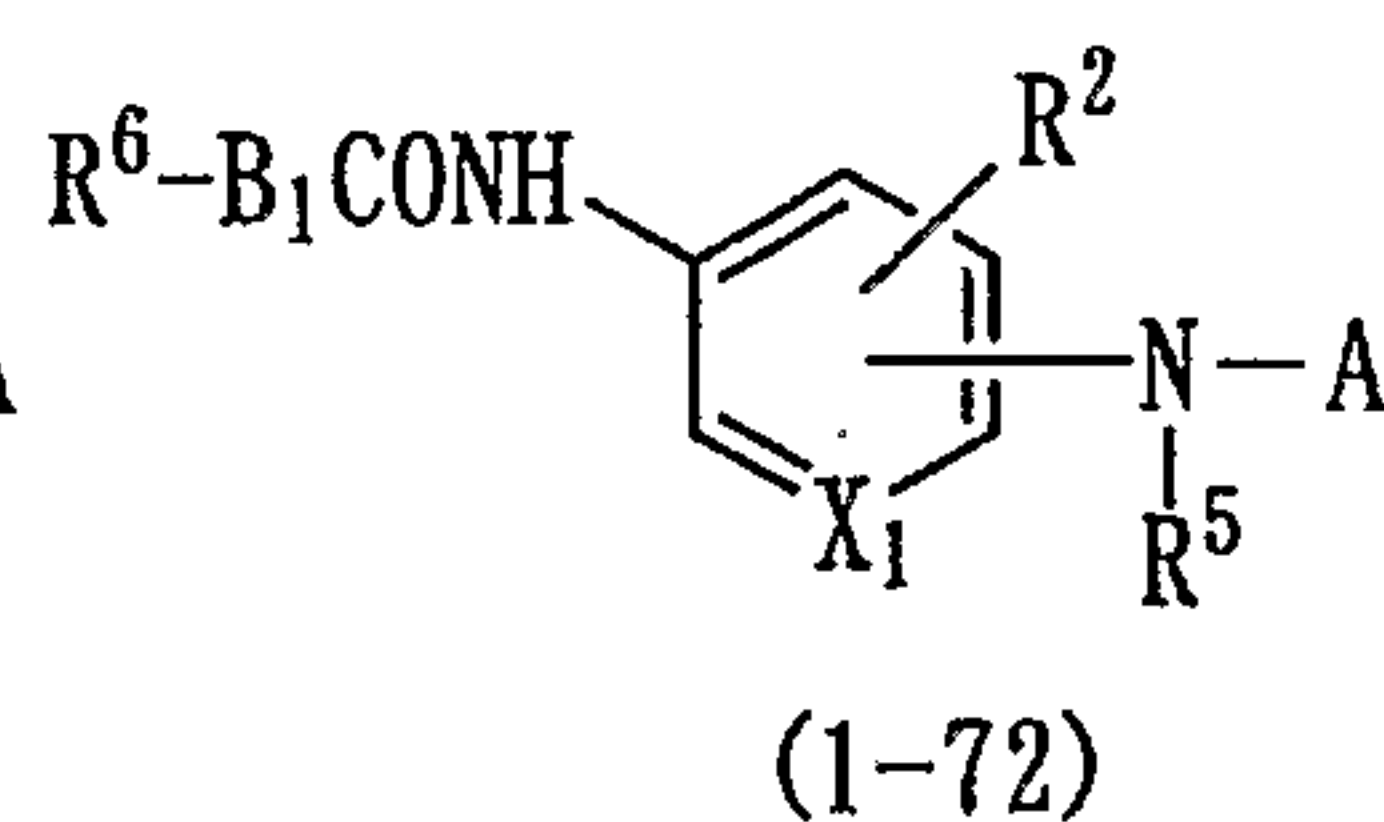
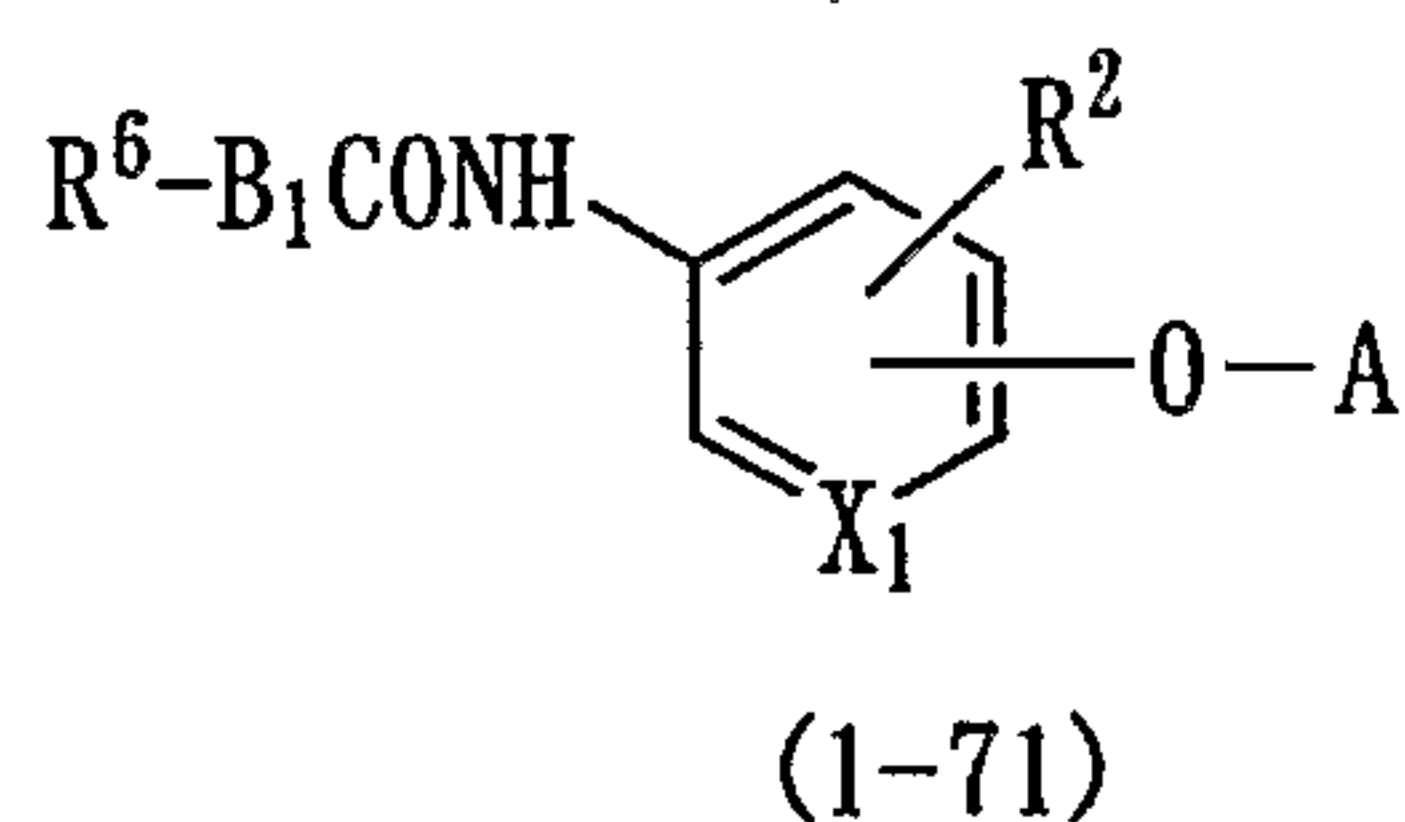
[wherein, in said general formulas (1-57) to (1-63), R^6 , R^2 , R^5 , n , X_1 , A , R^{10a} , B_{22a} , e and Y_3 have the same meanings as described above].

The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-64) to (1-70) or salts thereof:



[wherein, in said general formulas (1-64) to (1-70), R^6 , R^2 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above, and Z_1 represents a lower alkenylene group].

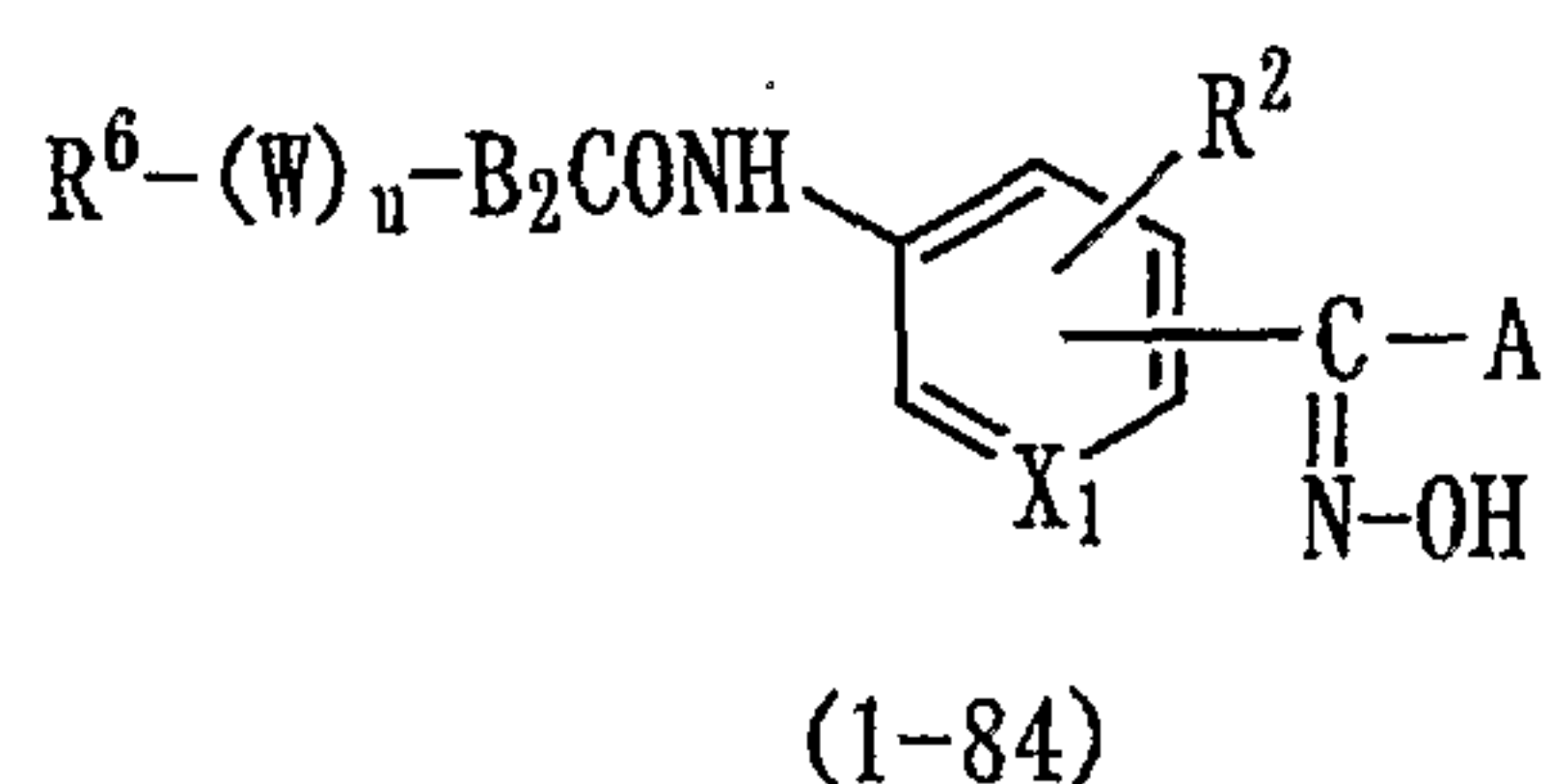
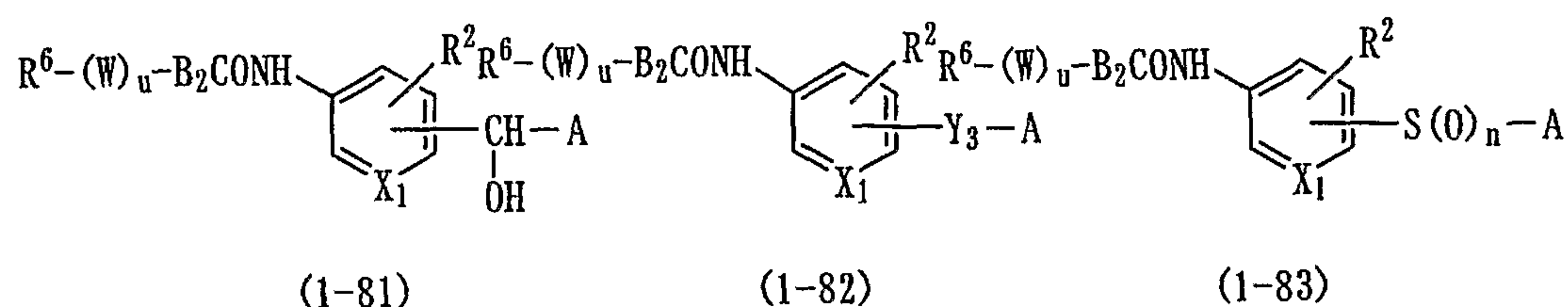
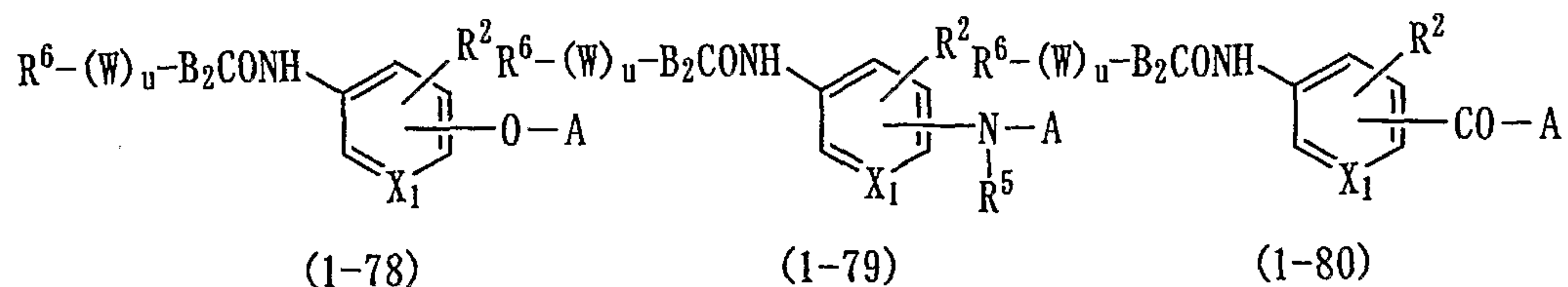
5 The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-71) to (1-77) or salts thereof:



10 [wherein, in said general formulas (1-71) to (1-77), R^6 , R^2 , B_1 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above].

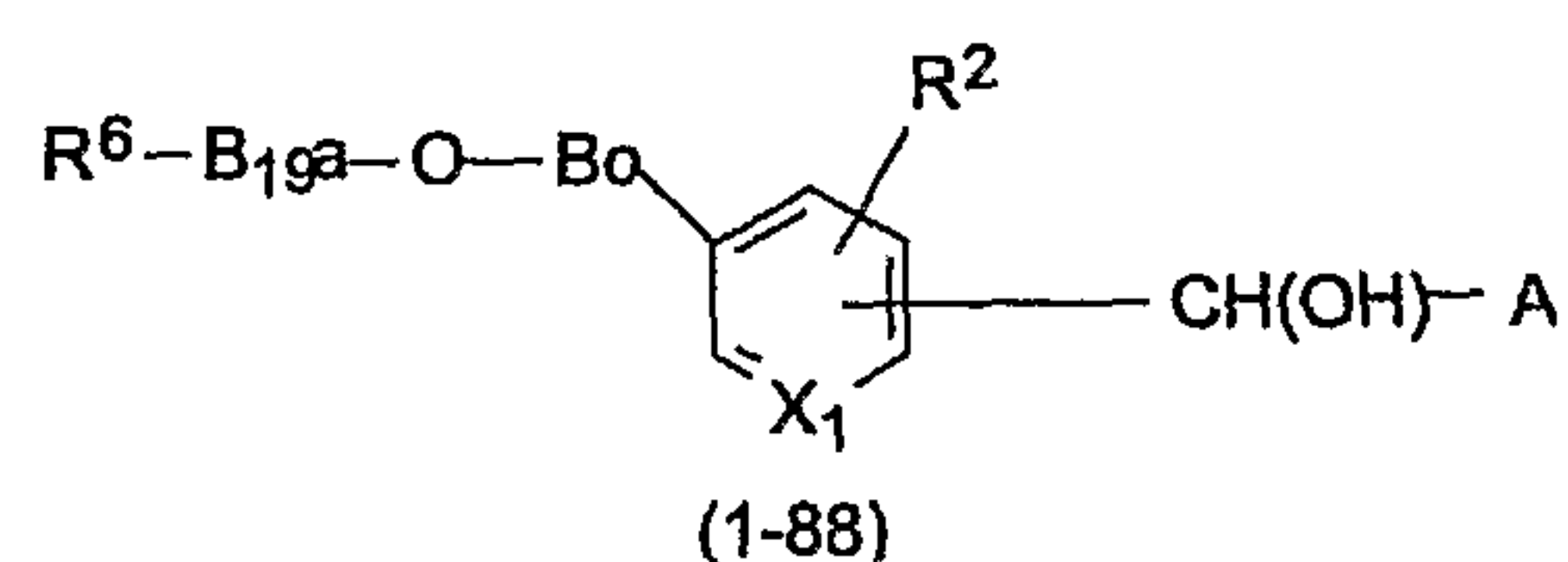
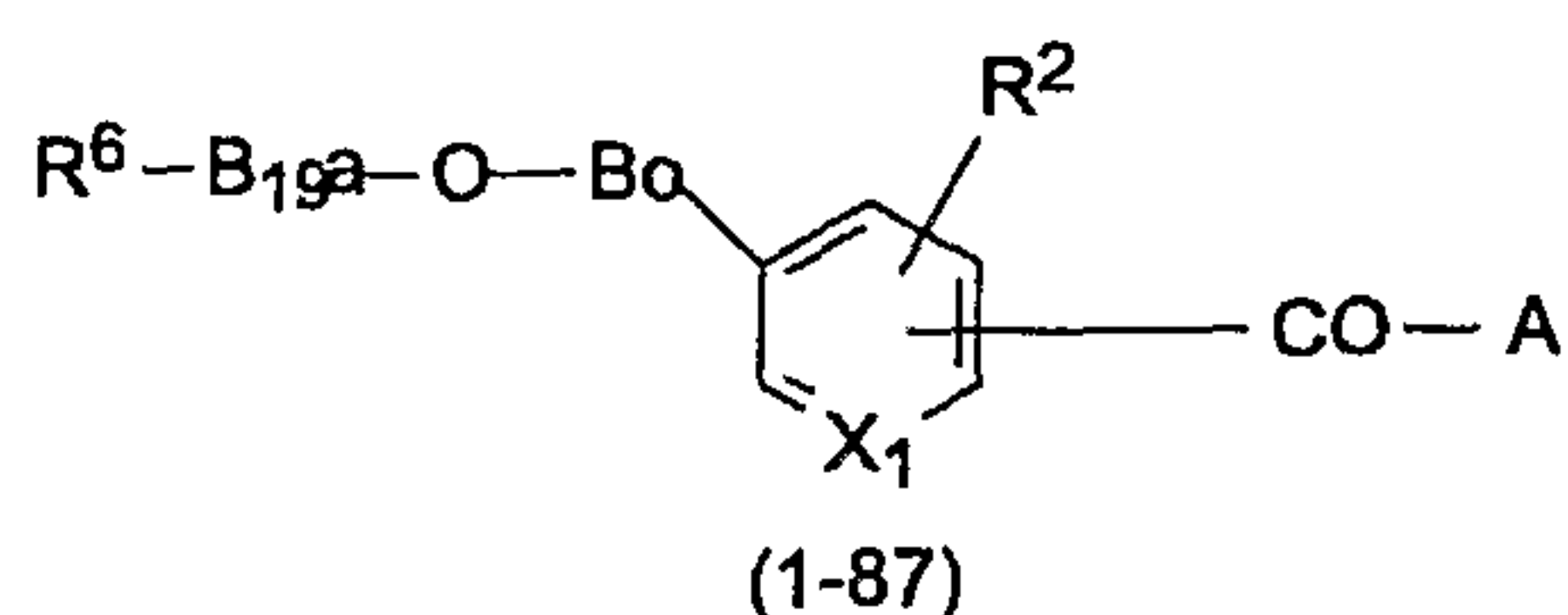
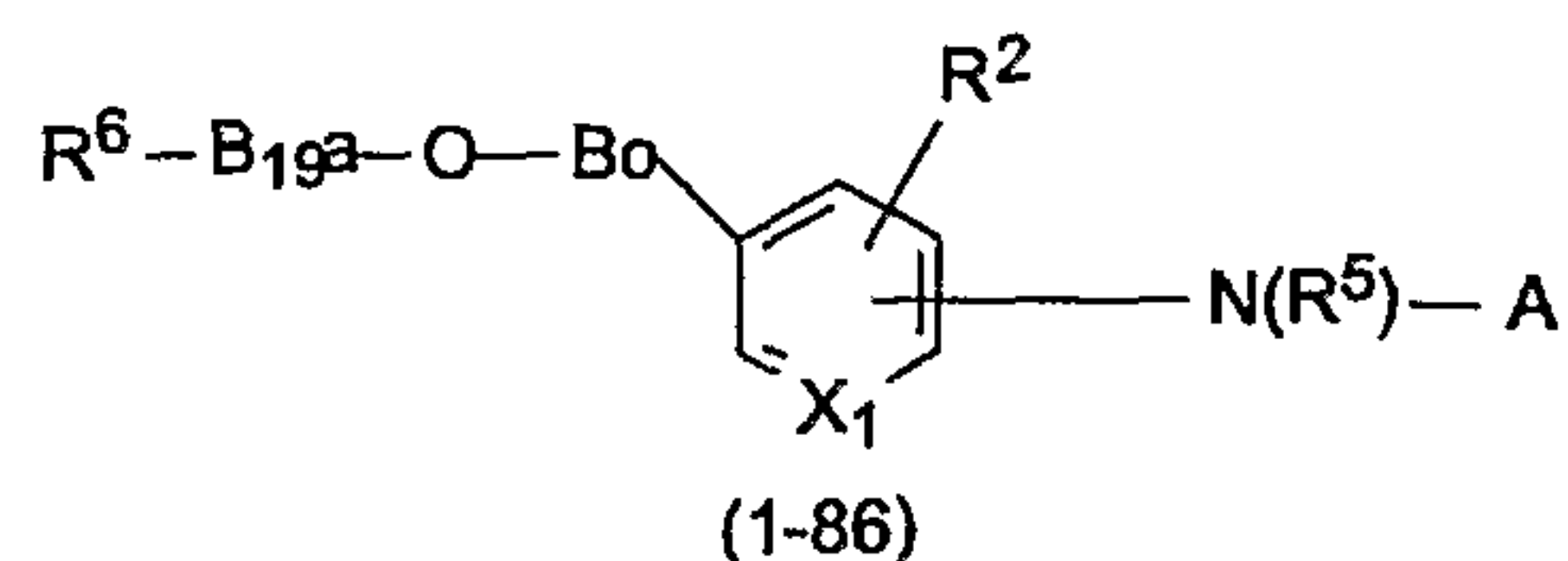
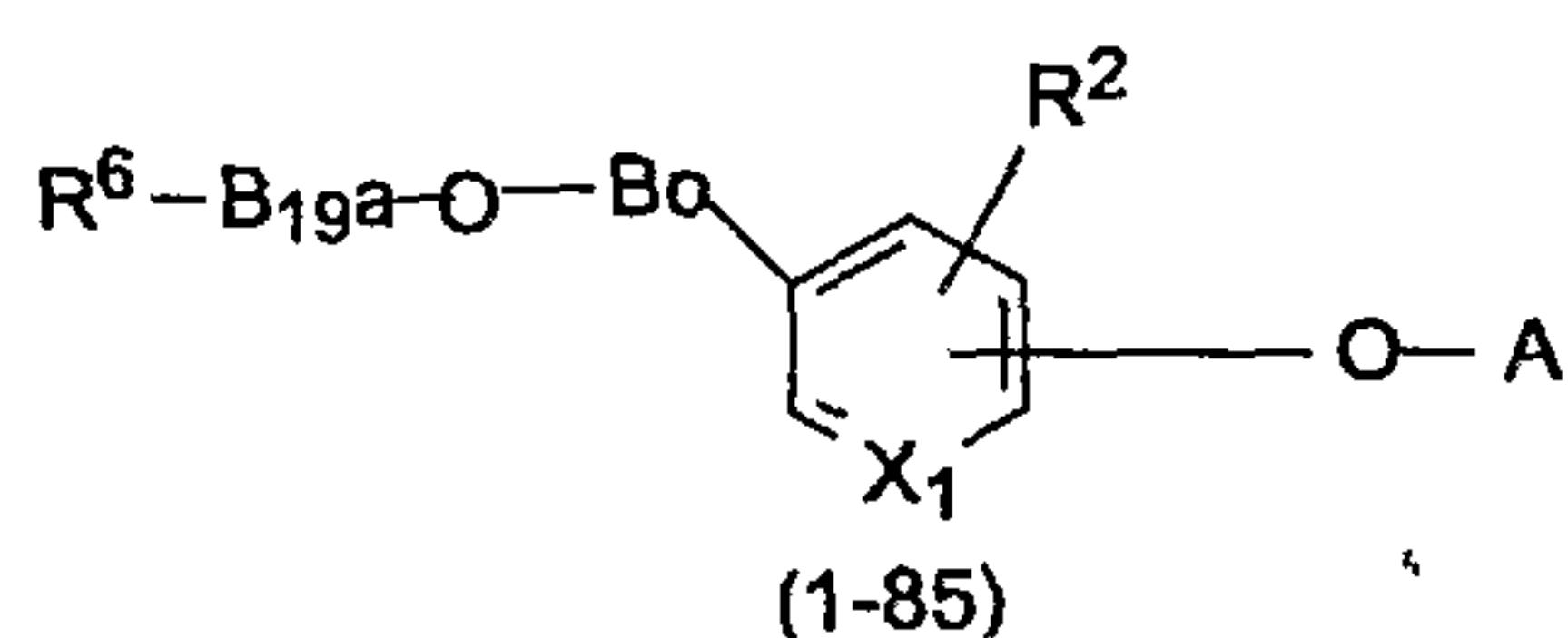
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general
15 formulas (1-78) to (1-84) or salts thereof:

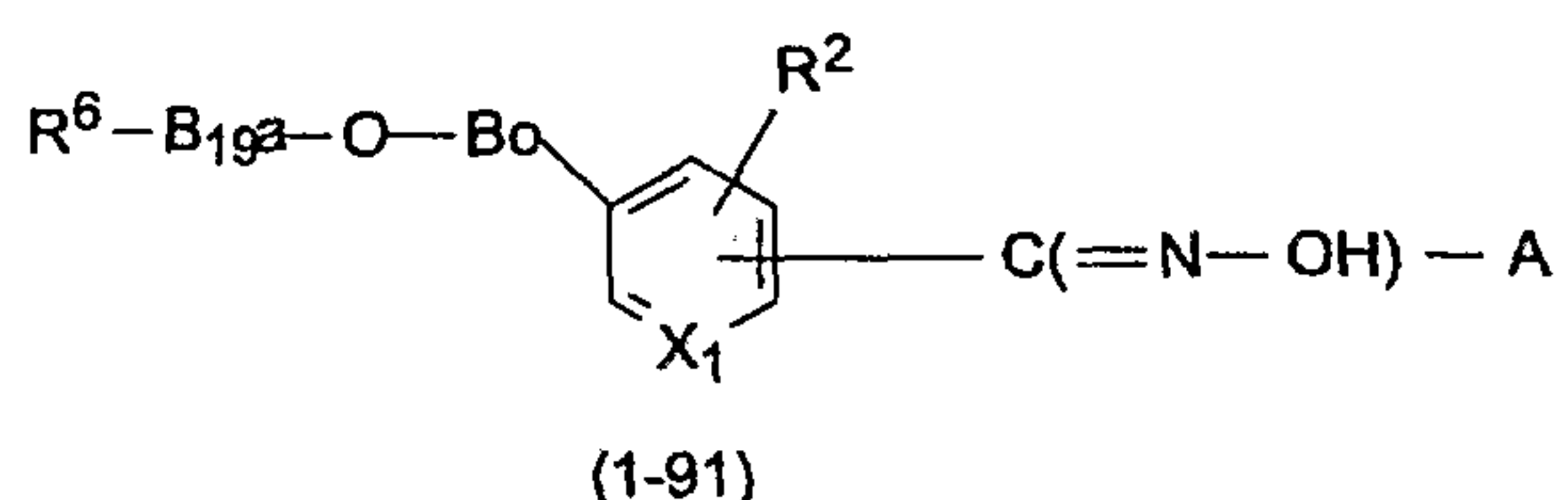
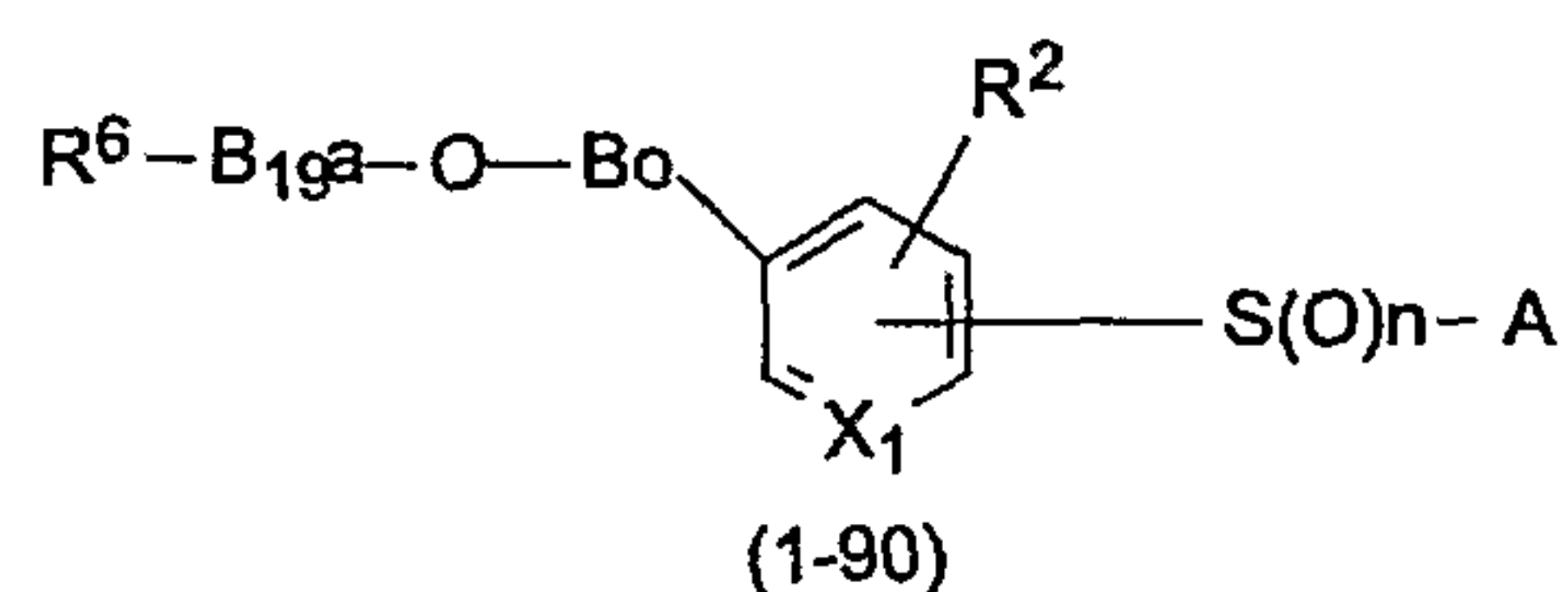
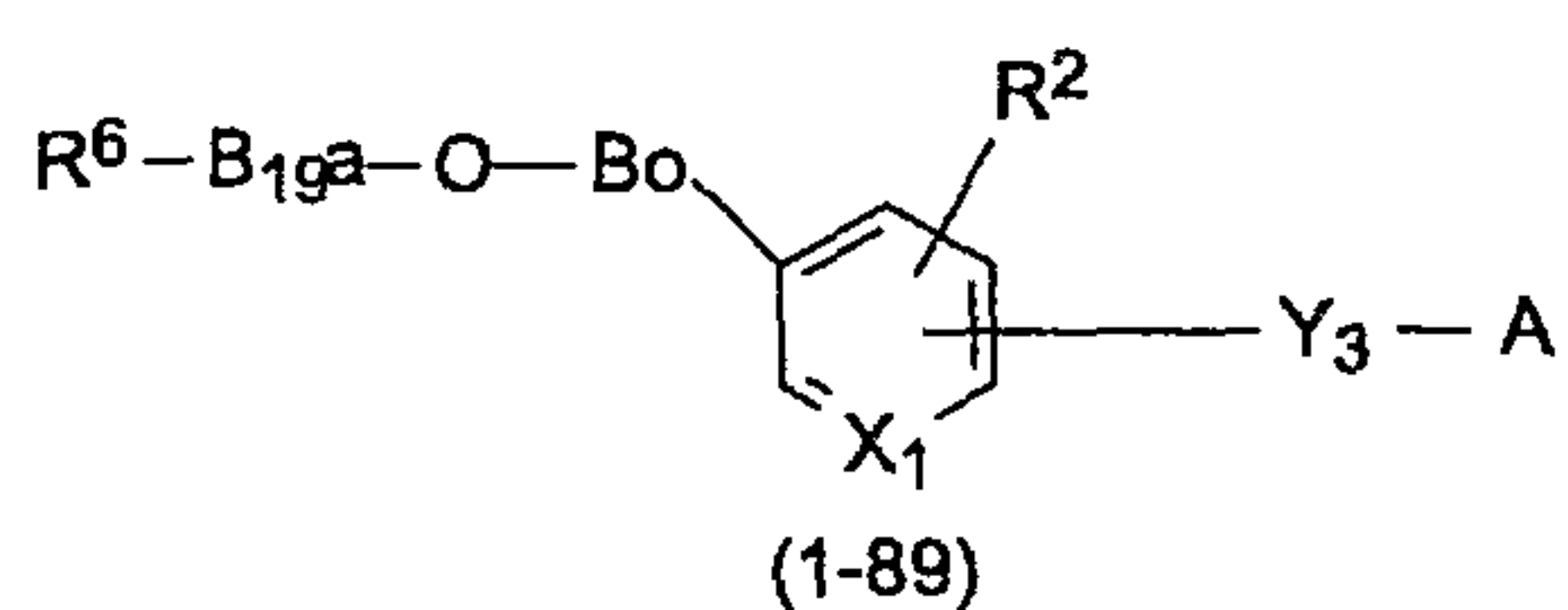
35



[wherein, in said general formulas (1-78) to (1-84), R^6 , W , u , B_2 , R^2 , R^5 , n , X_1 , A and Y_3 have the same meanings as described above].

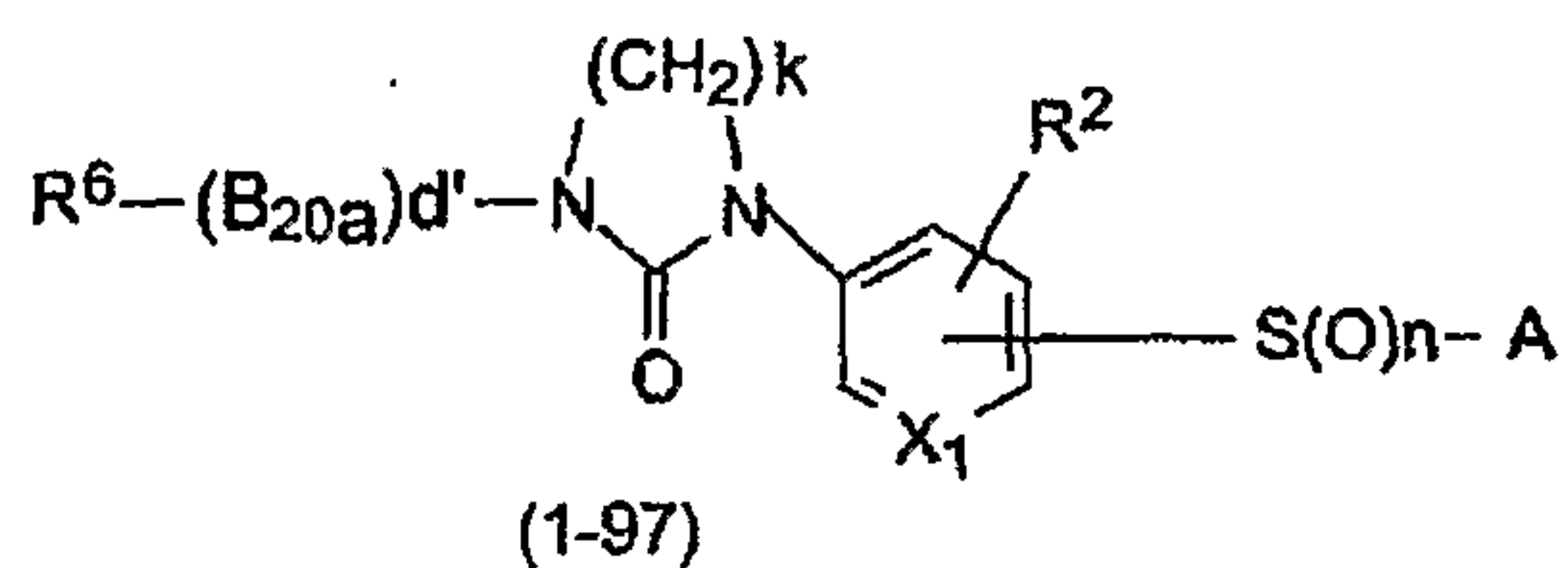
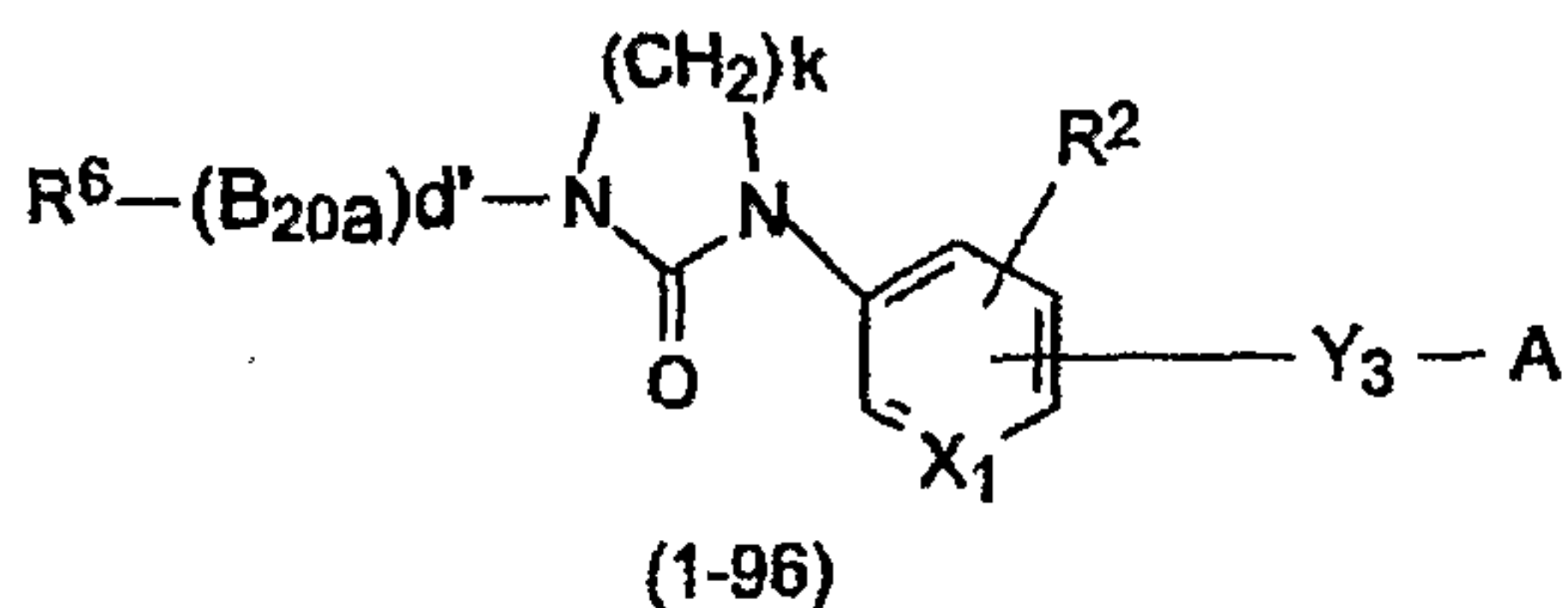
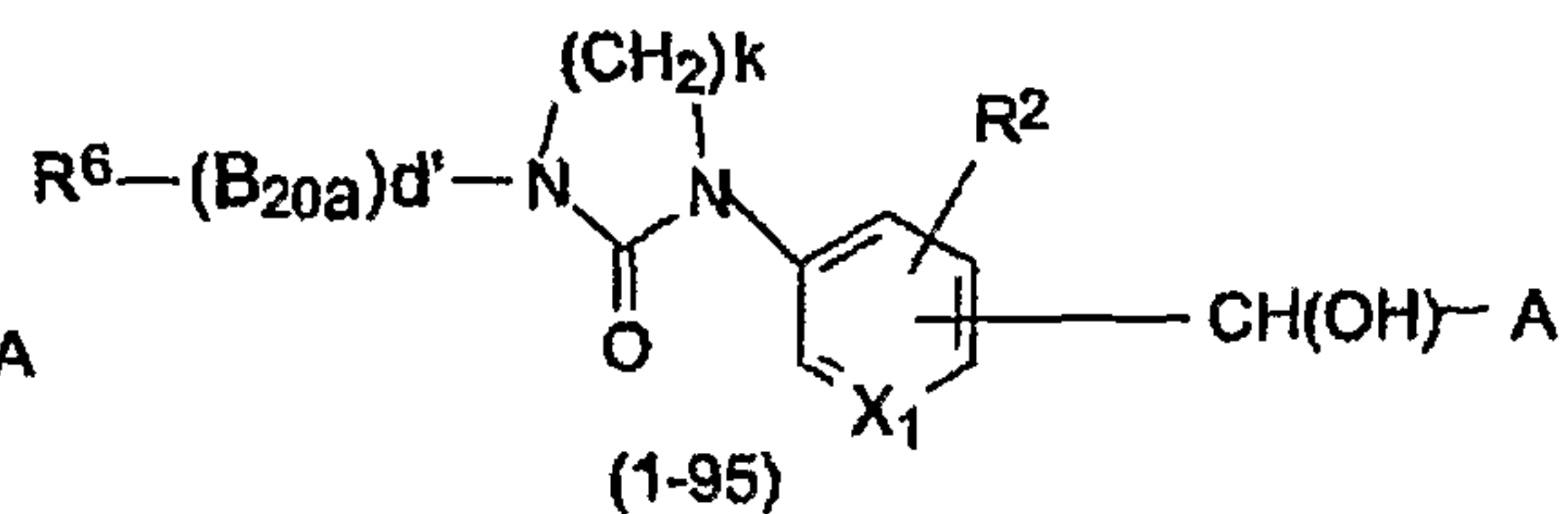
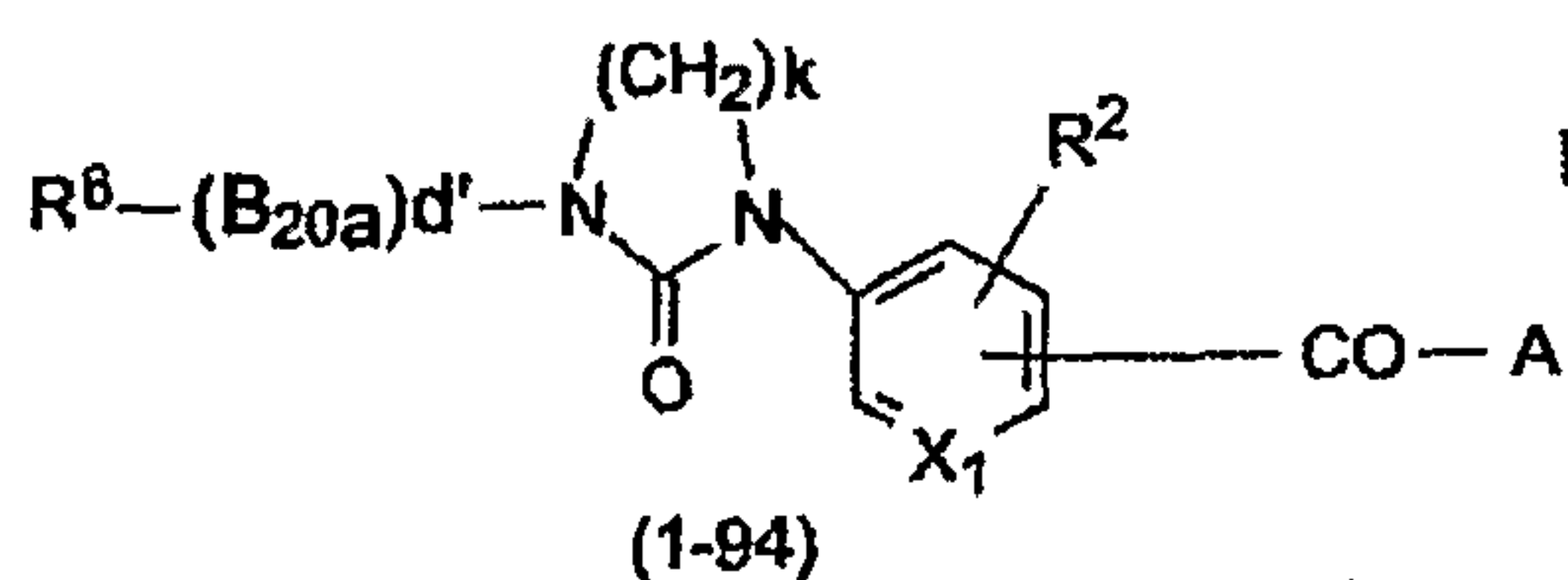
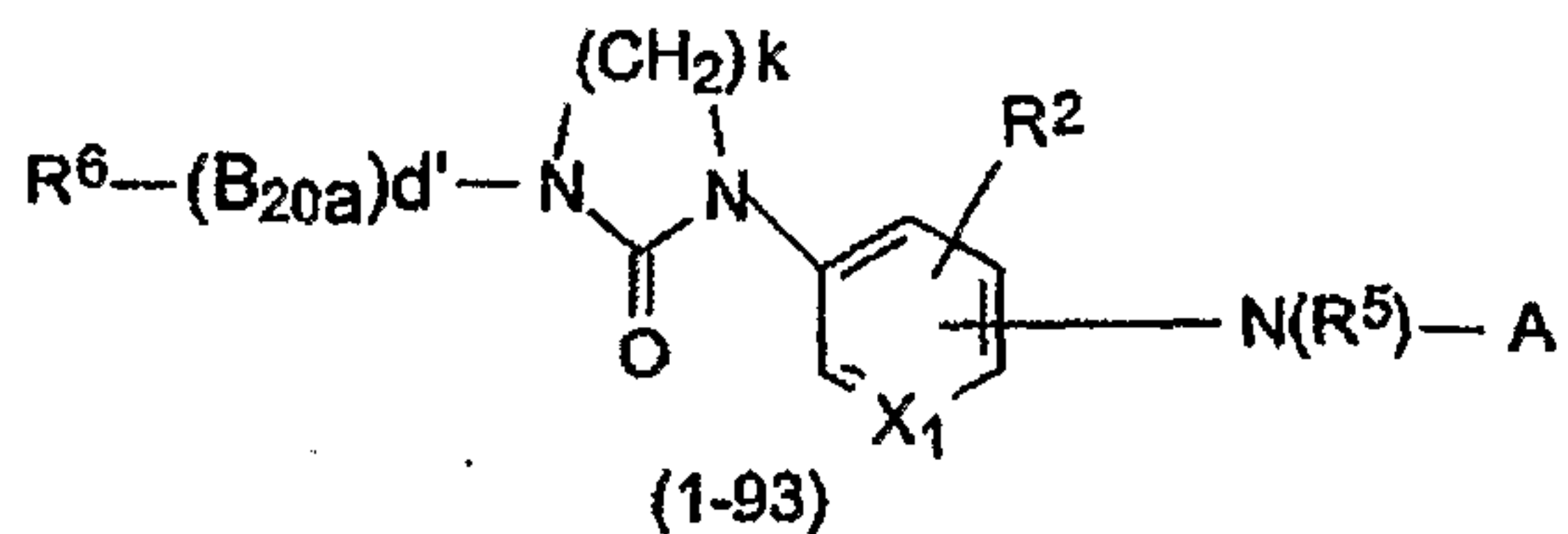
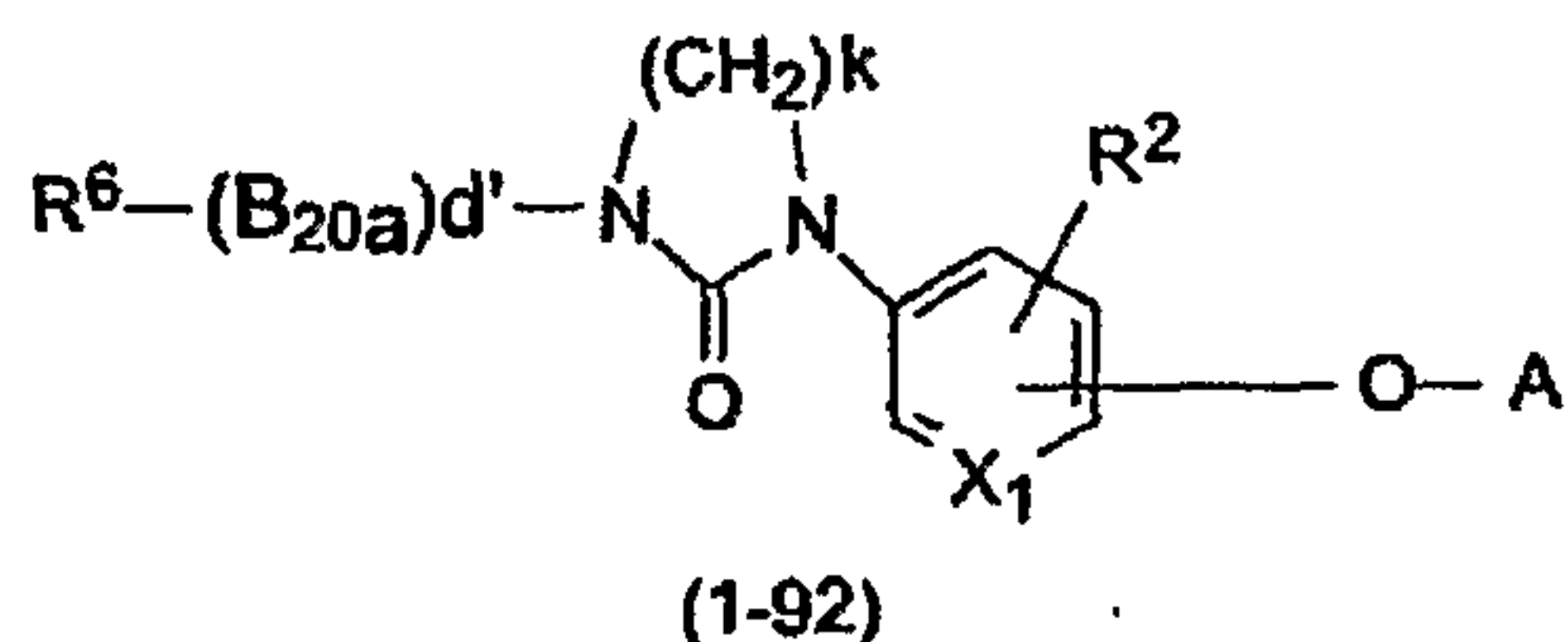
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-85) to (1-91) or salts thereof:

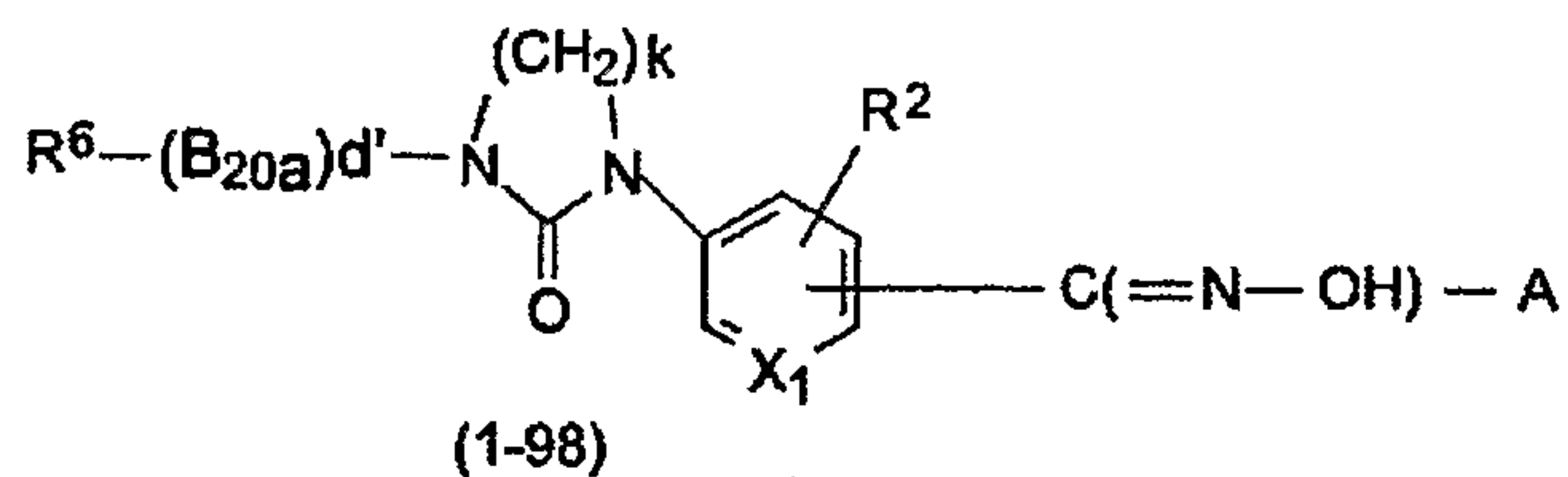




[wherein, in said general formulas (1-85) to (1-91), R^5 , R^6 , B_{19a} , Bo , R^2 , X_1 , n , A and Y_3 have the same meanings as described above].

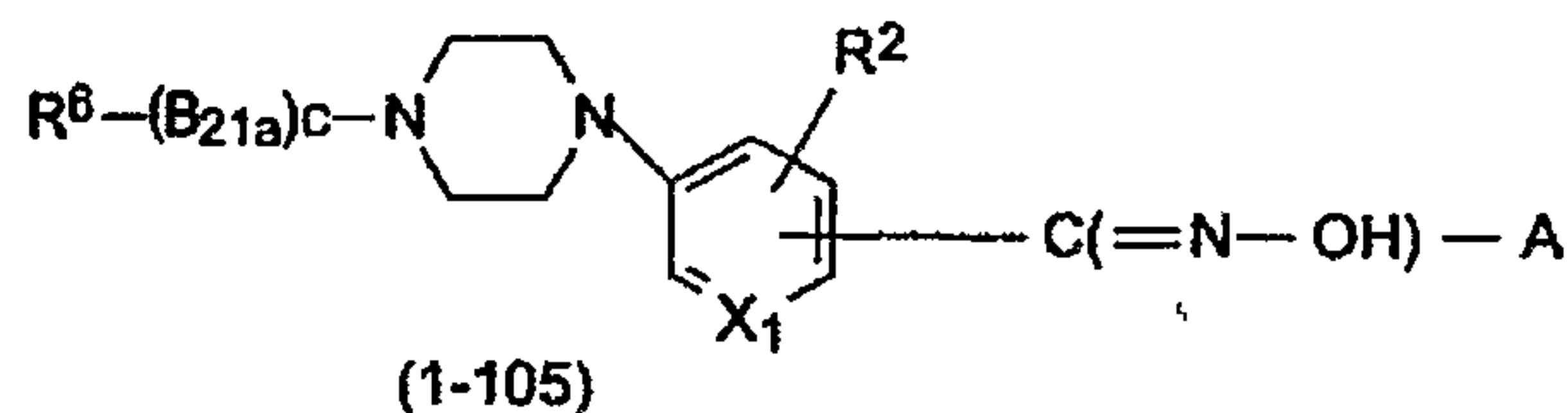
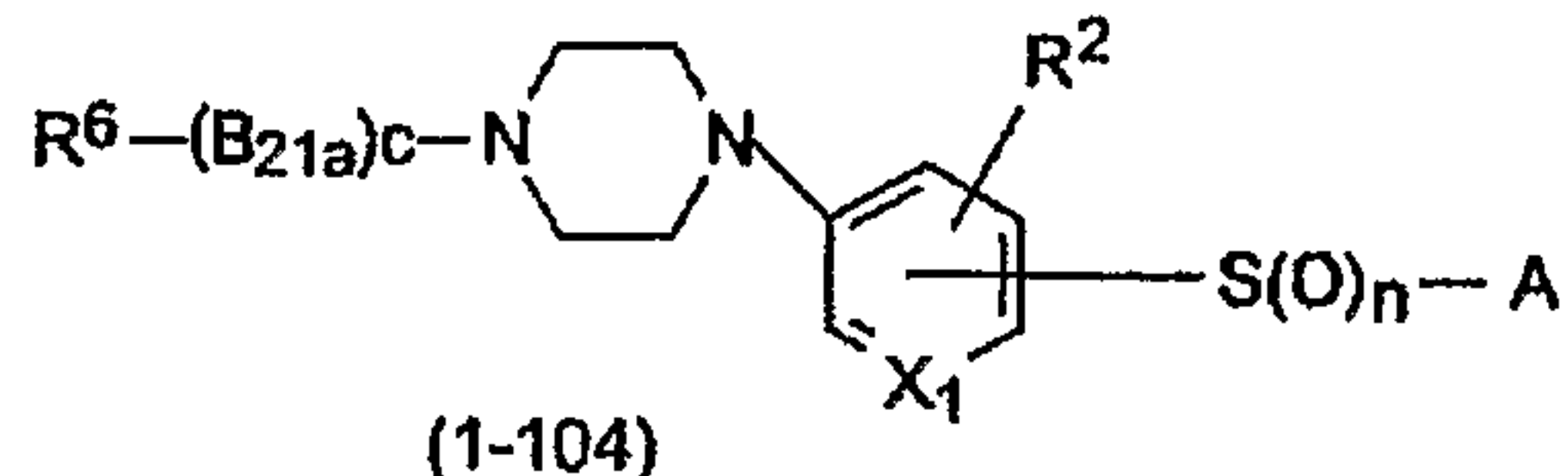
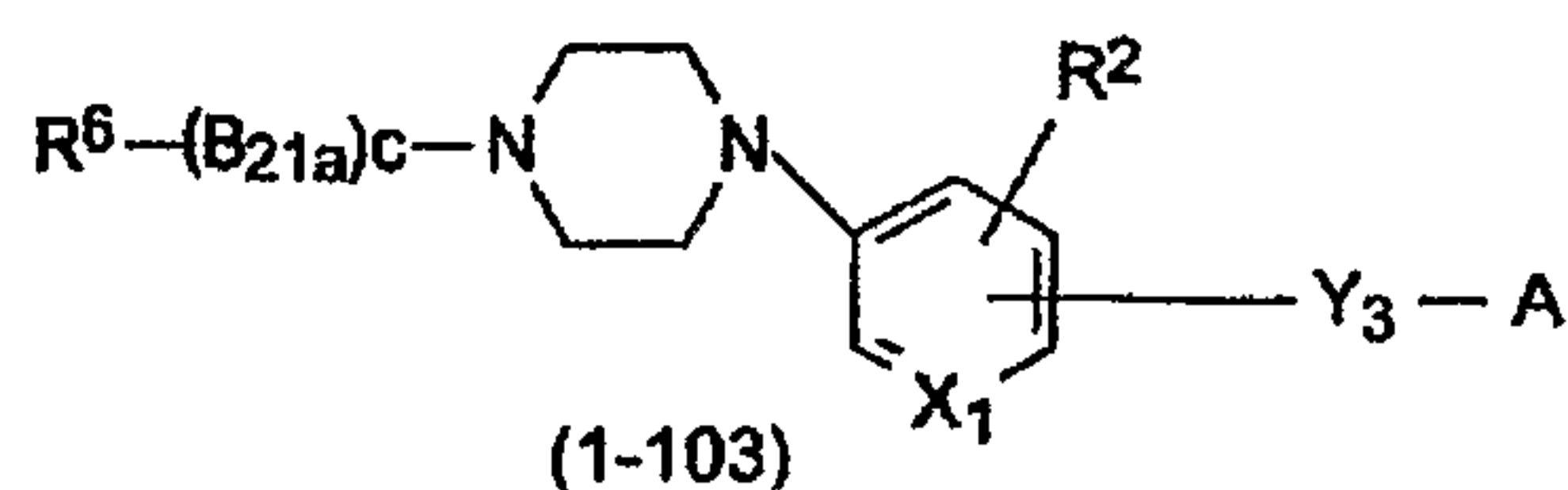
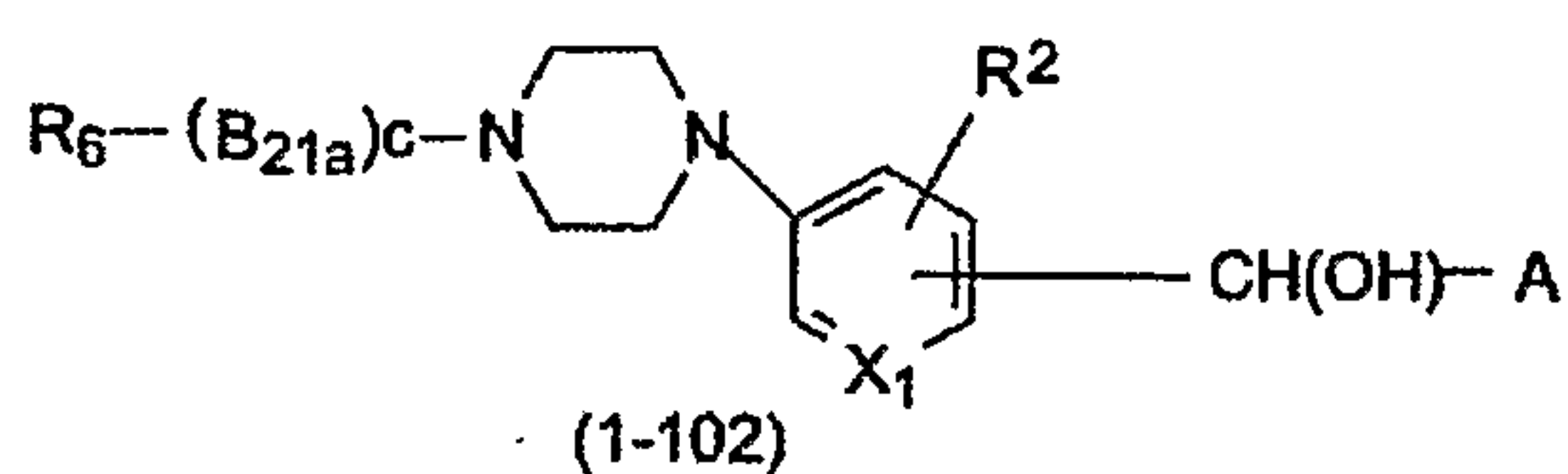
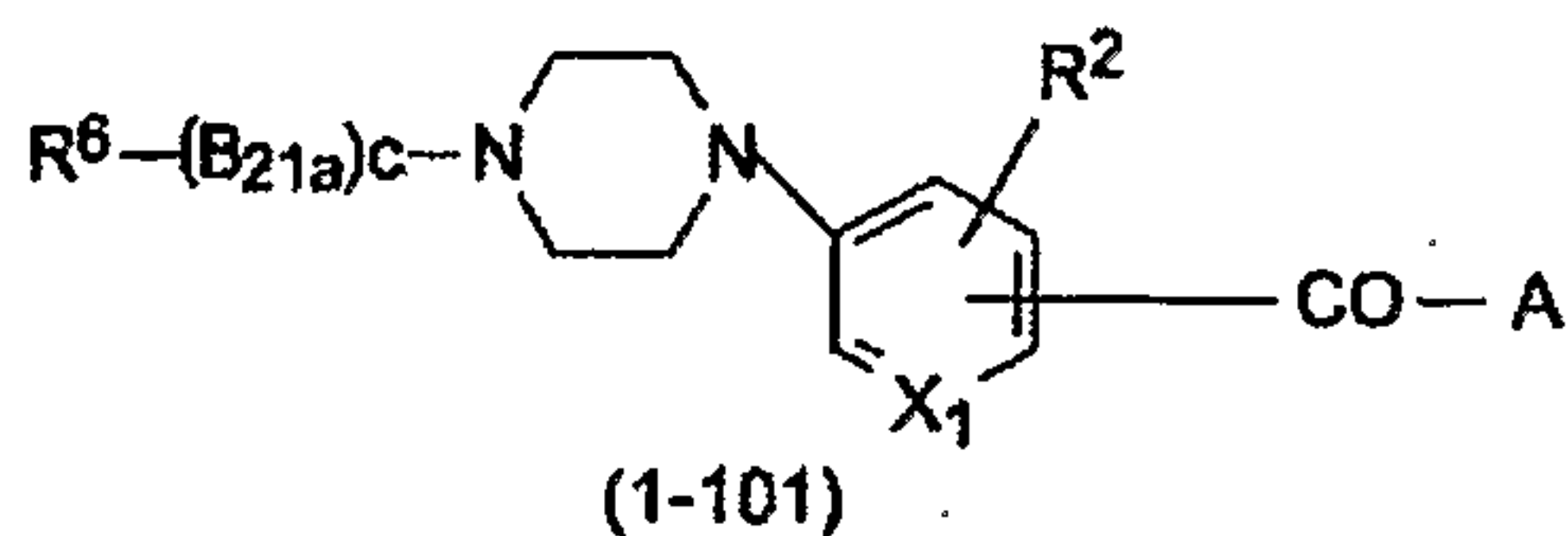
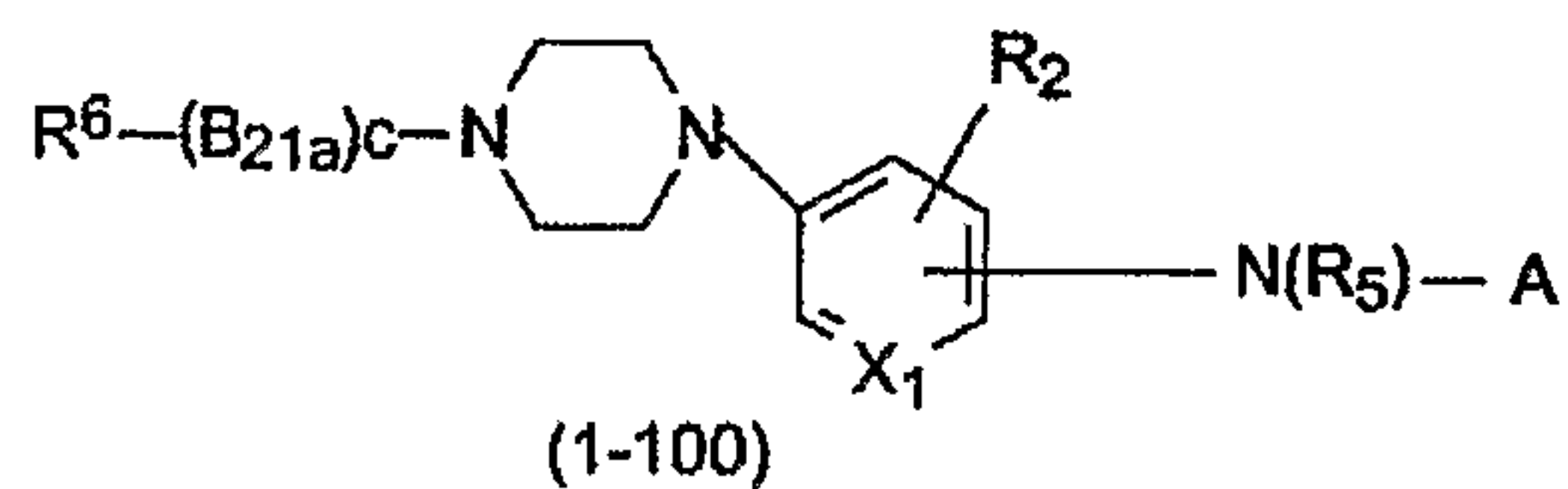
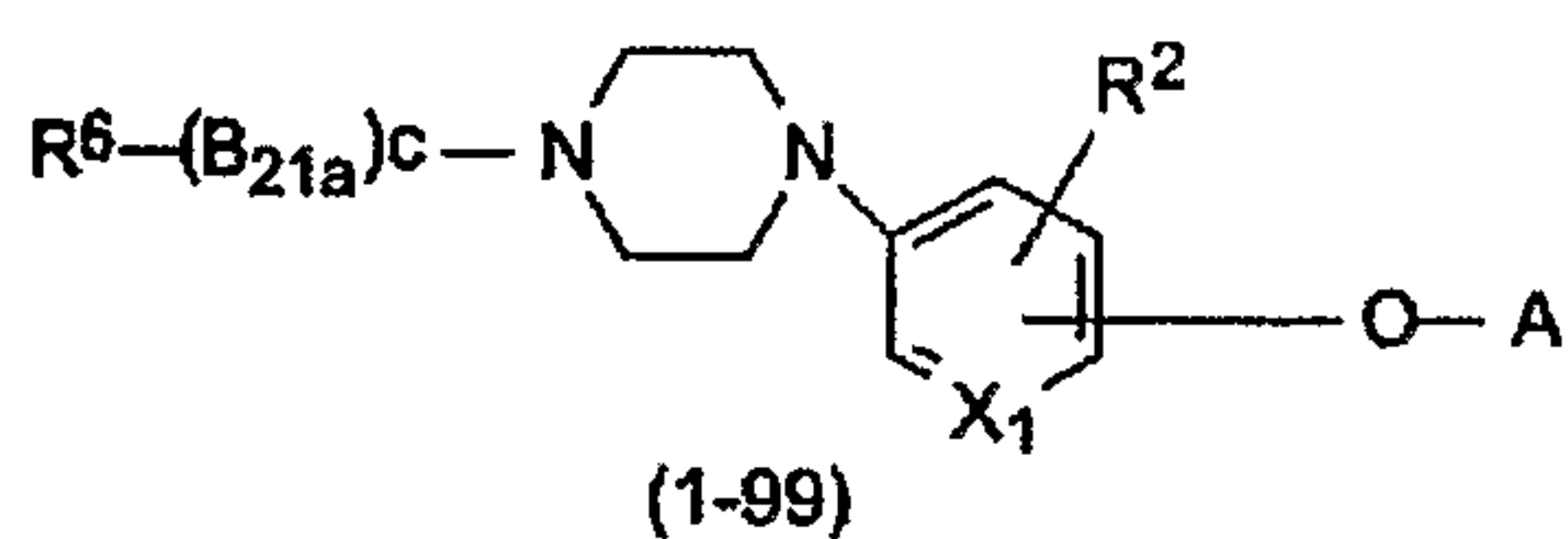
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-92) to (1-98) or salts thereof:





[wherein, in said general formulas (1-92) to (1-98), R^5 , R^6 , B_{20a} , R^2 , X_1 , A , n , d' , k and Y_3 have the same meanings as described above].

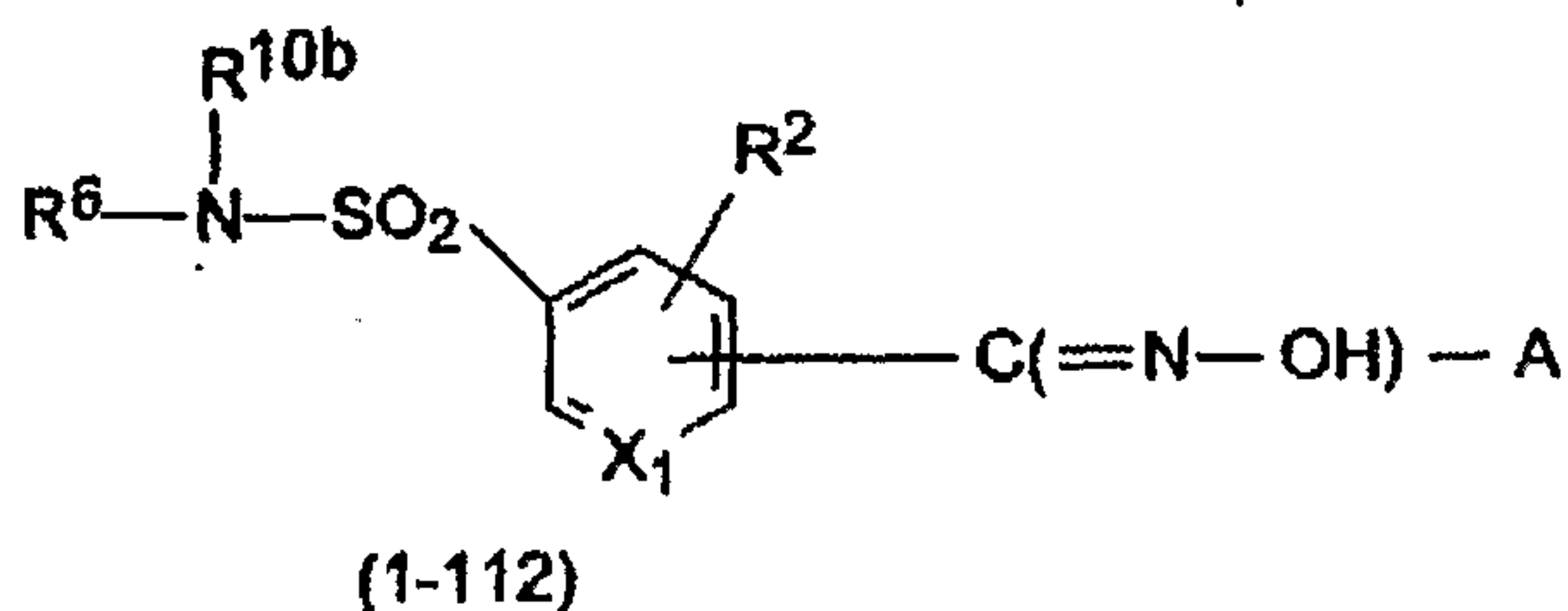
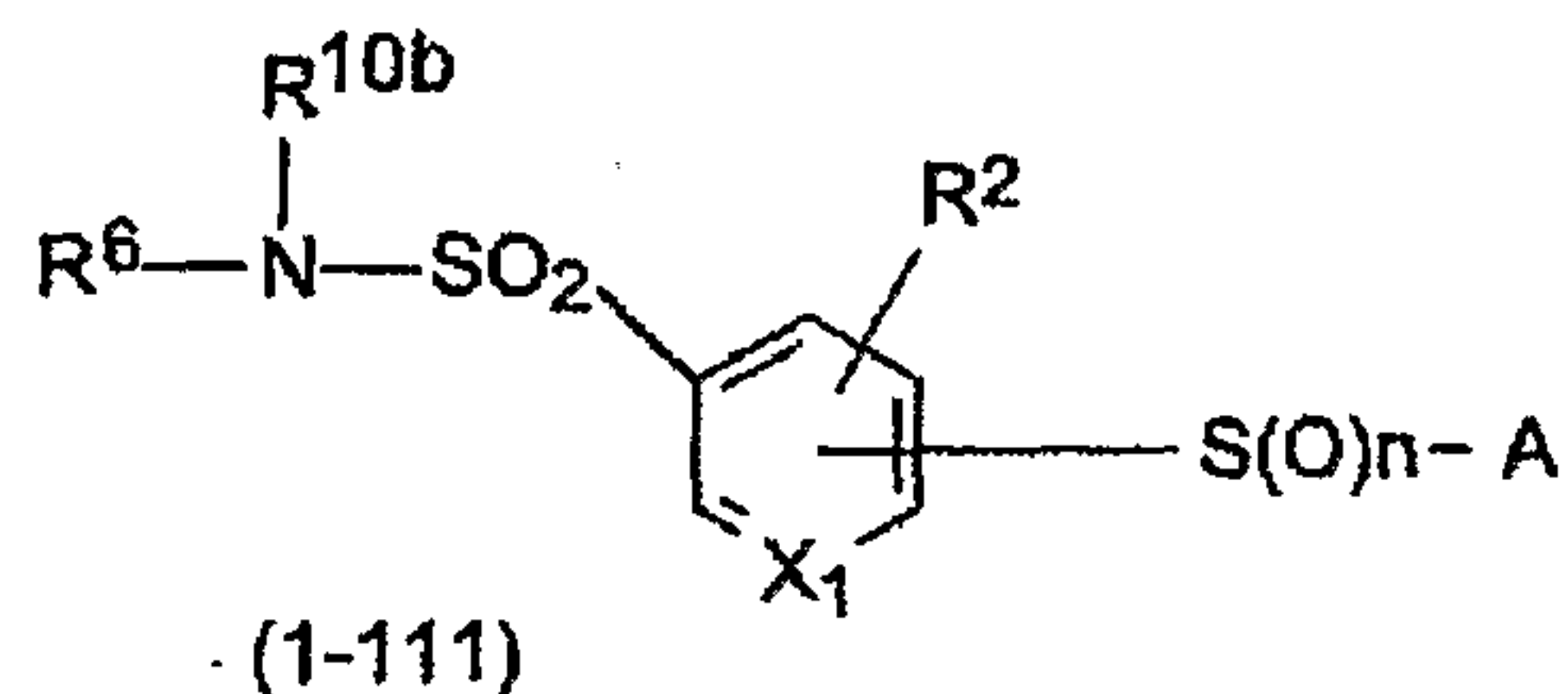
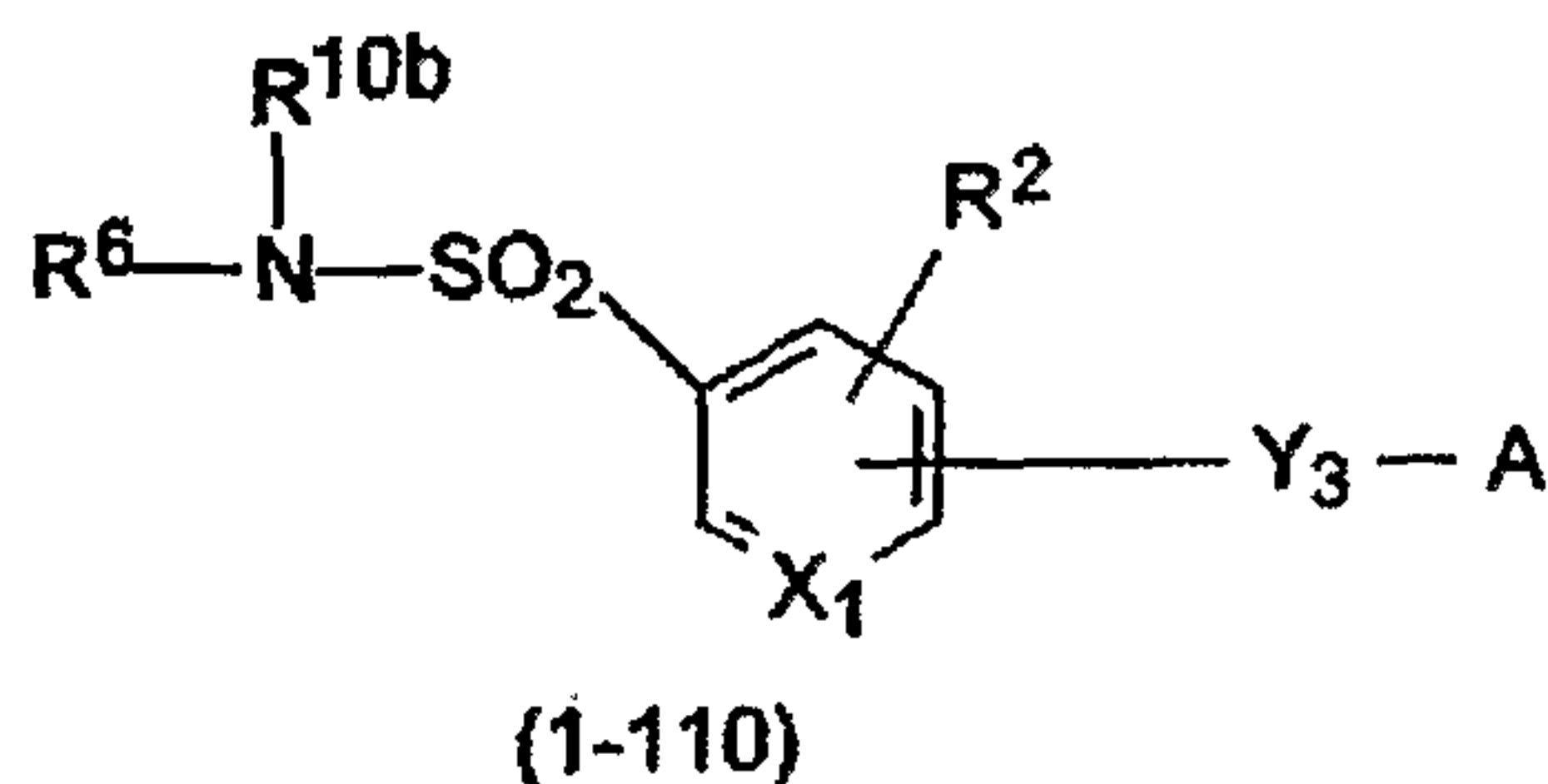
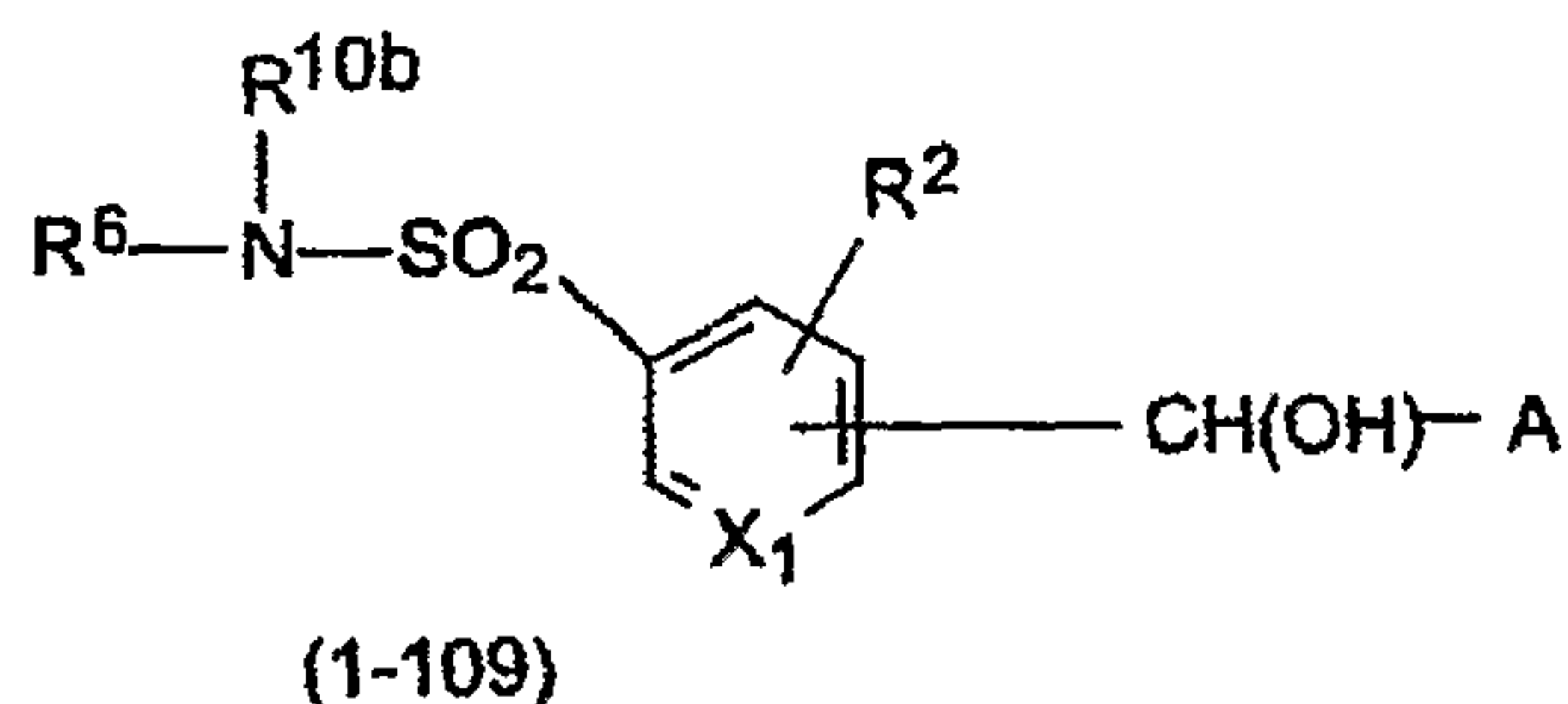
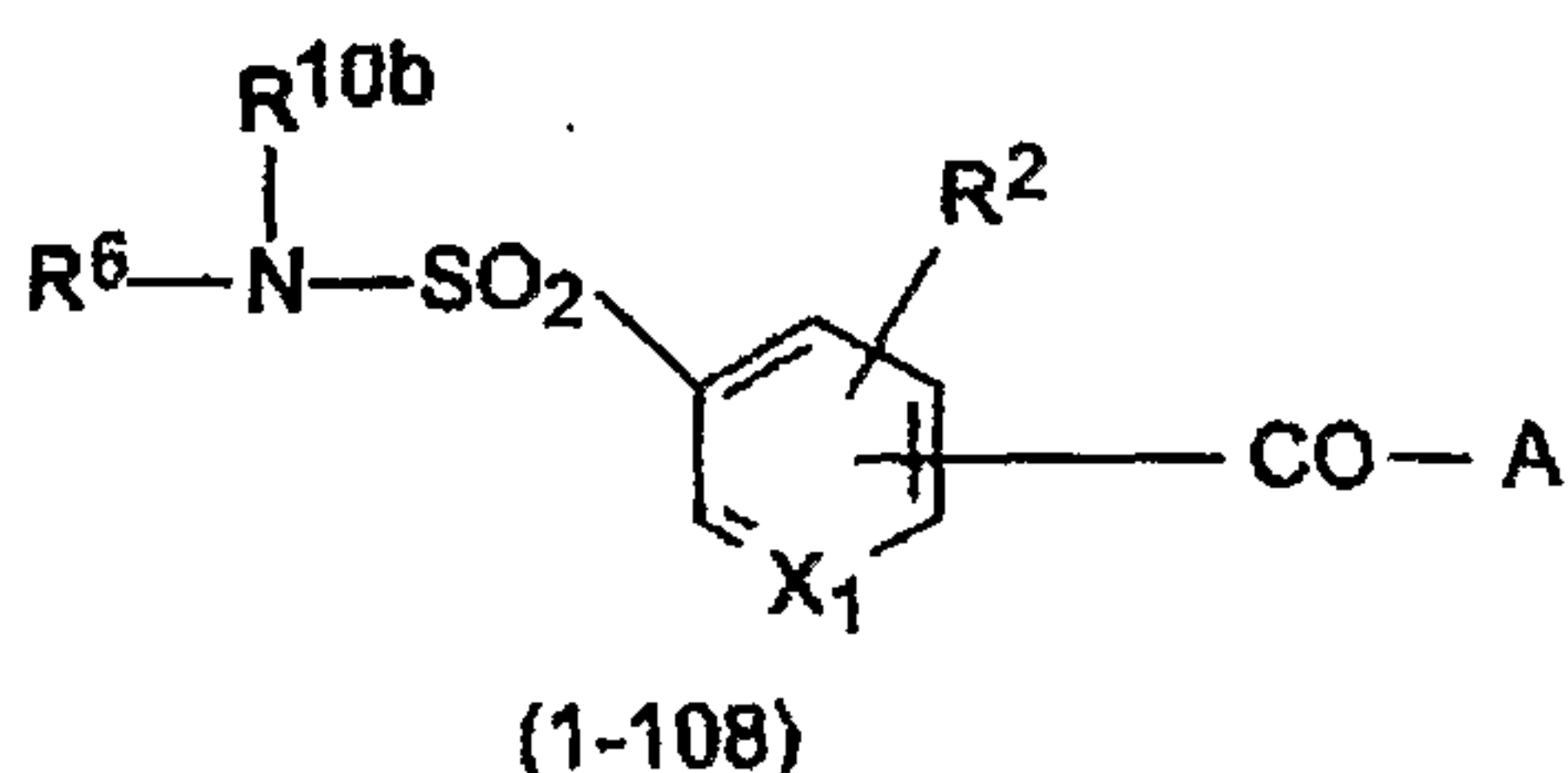
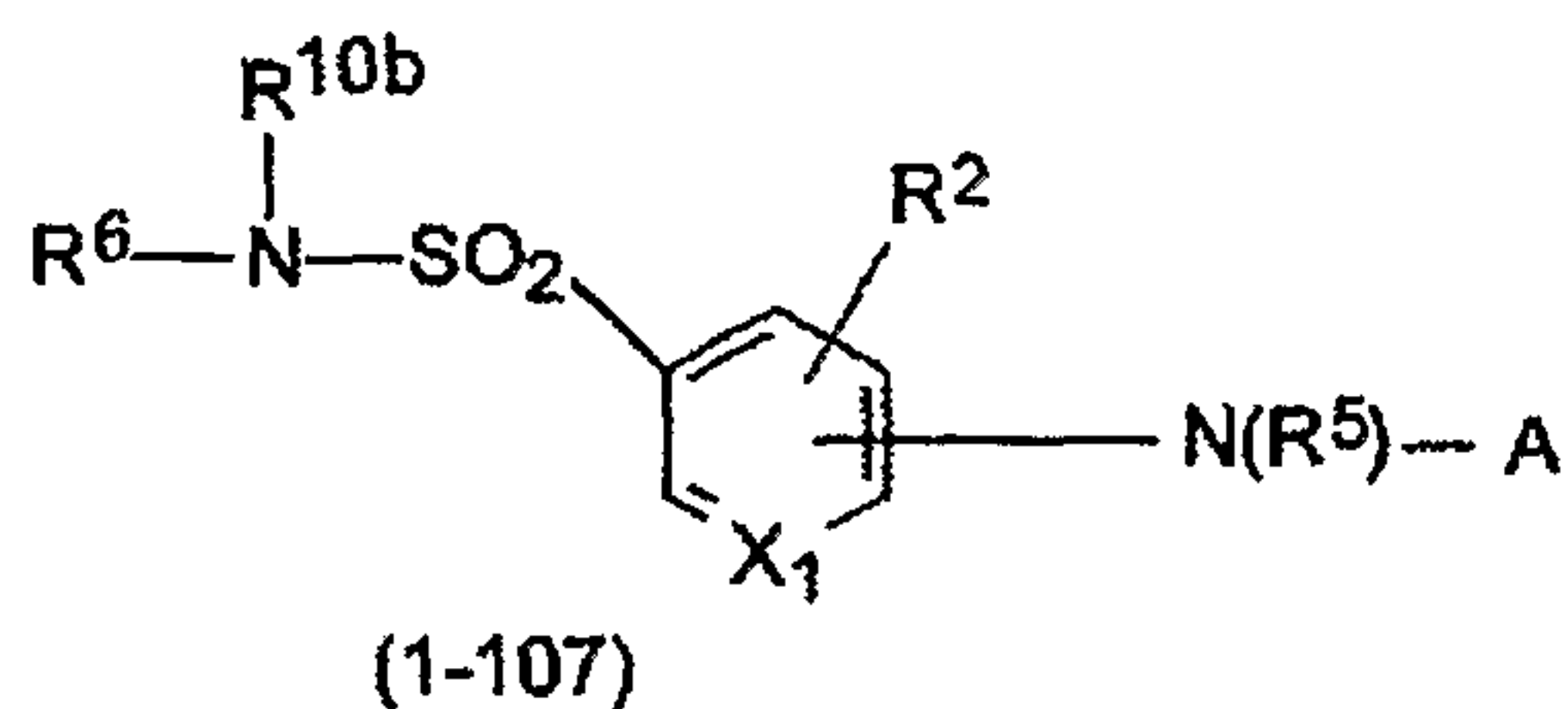
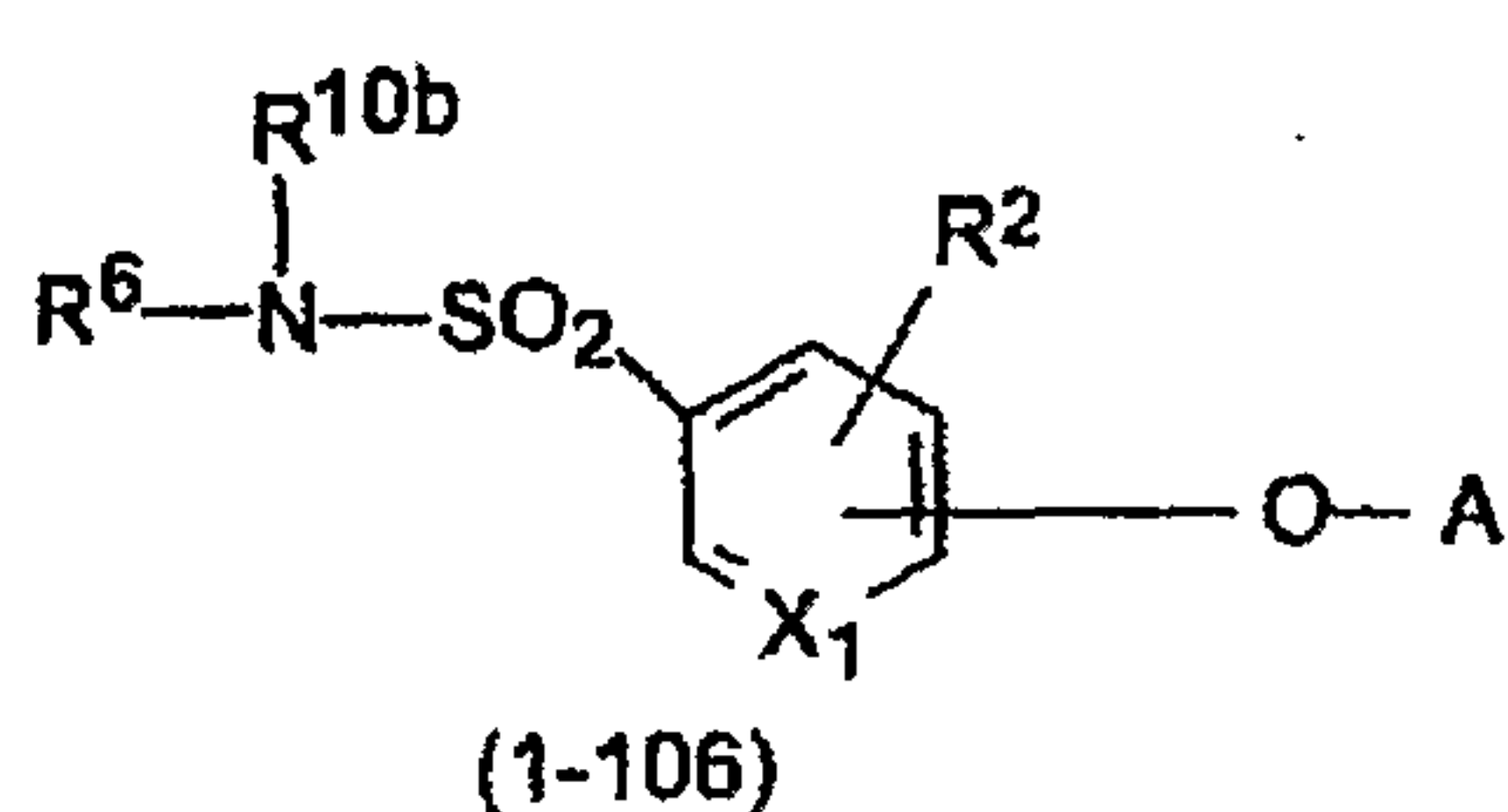
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-99) to (1-105) or salts thereof:



[wherein, in said general formulas (1-99) to (1-105), R^6 , R^5 , B_{21a} , R^2 , X_1 , A , n , c and Y_3 have the same meanings as described above].

The above aromatic compound represented by

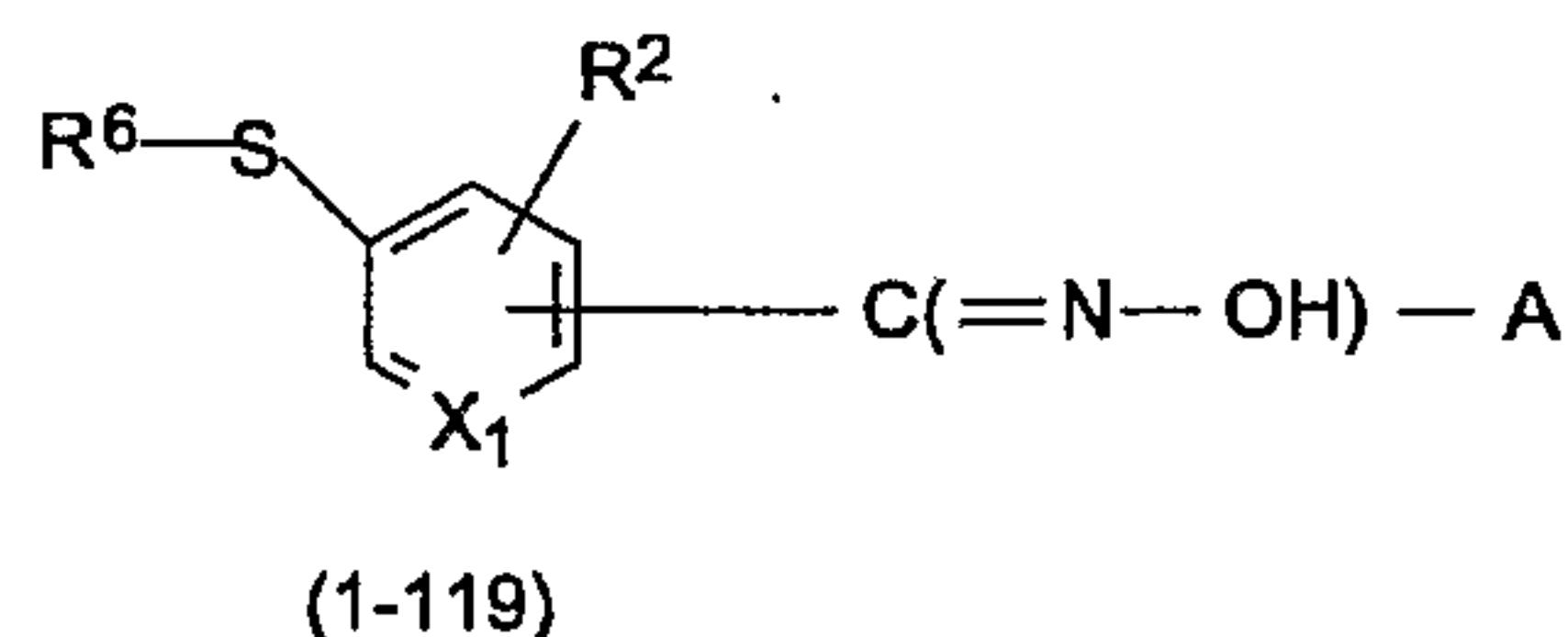
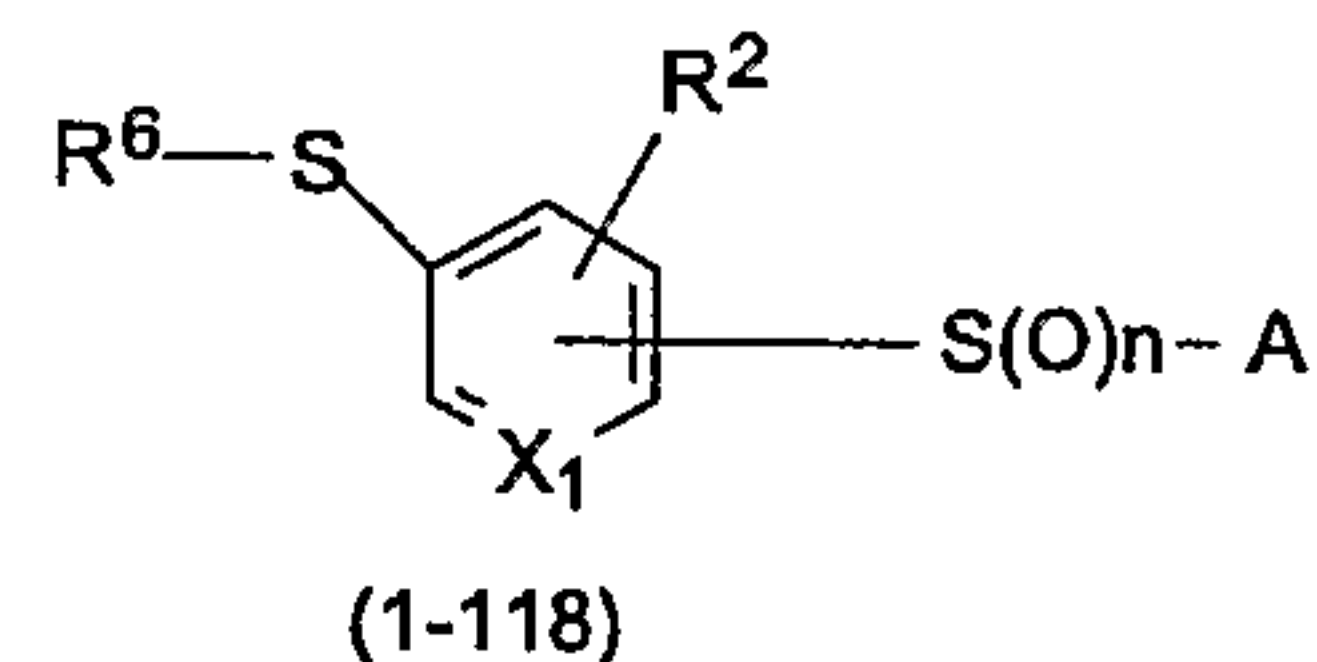
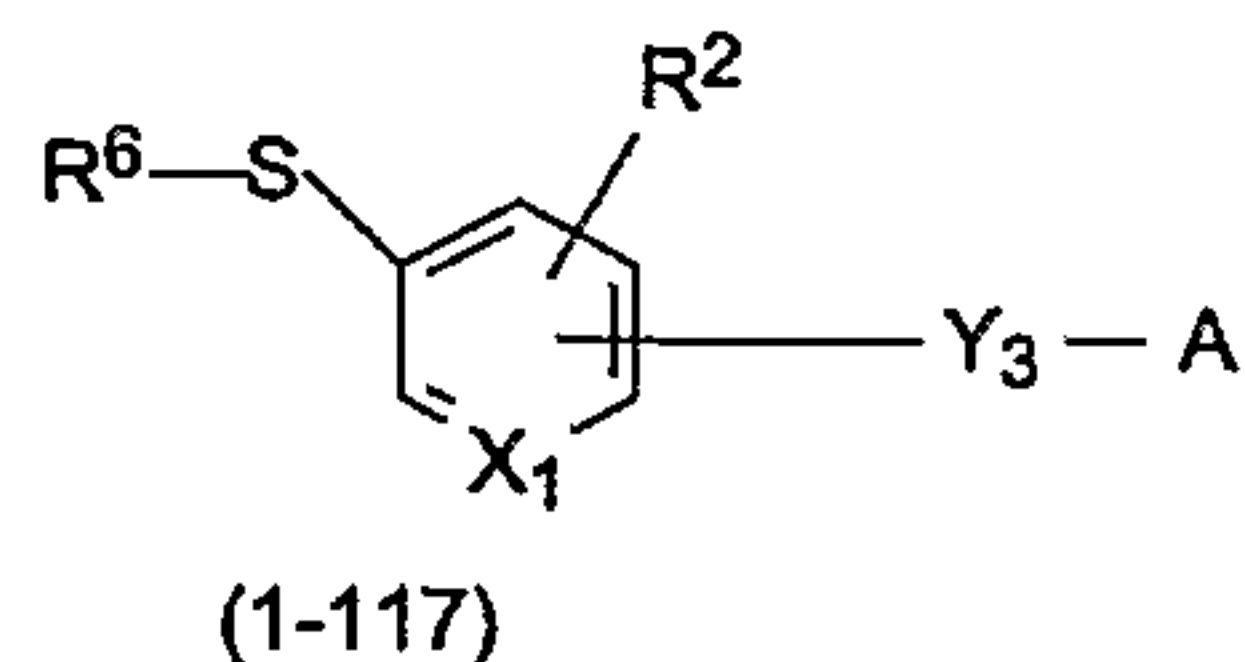
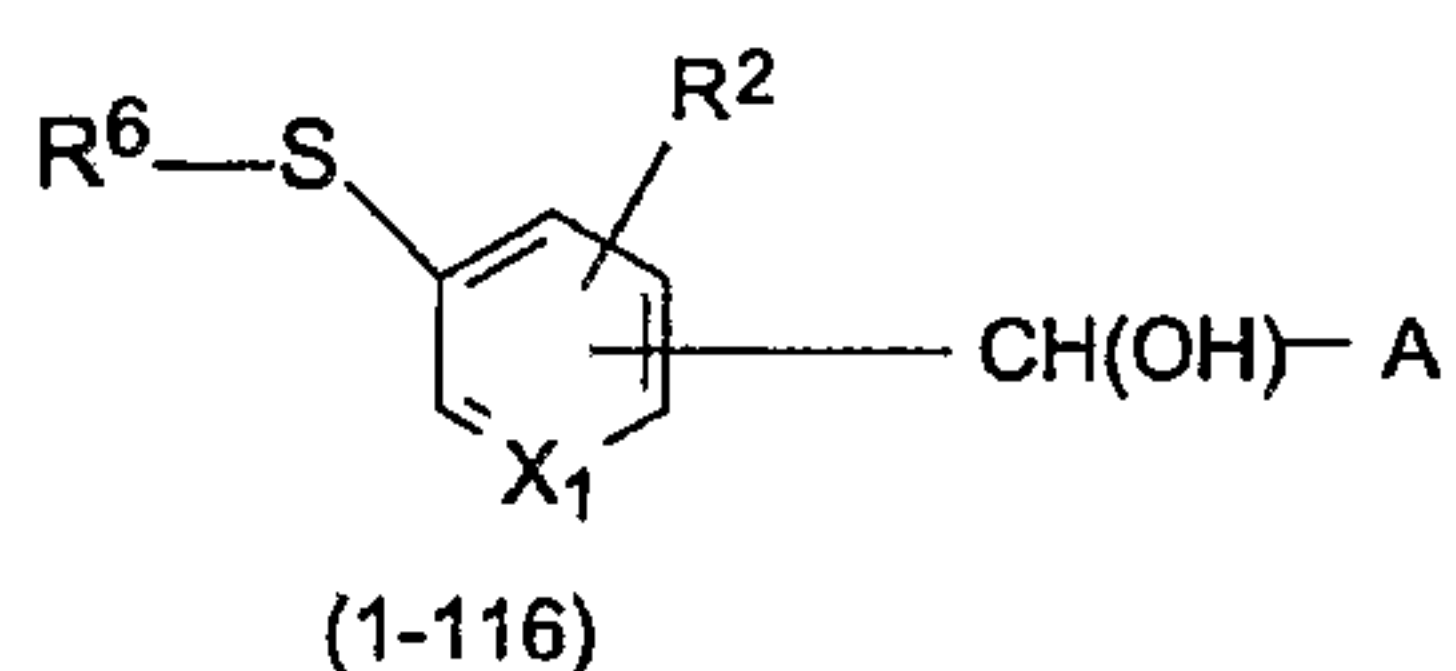
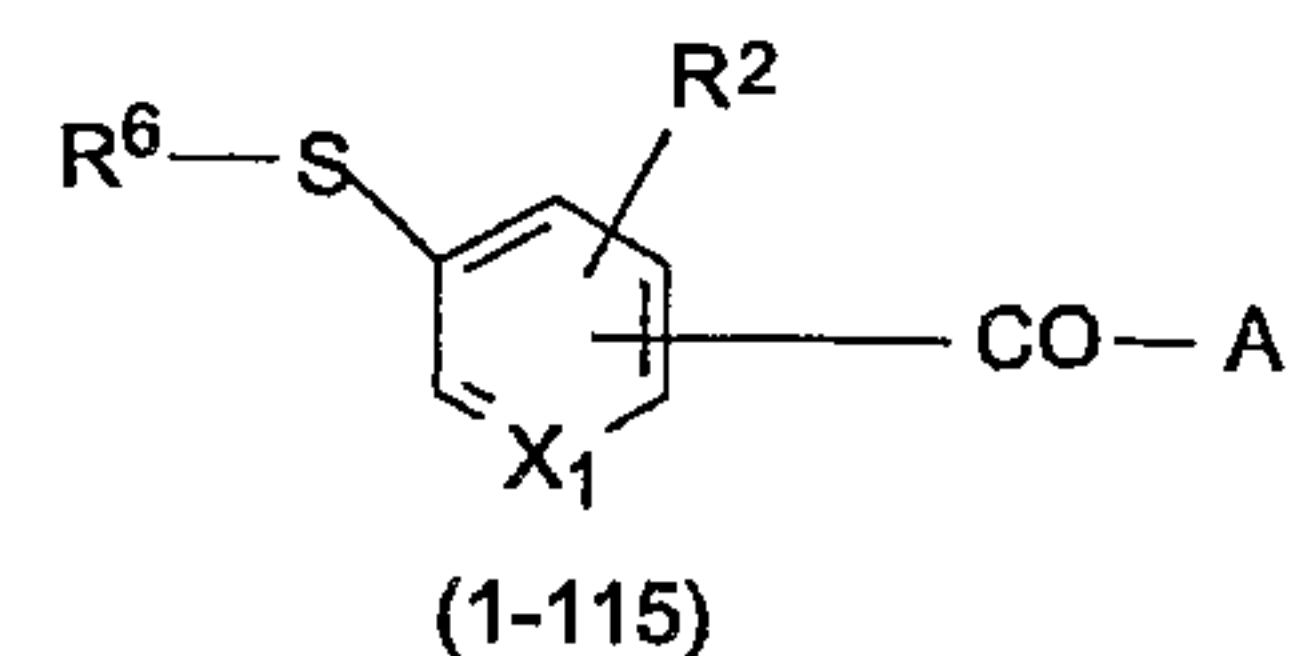
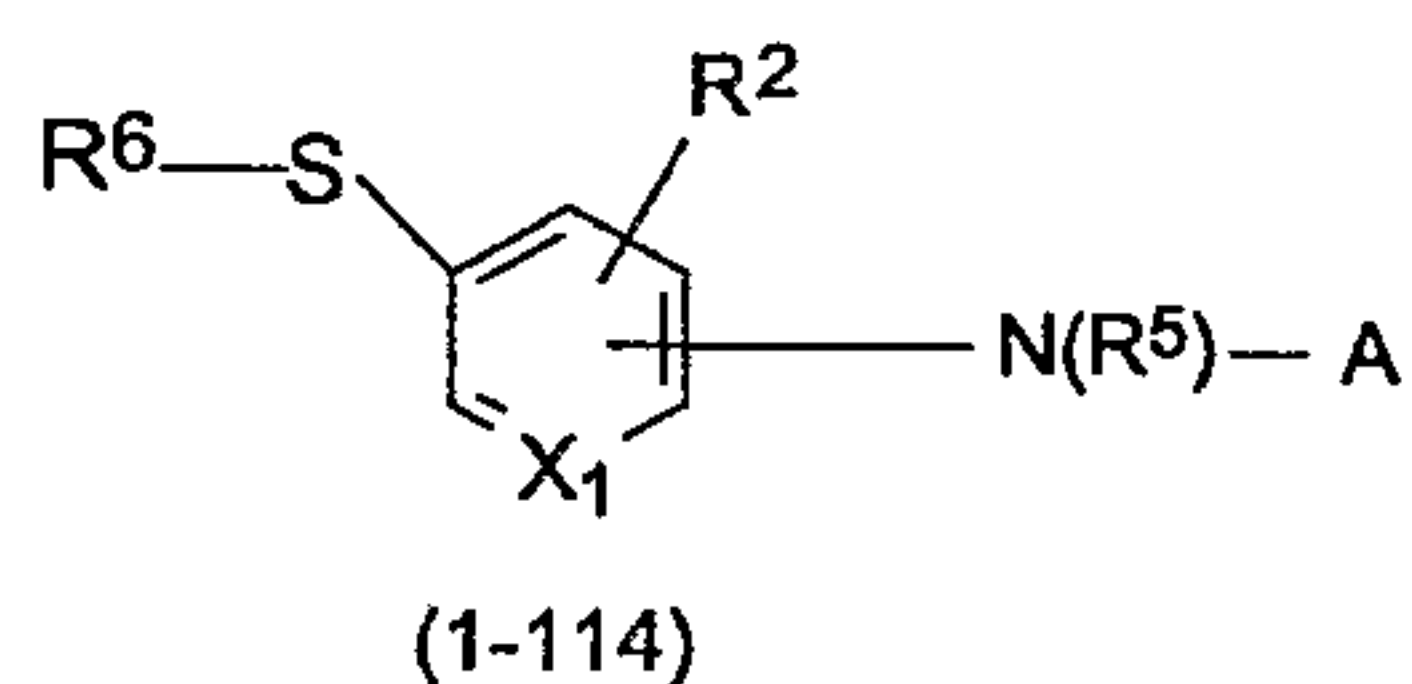
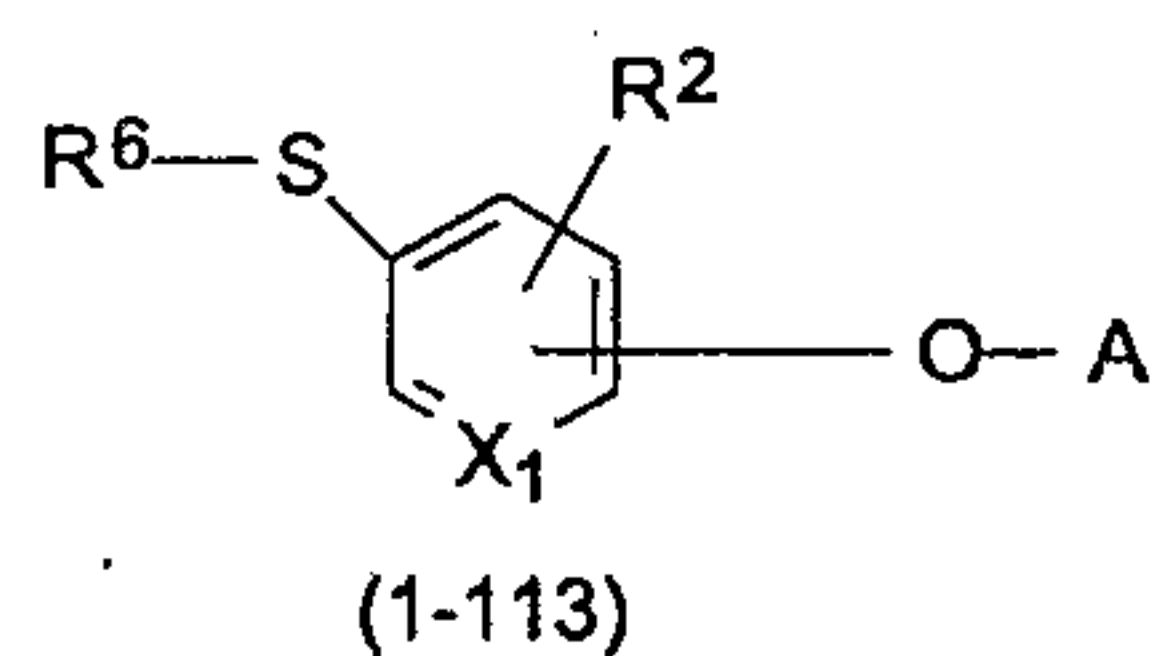
the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-106) to (1-112) or salts thereof:



[wherein, in said general formulas (1-106) to (1-112),
 5 R⁵, n, R⁶, R^{10b}, X₁, R², A and Y₃ have the same meanings as described above].

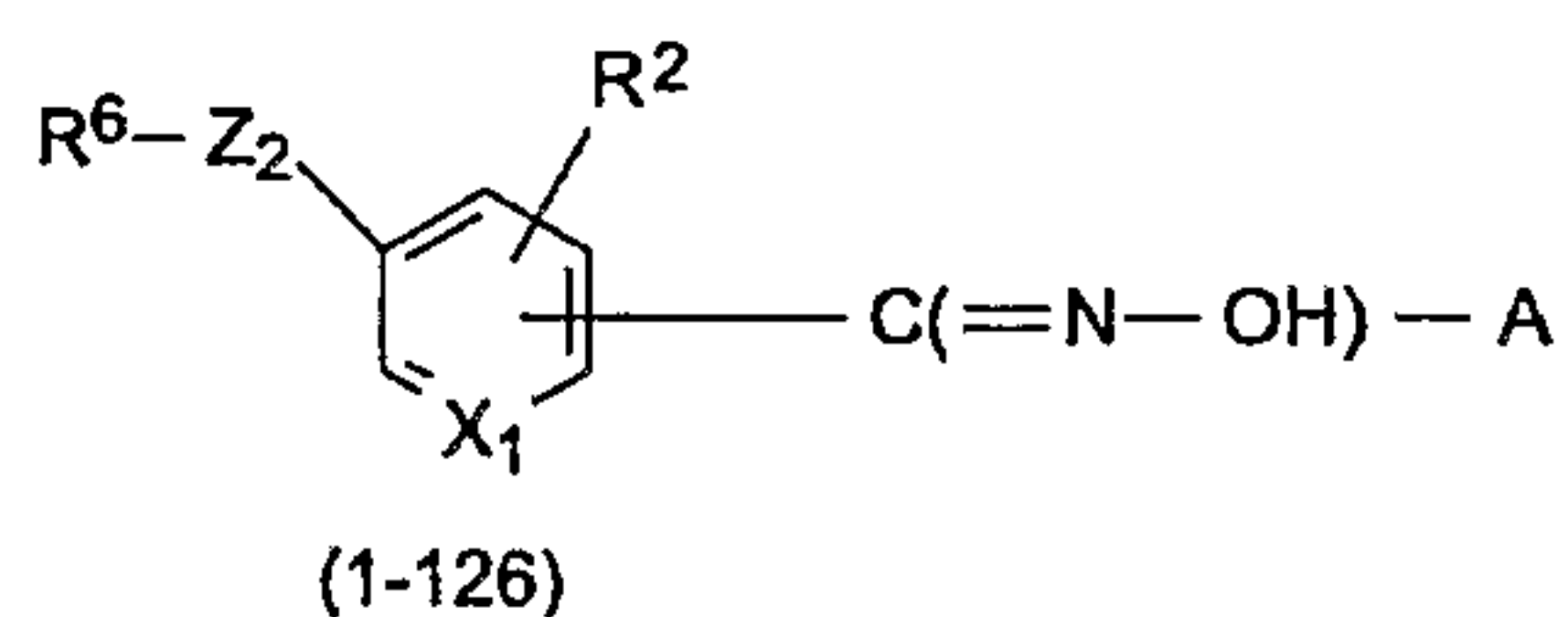
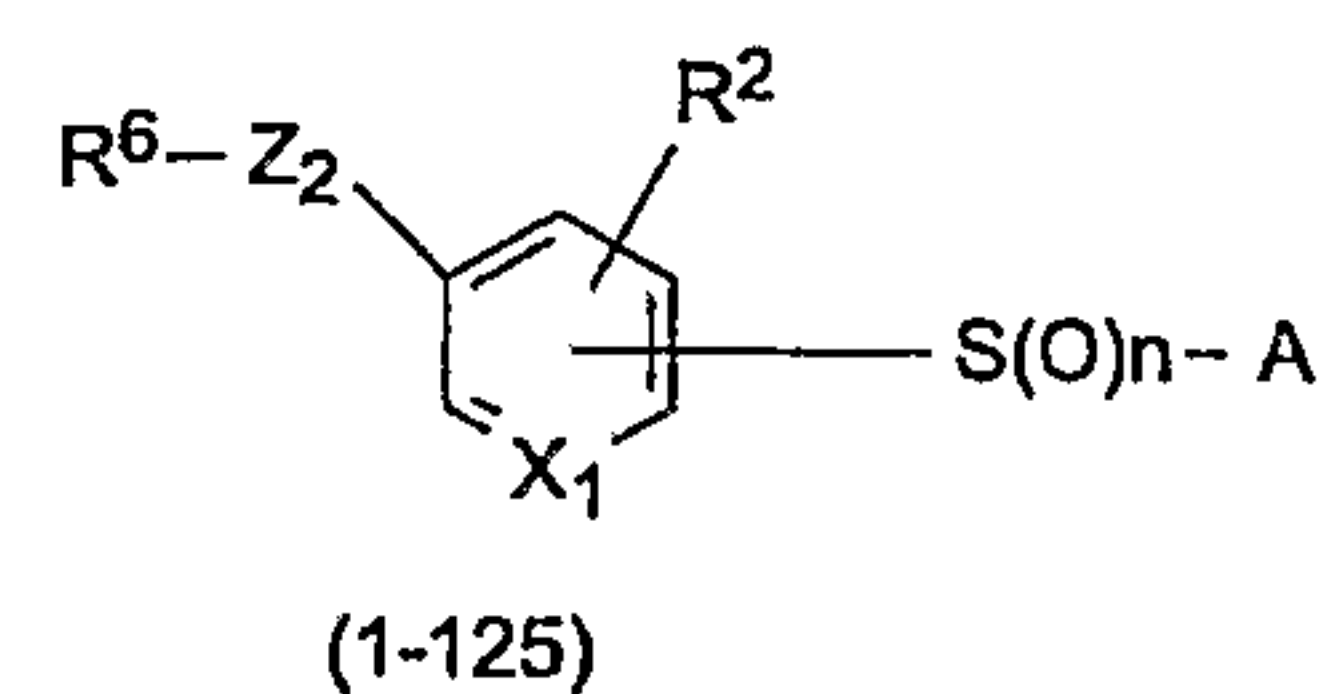
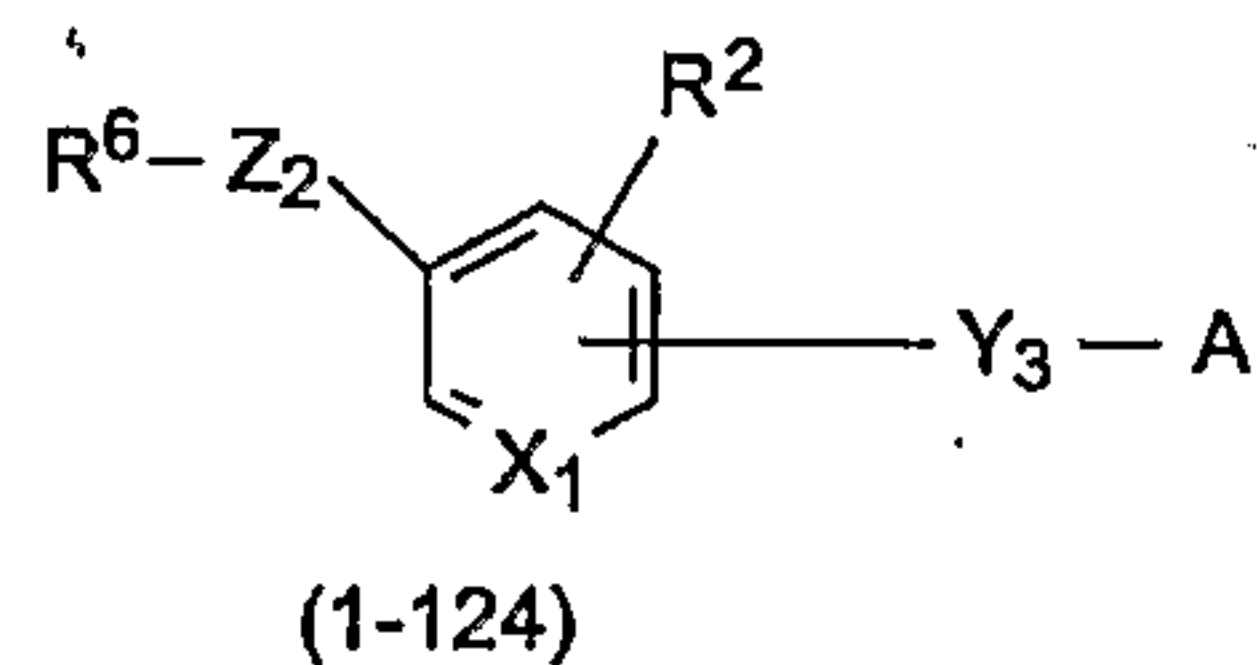
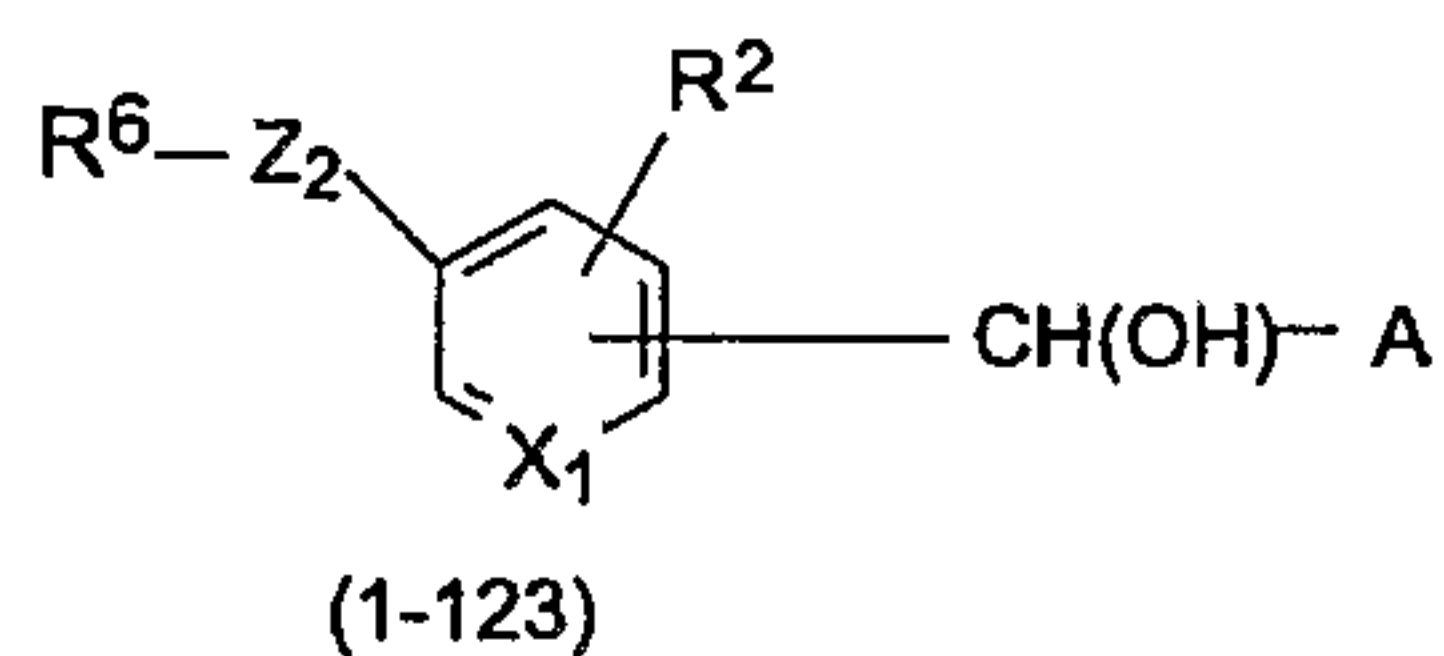
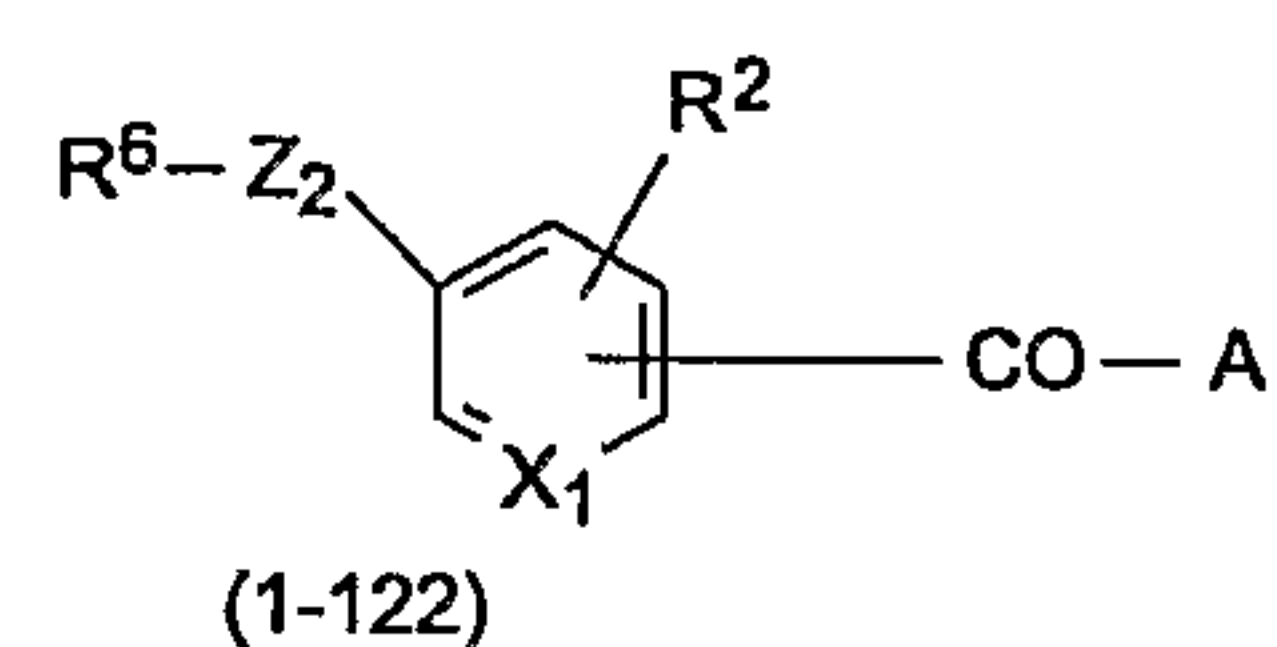
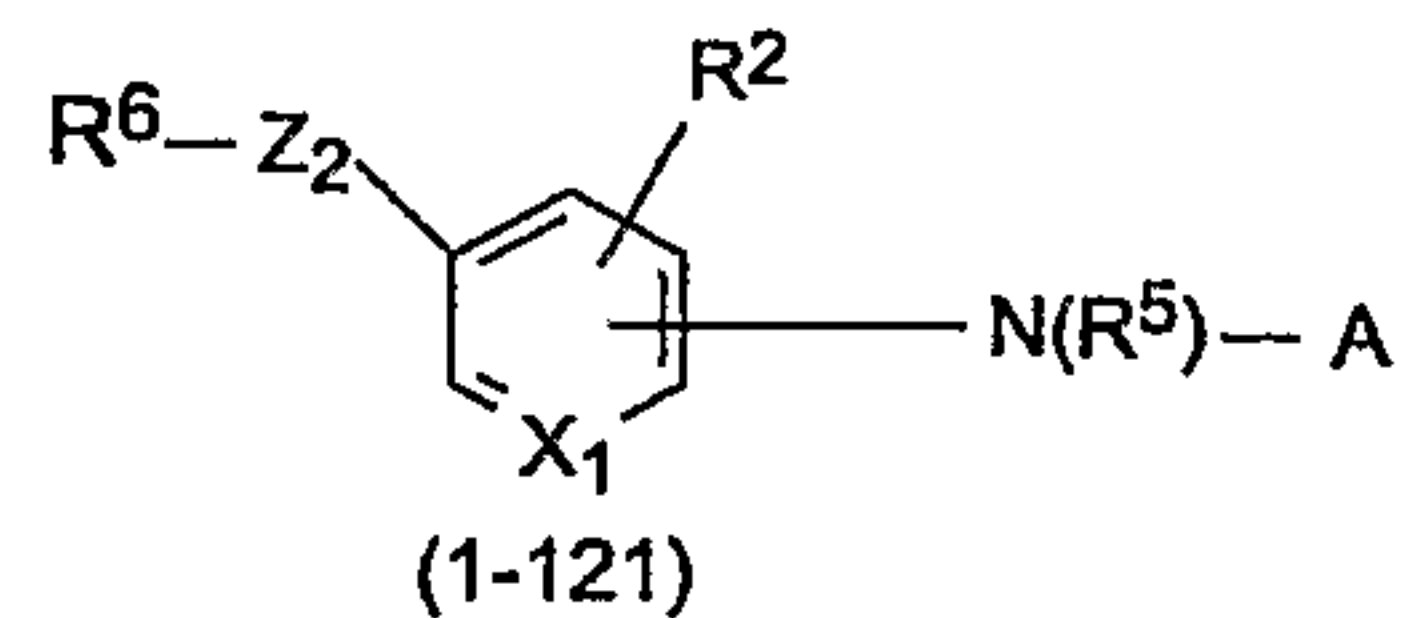
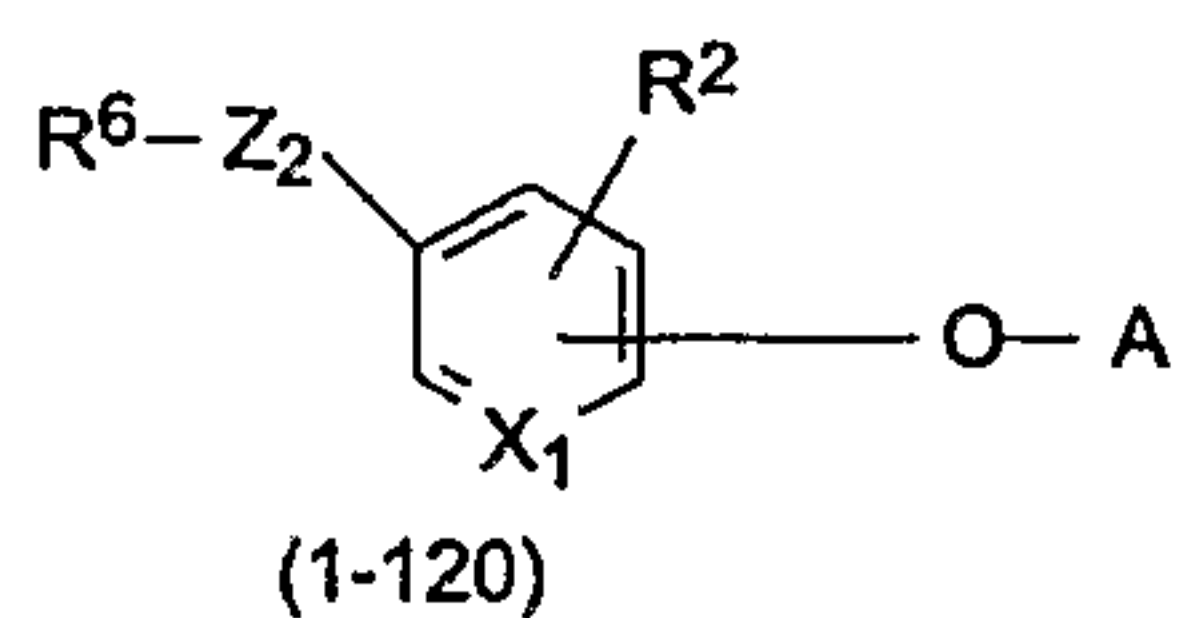
The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general

formulas (1-113) to (1-119) or salts thereof:



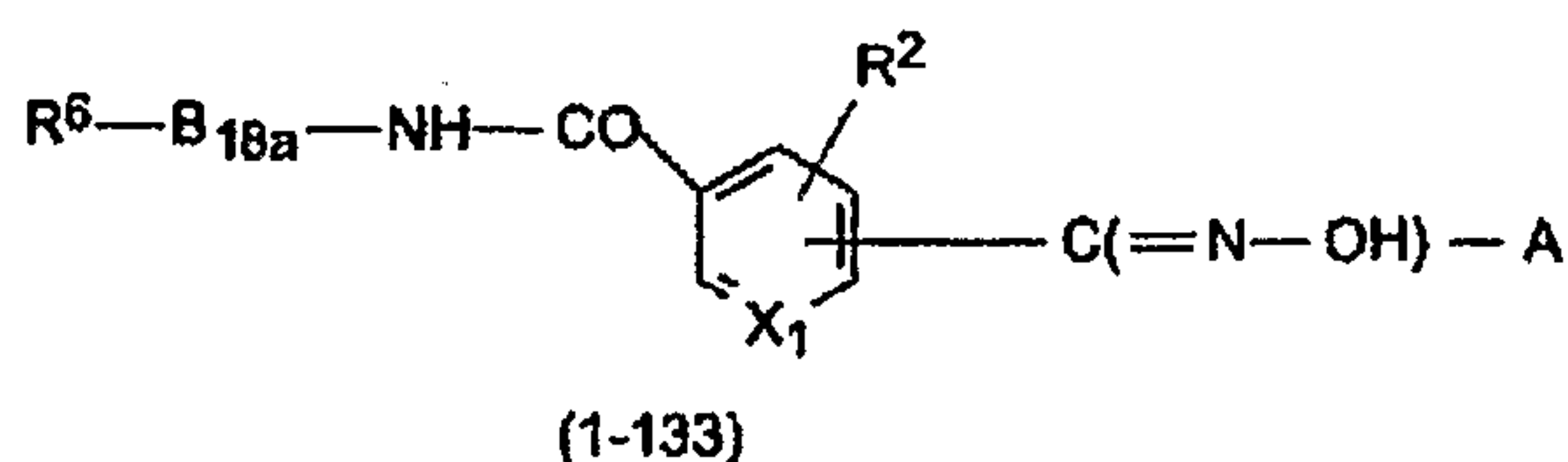
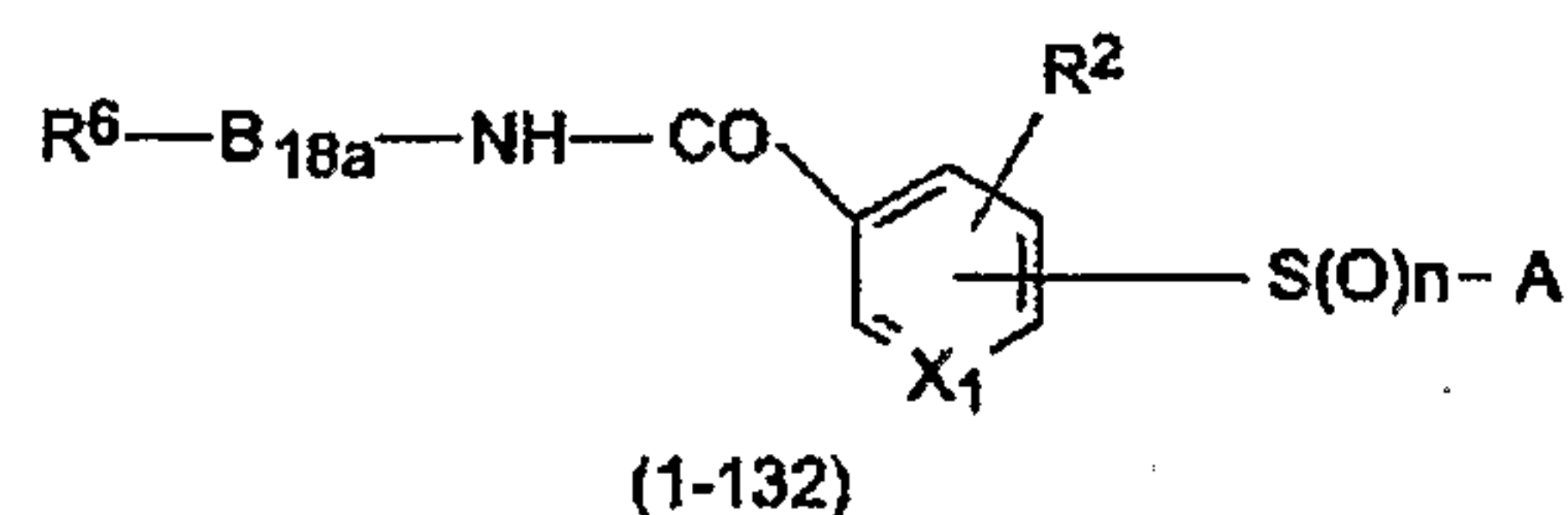
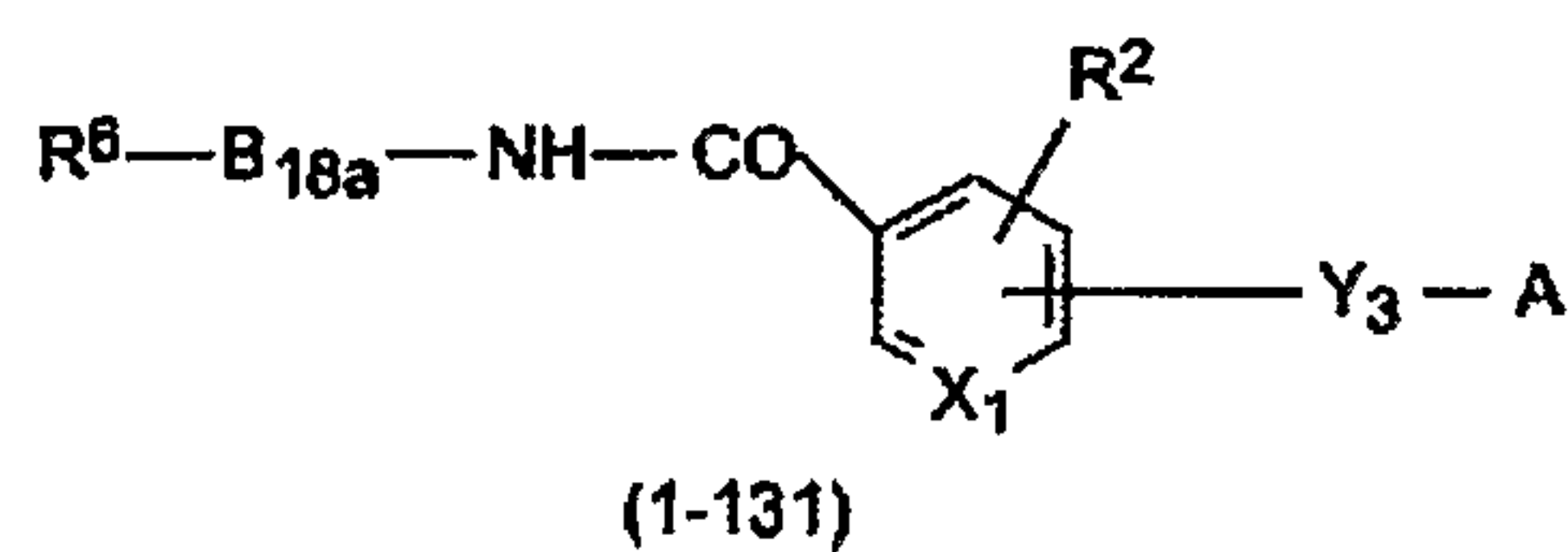
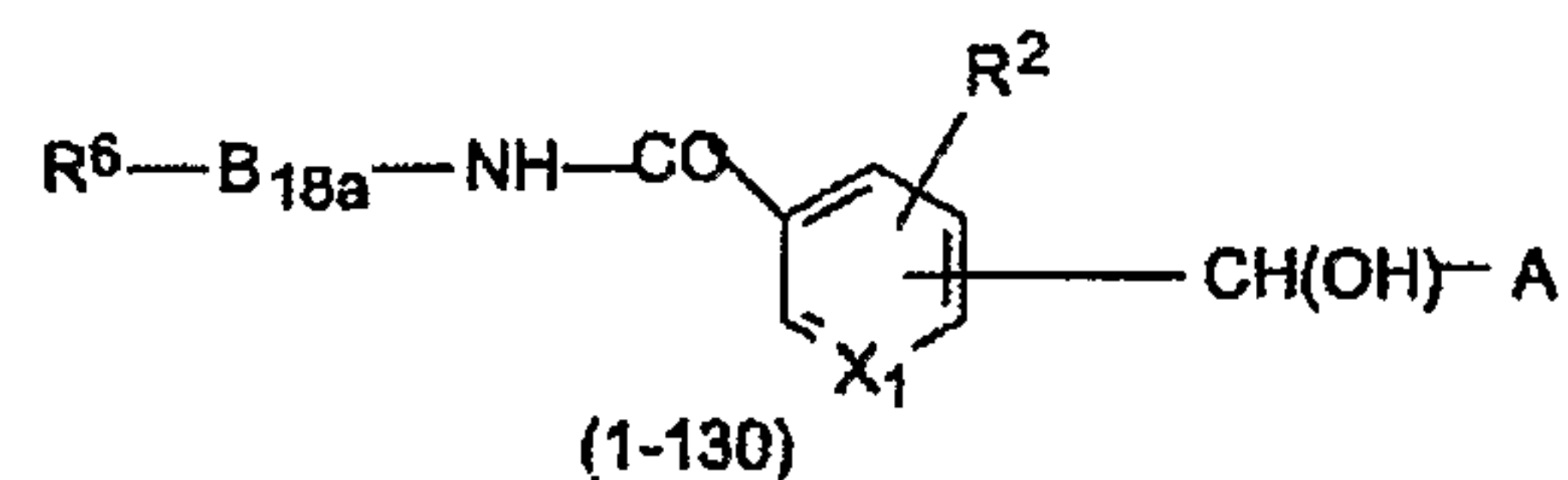
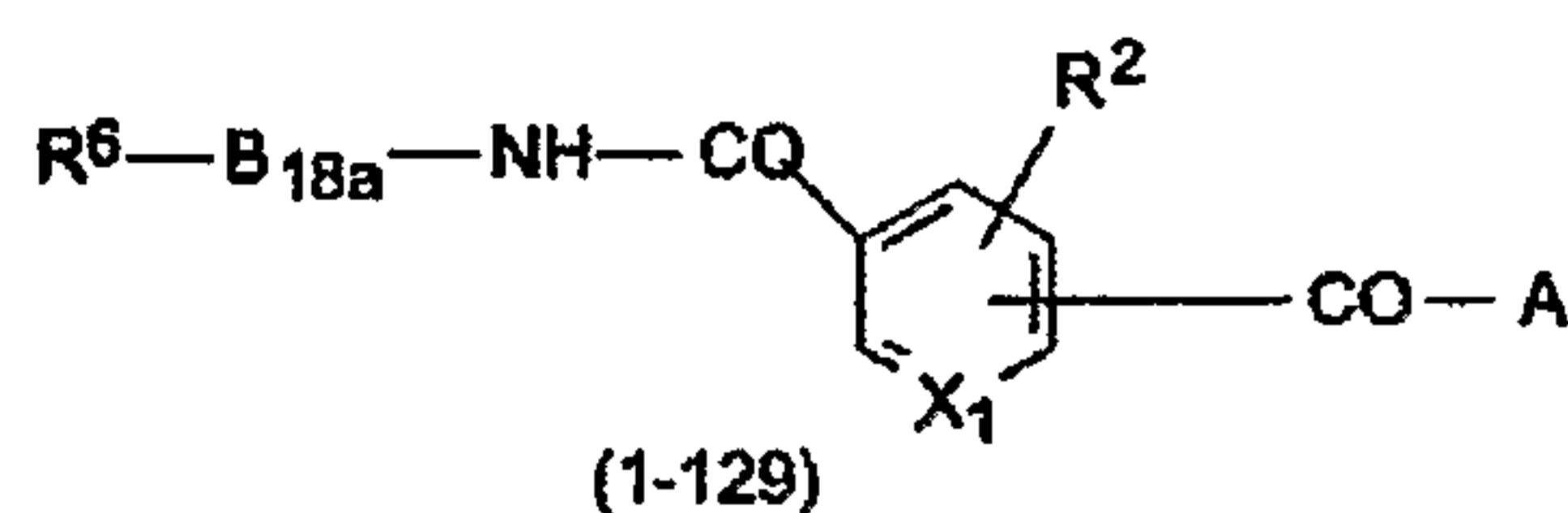
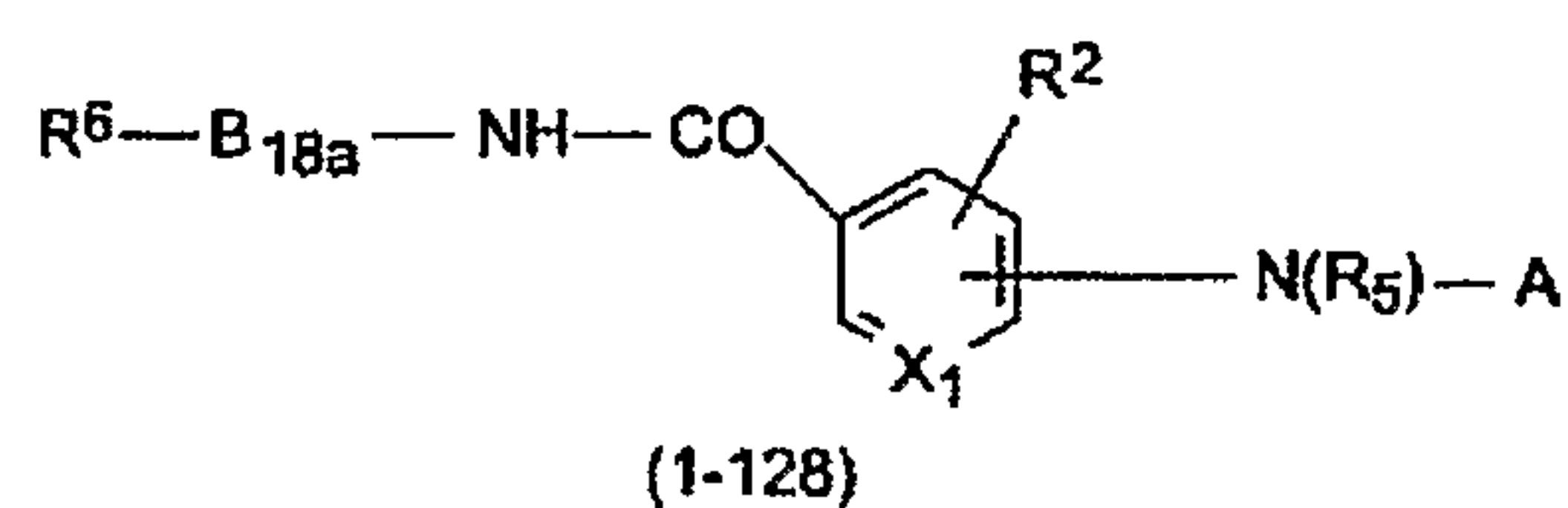
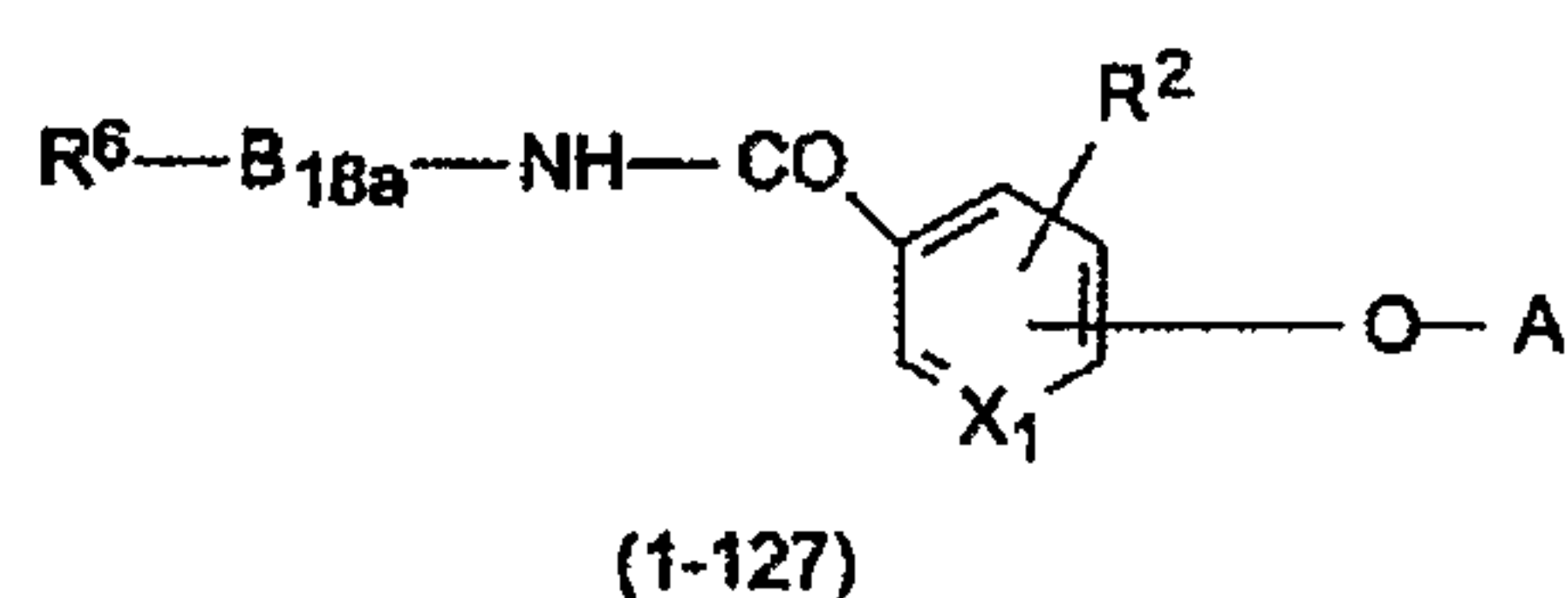
[wherein, in said general formulas (1-113) to (1-119), R^6 , R^2 , X_1 , R^5 , n , A and Y_3 have the same meanings as described above].

5 The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-120) to (1-126) or salts thereof:



[wherein, in said general formulas (1-120) to (1-126), R^6 , R^2 , X_1 , A, R^5 , n and Y_3 have the same meanings as described above, and Z_2 represents a lower alkynylene group].

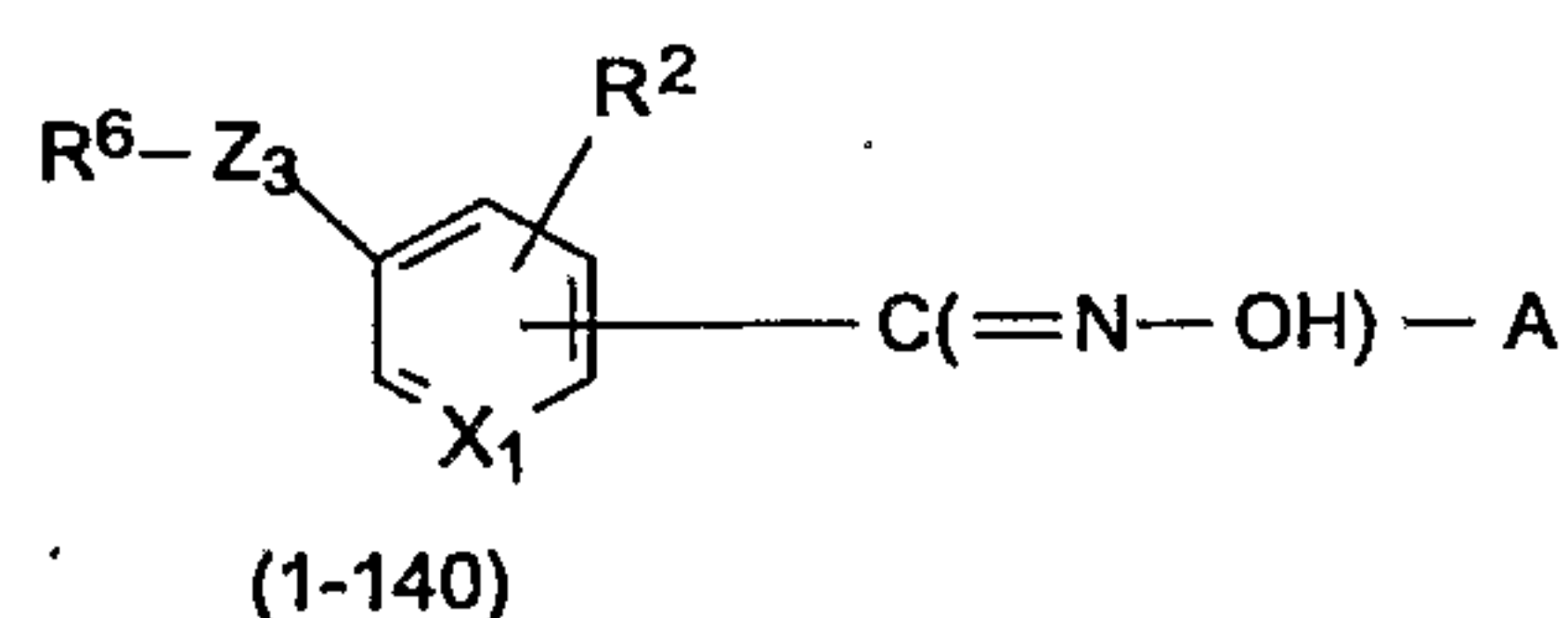
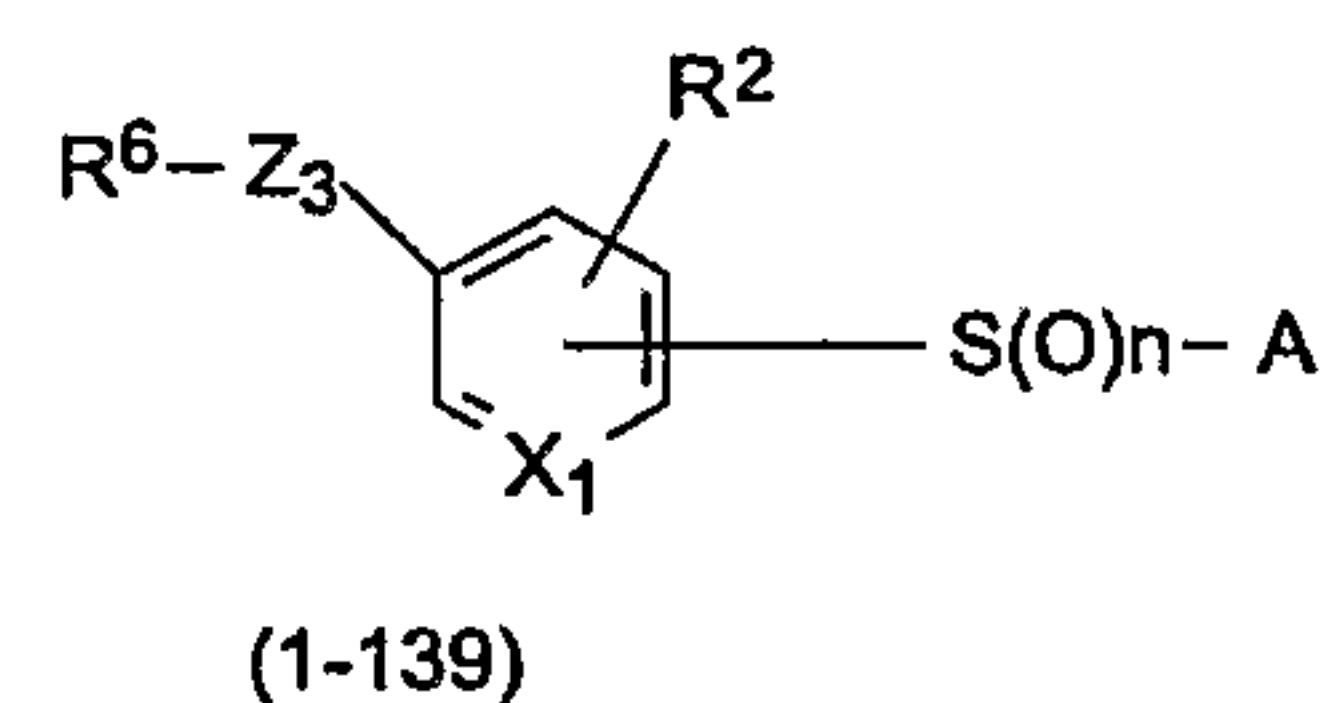
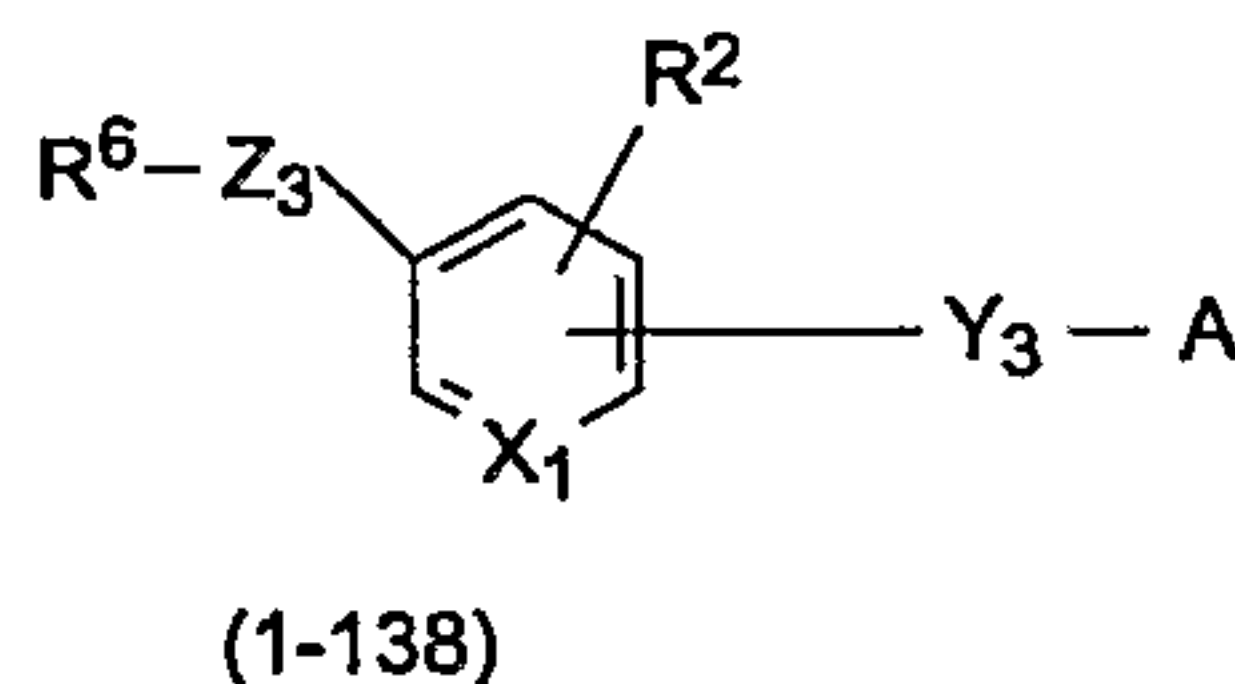
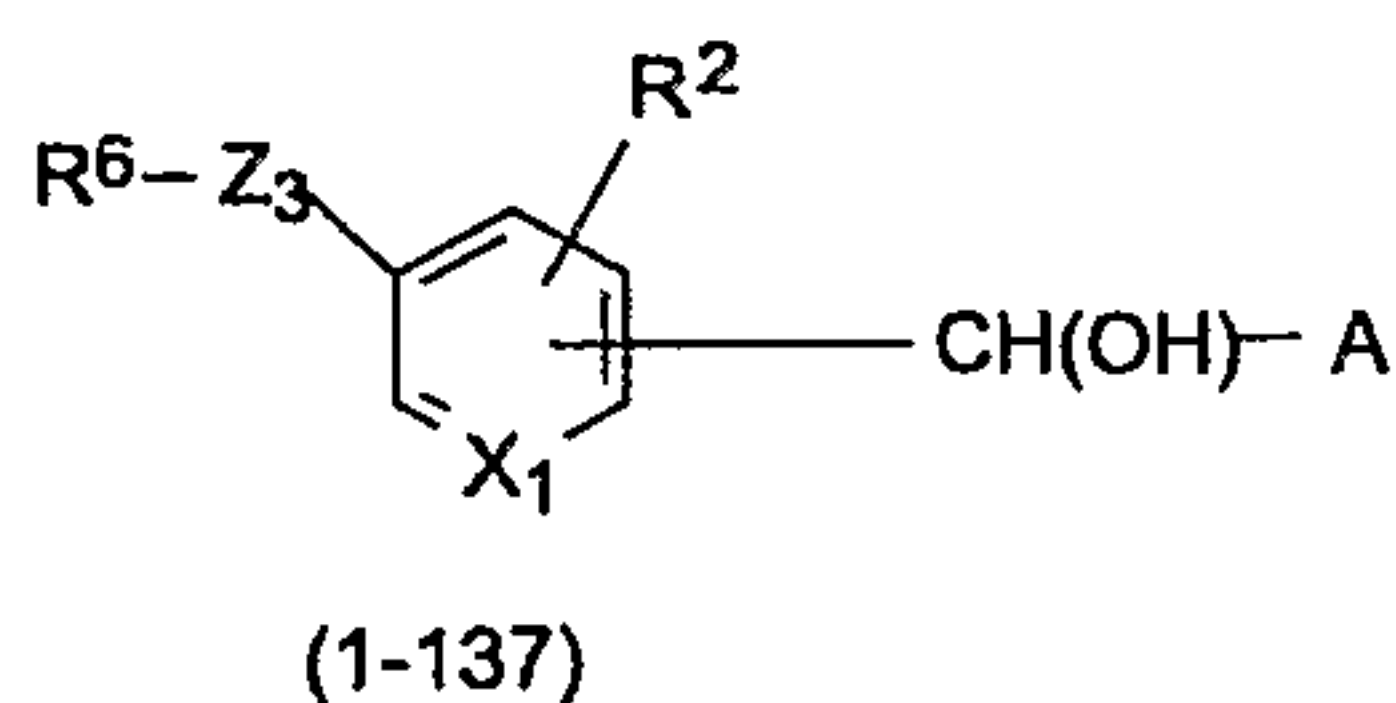
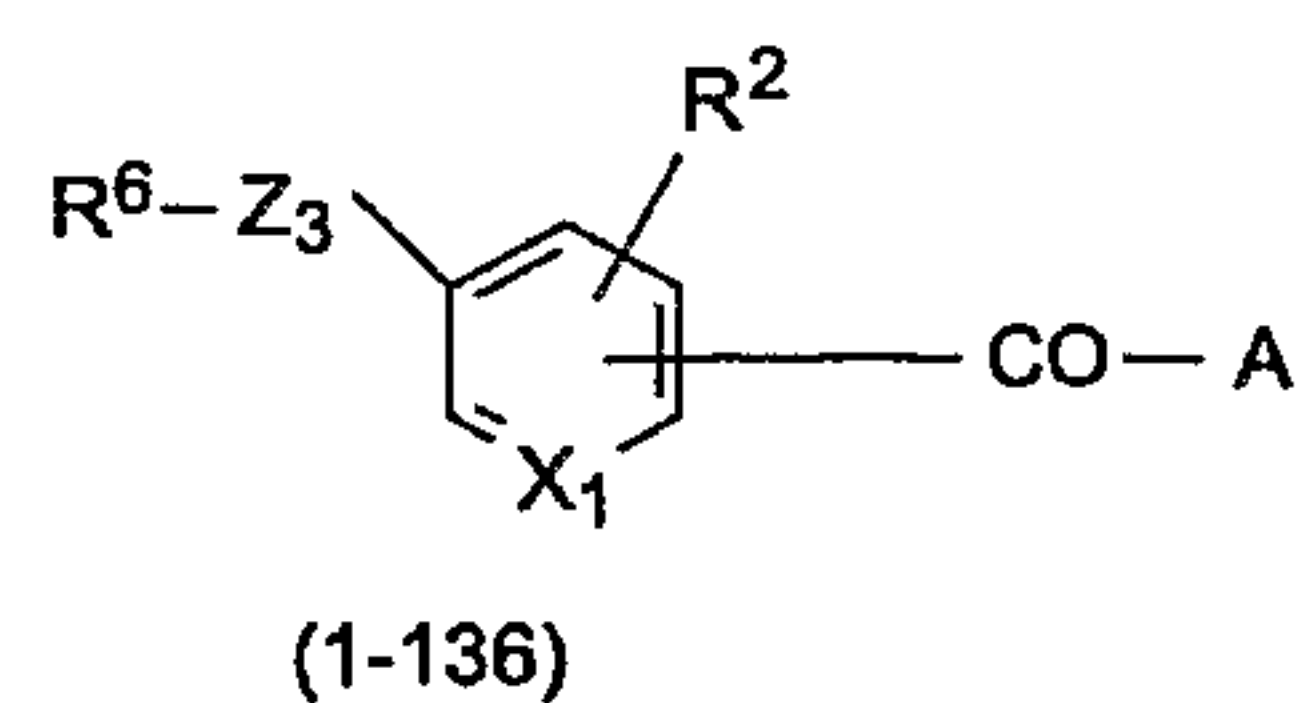
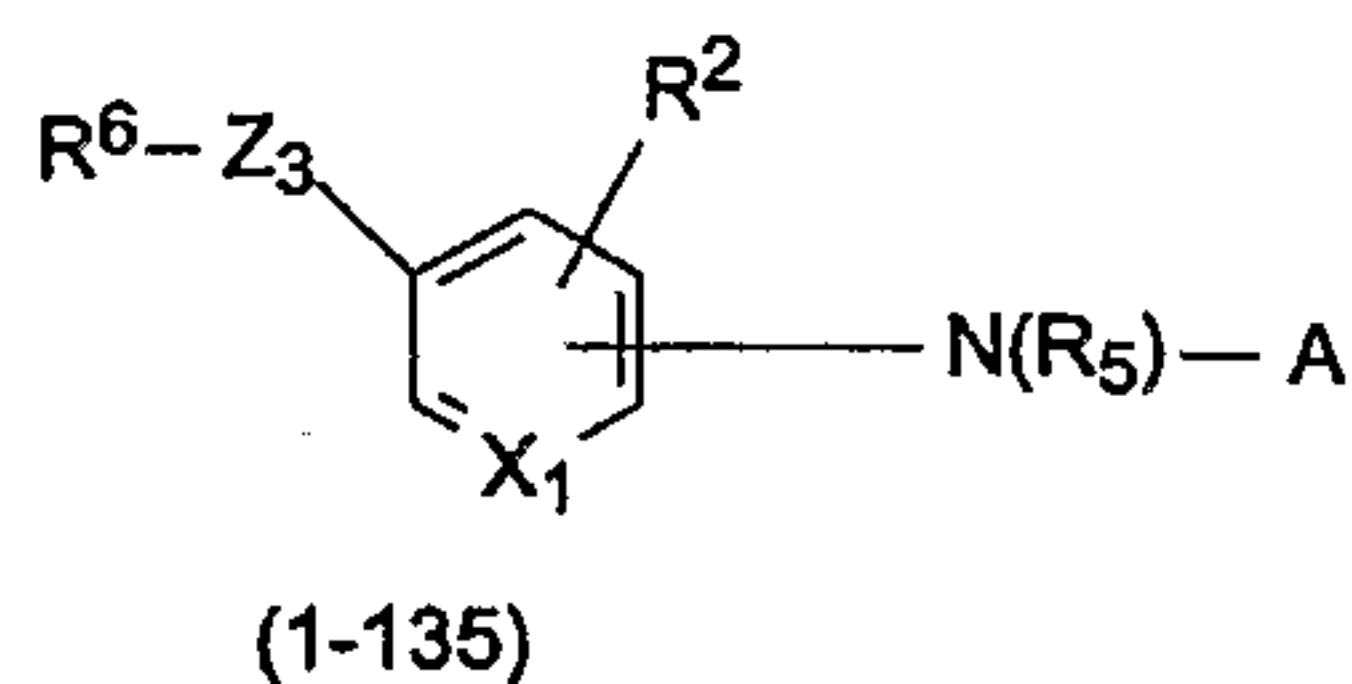
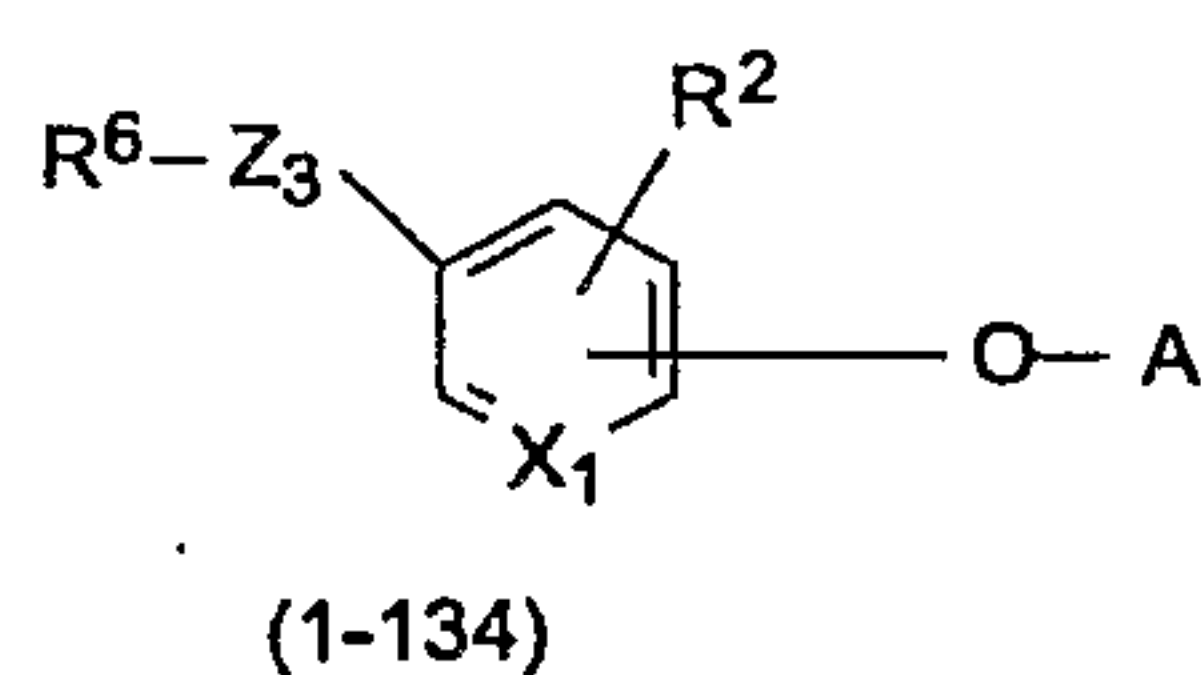
5 The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general formulas (1-127) to (1-133) or salts thereof:



10 [wherein, in said general formulas (1-127) to (1-133), R^6 , B_{18a} , R^2 , X_1 , A, R^5 , n and Y_3 have the same meanings as described above].

The above aromatic compound represented by the general formula (1) or a salt thereof includes the following aromatic compounds represented by the general

formulas (1-134) to (1-140) or salts thereof:



[wherein, in said general formulas (1-134) to (1-140),
 R^6 , R^2 , X_1 , A , R^5 , and n have the same meanings as
described in Claim 1, Y_3 has the same meanings as
5 described in Claim 2, and Z_3 represents a lower alkylene
group or a group $\begin{array}{c} -N- \\ | \\ R^{8d} \end{array}$ (R^{8d} is the same meanings as
described above)].

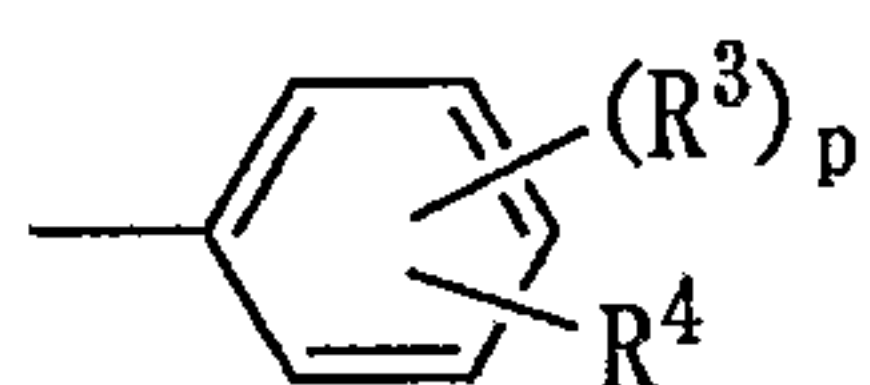
The present invention provides the above-
mentioned aromatic compound or salt thereof wherein
10 Y is a group $-O-$.

The present invention provides the above-
mentioned aromatic compound or salt thereof wherein
 Y is a group $-N(R^5)-$ (R^5 has the same meanings as
described above).

15 The present invention provides the above-
mentioned aromatic compound or salt thereof wherein

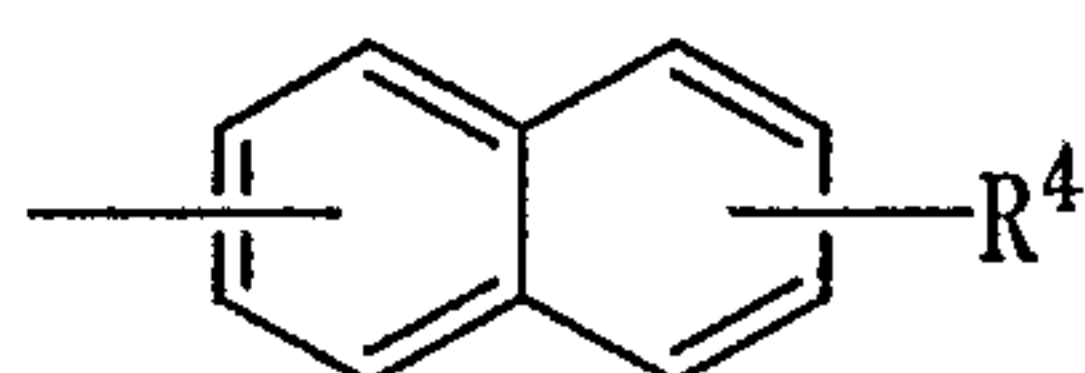
Y is a group -CO- , a group -CH(OH)- , a lower alkylene group, a group $\text{-S(O)}_n\text{-}$ (n has the same meanings as described above), or a group -C(=N-OH)- .

The present invention provides the above-mentioned aromatic compound or salt thereof wherein A is a group



(R^3 , R^4 and p have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein A is a group



(R^4 has the same meanings as described above).

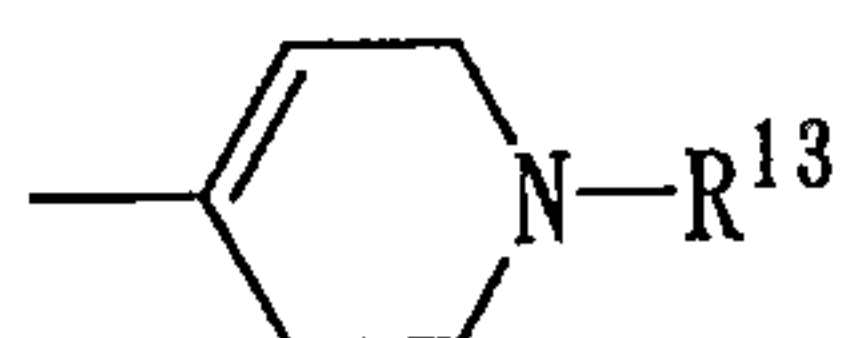
The present invention provides the above-mentioned aromatic compound or salt thereof wherein

15 R^4 is an imidazolyl lower alkyl group, a 1,2,4-triazolyl lower alkyl group, a 1,2,3-triazolyl lower alkyl group, a 1,2,5-triazolyl lower alkyl group, a pyrazolyl lower alkyl group, a pyrimidinyl lower alkyl group that may have an oxo group as a substituent on the pyrimidine

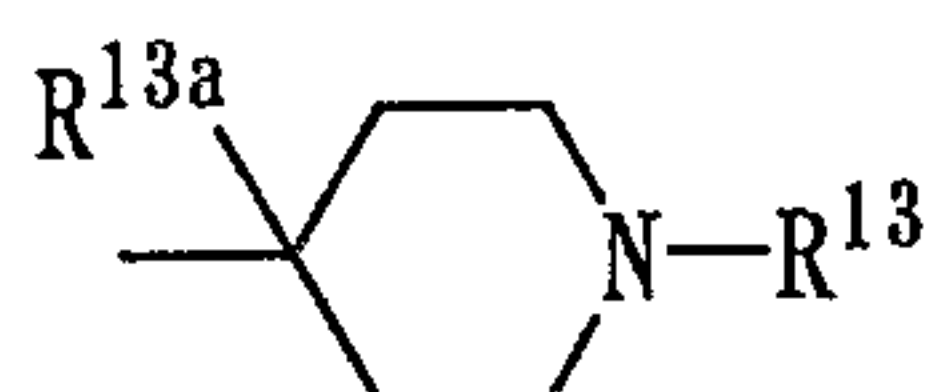
20 ring, a 3,5-dioxoisoxazolidin-4-ylidene lower alkyl group, a 1,2,4-oxadiazolyl lower alkyl group that may have a lower alkyl group as a substituent on the 1,2,4-oxadiazole ring, a thiazolidinyl lower alkyl group that

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may have an oxo group as a substituent on the thiazolidine ring, a group



or a group



(R^{13} and R^{13a} have the same meanings as described above).

5 The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$ (T , R^{14} and R^{15} have the same meanings as described above), and l is 0.

10 The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$ (T , R^{14} and R^{15} have the same meanings as described above), and l is 1.

15 The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-N(R^{17})-B_3-CO-$ (R^{14} , R^{15} , R^{17} and B_3 have the same meanings as described above).

20 The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-B_{19}-N(R^{18})-CO-$ (R^{14} , R^{15} , B_{19} and R^{18} have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-B_4-CO-$ (R^{14} , R^{15} , and B_4 have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-Q-B_5-CO-$ (R^{14} , R^{15} , Q and B_5 have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-B_6-N(R^{19})-B_7-$ (R^{14} , R^{15} , B_6 , R^{19} and B_7 have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-CO-B_8-$ (R^{14} , R^{15} , and B_8 have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-CH(OH)-B_9-$ (R^{14} , R^{15} , and B_9 have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group

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-CO-B₁₀-CO- (R¹⁴, R¹⁵, and B₁₀ have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein
5 R⁴ is a group -(T)₁-N(R¹⁴)R¹⁵, l is 1, and T is a group
-CH(OH)-B₁₁-CO- (R¹⁴, R¹⁵, and B₁₁ have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein
10 R⁴ is a group -(T)₁-N(R¹⁴)R¹⁵, l is 1, and T is a group
-CO- (R¹⁴ and R¹⁵ have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein
15 R⁴ is a group -(T)₁-N(R¹⁴)R¹⁵, l is 1, and T is a group
-SO₂- (R¹⁴ and R¹⁵ have the same meanings as described above).

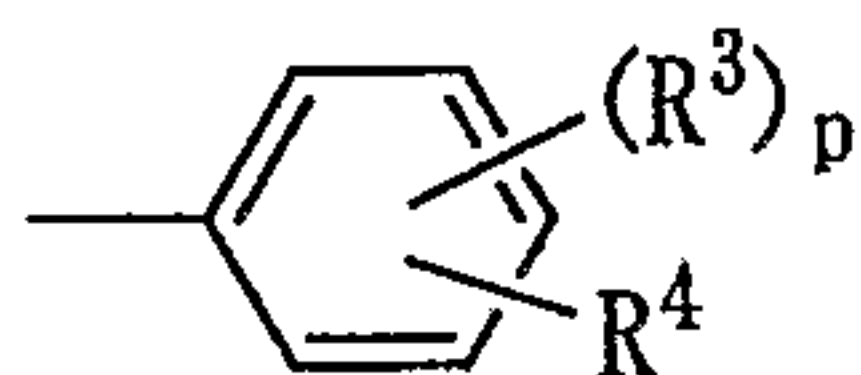
The present invention provides the above-mentioned aromatic compound or salt thereof wherein
20 R⁴ is a group -(T)₁-N(R¹⁴)R¹⁵, l is 1, and T is a group
-B_{23a}-CO-CO- (R¹⁴, R¹⁵ and B_{23a} have the same meanings as described above).

The present invention provides the above-mentioned aromatic compound or salt thereof wherein
25 R⁴ is a group -(T)₁-N(R¹⁴)R¹⁵, l is 1, and T is a lower
alkylene group (R¹⁴ and R¹⁵ have the same meanings as described above).

In the above-mentioned aromatic compound

represented by the general formula (1) or salt thereof,
the aromatic compounds represented by the general
formulas (1-1), (1-2), (1-8), (1-9), (1-15), (1-16),
(1-29), (1-30), (1-64) and (1-65) or salts thereof are
5 preferable.

Further, those compounds represented by the
general formulas (1-1), (1-2), (1-8), (1-9), (1-15),
(1-16), (1-29), (1-30), (1-43), (1-44), (1-57), (1-58),
(1-64) and (1-65) or salts thereof, wherein Y is a
10 group -O- or a group -N(R⁵)-, A is a group



, and R^4 is a group $-(T)_1-N(R^{14})R^{15}$ (R^3 , R^4 , R^5 , R^{14} , R^{15} , p
and l have the same meanings as described above).
are more preferable.

The present invention provides the aromatic
15 compounds represented by the general formulas (1-1),
(1-2), (1-8), (1-9), (1-15), (1-16), (1-29), (1-30),
(1-43), (1-44), (1-57), (1-58), (1-64) and (1-65) or
salts thereof, wherein
 l is 1, and T is a group $-N(R^{17})-B_3-CO-$ (R^{17} and B_3 have
20 the same meanings as described above).

The present invention provides the aromatic
compounds represented by the general formulas (1-1),
(1-2), (1-8), (1-9), (1-15), (1-16), (1-29), (1-30),
(1-43), (1-44), (1-57), (1-58), (1-64) and (1-65) or
25 salts thereof, wherein

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l is 1, and T is a group -B₄-CO- (B₄ have the same meanings as described above).

The present invention provides the aromatic compounds represented by the general formulas (1-1),
5 (1-2), (1-8), (1-9), (1-15), (1-16), (1-29), (1-30), (1-43), (1-44), (1-57), (1-58), (1-64) and (1-65) or salts thereof, wherein
l is 1, and T is a group -CO-.

The present invention provides the aromatic
10 compounds represented by the general formulas (1-1), (1-2), (1-8), (1-9), (1-15), (1-16), (1-29), (1-30), (1-43), (1-44), (1-57), (1-58), (1-64) and (1-65) or salts thereof, wherein
l is 0.

15 The present invention particularly provides the aromatic compounds selected from the group consisting of:

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methoxyphenoxy)pyridin-3-yl]-
20 3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

25 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-fluorophenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-fluorophenoxy)pyridin-3-yl]-4-

trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

5 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methylphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

15 N-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-3,4-dichlorobenzene-sulfonamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperazin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

20 N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-{6-[(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenyl)methylamino]pyridin-3-yl}-4-trifluoromethylbenzamide,

25 N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-{6-[4-(4-benzylpiperazine-1-carbonyl)-phenoxy]pyridin-3-yl}-4-trifluoromethylbenzamide,

N-{6-[4-(4-benzylpiperazine-1-carbonyl)phenoxy]pyridin-3-yl}-3,4-dichlorobenzamide,

N-[6-({4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenyl}methylamino)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-fluorophenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-fluorophenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methoxyphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}phenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

1-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-3-(3,4-dichlorophenyl)-1-ethylurea,

N-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-4-trifluoromethylbenzamide,

5 N-[6-(4-{[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

10 N-(6-{4-[3-(4-piperonylpiperazine-1-carbonyl)piperidin-1-yl]phenoxy}pyridin-3-yl)-3,4-dichlorobenzamide,

N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

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N-{6-[(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenyl)methylamino]pyridin-3-yl}-4-trifluoromethylbenzamide,

N-(6-{4-[(2-{4-[4-(4-fluorobenzoyl)phenyl]-piperazin-1-yl}-2-oxoethyl)methylamino]-2-methoxyphenoxy}pyridin-3-yl)-4-trifluoromethylbenzamide,

20

2-(4-piperonylpiperazin-1-yl)-N-{3-methyl-4-[5-(4-trifluoromethylphenoxy)methyl]pyridin-2-yloxy}phenyl}-2-oxoacetamide,

25 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-2-fluoro-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-

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oxoethyl]piperidin-1-yl}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide, and

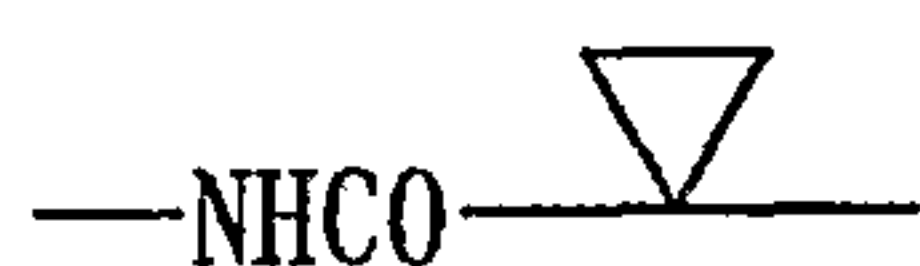
4-(3-{3-methyl-4-[5-(4-trifluoromethyl-benzoylamino)pyridin-2-yloxy]phenyl}-2-oxohexahydropyrimidin-1-yl)benzoic acid ethyl ester, or salts thereof.

The present invention provides processes for preparing the aromatic compound represented by the general formula (1) or a salt thereof according to any one of the processes described in Reaction formulas-1 to 46, 48, 49, 52, 59, 104, 105, 108 to 132 and 135 mentioned below.

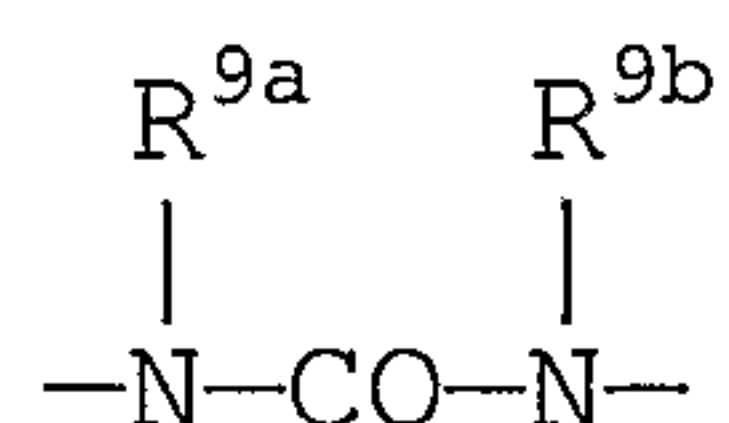
The present invention provides a pharmaceutical composition for the treatment of fibrosis, which comprises an aromatic compound represented by the general formula (1A) or a salt thereof:



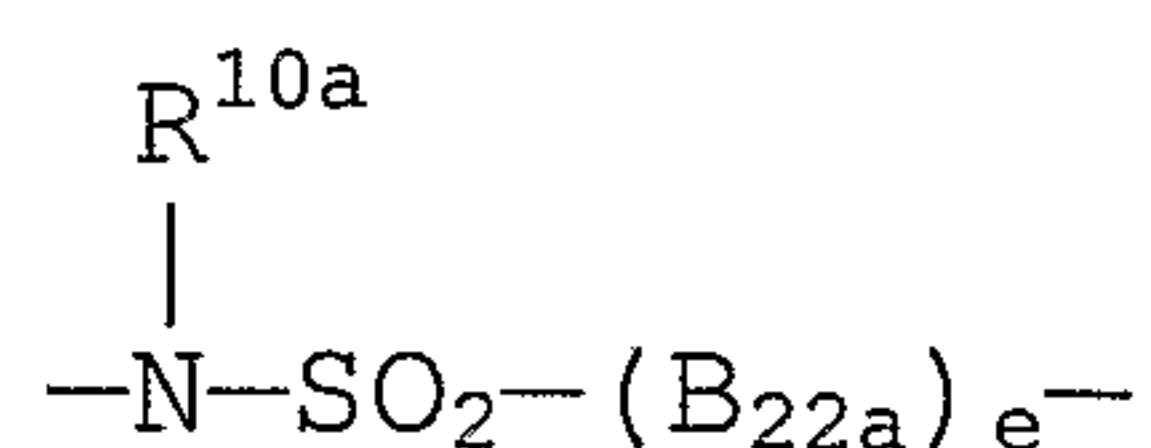
[wherein X_1 represents a nitrogen atom or a group $-\text{CH}=\text{}$, R^1 represents a group $-\text{Z}-\text{R}^6$, Z represents a group $-\text{N}(\text{R}^8)-\text{B}-$, a group $-\text{B}-\text{N}(\text{R}^8)-$, a group $-\text{B}_0-\text{O}-$, a group



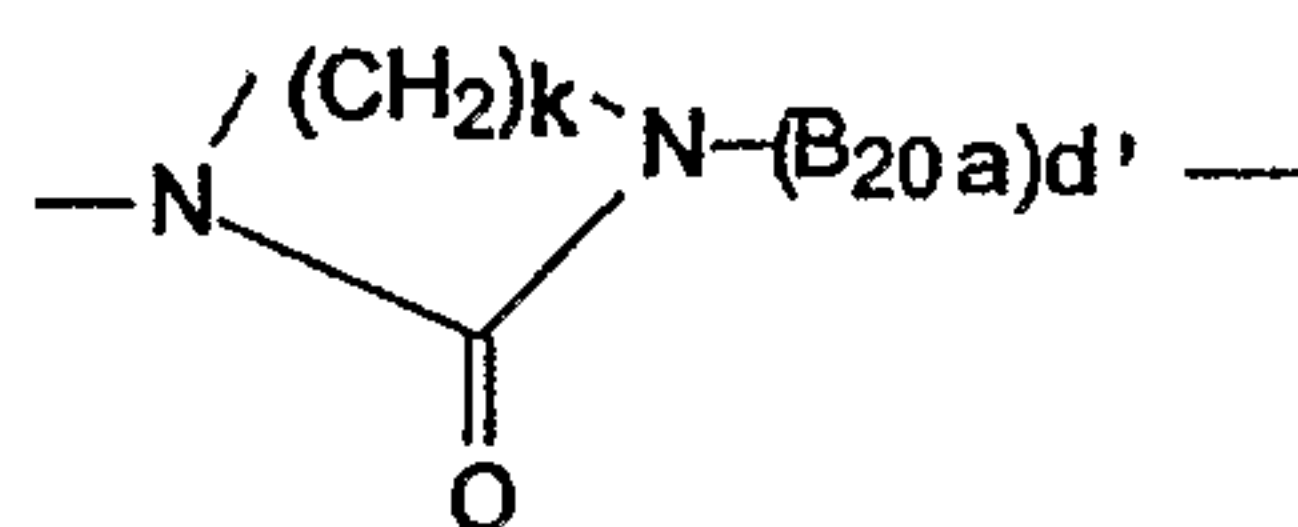
a group $-\text{CO}-$, a group $-\text{CH}(\text{OH})-$, a group



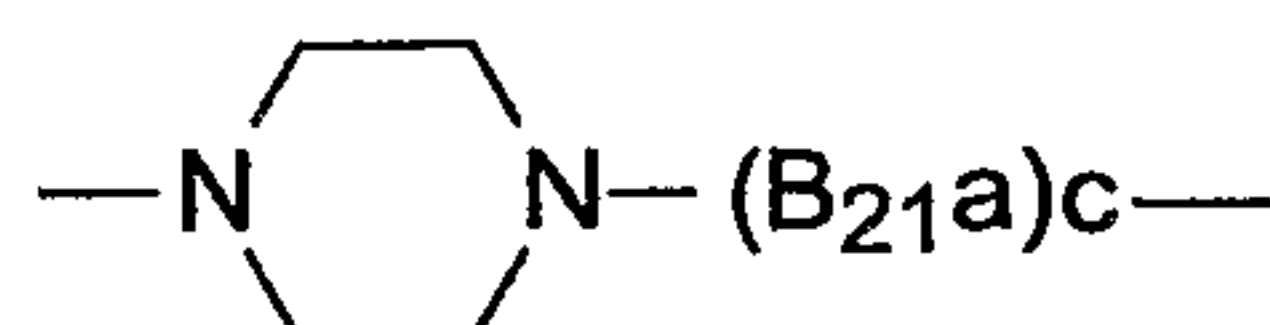
a group $-N=CH-$, a group



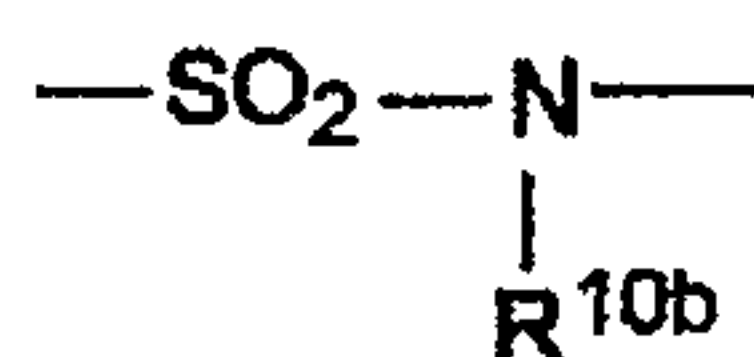
a lower alkenylene group, a group -NHCO-B₁-, a group -NHCO-B₂-(W)u-, a group -B₀-O-B_{19a}-, a group



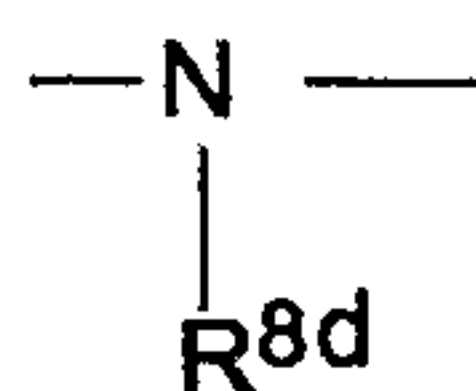
a group



5 a group



a group -S-, a lower alkynylene group, a lower alkylene group, a group



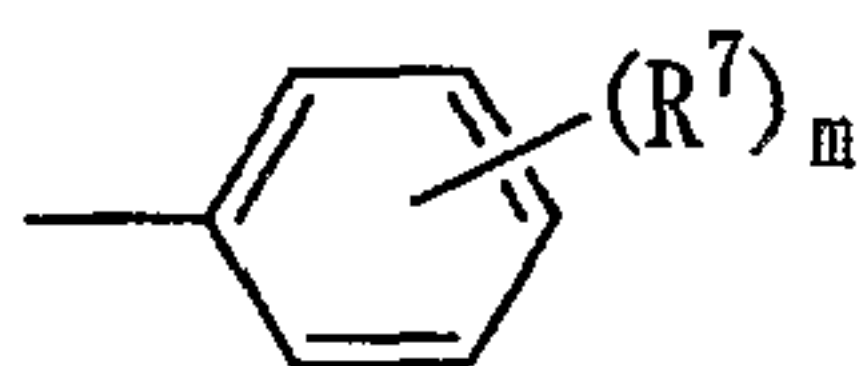
or a group $\text{—CO—NH—B}_{18}\text{a—}$,

wherein R⁸ represents a hydrogen atom, a lower alkyl
10 group that may have a lower alkoxy group as a
substituent, a lower alkanoyl group, a phenyl lower
alkyl group, or a lower alkylsulfonyl group,

B represents a group -CO- or a lower alkylene group,
B₀ represents a lower alkylene group,
each of R^{9a} and R^{9b}, which are identical or different,
represents a hydrogen atom or a lower alkyl group
5 R^{10a} represents a hydrogen atom or a lower alkyl group,
B_{22a} represents a lower alkylene group or a lower
alkenylene group,
e represents 0 or 1,
B₁ represents a lower alkenylene group that may have a
10 phenyl group as a substituent,
B₂ represents a lower alkylene group that may be
substituted by a group selected from the group
consisting of a lower alkoxy group and a phenyl group,
W represents an oxygen atom, a group -NH-, or a sulfur
15 atom,
u represents 0 or 1,
B_{18a} represents a lower alkylene group,
B_{19a} represents a lower alkylene group,
B_{20a} represents a lower alkylene group,
20 B_{21a} represents a lower alkylene group,
R^{8d} represents a hydrogen atom or a lower alkyl group,
k represents 2 or 3,
c represents 0 or 1,
d' represents 0 or 1,
25 R^{10b} represents a hydrogen atom or a lower alkyl group,
R⁶ represents a 5- to 15-membered monocyclic, dicyclic,
or tricyclic saturated or unsaturated heterocyclic
group having 1 to 4 nitrogen atoms, oxygen atoms, or

sulfur atoms (wherein, the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of an oxo group; an optionally halogenated lower alkoxy group; an optionally halogenated lower alkyl group; a halogen atom; a lower alkylsulfonyl group; a phenyl group that may be substituted, on the phenyl ring, by an optionally halogenated lower alkyl group; a lower alkylthio group; a pyrrolyl group; a benzoyl group; a lower alkanoyl group; a lower alkoxycarbonyl group; and an amino group that may have a group selected from the group consisting of a lower alkyl group and a lower alkanoyl group as a substituent), an adamantyl group, a naphthyl group (wherein, the naphthalene ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group, a halogen atom, and an amino group that may have a group selected from the group consisting of a lower alkyl group and a lower alkanoyl group as a substituent), an alkyl group that may have a lower alkoxy group as a substituent, a cycloalkyl group that may be substituted, on the cycloalkyl ring, by a group selected from the group consisting of an amino-substituted lower alkyl group that may have a lower alkyl group on the amino group and a lower alkyl group that may have a halogen atom as a substituent, a lower alkenyl group that may have a halogen atom as a substituent, a lower alkanoyl group, a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3

groups selected from the group consisting of a lower alkyl group that may have a halogen atom as a substituent and a halogen atom, a group



, a halogen atom-substituted lower alkyl group, or a
5 cycloalkyl lower alkyl group,

R^7 represents a hydrogen atom, a phenyl group, a carboxy group, a hydroxyl group, a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, a phenoxy group, a lower alkoxy group that may have a
10 halogen atom as a substituent, a lower alkylenedioxy group, an amino group that may have, as a substituent, a group selected from the group consisting of a lower alkyl group, a lower alkanoyl group, a benzoyl group, and a cycloalkyl group, a cyano group, a lower alkanoyl
15 group that may have a halogen atom as a substituent, a lower alkylsulfonyl group, an aminosulfonyl group, a lower alkoxy carbonyl group, a lower alkanoyloxy group, a 5- or 6-membered saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen
20 atoms, or sulfur atoms (wherein the heterocyclic ring may be substituted, by an oxo group), or a lower alkoxy carbonyl lower alkyl group,

m represents an integer between 1 and 5, wherein when m represents 2 to 5, two to five R^7 's may be identical or
25 different,

R^2 represents a hydrogen atom, a halogen atom, or a lower alkyl group,

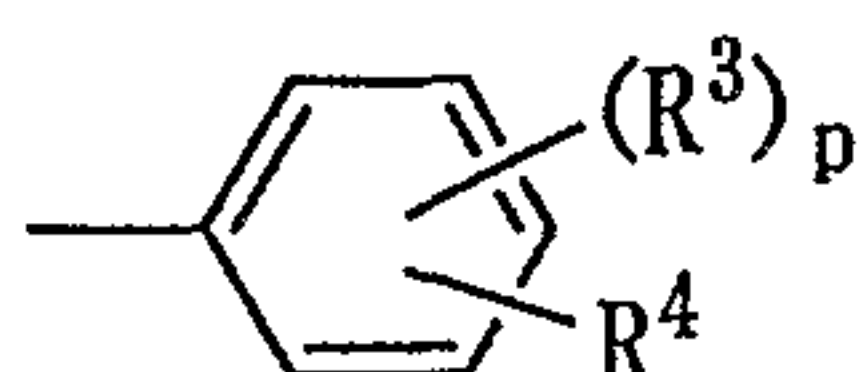
Y represents a group $-O-$, a group $-N(R^5)-$, a group $-CO-$, a group $-CH(OH)-$, a lower alkylene group, a group

5 $-S(O)_n-$, or a group $-C(=N-OH)-$,

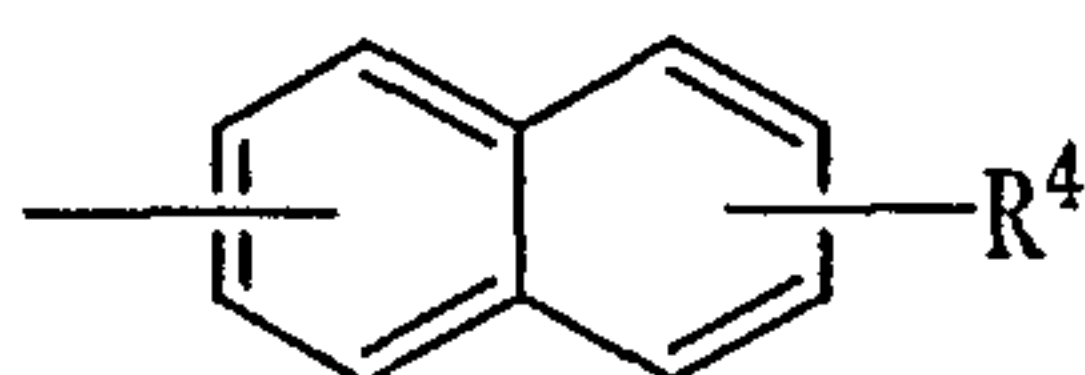
R^5 represents a hydrogen atom, a lower alkyl group, a lower alkanoyl group, a benzoyl group, a phenyl lower alkyl group, or a cycloalkyl group,

n represents 0, 1, or 2,

10 A represents a group



or a group



p represents 1 or 2,

R^3 represents a hydrogen atom, a lower alkoxy group, a halogen atom, a lower alkyl group that may have a

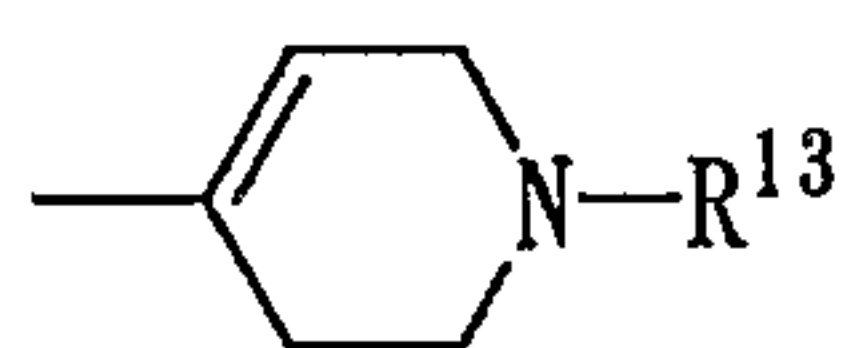
15 halogen atom as a substituent, a lower alkoxy carbonyl group, a carboxy group, a group $-CONR^{11}R^{12}$, or a cyano group,

wherein each of R^{11} and R^{12} , which are identical or different, represents a hydrogen atom, a lower alkyl

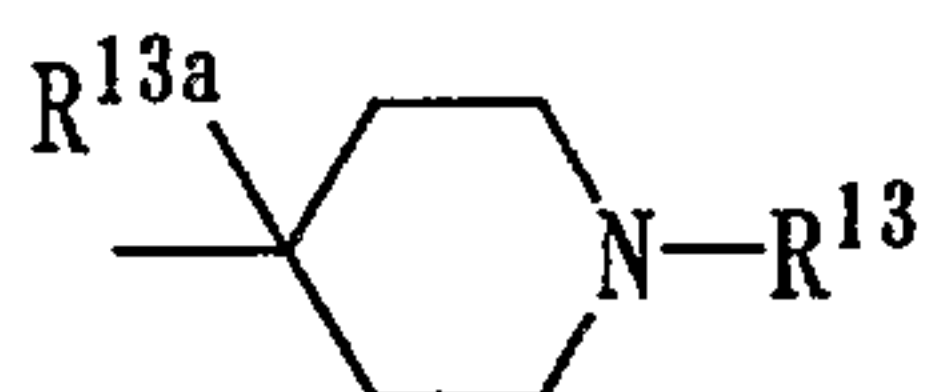
20 group, a cycloalkyl group, or a phenyl group, or R^{11} and R^{12} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-

membered saturated heterocyclic ring,

R^4 represents an imidazolyl lower alkyl group, a 1,2,4-triazolyl lower alkyl group, a 1,2,3-triazolyl lower alkyl group, a 1,2,5-triazolyl lower alkyl group, a pyrazolyl lower alkyl group, a pyrimidinyl lower alkyl group that may have an oxo group as a substituent on the pyrimidine ring, a 3,5-dioxoisoxazolidin-4-ylidene lower alkyl group, a 1,2,4-oxadiazolyl lower alkyl group that may have a lower alkyl group as a substituent on the 1,2,4-oxadiazole ring, a thiazolidinyl lower alkyl group that may have an oxo group as a substituent on the thiazolidine ring, a group



a group



or a group $-(T)_1-N(R^{14})R^{15}$,

R^{13} represents a hydrogen atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkanoyl group that may have a halogen atom as a substituent, a lower alkoxycarbonyl group, a phenyl lower alkyl group that may have a lower alkylendioxy group as a substituent on the phenyl ring, an imidazolyl lower alkyl group, a lower alkoxycarbonyl lower alkyl group, a carboxy lower alkyl group, a

benzoyl group, a morpholino-substituted lower alkanoyl group, a piperazinyl carbonyl lower alkyl group that may be substituted, on the piperazine ring, by a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, a piperazinyl lower alkanoyl group that may be substituted, on the piperazine ring, by a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, a morpholinocarbonyl-substituted lower alkyl group, or an imidazolyl lower alkanoyl group,

R^{13a} represents a hydrogen atom or a hydroxyl group,

T represents a lower alkylene group, a group $-N(R^{17})-B_3-CO-$, a group $-(B_{19})_e-N(R^{18})-CO-$, a group $-B_4-CO-$, a group $-Q-B_5-CO-$, a group $-B_6-N(R^{19})-B_7-CO-$, a group $-CO-B_8-$, a group $-CH(OH)-B_9-$, a group $-CO-B_{10}-CO-$, a group $-CH(OH)-B_{11}-CO-$, a group $-CO-$, a group $-SO_2-$, or a group $-B_{23a}-CO-CO-$,

wherein R^{17} represents a hydrogen atom, a lower alkyl group, a cycloalkyl group, a cycloalkylcarbonyl group, a lower alkanoyl group that may have a halogen atom as a substituent, a lower alkenyl group, an amino-substituted lower alkanoyl group that may have a lower alkyl group as a substituent, or a lower alkylsulfonyl group,

B_3 represents a lower alkylene group,

B_{19} represents a lower alkylene group,

e represents 0 or 1,

R^{18} represents a hydrogen atom or a lower alkyl group,
 B_4 represents a lower alkenylene group or a lower
alkylene group that may have a hydroxyl group as a
substituent,
5 Q represents an oxygen atom or a group $-S(O)_n-$ (wherein
 n has the same meanings as described above),
 B_5 represents a lower alkylene group,
 B_6 represents a lower alkylene group,
 R^{19} represents a hydrogen atom or a lower alkanoyl
10 group,
 B_7 represents a lower alkylene group,
 B_8 represents a lower alkylene group,
 B_9 represents a lower alkylene group,
 B_{10} represents a lower alkylene group,
15 B_{11} represents a lower alkylene group,
 B_{23a} represents a lower alkylene group,
 l represents 0 or 1,
each of R^{14} and R^{15} , which are identical or different
represents (1) a hydrogen atom, (2) an alkyl group that
20 may have a hydroxyl group as a substituent, (3) a
cycloalkyl group that may have a group selected from
the group consisting of a hydroxyl group and a lower
alkyl group as a substituent, (4) a phenoxy lower alkyl
group, (5) a phenyl group that may be substituted, on
25 the phenyl ring, by 1 to 3 groups selected from the
group consisting of a lower alkyl group; a lower alkoxy
group that may have a halogen atom as a substituent; a
halogen atom; an amino lower alkoxy group that may have

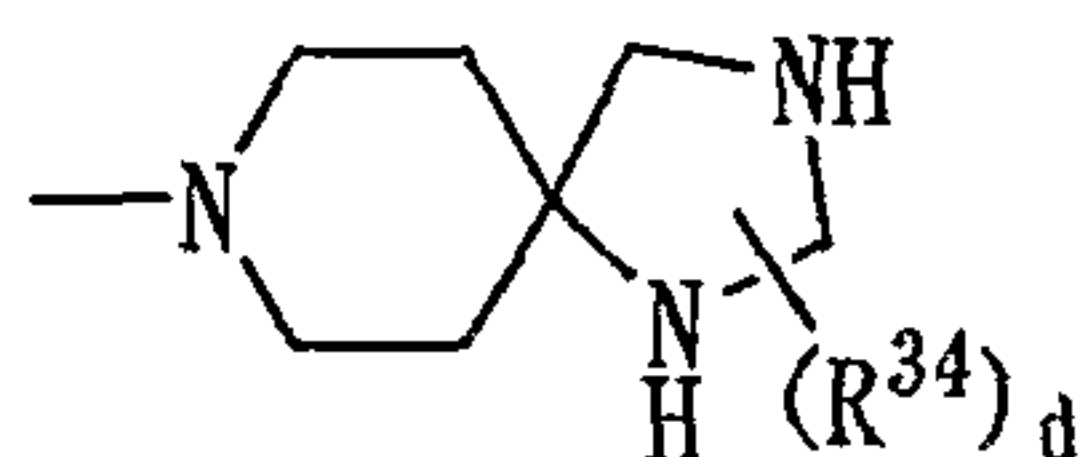
a lower alkyl group as a substituent; a hydroxyl group-substituted lower alkyl group; a phenyl lower alkyl group; a lower alkynyl group; an amino group that may have a lower alkylsulfonyl group as a substituent; a
5 lower alkylthio group; a cycloalkyl group; a phenylthio group; an adamantyl group; an anilino group that may have a halogen atom as a substituent on the phenyl ring; a lower alkoxy carbonyl group; a piperazinyl group that may have a lower alkyl group as a substituent on
10 the piperazine ring; a pyrrolidinyl group that may have an oxo group as a substituent on the pyrrolidine ring; a lower alkanoylamino group; a cyano group; and a phenoxy group, (6) a phenoxy group, (7) a phenyl lower alkyl group that may be substituted, on the phenyl
15 ring, by 1 to 3 groups selected from the group consisting of a halogen atom, a lower alkoxy group that may have a halogen atom as a substituent, and a lower alkyl group, (8) a phenyl lower alkyl group that has a lower alkylenedioxy group as a substituent on the
20 phenyl ring, (9) a lower alkanoyl group, (10) a lower alkoxy carbonyl-substituted lower alkyl group, (11) a carboxy-substituted lower alkyl group, (12) an amino group that may have a lower alkanoyl group as a substituent, (13) a 1,2,3,4-tetrahydroquinolyl group
25 that may have 1 to 3 groups selected from the group consisting of an oxo group, a lower alkoxy group, and a lower alkylenedioxy group as a substituent(s) on the tetrahydroquinoline ring, (14) a cycloalkyl lower alkyl

group, (15) a piperazinyl lower alkanoyl group that may be substituted, on the piperazine ring, by a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, (16) a
5 pyridyl lower alkyl group, (17) an amino group-substituted lower alkyl group that may have a group selected from the group consisting of a lower alkyl group and a lower alkanoyl group as a substituent, (18) a lower alkoxy lower alkyl group, (19) an imidazolyl
10 group, (20) an imidazolyl lower alkyl group, (21) a 1,2,3,4-tetrahydroisoquinolylcarbonyl-substituted lower alkyl group, (22) a piperidinylcarbonyl group that may have a group selected from the group consisting of a lower alkoxy carbonyl group, a phenyl lower alkyl group,
15 and a furyl lower alkyl group as a substituent on the piperidine ring, (23) a thiazolidinyl lower alkanoyl group that may have an oxo group as a substituent on the thiazolidine ring, (24) a piperidinyl group that may be substituted, on the piperidine ring, by a group
20 selected from the group consisting of a lower alkoxy carbonyl group, a phenyl lower alkyl group, a lower alkyl group, a benzoyl group, and a furyl lower alkyl group, (25) a carbonyl lower alkyl group substituted by a group



25 , (26) a carbonyl lower alkyl group substituted by a

group



, (27) a group $-\text{CO}-\text{B}_{20}-\text{N}(\text{R}^{36})\text{R}^{37}$, (26a) a pyrrolidinyl lower alkyl group, (27a) a morpholino lower alkyl group, (28a) a phenyl lower alkenyl group, (29a) an
 5 anilinocarbonyl lower alkyl group that may have a lower alkyl group as a substituent on the phenyl ring, (30a) an indolyl group, (31a) a piperazinyl lower alkyl group that may have, as a substituent on the piperazine ring, a group selected from the group consisting of a lower
 10 alkyl group and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, (32a) an amidino lower alkyl group that may have a lower alkyl group as a substituent, (33a) a fluorenyl group, (34a) a carbazolyl group that
 15 may have a lower alkyl group as a substituent on the carbazole ring, (35a) an amidino group that may have a lower alkyl group as a substituent, (36a) a piperazinyl-substituted oxalyl group that may have 1 to 3 groups selected from the group consisting of a phenyl
 20 lower alkyl group (that may have 1 to 3 groups selected from the group consisting of a lower alkylenedioxy group and a lower alkoxy group as a substituent(s) on the phenyl ring) and a pyridyl lower alkyl group as a substituent(s) on the piperazine ring, or (37a) a
 25 cyano-substituted lower alkyl group,

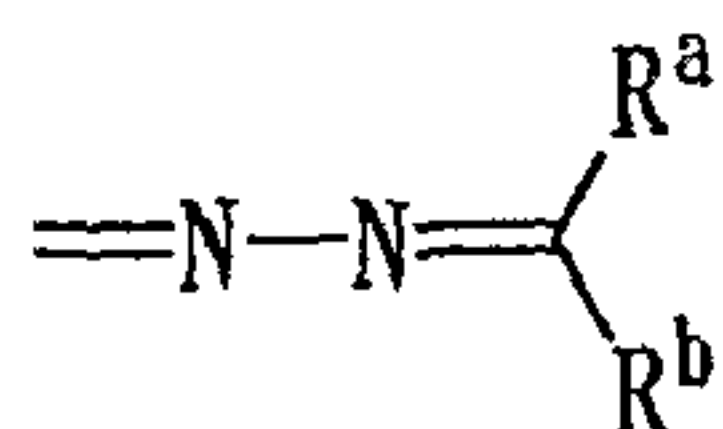
R^{34} represents an oxo group or a phenyl group,
d represents an integer between 0 and 3,
 B_{20} represents a lower alkylene group,
 R^{36} and R^{37} , together with the nitrogen atom to which
5 they bind, may bind to each other, directly or via a
nitrogen atom, oxygen atom, or sulfur atom to form a 5-
to 7-membered saturated heterocyclic group, wherein the
heterocyclic group may be substituted by 1 to 3 phenyl
lower alkyl groups that may have a lower alkylendioxy
10 group as a substituent on the phenyl ring,
 R^{14} and R^{15} , together with the nitrogen atom to which
they bind, may bind to each other, directly or via a
nitrogen atom, oxygen atom, or sulfur atom to form a 5-
to 10-membered saturated or unsaturated heterocyclic
15 ring; or a group



wherein the heterocyclic ring may be substituted by 1
to 3 groups selected from the group consisting of (28)
a phenyl-substituted lower alkyl group, which has 1 to
2 phenyl groups and which may have a pyridyl group on
20 the lower alkyl group, wherein the phenyl ring may be
substituted by 1 to 3 groups selected from the group
consisting of a lower alkanoyl group, an amino group
that may have a lower alkanoyl group as a substituent,
a lower alkoxy carbonyl group, a cyano group, a nitro
25 group, a phenyl group, a halogen atom, a lower alkyl

group that may have a halogen atom as a substituent, a lower alkoxy group that may have a halogen atom as a substituent, a phenyl lower alkoxy group, a hydroxyl group, and a lower alkylenedioxy group, (29) a carbamoyl group, (30) a pyridyl lower alkyl group that may have, as a substituent(s) on the pyridine ring, 1 to 3 groups selected from the group consisting of a hydroxyl group and a lower alkyl group that may have a hydroxyl group as a substituent, (31) a pyrrolyl lower alkyl group that may have 1 to 3 lower alkyl groups as a substituent(s) on the pyrrole ring, (32) a benzoxazolyl lower alkyl group, (33) a benzothiazolyl lower alkyl group, (34) a furyl lower alkyl group, (35) a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a cyano group, an amino group that may have a lower alkylsulfonyl group as a substituent, a halogen atom, a lower alkoxy group, a lower alkyl group that may have a halogen atom as a substituent, a thiazolidinyl lower alkyl group that may have an oxo group as a substituent on the thiazolidine ring, a thiazolidinylidene lower alkyl group that may have an oxo group as a substituent on the thiazolidine ring, and a lower alkylenedioxy group, (36) a pyrimidinyl group, (37) a pyrazinyl group, (38) a pyridyl group, (39) a lower alkoxycarbonyl group, (40) a thiazolidinyl lower alkanoyl group that may be substituted, on the thiazolidine ring, by a group selected from the group

consisting of an oxo group and a group



(wherein each of R^a and R^b represents a lower alkyl group), (41) a lower alkyl group that may have a group selected from the group consisting of a hydroxyl group and a halogen atom as a substituent, (42) a lower alkanoyl group that may have a halogen atom as a substituent, (43) a phenyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a carbamoyl group that may have a group selected from the group consisting of a lower alkoxy lower alkyl group and a lower alkyl group, a lower alkoxy carbonyl group, a carboxy group, a cyano group, a phenyl group, a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, a lower alkoxy group that may have a halogen atom as a substituent, a benzoyl group that may have a halogen atom as a substituent on the phenyl ring, a phenyl lower alkyl group that may have a halogen atom as a substituent on the phenyl ring, and a hydroxyl group, (44) a phenyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring, (45) a naphthyl lower alkyl group, (46) a phenoxy group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a cyano group, a lower alkyl group that

may have a halogen atom as a substituent, and a lower alkoxy group that may have a halogen atom as a substituent, (47) a phenoxy lower alkyl group, (48) a phenyl lower alkoxy group that may be substituted, on
5 the phenyl ring, by 1 to 3 groups selected from the group consisting of a halogen atom, a lower alkyl group that may have a halogen atom as a substituent, and a lower alkoxy group that may have a halogen atom as a substituent, (49) a group $-(B_{12}CO)t-N(R^{20})R^{21}$, (50) a
10 group $-(CO)o-B_{13}-N(R^{22})R^{23}$, (51) a 1,2,3,4-tetrahydronaphthyl-substituted lower alkyl group that may be substituted, on the 1,2,3,4-tetrahydronaphthalene ring, by 1 to 5 lower alkyl groups as a substituent(s), (52) a cycloalkyl group
15 that may have a hydroxyl group as a substituent, (53) a piperidinyl group that may be substituted, on the piperidine ring, by 1 to 3 lower alkyl groups as a substituent(s), (54) a quinolyl lower alkyl group, (55) a 1,2,3,4-tetrazolyl lower alkyl group that may have a
20 group selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group as a substituent on the tetrazole ring, (56) a thiazolyl lower alkyl group that may have a phenyl group as a substituent on the thiazole ring, (57) a benzoyl lower
25 alkyl group that may have 1 to 3 groups selected from the group consisting of a lower alkoxy group and a halogen atom as a substituent(s) on the phenyl ring, (58) a piperidinyl lower alkyl group that may have a

lower alkyl group as a substituent on the piperidine ring, (59) an imidazolyl group that may have 1 to 3 phenyl groups as a substituent(s) on the imidazole ring, (60) a benzimidazolyl group that may have 1 to 3 lower alkyl groups as a substituent(s) on the benzimidazole ring, (61) a pyridyl lower alkoxy group, (62) a 1,2,3,4-tetrahydroquinolyl lower alkyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (63) a 1,3,4-oxadiazolyl lower alkyl group that may have an oxo group as a substituent on the 1,3,4-oxadiazole ring, (64) a cycloalkyl lower alkyl group, (65) a tetrahydropyranyl group, (66) a thienyl lower alkyl group, (67) a pyrimidinylcarbonyl group that may have an oxo group as a substituent on the pyrimidine ring, (68) a hydroxyl group, (69) a carboxy group, (70) a lower alkoxy lower alkyl group, (71) a lower alkoxy lower alkoxy group, (72) a benzoyloxy group, (73) a lower alkoxycarbonyl lower alkoxy group, (74) a carboxy lower alkoxy group, (75) a phenoxy lower alkanoyl group, (76) a 1,2,3,4-tetrahydroquinolylcarbonyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (77) a phenylsulfonyl group, (78) an imidazolyl lower alkanoyl group, (79) an imidazolyl lower alkyl group, (80) a pyridylcarbonyl group, (81) an imidazolylcarbonyl group, (82) a lower alkoxycarbonyl lower alkyl group, (83) a carboxy lower alkyl group, (84) a group $-(O-B_{15})S-CO-N(R^{26})R^{27}$, (85) a group $-N(R^{28})-$

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CO-B₁₆-N(R²⁹)R³⁰, (86) a group -N(R³¹)-B₁₇-CO-N(R³²)R³³,
(87) a benzoxazolyl group, (88a) a benzothienyl group,
(89a) an oxo group, and (90a) a 1,2,3,4-
tetrahydroquinolyl group that may have an oxo group as
5 a substituent on the tetrahydroquinoline ring,
B₁₂ represents a lower alkylene group,
t represents 0 or 1,
each of R²⁰ and R²¹, which are identical or different,
represents a hydrogen atom; a cycloalkyl group; an
10 amino group that may have a lower alkoxy carbonyl group
as a substituent; a benzoyl group that may have 1 to 3
lower alkoxy groups as a substituent(s) on the phenyl
ring; a lower alkyl group; a lower alkyl group having 1
to 2 phenyl groups that may be substituted, on the
15 phenyl ring, by 1 to 3 groups selected from the group
consisting of a lower alkoxy carbonyl group, a cyano
group, a nitro group, a phenyl group, a halogen atom, a
lower alkyl group that may have a halogen atom as a
substituent, a lower alkoxy group that may have a
20 halogen atom as a substituent, and a lower alkylthio
group; a phenyl group that may be substituted, on the
phenyl ring, by 1 to 3 groups selected from the group
consisting of a lower alkoxy group that may have a
halogen atom as a substituent and a lower alkyl group
25 that may have a halogen atom as a substituent; a lower
alkoxy carbonyl group; a cycloalkyl lower alkyl group; a
pyrrolidinyl lower alkyl group that may have 1 to 3
lower alkyl groups that may have a hydroxyl group as a

substituent on the pyrrolidine ring; an amino-substituted lower alkyl group that may have a group selected from the group consisting of a phenyl group and a lower alkyl group as a substituent; a 1,2,3,4-tetrahydronaphthyl-substituted lower alkyl group that may have 1 to 5 lower alkyl groups as a substituent(s) on the 1,2,3,4-tetrahydronaphthalene ring; a naphthyl lower alkyl group; a pyridyl lower alkyl group; a quinolyl lower alkyl group; a 1,2,3,4-tetrazolyl lower alkyl group that may have 1 to 3 groups selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group as a substituent(s) on the tetrazole ring; a 1,2,4-triazolyl lower alkyl group; a tetrahydrofuryl lower alkyl group that may have a hydroxyl group as a substituent on the lower alkyl group; a phenoxy lower alkyl group that may have 1 to 3 groups selected from the group consisting of a lower alkyl group and a nitro group as a substituent(s) on the phenyl ring; a phenyl lower alkanoyl group; a lower alkanoyl group that may have a halogen atom as a substituent; an imidazolyl lower alkanoyl group; a lower alkoxycarbonyl lower alkyl group; a pyridyl group; or a carboxy lower alkyl group, or R^{20} and R^{21} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from

the group consisting of a lower alkyl group, a phenyl group that may have 1 to 3 groups selected from the group consisting of a halogen atom and a lower alkyl group that may have a halogen atom as a substituent(s) on the phenyl ring, and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring,

o represents 0 or 1,

B_{13} represents a lower alkylene group,

each of R^{22} and R^{23} , which are identical or different, represents a hydrogen atom, a lower alkyl group, a benzoyl group that may have 1 to 3 lower alkoxy groups as a substituent(s) on the phenyl ring, a phenoxy lower alkyl group that may have a lower alkyl group as a substituent on the phenyl ring, a phenyl lower alkyl group, or a phenyl group, or R^{22} and R^{23} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring,

B_{15} represents a lower alkylene group,

s represents 0 or 1,

each of R^{26} and R^{27} , which are identical or different, represents a hydrogen atom, a lower alkyl group, a

phenyl lower alkyl group, or an imidazolyl lower alkyl group, or R^{26} and R^{27} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 phenyl lower alkyl groups that may have a lower alkylenedioxy group as a substituent on the phenyl ring, as a substituent(s),

10 R^{28} represents a hydrogen atom or a lower alkyl group, B_{16} represents a lower alkylene group, R^{29} and R^{30} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl group, a phenyl group, and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a

20 substituent on the phenyl ring, R^{31} represents a hydrogen atom or a lower alkyl group, B_{17} represents a lower alkylene group, R^{32} and R^{33} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a

25 nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a lower alkyl

group, a phenyl group, and a phenyl lower alkyl group that may have a lower alkylenedioxy group as a substituent on the phenyl ring].

Further, the present invention provides the
5 pharmaceutical composition for the treatment of fibrosis, comprising the aromatic compound represented by the general formula (1) or a salt thereof mentioned above.

The present invention provides the above-
10 mentioned pharmaceutical composition for the treatment of fibrosis, comprising the aromatic compound or a salt thereof mentioned above, wherein the aromatic compound is selected from the group consisting of

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
15 oxoethyl]ethylamino}-2-methoxyphenoxy)pyridin-3-yl]-
3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]ethylamino}phenoxy)pyridin-3-yl]-4-
trifluoromethylbenzamide,

20 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]ethylamino}-2-fluorophenoxy)pyridin-3-yl]-4-
trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]methylamino}-2-fluorophenoxy)pyridin-3-yl]-4-
25 trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]methylamino}-2-methoxyphenoxy)pyridin-3-yl]-4-
trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

5 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methylphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

10 N-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-3,4-dichlorobenzene-sulfonamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperazin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

20 N-{6-[(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenyl)methylamino]pyridin-3-yl}-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

25 N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-

oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-
3,4-dichlorobenzamide,

N-{6-[4-(4-benzylpiperazine-1-carbonyl)-
phenoxy]pyridin-3-yl}-4-trifluoromethylbenzamide,

5 N-{6-[4-(4-benzylpiperazine-1-
carbonyl)phenoxy]pyridin-3-yl}-3,4-dichlorobenzamide,

N-[6-({4-[3-(4-piperonylpiperazin-1-yl)-3-
oxopropyl]phenyl}methylamino)pyridin-3-yl]-4-
trifluoromethylbenzamide,

10 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]ethylamino}-2-fluorophenoxy)pyridin-3-yl]-3,4-
dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]methylamino}-2-fluorophenoxy)pyridin-3-yl]-
15 3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
oxoethyl]methylamino}-2-methoxyphenoxy)pyridin-3-yl]-
3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-
20 oxoethyl]methylamino}phenoxy)pyridin-3-yl]-3,4-
dichlorobenzamide,

1-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-
oxopropyl]phenoxy}pyridin-3-yl)-3-(3,4-dichlorophenyl)-
1-ethylurea,

25 N-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-
oxopropyl]phenoxy}pyridin-3-yl)-4-trifluoromethyl-
benzamide,

N-[6-(4-{[2-(4-benzylpiperazin-1-yl)-2-

oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-(6-{4-[3-(4-piperonylpiperazine-1-carbonyl)piperidin-1-yl]phenoxy}pyridin-3-yl)-3,4-dichlorobenzamide,

N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-{6-[(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenyl)methylamino]pyridin-3-yl}-4-trifluoromethylbenzamide,

N-(6-{4-[(2-{4-[4-(4-fluorobenzoyl)phenyl]-piperazin-1-yl}-2-oxoethyl)methylamino]-2-methoxyphenoxy}pyridin-3-yl)-4-trifluoromethylbenzamide,

2-(4-piperonylpiperazin-1-yl)-N-{3-methyl-4-[5-(4-trifluoromethylphenoxy)methyl]pyridin-2-yloxy}phenyl}-2-oxoacetamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-2-fluoro-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide, and

4-(3-{3-methyl-4-[5-(4-trifluoromethylbenzoylamino)pyridin-2-yloxy]phenyl}-2-

oxohexahydropyrimidin-1-yl)benzoic acid ethyl ester, or salts thereof.

The present invention provides the above-mentioned pharmaceutical composition for the treatment
5 of fibrosis, wherein the fibrosis is lung fibrosis.
The present invention provides the above-mentioned pharmaceutical composition for the treatment of fibrosis, wherein the fibrosis is hepatic fibrosis.
The present invention provides the above-mentioned
10 pharmaceutical composition for the treatment of fibrosis, wherein the fibrosis is glomerulosclerosis.

Specific examples of each group represented by the general formula (1) are as follows.

Examples of the lower alkynylene group
15 include linear or branched alkynylene groups having 2 to 6 carbon atoms which have 2 to 6 triple bonds such as ethynylene, 1-propynylene, 1-methyl-1-propynylene, 2-methyl-1-propynylene, 2-propynylene, 2-butynylene, 1-butynylene, 3-butynylene, 2-pentynylene, 1-pentynylene,
20 3-pentynylene, 4-pentynylene, 2-pentyn-4-ynylene, 2-hexynylene, 1-hexynylene, 5-hexynylene, 3-hexynylene, 4-hexynylene, 3,3-diethyl-1-propynylene, 2-ethyl-1-propynylene groups.

Examples of the amino group which may have a
25 substituent selected from the group consisting of a lower alkyl group and a lower alkanoyl group include amino groups which may have 1 or 2 substituents selected from the group consisting of a linear or

branched alkyl group having 1 to 6 carbon atoms and a linear or branched alkanoyl group having 1 to 6 carbon atoms such as amino, methylamino, ethylamino, propylamino, isopropylamino, butylamino, tert-butylamino, pentylamino, hexylamino, dimethylamino, diethylamino, dipropylamino, dibutylamino, dipentylamino, dihexylamino, N-methyl-N-ethylamino, N-ethyl-N-propylamino, N-methyl-N-butylamino, N-methyl-N-hexylamino, N-acetylamino, N-formylamino, N-propionylamino, N-butyrylamino, N-isobutyrylamino, N-pentanoylamino, N-tert-butylcarbonylamino, N-hexanoylamino, diacetylamino, N-acetyl-N-methylamino, N-acetyl-N-ethylamino groups.

Examples of the benzoyl group (which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a lower alkyl group which may have a halogen atom as a substituent and a halogen atom) include benzoyl groups (which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents and a halogen atom) such as benzoyl, 3,4-difluorobenzoyl, 2-fluorobenzoyl, 3-bromobenzoyl, 4-iodobenzoyl, 4-methylbenzoyl, 2-methylbenzoyl, 3-methylbenzoyl, 2-ethylbenzoyl, 3-ethylbenzoyl, 4-ethylbenzoyl, 4-isopropylbenzoyl, 3-butylbenzoyl, 4-pentylbenzoyl, 4-hexylbenzoyl, 3,4-dimethylbenzoyl, 3,4-diethylbenzoyl, 2,4-

dimethylbenzoyl, 2,5-dimethylbenzoyl, 2,6-dimethylbenzoyl, 3,4,5-trimethylbenzoyl, 2-trifluoromethylbenzoyl, 3-trifluoromethylbenzoyl, 4-trifluoromethylbenzoyl, 2-(bromomethyl)benzoyl, 3-(2-chloroethyl)benzoyl, 4-(2,3-dichloropropyl)benzoyl, 4-(4-fluorobutyl)benzoyl, 3-(5-chloropentyl)benzoyl, 4-(5-bromohexyl)benzoyl, 4-(5,6-dibromohexyl)benzoyl, 3,4-di(trifluoromethyl)benzoyl, 3,4-di(4,4,4-trichlorobutyl)benzoyl, 2,4-di(3-chloro-2-methylpropyl)benzoyl, 2,5-di(3-chloropropyl)benzoyl, 2,6-di(2,2,2-trifluoroethyl)benzoyl, 3,4,5-tri(trifluoromethyl)benzoyl, 4-(2,2,2-trichloroethyl)benzoyl, 2-methyl-4-trifluoromethylbenzoyl, 3-ethyl-4-trichloromethylbenzoyl, 2-chloro-4-trifluoromethylbenzoyl, 3-ethyl-4-fluorobenzoyl, 3-fluoro-4-trichloromethylbenzoyl, 2-methyl-3-trifluoromethyl-4-trifluoromethylbenzoyl, 3-fluorobenzoyl, 4-fluorobenzoyl, 2-bromobenzoyl, 4-bromobenzoyl, 2-iodobenzoyl, 3-iodobenzoyl, 2,3-dibromobenzoyl, 2,4-diiodobenzoyl, 2,5-difluorobenzoyl, 2,6-dichlorobenzoyl, 2,4,6-trichlorobenzoyl, 2,4-difluorobenzoyl, 3,5-difluorobenzoyl, 2,6-difluorobenzoyl, 2-chlorobenzoyl, 3-chlorobenzoyl, 4-chlorobenzoyl, 2,3-dichlorobenzoyl, 2,4-dichlorobenzoyl, 2,5-dichlorobenzoyl, 3,4-dichlorobenzoyl, 2,6-dichlorobenzoyl, 3,5-dichlorobenzoyl, 2,4,6-trifluorobenzoyl, 2,4-

difluorobenzoyl groups.

Examples of the halogen substituted lower alkyl group include linear or branched alkyl groups having 1 to 6 carbon atoms which have 1 to 3 halogen atoms as substituents such as a trifluoromethyl group, trichloromethyl group, chloromethyl group, bromomethyl group, fluoromethyl group, iodomethyl group, difluoromethyl group, dibromomethyl group, dichloromethyl group, 2-chloroethyl group, 2,2,2-trifluoroethyl group, 2,2,2-trichloroethyl group, 3-chloropropyl group, 2,3-dichloropropyl group, 4,4,4-trichlorobutyl group, 4-fluorobutyl group, 5-chloropentyl group, 3-chloro-2-methylpropyl group, 5-bromohexyl group, and 5,6-dibromohexyl group.

Examples of the lower alkanoyl substituted amino group include linear or branched alkanoyl groups having 2 to 6 carbon atoms which have 1 to 3 halogen atoms as substituents such as a acetyl amino group, propionyl amino group, butyryl amino group, pentanoyl amino group, 2-methylpropionyl amino group and hexanoyl amino group.

Examples of the piperazinyl substituted oxalyl group which may have, on the piperazine ring, 1 to 3 substituents selected from the group consisting of a phenyl lower alkyl group (which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a lower alkylenedioxy group and a lower alkoxy group) and a pyridyl lower alkyl group

include piperazinyll substituted oxalyl groups which may have, on the piperazine ring, 1 to 3 substituents selected from the group consisting of a phenylalkyl group of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms (and which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkylenedioxy group having 1 to 4 carbon atoms and a linear or branched alkoxy group having 1 to 6 carbon atoms) and a pyridylalkyl group of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as 4-(3,4-methylenedioxybenzyl)-(1-, 2-, or 3-)piperazinyloxalyl, 4-(2-, 3-, or 4-pyridylmethyl)-(1-, 2-, or 3-)piperazinyloxalyl, 4-(3,4-dimethoxybenzyl)-(1-, 2-, or 3-)piperazinyloxalyl, 4-(2,3-methylenedioxybenzyl)-(1-, 2-, or 3-)piperazinyloxalyl, 4-(3,4-ethylenedioxybenzyl)-(1-, 2-, or 3-)piperazinyloxalyl, 4-[2-(2-, 3-, or 4-pyridyl)ethyl]-(1-, 2-, or 3-)piperazinyloxalyl, 4-[3-(2-, 3-, or 4-pyridyl)propyl]-(1-, 2-, or 3-)piperazinyloxalyl, 2,4-bis(2-, 3-, or 4-pyridylmethyl)-(1-, 2-, or 3-)piperazinyloxalyl, 2-(3,4-methylenedioxybenzyl)-4-(2-, 3-, or 4-pyridylmethyl)-(1-, 2-, or 3-)piperazinyloxalyl, 2,3,4-tri(2-, 3-, or 4-pyridylmethyl)-(1-, 2-, or 3-)piperazinyloxalyl groups.

Examples of the cyano substituted lower alkyl group include cyanoalkyl groups of which the alkyl

moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a cyanomethyl group, 2-cyanoethyl group, 1-cyanoethyl group, 3-cyanopropyl group, 4-cyanobutyl group, 5-cyanopentyl group, 6-cyanohexyl group, 1,1-dimethyl-2-cyanoethyl group, and 2-methyl-3-cyanopropyl group.

Examples of the carbamoyl group which may have a group selected from the group consisting of a lower alkoxy lower alkyl group and a lower alkyl group include carbamoyl groups which may have 1 or 2 groups selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms which has a linear or branched alkoxy group having 1 to 6 carbon atoms and a linear or branched alkyl group having 1 to 6 carbon atoms such as carbamoyl, N-(2-methoxyethyl)carbamoyl, methylcarbamoyl, ethylcarbamoyl, propylcarbamoyl, isopropylcarbamoyl, butylcarbamoyl, tert-butylcarbamoyl, pentylcarbamoyl, hexylcarbamoyl, dimethylcarbamoyl, diethylcarbamoyl, dipropylcarbamoyl, dibutylcarbamoyl, dipentylcarbamoyl, dihexylcarbamoyl, N-methyl-N-ethylcarbamoyl, N-ethyl-N-propylcarbamoyl, N-methyl-N-butylcarbamoyl, N-methyl-N-hexylcarbamoyl, N-(methoxymethyl)carbamoyl, N-(3-propoxypropyl)carbamoyl, N-(4-butoxybutyl)carbamoyl, N-(4-ethoxybutyl)carbamoyl, N-(5-pentyloxypropyl)carbamoyl, N-(5-methoxypentyl)carbamoyl, N-(6-hexyloxyhexyl)carbamoyl, di(2-methoxyethyl)carbamoyl, N-(2-methoxyethyl)-N-

methylcarbamoyl, N-(2-methoxyethyl)-N-ethylcarbamoyl groups.

Examples of the phenyl group which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a halogen atom and a lower alkyl group which may have a halogen atom include phenyl groups which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a halogen atom and a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms such as phenyl, 3,4-difluorophenyl, 2-fluorophenyl, 3-bromophenyl, 4-iodophenyl, 4-methylphenyl, 2-methylphenyl, 3-methylphenyl, 2-ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 4-isopropylphenyl, 3-butylphenyl, 4-pentylphenyl, 4-hexylphenyl, 3,4-dimethylphenyl, 3,4-diethylphenyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 3,4,5-trimethylphenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-(bromomethyl)phenyl, 3-(2-chloroethyl)phenyl, 4-(2,3-dichloropropyl)phenyl, 4-(4-fluorobutyl)phenyl, 3-(5-chloropentyl)phenyl, 4-(5-bromohexyl)phenyl, 4-(5,6-dibromohexyl)phenyl, 3,4-di(trifluoromethyl)phenyl, 3,4-di(4,4,4-trichlorobutyl)phenyl, 2,4-di(3-chloro-2-methylpropyl)phenyl, 2,5-di(3-chloropropyl)phenyl, 2,6-di(2,2,2-trifluoroethyl)phenyl, 3,4,5-tri(trifluoromethyl)phenyl, 4-(2,2,2-

trichloroethyl)phenyl, 2-methyl-4-
trifluoromethylphenyl, 3-ethyl-4-trichloromethylphenyl,
2-chloro-4-trifluoromethylphenyl, 3-ethyl-4-
fluorophenyl, 3-fluoro-4-trichloromethylphenyl, 2-
5 methyl-3-trifluoromethyl-4-trifluoromethylphenyl, 3-
fluorophenyl, 4-fluorophenyl, 2-bromophenyl, 4-
bromophenyl, 2-iodophenyl, 3-iodophenyl, 2,3-
dibromophenyl, 2,4-diiodophenyl, 2,5-difluorophenyl,
2,6-dichlorophenyl, 2,4,6-trichlorophenyl, 2,4-
10 difluorophenyl, 3,5-difluorophenyl, 2,6-difluorophenyl,
2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,3-
dichlorophenyl, 2,4-dichlorophenyl, 2,5-dichlorophenyl,
3,4-dichlorophenyl, 2,6-dichlorophenyl, 3,5-
dichlorophenyl, 2,4,6-trifluorophenyl, 2,4-
15 difluorophenyl groups.

Examples of the lower alkenylene group
include linear or branched alkenylene groups having 2
to 6 carbon atoms which have 1 to 3 double bonds such
as vinylene, 1-propenylene, 1-methyl-1-propenylene, 2-
20 methyl-1-propenylene, 2-propenylene, 2-butenylene, 1-
butenylene, 3-butenylene, 3-pentenylene, 1-pentenylene,
2-pentenylene, 4-pentenylene, 1,3-butadienylene, 1,3-
pentadienylene, 2-penten-4-ynylene, 2-hexenylene, 1-
hexenylene, 5-hexenylene, 3-hexenylene, 4-hexenylene,
25 3,3-dimethyl-1-propenylene, 2-ethyl-1-propenylene,
1,3,5-hexatrienylene, 1,3-hexadienylene, and 1,4-
hexadienylene.

Examples of the lower alkoxy group include

linear or branched alkoxy groups having 1 to 6 carbon atoms such as a methoxy group, ethoxy group, propoxy group, isopropoxy group, butoxy group, tert-butoxyl group, pentyloxy group, and hexyloxy group.

5 Examples of the lower alkyl group include linear or branched alkyl groups having 1 to 6 carbon atoms such as a methyl group, ethyl group, propyl group, isopropyl group, 2,2-dimethylpropyl group, 1-ethylpropyl group, butyl group, isobutyl group, tert-
10 butyl group, isopentyl group, pentyl group, and hexyl group.

 Examples of the lower alkyl group which may have a lower alkoxy group as a substituent include, in addition to the above described lower alkyl groups,
15 linear or branched alkyl groups having 1 to 6 carbon atoms which may have a linear or branched alkoxy group having 1 to 6 carbon atoms as a substituent such as a methoxymethyl group, 1-ethoxyethyl group, 2-methoxyethyl group, 2-propoxyethyl group, 3-
20 isopropoxypropyl group, 4-butoxybutyl group, 5-pentyloxypropyl group, 6-hexyloxyhexyl, 1,1-dimethyl-2-methoxyethyl group, 2-methyl-3-ethoxypropyl, and 3-methoxypropyl group.

 Examples of the lower alkanoyl group include
25 alkanoyl groups having 1 to 6 carbon atoms such as a formyl group, acetyl group, propionyl group, butyryl group, isobutyryl group, pentanoyl group, tert-butylcarbonyl, and hexanoyl group.

Examples of the phenyl lower alkyl group include phenylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a benzyl group, 2-phenylethyl group, 1-phenylethyl group, 3-phenylpropyl group, 4-phenylbutyl group, 5-phenylpentyl group, 6-phenylhexyl group, 1,1-dimethyl-2-phenylethyl group, and 2-methyl-3-phenylpropyl group.

Examples of the phenyl lower alkyl group (which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a lower alkylenedioxy group and a lower alkoxy group), include, in addition to the above described phenyl lower alkyl groups, phenylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms (and which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkylenedioxy group having 1 to 4 carbon atoms and a linear or branched alkoxy group having 1 to 6 carbon atoms) such as 3,4-methylenedioxybenzyl, 3,4-trimethylenedioxybenzyl, 2-(2,3-ethylenedioxyphenyl)ethyl, 1-(3,4-trimethylenedioxyphenyl)ethyl, 3-(2,3-tetramethylenedioxyphenyl)propyl, 4-(3,4-methylenedioxyphenyl)butyl, 5-(2,3-ethylenedioxyphenyl)pentyl, 6-(3,4-trimethylenedioxyphenyl)hexyl, 1,1-dimethyl-2-(2,3-methylenedioxyphenyl)ethyl, 2-methyl-3-(3,4-

ethylenedioxyphenyl)propyl, 2-methoxybenzyl, 2-(2-methoxyphenyl)ethyl, 2-(3-methoxyphenyl)ethyl, 2-(4-methoxyphenyl)ethyl, 4-methoxybenzyl, 1-(2-ethoxyphenyl)ethyl, 3-(3-ethoxyphenyl)propyl, 4-(4-ethoxyphenyl)butyl, 5-(4-isopropoxyphenyl)pentyl, 6-(3-butoxyphenyl)hexyl, 1,1-dimethyl-2-(4-pentyloxyphenyl)ethyl, 2-methyl-3-(4-hexyloxyphenyl)propyl, 3,4-dimethoxybenzyl, 3,4-diethoxybenzyl, 2,4-dimethoxybenzyl, 2,5-dimethoxybenzyl, 2,6-dimethoxybenzyl, 3,4,5-trimethoxybenzyl groups.

Examples of the lower alkylene group include linear or branched alkylene groups having 1 to 6 carbon atoms such as a methylene group, ethylene group, trimethylene group, 2-methyltrimethylene group, 2,2-dimethylethylene group, 2,2-dimethyltrimethylene group, 1-methyltrimethylene group, methylmethylene group, ethylmethylene group, tetramethylene group, pentamethylene group, and hexamethylene group.

Examples of the lower alkenylene group which may have a phenyl group as a substituent include linear or branched alkenylene groups having 2 to 6 carbon atoms which have 1 to 3 double bonds and may have a phenyl group as a substituent such as vinylene, 1-propenylene, 1-methyl-1-propenylene, 2-methyl-1-propenylene, 2-propenylene, 2-butenylene, 1-butenylene, 3-butenylene, 2-pentenylene, 1-pentenylene, 3-pentenylene, 4-pentenylene, 1,3-butadienylene, 1,3-

pentadienylene, 2-penten-4-ynylene, 2-hexenylene, 1-hexenylene, 5-hexenylene, 3-hexenylene, 4-hexenylene, 3,3-dimethyl-1-propenylene, 2-ethyl-1-propenylene, 1,3,5-hexatrienylene, 1,3-hexadienylene, 1,4-hexadienylene, 1-phenylvinylene, 3-phenyl-1-propenylene, 3-phenyl-1-methyl-1-propenylene, 3-phenyl-2-methyl-1-propenylene, 1-phenyl-2-propenylene, 1-phenyl-2-butenylene, 3-phenyl-1-butenylene, 1-phenyl-3-butenylene, 5-phenyl-2-pentenylene, 4-phenyl-1-pentenylene, 2-phenyl-3-pentenylene, 1-phenyl-4-pentenylene, 1-phenyl-1,3-butadienylene, 1-phenyl-1,3-pentadienylene, 1-phenyl-2-penten-4-ynylene, 1-phenyl-2-hexenylene, 3-phenyl-1-hexenylene, 4-phenyl-5-hexenylene, 6-phenyl-3-hexenylene, 5-phenyl-4-hexenylene, 1-phenyl-3,3-dimethyl-1-propenylene, 1-phenyl-2-ethyl-1-propenylene, 6-phenyl-1,3,5-hexatrienylene, 1-phenyl-1,3-hexadienylene, 2-phenyl-1,4-hexadienylene groups.

Examples of the lower alkylene group which may be substituted with a group selected from the group consisting of a lower alkoxy group and a phenyl group include, in addition to the above described lower alkylene groups, linear or branched alkylene groups having 1 to 6 carbon atoms which may be substituted with 1 or 2 groups selected from the group consisting of a linear or branched alkoxy group having 1 to 6 carbon atoms and a phenyl group such as methoxymethylene, 2-phenylethylene, 3-

ethoxytrimethylene, 1-propoxy-2-methyltrimethylene, 1-phenyl-2,2-dimethylethylene, 3-phenyl-2,2-dimethyltrimethylene, 2-butoxy-1-methyltrimethylene, phenylmethylethylene, 2-pentyloxyethylethylene, 4-phenyl-2-hexyloxytetramethylene, 3-phenylpentamethylene, 5-phenylhexamethylene, ethoxymethylene, 1-phenylethylene, 3-phenyltrimethylene, 2-phenyl-1-methoxyethylene groups.

Examples of the 5- to 15- membered monocyclic, bicyclic or tricyclic saturated or unsaturated heterocyclic group which has 1 to 4 nitrogen atoms, oxygen atoms or sulfur atoms include pyrrolidinyl, piperidinyl, piperazinyl, morpholino, pyridyl, 1,2,5,6-tetrahydropyridyl, 1,2,4-triazolyl, 1,2,3-triazolyl, 1,2,5-triazolyl, thiazolidinyl, 1,2,3,4-tetrazolyl, thienyl, quinolyl, 1,4-dihydroquinolyl, benzothiazolyl, pyrazyl, pyrimidyl, pyridazyl, 2H-pyrrolyl, pyrrolyl, 1,3,4-oxadiazolyl, tetrahydropyranyl, tetrahydrofuryl, furazanyl, carbostyryl, 3,4-dihydrocarbostyryl, 1,2,3,4-tetrahydroquinolyl, 1,2,3,4-tetrahydroisoquinolyl, indolyl, isoindolyl, indolinyl, benzoimidazolyl, benzoxazolyl, imidazolidinyl, isoquinolyl, quinazolidinyl, quinoxalinyl, cinnolinyl, phthalazinyl, carbazoyl, acridinyl, chromanyl, isoindolinyl, isochromanyl, pyrazolyl, imidazolyl, pyrazolidinyl, phenothiazinyl, benzofuryl, 2,3-dihydrobenzo[b]furyl, benzothienyl, phenoxatiynyl, phenoxadinyl, 4H-

chromenyl, 1H-indazolyl, phenazinyl, xanthenyl,
thianthrenyl, 2-imidazoliny, 2-pyrroliny, furyl,
oxazolyl, isoxazolyl, isoxazolidiny, thiazolyl,
isothiazolyl, pyranyl, 2-thiazoliny, 2-pyrazoliny,
5 quinuclidiny, 1,4-benzoxadiny, 3,4,-dihydro-2H-1,4-
benzoxadiny, 3,4-dihydro-2H-1,4-benthiaziny, 1,4-
benzothiaziny, 1,2,3,4-tetrahydroquinoxaliny, 1,3-
dithia-2,4-dihydronaphthaleny, phenanthridiny, 1,4-
dithianaphthaleny, dibenz[b,e]azepine, 6,11-dihydro-
10 5H-dibenz[b,e]azepine groups.

Examples of the halogen atom include a
fluorine atom, chlorine atom, bromine atom and iodine
atom.

Examples of the lower alkoxy group which may
15 have a halogen atom as a substituent include linear or
branched alkoxy groups having 1 to 6 carbon atoms which
may have 1 to 3 halogen atoms as substituents such as
methoxy, ethoxy, propoxy, isopropoxy, butoxy, tert-
butoxy, pentyloxy, hexyloxy, trifluoromethoxy,
20 trichloromethoxy, chloromethoxy, bromomethoxy,
fluoromethoxy, iodomethoxy, difluoromethoxy,
dibromomethoxy, 2-chloroethoxy, 2,2,2-trifluoroethoxy,
2,2,2-trichloroethoxy, 3-chloropropoxy, 2,3-
dichloropropoxy, 4,4,4-trichlorobutoxy, 4-fluorobutoxy,
25 5-chloropentyloxy, 3-chloro-2-methylpropoxy, 6-
bromohexyloxy, 5,6-dichlorohexyloxy groups.

Examples of the lower alkyl group which may
have a halogen atom as a substituent include, in

addition to the above described lower alkyl groups,
linear or branched alkyl groups having 1 to 6 carbon
atoms which may have 1 to 3 halogen atoms as
substituents such as a trifluoromethyl group,
5 trichloromethyl group, chloromethyl group,
dichloromethyl group, bromomethyl group, fluoromethyl
group, iodomethyl group, difluoromethyl group,
dibromomethyl group, dichloromethyl group, 2-
chloroethyl group, 2,2,2-trifluoroethyl group, 2,2,2-
10 trichloroethyl group, 3-chloropropyl group, 2,3-
dichloropropyl group, 4,4,4-trichlorobutyl group, 4-
fluorobutyl group, 5-chloropentyl group, 3-chloro-2-
methylpropyl group, 5-bromohexyl group, and 5,6-
dibromohexyl group.

15 Examples of the lower alkylsulfonyl group
include linear or branched alkylsulfonyl groups having
1 to 6 carbon atoms such as a methylsulfonyl group,
ethylsulfonyl group, propylsulfonyl group,
isopropylsulfonyl group, butylsulfonyl group, tert-
20 butylsulfonyl group, pentylsulfonyl group, and
hexylsulfonyl group.

 Examples of the phenyl group which may be
substituted on the phenyl ring with a lower alkyl group
which may have a halogen atom include phenyl groups
25 which may be substituted with 1 to 3 linear or branched
alkyl groups having 1 to 6 carbon atoms which may have
1 to 3 halogen atoms such as phenyl, 2-methylphenyl, 3-
methylphenyl, 4-methylphenyl, 2-ethylphenyl, 3-

ethylphenyl, 4-ethylphenyl, 4-isopropylphenyl, 3-butylphenyl, 4-pentylphenyl, 4-hexylphenyl, 3,4-dimethylphenyl, 3,4-diethylphenyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 3,4,5-trimethylphenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-(bromomethyl)phenyl, 3-(2-chloroethyl)phenyl, 4-(2,3-dichloropropyl)phenyl, 4-(4-fluorobutyl)phenyl, 3-(5-chloropentyl)phenyl, 4-(5-bromohexyl)phenyl, 4-(5,6-dibromohexyl)phenyl, 3,4-di(trifluoromethyl)phenyl, 3,4-di(4,4,4-trichlorobutyl)phenyl, 2,4-di(3-chloro-2-methylpropyl)phenyl, 2,5-di(3-chloropropyl)phenyl, 2,6-di(2,2,2-trifluoroethyl)phenyl, 3,4,5-tri(trifluoromethyl)phenyl, 4-(2,2,2-trichloroethyl)phenyl, 2-methyl-4-trifluoromethylphenyl, 3-ethyl-4-trichloromethyl groups.

Examples of the lower alkylthio group include linear or branched alkylthio groups having 1 to 6 carbon atoms such as a methylthio group, ethylthio group, propylthio group, isopropylthio group, butylthio group, tert-butylthio group, pentylthio group, and hexylthio group.

Examples of the naphthyl group which may be substituted on the naphthalene ring with 1 to 3 substituents selected from the group consisting of a lower alkyl group, a halogen atom, and an amino group which may have a substituent selected from the group

consisting of a lower alkyl group and a lower alkanoyl group include naphthyl groups which may have, on the naphthalene ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms, a halogen atom, and an amino group which may have 1 or 2 substituents selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms and a linear or branched alkanoyl group having 1 to 6 carbon atoms such as (1- or 2-)naphthyl, 1-methyl-(2-, 3-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 2-ethyl-(1-, 3-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 3-n-propyl-(1-, 2-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 4-n-butyl-(1-, 2-, 3-, 5-, 6-, 7-, or 8-)naphthyl, 4-methyl-(1-, 2-, 3-, 5-, 6-, 7-, or 8-)naphthyl, 5-n-pentyl-(1-, 2-, 3-, 4-, 6-, 7-, or 8-)naphthyl, 6-n-hexyl-(1-, 2-, 3-, 4-, 5-, 7-, or 8-)naphthyl, 1,7-dimethyl-(2-, 3-, 4-, 5-, 6-, or 8-)naphthyl, 1,2,8-trimethyl-(3-, 4-, 5-, 6-, or 7-)naphthyl, 1-dimethylamino-(2-, 3-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 2-dimethylamino-(1-, 3-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 3-methylamino-(1-, 2-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 5-amino-(1-, 2-, 3-, 4-, 6-, 7-, or 8-)naphthyl, 5-dimethylamino-(1-, 2-, 3-, 4-, 6-, 7-, or 8-)naphthyl, 4-(N-methyl-N-ethylamino)-(1-, 2-, 3-, 5-, 6-, 7-, or 8-)naphthyl, 1-methyl-2-dimethylamino-(3-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 1-chloro-(2-, 3-, 4-, 5-, 6-, 7-, or 8-)naphthyl, 1-acetylamino-(2-, 3-, 4-, 5-, 6-, 7-, or 8-)naphthyl groups.

Examples of the alkyl group which may have a lower alkoxy group as a substituent include, in addition to the above described alkyl groups which may have a lower alkoxy group as a substituent, linear or branched alkyl groups having 1 to 8 carbon atoms which may have a linear or branched alkoxy group having 1 to 6 carbon atoms as a substituent such as a heptyl group, 1-ethylpentyl group, octyl group, 7-methoxyheptyl group, 1-ethoxyheptyl group, 2-propoxyl-1-ethylpentyl group, 3-isopropoxyoctyl group, 7-butoxyheptyl group, 8-pentyloxyoctyl group, and 5-hexyloxy-1-ethylpentyl group.

Examples of the amino substituted lower alkyl group include linear or branched alkyl groups having 1 to 6 carbon atoms substituted with an amino group which may have 1 or 2 linear or branched alkyl groups having 1 to 6 carbon atoms such as aminomethyl, 2-aminoethyl, 1-aminoethyl, 3-aminopropyl, 4-aminobutyl, 5-aminopentyl, 6-aminohexyl, 1,1-dimethyl-2-aminoethyl, 2-methyl-3-aminopropyl, methylaminomethyl, 1-ethylaminoethyl, 2-propylaminoethyl, 3-isopropylaminopropyl, 4-butylaminobutyl, 5-pentylaminopentyl, 6-hexylaminohexyl, dimethylaminomethyl, 2-diethylaminoethyl, 2-diisopropylaminoethyl, (N-ethyl-N-propylamino)methyl, 2-(N-methyl-N-hexylamino)ethyl groups.

Examples of the cycloalkyl group include cycloalkyl groups having 3 to 16 carbon atoms such as a

cyclopropyl group, cyclobutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclooctyl group, cyclononyl group, cyclodecyl group, cycloundecyl group, cyclododecyl group, cyclotridecyl group, cycloteradecyl group, cyclopentadecyl group, and cyclohexadecyl group.

Examples of the cycloalkyl group which may be substituted with a group selected from the group consisting of an amino substituted lower alkyl group which may have a lower alkyl group and a lower alkyl group which may have a halogen as a substituent include cycloalkyl groups having 3 to 16 carbon atoms which may be substituted on the cycloalkyl ring with 1 to 3 groups selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms substituted with an amino group which may have 1 or 2 linear or branched alkyl groups having 1 to 6 carbon atoms and a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents such as 4-dimethylaminomethylcyclohexyl, 2-(aminomethyl)cyclopropyl, 3-(2-aminomethyl)cyclobutyl, 2-(1-aminoethyl)cyclopentyl, 3-(3-aminopropyl)cyclohexyl, 3-(4-aminobutyl)cycloheptyl, 4-(5-aminopentyl)cyclooctyl, 4-(6-aminoethyl)cyclohexyl, 2-(1,1-dimethyl-2-aminoethyl)cycloheptyl, 3-(2-methyl-3-aminopropyl)cyclopentyl, 3-(methylaminomethyl)cyclohexyl, 2-(1-ethylaminoethyl)cyclooctyl, 2-(2-

- propylaminoethyl)cyclohexyl, 3-(3-isopropylaminopropyl)cyclopentyl, 4-(4-butylaminobutyl)cycloheptyl, 2-(5-pentylaminopentyl)cyclohexyl, 2-(6-hexylaminoethyl)cyclooctyl, 4-dimethylaminomethylcyclononyl, 2-(aminomethyl)cyclodecyl, 3-(2-aminomethyl)cycloundecyl, 2-(1-aminoethyl)cyclododecyl, 3-(3-aminopropyl)cyclotridecyl, 3-(4-aminobutyl)cyclotetradecyl, 4-(5-aminopentyl)cyclopentadecyl, 4-(6-aminoethyl)cyclohexadecyl, 2-(1,1-dimethyl-2-aminoethyl)cyclononyl, 3-(2-methyl-3-aminopropyl)cyclodecyl, 3-(methylaminomethyl)cycloundecyl, 2-(1-ethylaminoethyl)cyclododecyl, 2-(2-propylaminoethyl)cyclotridecyl, 3-(3-isopropylaminopropyl)cyclotetradecyl, 4-(4-butylaminobutyl)cyclopentadecyl, 2-(5-pentylaminopentyl)cyclohexadecyl, 2-(6-hexylaminoethyl)cyclononyl, 3-(dimethylaminomethyl)cyclododecyl, 3-[(N-ethyl-N-propylamino)methyl]cyclodecyl, 4-[2-(N-methyl-N-hexylamino)ethyl]cyclohexadecyl, 2,2-dimethylcyclopropyl, 2-trifluoromethylcyclopropyl

groups.

Examples of the lower alkenyl group include linear or branched alkenyl groups having 2 to 6 carbon atoms which have 1 to 3 double bonds such as a vinyl group, 1-propenyl group, 1-methyl-1-propenyl group, 2-methyl-1-propenyl group, 2-propenyl group, 2-butenyl group, 1-butenyl group, 3-butenyl group, 2-pentenyl group, 1-pentenyl group, 3-pentenyl group, 4-pentenyl group, 1,3-butadienyl group, 1,3-pentadienyl group, 2-penten-4-ynyl group, 2-hexenyl group, 1-hexenyl group, 5-hexenyl group, 3-hexenyl group, 4-hexenyl group, 3,3-dimethyl-1-propenyl group, 2-ethyl-1-propenyl group, 1,3,5-hexatrienyl group, 1,3-hexadienyl group, and 1,4-hexadienyl group.

Examples of the lower alkenyl group which may have a halogen atom as a substituent include, in addition to the above described lower alkenyl groups, linear or branched alkenyl groups having 2 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents and 1 to 3 double bonds such as 3,3,3-trifluoro-1-propenyl, 2-bromovinyl, 3-chloro-1-propenyl, 3-iodo-1-methyl-1-propenyl, 3-fluoro-2-methyl-1-propenyl, 2-butenyl, 4,4,3-trichloro-1-butenyl, 4,4-difluoro-3-butenyl, 5-fluoro-2-pentenyl, 5,5,3-tribromo-1-pentenyl, 5-chloro-3-pentenyl, 5,5,5-trifluoro-4-pentenyl, 4-chloro-1,3-butadienyl, 5-fluoro-1,3-pentadienyl, 5-bromo-2-penten-4-ynyl, 6-fluoro-2-hexenyl, 6,6,5-trifluoro-1-hexenyl, 6-chloro-

5-hexenyl, 5-bromo-3-hexenyl, 6-chloro-4-hexenyl, 3,3-dimethyl-2-chloro-1-propenyl, 3-fluoro-2-ethyl-1-propenyl, 6-chloro-1,3,5-hexatrienyl, 6-bromo-1,3-hexadienyl, 6-fluoro-1,4-hexadienyl groups.

5 Examples of the lower alkylenedioxy group include linear or branched alkylene groups having 1 to 4 carbon atoms such as a methylenedioxy group, ethylenedioxy group, trimethylenedioxy group, and tetramethylenedioxy group.

10 Examples of the amino group which may have a substituent selected from the group consisting of a lower alkyl group, a lower alkanoyl group, a benzoyl group and a cycloalkyl group include amino groups which may have 1 or 2 substituents selected from the group
15 consisting of a linear or branched alkyl group having 1 to 6 carbon atoms, a linear or branched alkanoyl group having 1 to 6 carbon atoms, a benzoyl group, and a cycloalkyl group having 3 to 16 carbon atoms such as amino, methylamino, ethylamino, propylamino,
20 isopropylamino, butylamino, tert-butylamino, pentylamino, hexylamino, dimethylamino, diethylamino, dipropylamino, dibutylamino, dipentylamino, dihexylamino, N-methyl-N-ethylamino, N-ethyl-N-propylamino, N-methyl-N-butylamino, N-methyl-N-hexylamino, N-methyl-N-acetylamino, N-acetylamino, N-formylamino, N-propionylamino, N-butyrylamino, N-isobutyrylamino, N-pentanoylamino, N-tert-butylcarbonylamino, N-hexanoylamino, N-ethyl-N-

acetylamino, N-benzoylamino, N-ethyl-N-benzoylamino, N-methyl-N-benzoylamino, N-acetyl-N-benzoylamino, cyclopropylamino, cyclobutylamino, cyclopentylamino, cyclohexylamino, cycloheptylamino, cyclooctylamino, N-methyl-N-cyclohexylamino, N-methyl-N-cyclopentylamino, N-methyl-N-cycloheptylamino, N-cyclohexyl-N-acetylamino, N-cyclopentyl-N-benzoylamino, cyclononylamino, cyclodecylamino, cyclododecylamino, cyclotridecylamino, cyclotetradecylamino, cyclopentadecylamino, N-methyl-N-cyclohexadecylamino, N-methyl-N-cyclononylamino, N-methyl-N-cyclodecylamino, N-cycloundecyl-N-acetylamino, N-cyclohexadecyl-N-benzoylamino groups.

Examples of the lower alkanoyl group which may have a halogen atom as a substituent include, in addition to the above described lower alkanoyl groups, linear or branched alkanoyl groups having 2-6 carbon atoms which may have 1 to 3 halogen atoms as substituents such as a 2,2,2-trifluoroacetyl group, 2,2,2-trichloroacetyl group, 2-chloroacetyl group, 2-bromoacetyl group, 2-fluoroacetyl group, 2-iodoacetyl group, 2,2-difluoroacetyl group, 2,2-dibromoacetyl group, 3,3,3-trifluoropropionyl group, 3,3,3-trichloropropionyl group, 3-chloropropionyl group, 2,3-dichloropropionyl group, 4,4,4-trichlorobutyryl group, 4-fluorobutyryl group, 5-chloropentanoyl group, 3-chloro-2-methylpropionyl group, 6-bromohexanoyl group, and 5,6-dibromohexanoyl group.

Examples of the lower alkoxycarbonyl group include linear or branched alkoxycarbonyl groups having 1 to 6 carbon atoms such as a methoxycarbonyl group, ethoxycarbonyl group, propoxycarbonyl group, 5 isopropoxycarbonyl group, butoxycarbonyl group, tert-butoxycarbonyl group, pentyloxycarbonyl group, and hexyloxycarbonyl group.

Examples of the lower alkanoyloxy group include linear or branched alkanoyloxy groups having 2 10 to 6 carbon atoms such as an acetyloxy group, propionyloxy group, butyryloxy group, isobutyryloxy group, pentanoyloxy group, tert-butylcarbonyloxy group, and hexanoyloxy group.

Examples of the 5- or 6-membered saturated or 15 unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen atoms or sulfur atoms include pyrrolidinyl, piperidinyl, piperazinyl, morpholino, thiomorpholino, pyridyl, 1,2,5,6-tetrahydropyridyl, thienyl, pyrazyl, pyrimidyl, pyridazyl, pyrrolyl, 2H- 20 pyrrolyl, imidazolidinyl, pyrazolyl, imidazolyl, pyrazolidinyl, furazanyl, 2-imidazolinyl, imidazolidinyl, 2-pyrrolinyl, furyl, oxazolyl, isoxazolidinyl, isoxazolyl, thiazolyl, isothiazolyl, pyranyl, 2-pyrazolidinyl, 1,2,4-triazolyl, 1,2,3- 25 triazolyl, 1,2,5-triazolyl, thiazolidinyl, 2-thiazolinyl, 1,2,3,4-tetrazolyl, 1,3,4-oxadiazolyl, tetrahydropyranyl, tetrahydrofuryl groups.

Examples of the 5- to 7-membered saturated

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heterocyclic ring formed by binding R¹¹ and R¹² each other, together with nitrogen atoms bound to them, through or not through a nitrogen atom, a sulfur atom or an oxygen atom, include a pyrrolidinyl group, 5 piperidinyl group, piperazinyl group, morpholino group, thiomorpholino group, and homopiperazinyl group.

Examples of the imidazolyl lower alkyl group include imidazolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 10 6 carbon atoms such as a (1,2,4 or 5-)imidazolylmethyl group, 2-[(1,2,4 or 5-)imidazolyl]ethyl group, 1-[(1,2,4 or 5-)imidazolyl]ethyl group, 3-[(1,2,4 or 5-)imidazolyl]propyl group, 4-[(1,2,4 or 5-)imidazolyl]butyl group, 5-[(1,2,4 or 15 5-)imidazolyl]pentyl group, 6-[(1,2,4 or 5-)imidazolyl]hexyl group, 1,1-dimethyl-2-[(1,2,4 or 5-)imidazolyl]ethyl group, and 2-methyl-3-[(1,2,4 or 5-)imidazolyl]propyl group.

Examples of the 1,2,4-triazolyl lower alkyl 20 group include 1,2,4-triazolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (1, 3, or 5-)1,2,4-triazolylmethyl, 2-[(1, 3, or 5-)1,2,4-triazolyl]ethyl, 1-[(1, 3, or 5-)1,2,4-triazolyl]ethyl, 3-[(1, 3, or 25 5-)1,2,4-triazolyl]propyl, 4-[(1, 3, or 5-)1,2,4-triazolyl]butyl, 5-[(1, 3, or 5-)1,2,4-triazolyl]pentyl, 6-[(1, 3, or 5-)1,2,4-triazolyl]hexyl, 1,1-dimethyl-2-[(1, 3, or 5-)1,2,4-

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triazolyl]ethyl, 2-methyl-3-[(1, 3, or 5-)1,2,4-triazolyl]propyl groups.

Examples of the 1,2,3-triazolyl lower alkyl group include 1,2,3-triazolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (1, 4, or 5-)1,2,3-triazolylmethyl, 2-[(1, 4, or 5-)1,2,3-triazolyl]ethyl, 1-[(1, 4, or 5-)1,2,3-triazolyl]ethyl, 3-[(1, 4, or 5-)1,2,3-triazolyl]propyl, 4-[(1, 4, or 5-)1,2,3-triazolyl]butyl, 5-[(1, 4, or 5-)1,2,3-triazolyl]pentyl, 6-[(1, 4, or 5-)1,2,3-triazolyl]hexyl, 1,1-dimethyl-2-[(1, 4, or 5-)1,2,3-triazolyl]ethyl, 2-methyl-3-[(1, 4, or 5-)1,2,3-triazolyl]propyl groups.

Examples of the 1,2,5-triazolyl lower alkyl group include 1,2,5-triazolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (1, 3, or 4-)1,2,5-triazolylmethyl, 2-[(1, 3, or 4-)1,2,5-triazolyl]ethyl, 1-[(1, 3, or 4-)1,2,5-triazolyl]ethyl, 3-[(1, 3, or 4-)1,2,5-triazolyl]propyl, 4-[(1, 3, or 4-)1,2,5-triazolyl]butyl, 5-[(1, 3, or 4-)1,2,5-triazolyl]pentyl, 6-[(1, 3, or 4-)1,2,5-triazolyl]hexyl, 1,1-dimethyl-2-[(1, 3, or 4-)1,2,5-triazolyl]ethyl, 2-methyl-3-[(1, 3, or 4-)1,2,5-triazolyl]propyl groups.

Examples of the pyrazolyl lower alkyl group include pyrazolylalkyl groups of which the alkyl moiety

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is a linear or branched alkyl group having 1 to 6 carbon atoms such as a (1,3,4 or 5-)pyrazolylmethyl group, 2-[(1,3,4 or 5-)1,2,5-pyrazolyl]ethyl group, 1-[(1,3,4 or 5-)pyrazolyl]ethyl group, 3-[(1,3,4 or 5-)pyrazolyl]propyl group, 4-[(1,3,4 or 5-)pyrazolyl]butyl group, 5-[(1,3,4 or 5-)pyrazolyl]pentyl group, 6-[(1,3,4 or 5-)pyrazolyl]hexyl group, 1,1-dimethyl-2-[(1,3,4 or 5-)pyrazolyl]ethyl group, and 2-methyl-3-[(1,3,4 or 5-)pyrazolyl]propyl group.

Examples of the pyrimidinyl lower alkyl group include pyrimidinylalkyl groups which may have 1 to 3 oxo groups as substituents on the pyrimidine ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (2, 4, 5, or 6-)pyrimidinylmethyl, 2-[(2, 4, 5, or 6-)pyrimidinyl]ethyl, 1-[(2, 4, 5, or 6-)pyrimidinyl]ethyl, 3-[(2, 4, 5, or 6-)pyrimidinyl]propyl, 4-[(2, 4, 5, or 6-)pyrimidinyl]butyl, 5-[(2, 4, 5, or 6-)pyrimidinyl]pentyl, 6-[(2, 4, 5, or 6-)pyrimidinyl]hexyl, 1,1-dimethyl-2-[(2, 4, 5, or 6-)pyrimidinyl]ethyl, 2-methyl-3-[(2, 4, 5, or 6-)pyrimidinyl]propyl, [(1, 3, 4, or 5-)2,6-dioxypyrimidinyl]methyl, [(1, 3, 4, 5, or 6-)2-oxypyrimidinyl]methyl, [(1, 2, 4, or 5-)6-oxypyrimidinyl]methyl, [(1, 2, 5, or 6-)4-oxypyrimidinyl]methyl, [(1, 3, 5, or 6-)2,4-

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dioxypyrimidinyl)methyl, 2-[(4 or 6-)2,5-dioxypyrimidinyl]ethyl, 1-[(1, 3, 4, or 5-)2,6-dioxypyrimidinyl]ethyl, 3-[(1, 3, or 5-)2,4,6-trioxypyrimidinyl]propyl, 4-[(1, 3, 4, or 5-)2,6-dioxypyrimidinyl]butyl, 5-[(4 or 6-)2,5-dioxypyrimidinyl]pentyl, 6-[(1, 3, 5, or 6-)2,4-dioxypyrimidinyl]hexyl, 1,1-dimethyl-2-[(1, 3, 4, or 5-)2,6-dioxypyrimidinyl]ethyl, 2-methyl-3-[(1, 3, 4, or 5-)2,6-dioxypyrimidinyl]propyl groups.

10 Examples of the 3,5-dioxoisoxazolidin-4-ylidene lower alkyl group include 3,5-dioxoisoxazolidin-4-ylidenealkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a 3,5-dioxoisoxazolidin-4-ylidenemethyl group, 3,5-dioxoisoxazolidin-4-ylideneethyl group, 3,5-dioxoisoxazolidin-4-ylidenepropyl group, 3,5-dioxoisoxazolidin-4-ylideneisopropyl group, 3,5-dioxoisoxazolidin-4-ylidenebutyl group, 3,5-dioxoisoxazolidin-4-ylidenepentyl group, and 3,5-dioxoisoxazolidin-4-ylidenehexyl group.

 Examples of the 1,2,4-oxadiazolyl lower alkyl group which may have a lower alkyl group as a substituent on the 1,2,4-oxadiazol ring include 1,2,4-oxadiazolylalkyl groups which may have a linear or branched alkyl group having 1 to 6 carbon atoms as a substituent on the 1,2,4-oxadiazol ring and of which the alkyl moiety is a linear or branched alkyl group

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having 1 to 6 carbon atoms such as (3 or 5-)1,2,4-oxadiazolylmethyl, 2-[(3 or 5-)1,2,4-oxadiazolyl]ethyl, 1-[(3 or 5-)1,2,4-oxadiazolyl]ethyl, 3-[(3 or 5-)1,2,4-oxadiazolyl]propyl, 4-[(3 or 5-)1,2,4-oxadiazolyl]butyl, 5-[(3 or 5-)1,2,4-oxadiazolyl]pentyl, 6-[(3 or 5-)1,2,4-oxadiazolyl]hexyl, 1,1-dimethyl-2-[(3 or 5-)1,2,4-oxadiazolyl]ethyl, 2-methyl-3-[(3 or 5-)1,2,4-oxadiazolyl]propyl, 5-methyl-3-(1,2,4-oxadiazolyl)methyl, 3-ethyl-2-[5-(1,2,4-oxadiazolyl)]ethyl, 1-[3-propyl-5-(1,2,4-oxadiazolyl)]ethyl, 3-[5-butyl-3-(1,2,4-oxadiazolyl)]propyl, 4-[3-pentyl-5-(1,2,4-oxadiazolyl)]butyl, 5-[5-hexyl-3-(1,2,4-oxadiazolyl)]pentyl, 6-[3-methyl-5-(1,2,4-oxadiazolyl)]hexyl, 1,1-dimethyl-2-[5-isopropyl-3-(1,2,4-oxadiazolyl)]ethyl, 2-methyl-3-[3-isobutyl-5-(1,2,4-oxadiazolyl)]propyl groups.

Examples of the thiazolydinyll lower alkyl group which may have an oxo group as a substituent on the thiazolydine ring include thiazolydinyllalkyl groups which may have 1 to 3 oxo groups as substituents on the thiazolydine ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (2, 3, 4, or 5-)thiazolidinyllmethyl, 2-[(2, 3, 4, or 5-)thiazolidinyll]ethyl, 1-[(2, 3, 4, or 5-)thiazolidinyll]ethyl, 3-[(2, 3, 4, or 5-)thiazolidinyll]propyl, 4-[(2, 3, 4, or

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5-)thiazolidinyl]butyl, 5-[(2, 3, 4, or
 5-)thiazolidinyl]pentyl, 6-[(2, 3, 4, or
 5-)thiazolidinyl]hexyl, 1,1-dimethyl-2-[(2, 3, 4, or
 5-)thiazolidinyl]ethyl, 2-methyl-3-[(2, 3, 4, or
 5 5-)thiazolidinyl]propyl, 2,4-dioxo-5-
 thiazolidinylmethyl, 2-[2-oxo-(3, 4, or
 5-)thiazolidinyl]ethyl, 1-[4-oxo-(2, 3, or
 5-)thiazolidinyl]ethyl, 3-[5-oxo-(2, 3, or
 4-)thiazolidinyl]propyl, 4-[2,5-dioxo-(3 or
 10 4-)thiazolidinyl]butyl, 5-[2,4,5-trioxo-3-
 thiazolidinyl]pentyl, 6-[4,5-dioxo-(2 or
 3-)thiazolidinyl]hexyl, 1,1-dimethyl-2-[2,4-dioxo-(3 or
 5-)thiazolidinyl]ethyl, 2-methyl-3-[2,4-dioxo-(3 or
 5-)thiazolidinyl]propyl, 3-[2,4-dioxo-(3 or
 15 5-)thiazolidinyl]propyl groups.

Examples of the phenyl lower alkyl group
 which may have a lower alkylenedioxy group as a
 substituent on the phenyl ring include, in addition to
 the above described phenyl lower alkyl groups,
 20 phenylalkyl groups which may have a linear or branched
 alkylenedioxy group as a substituent on the phenyl ring
 and of which the alkyl moiety is a linear or branched
 alkyl group having 1 to 6 carbon atoms such as 3,4-
 methylenedioxybenzyl, 3,4-trimethylenedioxybenzyl, 2-
 25 (2,3-ethylenedioxyphenyl)ethyl, 1-(3,4-
 trimethylenedioxyphenyl)ethyl, 3-(2,3-
 tetramethylenedioxyphenyl)propyl, 4-(3,4-
 methylenedioxyphenyl)butyl, 5-(2,3-

ethylenedioxyphenyl)pentyl, 6-(3,4-trimethylenedioxyphenyl)hexyl, 1,1-dimethyl-2-(2,3-methylenedioxyphenyl)ethyl, 2-methyl-3-(3,4-ethylenedioxyphenyl)propyl groups.

5 Examples of the lower alkoxy carbonyl lower alkyl group include alkoxy carbonyl alkyl groups of which the alkoxy moiety is a linear or branched alkoxy group having 1 to 6 carbon atoms and the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon
10 atoms such as a methoxycarbonylmethyl group, ethoxycarbonylmethyl group, 2-methoxycarbonylethyl group, 2-ethoxycarbonylmethyl group, 1-ethoxycarbonylethyl group, 3-methoxycarbonylpropyl group, 3-ethoxycarbonylpropyl group, 4-
15 ethoxycarbonylbutyl group, 5-isopropoxycarbonylpentyl group, 6-propoxycarbonylhexyl group, 1,1-dimethyl-2-butoxycarbonylethyl group, 2-methyl-3-tert-butoxycarbonylpropyl group, 2-pentyloxycarbonylethyl group, and hexyloxycarbonylmethyl group.

20 Examples of the carboxy lower alkyl group include carboxy alkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a carboxymethyl group, 2-carboxyethyl group, 1-carboxyethyl group, 3-
25 carboxypropyl group, 4-carboxybutyl group, 5-carboxypentyl group, 6-carboxyhexyl group, 1,1-dimethyl-2-carboxyethyl group, and 2-methyl-3-carboxypropyl group.

Examples of the morpholino substituted lower alkanoyl group include morpholino substituted alkanoyl groups of which the alkanoyl moiety is a linear or branched alkanoyl group having 2 to 6 carbon atoms such as a 2-[(2,3 or 4-)morpholino]acetyl group, 3-[(2,3 or 4-)morpholino]propionyl group, 2-[(2,3 or 4-)morpholino]propionyl group, 4-[(2,3 or 4-)morpholino]butyryl group, 5-[(2,3 or 4-)morpholino]pentanoyl group, 6-[(2,3 or 4-)morpholino]hexanoyl group, 2,2-dimethyl-2-[(2,3 or 4-)morpholino]propionyl group, and 2-methyl-3-[(2,3 or 4-)morpholino]propionyl group.

Examples of the piperazinylcarbonyl lower alkyl group which may be substituted on the piperazine ring with a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring include piperazinylcarbonylalkyl groups which may be substituted on the piperazine ring with 1 to 3 phenylalkyl groups which may have a linear or branched alkylenedioxy group having 1 to 4 carbon atoms and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms, the piperazinylcarbonylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms, such as [(1, 2, or 3-)piperazinyl]carbonylmethyl, 2-[(1, 2, or 3-)piperazinyl] carbonylethyl, 1-[(1, 2, or 3-)piperazinyl]carbonylethyl, 3-[(1, 2, or

3-)piperazinyl]carbonylpropyl, 4-[(1, 2, or
 3-)piperazinyl]carbonylbutyl, 5-[(1, 2, or
 3-)piperazinyl]carbonylpentyl, 6-[(1, 2, or
 3-)piperazinyl]carbonylhexyl, 1,1-dimethyl-2-[(1, 2, or
 5 3-)piperazinyl]carbonylethyl, 2-methyl-3-[(1, 2, or
 3-)piperazinyl]carbonylpropyl, (4-benzyl-1-
 piperazinylcarbonyl)methyl, 2-[4-(2-phenylethyl)-1-
 piperazinylcarbonyl]ethyl, 1-[4-(3-phenylpropyl)-1-
 piperazinylcarbonyl]ethyl, 3-[4-(4-phenylbutyl)-1-
 10 piperazinylcarbonyl]propyl, 4-[4-(5-phenylpentyl)-1-
 piperazinylcarbonyl]butyl, 5-[4-(6-phenylpropyl)-1-
 piperazinylcarbonyl]pentyl, 6-(4-benzyl-1-
 piperazinylcarbonyl)hexyl, 1,1-dimethyl-2-(4-benzyl-1-
 piperazinylcarbonyl)ethyl, 2-methyl-3-(4-benzyl-1-
 15 piperazinylcarbonyl)propyl, [4-(3,4-
 methylenedioxybenzyl)-1-piperazinylcarbonyl]methyl, 2-
 {4-[2-(2,3-ethylenedioxyphenyl)ethyl]-1-
 piperazinylcarbonyl}ethyl, 1-{4-[3-(3,4-
 trimethylenedioxyphenyl)propyl]-1-
 20 piperazinylcarbonyl}ethyl, 3-{4-[4-(2,3-
 tetramethylenedioxyphenyl)butyl]-1-
 piperazinylcarbonyl}propyl, 4-{4-[5-(3,4-
 methylenedioxyphenyl)pentyl]-1-
 piperazinylcarbonyl}butyl, 5-{4-[3-(2,3-
 25 ethylenedioxyphenyl)propyl]-1-
 piperazinylcarbonyl}pentyl, 6-[4-(3,4-
 trimethylenedioxybenzyl)-1-piperazinylcarbonyl]hexyl,
 1,1-dimethyl-2-[4-(2,3-tetramethylenedioxybenzyl)-1-

piperazinylcarbonyl]ethyl, 2-methyl-3-[4-(3,4-methylenedioxybenzyl)-1-piperazinylcarbonyl]propyl, (3,4-dibenzyl-1-piperazinylcarbonyl)methyl, (3,4,5-tribenzyl-1-piperazinylcarbonyl)methyl, [2,4-di(3,4-methylenedioxybenzyl)-1-piperazinylcarbonyl])methyl, [2,4,6-tri(3,4-methylenedioxybenzyl)-1-piperazinylcarbonyl]methyl, [3-benzyl-4-(3,4-methylenedioxybenzyl)-1-piperazinylcarbonyl]methyl groups.

10 Examples of the piperazinyl lower alkanoyl group which may be substituted on the piperazine ring with a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring include piperazinylalkanoyl groups which may be

15 substituted on the piperazine ring with 1 to 3 phenylalkyl groups which may have a linear or branched alkylenedioxy group having 1 to 4 carbon atoms as a substituent on the phenyl ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to

20 6 carbon atoms, the piperazinylalkanoyl groups of which the alkanoyl moiety is a linear or branched alkanoyl group having 2 to 6 carbon atoms, such as 2-[(1, 2, or 3-)piperazinyl]acetyl, 3-[(1, 2, or 3-)piperazinyl]propionyl, 2-[(1, 2, or

25 3-)piperazinyl]propionyl, 4-[(1, 2, or 3-)piperazinyl]butyryl, 5-[(1, 2, or 3-)piperazinyl]pentanoyl, 6-[(1, 2, or 3-)piperazinyl]hexanoyl, 2,2-dimethyl-3-[(1, 2, or

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3-)piperazinyl]propionyl, 2-methyl-3-[(1, 2, or
 3-)piperazinyl]propionyl, 2-(4-benzyl-1-
 piperazinyl)acetyl, 3-[4-(2-phenylethyl)-1-
 piperazinyl]propionyl, 2-[4-(3-phenylpropyl)-1-
 5 piperazinyl]propionyl, 4-[4-(4-phenylbutyl)-1-
 piperazinyl]butyryl, 5-[4-(5-phenylpentyl)-1-
 piperazinyl]pentanoyl, 6-[4-(6-phenylpropyl)-1-
 piperazinyl]hexanoyl, 6-(4-benzyl-1-
 piperazinyl)hexanoyl, 2,2-dimethyl-3-(4-benzyl-1-
 10 piperazinyl)propionyl, 2-methyl-3-(4-benzyl-1-
 piperazinyl)propionyl, 2-[4-(3,4-methylenedioxybenzyl)-
 1-piperazinyl])acetyl, 3-{4-[2-(2,3-
 ethylenedioxyphenyl)ethyl]-1-piperazinyl}propionyl, 2-
 {4-[3-(3,4-trimethylenedioxyphenyl)propyl]-1-
 15 piperazinyl}propionyl, 4-{4-[4-(2,3-
 tetramethylenedioxyphenyl)butyl]-1-piperazinyl}butyryl,
 5-{4-[5-(3,4-methylenedioxyphenyl)pentyl]-1-
 piperazinyl}pentanoyl, 5-{4-[3-(2,3-
 ethylenedioxyphenyl)propyl]-1-piperazinyl}pentanoyl, 6-
 20 [4-(3,4-trimethylenedioxybenzyl)-1-
 piperazinyl])hexanoyl, 2,2-dimethyl-3-[4-(2,3-
 tetramethylenedioxybenzyl)-1-piperazinyl]propionyl, 2-
 methyl-3-[4-(3,4-methylenedioxybenzyl)-1-
 piperazinyl]propionyl, 2-(3,4-dibenzyl-1-
 25 piperazinyl)acetyl, 2-(3,4,5-tribenzyl-1-
 piperazinyl)acetyl, 2-[2,4-di(3,4-
 methylenedioxybenzyl)-1-piperazinyl])acetyl, 2-[2,4,6-
 tri(3,4-methylenedioxybenzyl)-1-piperazinyl])acetyl, 2-

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[3-benzyl-4-(3,4-methylenedioxybenzyl)-1-piperazinyl])acetyl groups.

Examples of the morpholinocarbonyl substituted lower alkyl group include

- 5 morpholinocarbonylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(2, 3, or 4-)morpholino]carbonylmethyl, 2-[(2, 3, or 4-)morpholino]carbonylethyl, 1-[(2, 3, or 10 4-)morpholino]carbonylethyl, 3-[(2, 3, or 4-)morpholino]carbonylpropyl, 4-[(2, 3, or 4-)morpholino]carbonylbutyl, 5-[(2, 3, or 4-)morpholino]carbonylpentyl, 6-[(2, 3, or 4-)morpholino]carbonylhexyl, 1,1-dimethyl-2-[(2, 3, or 15 4-)morpholino]carbonylethyl, 2-methyl-3-[(2, 3, or 4-)morpholino]carbonylpropyl groups.

- Examples of the imidazolyl lower alkanoyl group include imidazolylalkanoyl groups of which the alkanoyl moiety is a linear or branched alkanoyl group 20 having 2 to 6 carbon atoms such as a 2-[(1,2,4 or 5-)imidazolyl]acetyl group, 3-[(1,2,4 or 5-)imidazolyl]propionyl group, 2-[(1,2,4 or 5-)imidazolyl]propionyl group, 4-[(1,2,4 or 5-)imidazolyl]butyryl group, 5-[(1,2,4 or 25 5-)imidazolyl]pentanoyl group, 6-[(1,2,4 or 5-)imidazolyl]hexanoyl group, 2,2-dimethyl-3-[(1,2,4 or 5-)imidazolyl]propionyl group, and 2-methyl-3-[(1,2,4 or 5-)imidazolyl]propionyl group.

Examples of the cycloalkylcarbonyl group include cycloalkylcarbonyl groups of which the cycloalkyl moiety is a cycloalkyl group having 3 to 16 carbon atoms such as a cyclopropylcarbonyl group, 5 cyclobutylcarbonyl group, cyclopentylcarbonyl group, cyclohexylcarbonyl group, cycloheptylcarbonyl group, cyclooctylcarbonyl group, cyclononylcarbonyl group, cyclodecylcarbonyl group, cycloundecylcarbonyl group, cyclododecylcarbonyl group, cyclotridecylcarbonyl 10 group, cyclotetradecylcarbonyl group, cyclopentadecylcarbonyl group, and cyclohexadecylcarbonyl group.

Examples of the amino substituted lower alkanoyl group which may have a lower alkyl group as a 15 substituent include linear or branched alkanoyl groups having 2 to 6 carbon atoms substituted with an amino group which may have 1 or 2 linear or branched alkyl groups having 1 to 6 carbon atoms as substituents such as aminoacetyl, 2-aminopropionyl, 3-aminopropionyl, 4- 20 aminobutyryl, 5-aminopentanoyl, 6-aminohexanoyl, 2,2-dimethyl-3-aminopropionyl, 2-methyl-3-aminopropionyl, methylaminoacetyl, 2-ethylaminopropionyl, 3-propylaminopropionyl, 3-isopropylaminopropionyl, 4-butylaminobutyryl, 5-pentylaminopentanoyl, 6- 25 hexylaminohexanoyl, dimethylaminoacetyl, 3-diisopropylaminopropionyl, (N-ethyl-N-propylamino)acetyl, 2-(N-methyl-N-hexylamino)acetyl groups.

Examples of the lower alkylene group which may have a hydroxyl group as a substituent include, in addition to the above described lower alkylene groups, linear or branched alkylene groups having 1 to 6 carbon atoms which may have 1 to 3 hydroxyl groups as substituents such as 1-hydroxymethylene, 2-hydroxyethylene, 1-hydroxyethylene, 2-hydroxytrimethylene, 3-hydroxytrimethylene, 1-hydroxytrimethylene, 3-hydroxy-2-methyltrimethylene, 1-hydroxy-2-methyltrimethylene, 3-hydroxy-2,2-dimethyltrimethylene, 1-hydroxy-2,2-dimethyltrimethylene, 3-hydroxy-1-methyltrimethylene, 2-hydroxy-1-methyltrimethylene, 1-hydroxymethylmethylene, hydroxymethylmethylene, 2-hydroxymethyltrimethylene, 2-hydroxymethyl-2-methyltrimethylene, (2-hydroxyethyl)methylene, (1-hydroxyethyl)methylene, 4-hydroxytetramethylene, 2-hydroxytetramethylene, 3-hydroxytetramethylene, 1-hydroxytetramethylene, 5-hydroxypentamethylene, 4-hydroxypentamethylene, 3-hydroxypentamethylene, 2-hydroxypentamethylene, 1-hydroxypentamethylene, 6-hydroxyhexamethylene, 5-hydroxyhexamethylene, 4-hydroxyhexamethylene, 3-hydroxyhexamethylene, 2-hydroxyhexamethylene, 1-hydroxyhexamethylene, 1,2-dihydroxytrimethylene, 2,2,4-trihydroxytetramethylene, 1,2,6-trihydroxyhexamethylene, 3,4,5-trihydroxypentamethylene groups.

Examples of the alkyl group which may have a

hydroxyl group as a substituent include, in addition to the above described lower alkyl groups, linear or branched alkyl groups having 1 to 16 carbon atoms which have 1 to 3 hydroxyl groups as substituents such as a

5 heptyl group, octyl group, nonyl group, decyl group, undecyl group, dodecyl group, tridecyl group, tetradecyl group, pentadecyl group, 1-methylhexyl group, hexadecyl group, hydroxymethyl group, 2-

hydroxyethyl group, 1-hydroxyethyl group, 3-

10 hydroxypropyl group, 2,3-dihydroxypropyl group, 4-hydroxybutyl group, 1,1-dimethyl-2-hydroxyethyl group, 5,5,4-trihydroxypentyl group, 5-hydroxypentyl group, 6-hydroxyhexyl group, 1-hydroxyisopropyl group, and 2-methyl-3-hydroxypropyl group.

15 Examples of the hydroxyl group substituted alkyl group include linear or branched alkyl groups having 1 to 16 carbon atoms having 1 to 3 hydroxyl groups as substituents such as a hydroxymethyl group, 2-hydroxyethyl group, 1-hydroxyethyl group, 3-

20 hydroxypropyl group, 2,3-dihydroxypropyl group, 4-hydroxybutyl group, 1,1-dimethyl-2-hydroxyethyl group, 5,5,4-trihydroxypentyl group, 5-hydroxypentyl group, 6-hydroxyhexyl group, 1-hydroxyisopropyl group, and 2-methyl-3-hydroxypropyl group.

25 Examples of the cycloalkyl group which may have a substituent selected from the group consisting of a hydroxyl group and a lower alkyl group include, in addition to the above described cycloalkyl groups,

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cycloalkyl groups having 3 to 16 carbon atoms which may have 1 to 3 substituents selected from the group consisting of a hydroxyl group and a linear or branched alkyl group having 1 to 6 carbon atoms such as 2-
5 hydroxycyclopropyl, 3-hydroxycyclobutyl, 3-hydroxycyclopentyl, 2-hydroxycyclohexyl, 4-hydroxycyclohexyl, 3-hydroxycycloheptyl, 4-hydroxycyclooctyl, 5-hydroxycyclononyl, 3-hydroxycyclodecyl, 4-hydroxycycloundecyl, 5-
10 hydroxycyclododecyl, 6-hydroxycyclotridecyl, 7-hydroxycyclotetradecyl, 6-hydroxycyclopentadecyl, 8-hydroxycyclohexadecyl, 2,4-dihydroxycyclohexyl, 2,4,6-trihydroxycyclohexyl, 1-methylcyclopentyl, 2-ethylcyclopropyl, 3-n-propylcyclobutyl, 2-n-butylcyclohexyl, 4-n-pentylcycloheptyl, 4-n-hexylcyclooctyl, 2,3-dimethylcyclohexyl, 2,3,4-trimethylcyclohexyl, 2-methyl-4-hydroxycyclohexyl groups.

Examples of the phenoxy lower alkyl group
20 include phenoxyalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a phenoxymethyl group, 2-phenoxyethyl group, 1-phenoxyethyl group, 3-phenoxypropyl group, 4-phenoxybutyl group, 1,1-dimethyl-2-phenoxyethyl group, 5-phenoxypentyl group,
25 6-phenoxyhexyl group, 1-phenoxyisopropyl group, and 2-methyl-3-phenoxypropyl group.

Examples of the amino lower alkoxy group

which may have a lower alkyl group as a substituent include linear or branched alkoxy groups having 1 to 6 carbon atoms substituted with an amino group which may have 1 or 2 linear or branched alkyl groups having 1 to 5 6 carbon atoms such as aminomethoxy, 2-aminoethoxy, 1-aminoethoxy, 3-aminopropoxy, 4-aminobutoxy, 5-aminopentyloxy, 6-aminohexyloxy, 1,1-dimethyl-2-aminoethoxy, 2-methyl-3-aminopropoxy, methylaminomethoxy, 1-ethylaminoethoxy, 2- 10 propylaminoethoxy, 3-isopropylaminopropoxy, 4-butylaminobutoxy, 5-pentylaminopentyloxy, 6-hexylaminohexyloxy, dimethylaminomethoxy, 2-diethylaminoethoxy, 2-diisopropylaminoethoxy, (N-ethyl-N-propylamino)methoxy, 2-(N-methyl-N-hexylamino)ethoxy 15 groups.

Examples of the hydroxyl group substituted lower alkyl group include linear or branched alkyl groups having 1 to 6 carbon atoms which have 1 to 3 hydroxyl groups as substituents such as a hydroxymethyl 20 group, 1-hydroxyethyl group, 2-hydroxyethyl group, 3-hydroxypropyl group, 2,3-dihydroxypropyl group, 4-hydroxybutyl group, 1,1-dimethyl-2-hydroxyethyl group, 5,5,4-trihydroxypentyl group, 5-hydroxypentyl group, 6-hydroxyhexyl group, 1-hydroxyisopropyl group, and 2- 25 methyl-3-hydroxypropyl group.

Examples of the amino group which may have a lower alkylsulfonyl as a substituent include amino groups which may have 1 or 2 linear or branched

alkylsulfonyl groups having 1 to 6 carbon atoms as substituents such as amino, methylsulfonylamino, ethylsulfonylamino, propylsulfonylamino, isopropylsulfonylamino, butylsulfonylamino, tert-butylsulfonylamino, pentylsulfonylamino, hexylsulfonylamino, dimethylsulfonylamino, diethylsulfonylamino, dipropylsulfonylamino, dibutylsulfonylamino, dipentylsulfonylamino, dihexylsulfonylamino, N-methylsulfonyl-N-ethylsulfonylamino, N-ethylsulfonyl-N-propylsulfonylamino, N-methylsulfonyl-N-butylsulfonylamino, N-methylsulfonyl-N-hexylsulfonylamino groups.

Examples of the lower alkynyl group include linear or branched alkynyl groups having 2 to 6 carbon atoms include an ethynyl group, 2-propynyl group, 2-butynyl group, 3-butynyl group, 1-methyl-2-propynyl group, 2-pentynyl group, and 2-hexynyl group.

Examples of the anilino group which may have a halogen atom as a substituent on the phenyl ring include anilino groups which may have 1 to 3 halogen atoms as substituents on the phenyl ring such as anilino, 2-fluoroanilino, 3-fluoroanilino, 4-fluoroanilino, 2-bromoanilino, 3-bromoanilino, 4-bromoanilino, 2-iodoanilino, 3-iodoanilino, 4-iodoanilino, 2,3-dibromoanilino, 2,4-diiodoanilino, 2,5-difluoroanilino, 2,6-dichloroanilino, 2,4,6-trichloroanilino, 2,6-difluoroanilino, 3,5-

difluoroanilino, 2,6-difluoroanilino, 2-chloroanilino,
3-chloroanilino, 4-chloroanilino, 2,3-dichloroanilino,
2,4-dichloroanilino, 2,5-dichloroanilino, 3,4-
dichloroanilino, 2,6-dichloroanilino, 3,5-
5 dichloroanilino, 2,4,6-trifluoroanilino, 2,4-
difluoroanilino, 3,4-difluoroanilino groups.

Examples of the piperazinyl group which may
have a lower alkyl group as a substituent on the
piperazine ring include piperazinyl groups which may
10 have 1 to 3 linear or branched alkyl groups having 1 to
6 carbon atoms as substituents on the piperazine ring
such as a (1-, 2- or 3-)piperazinyl group, 4-methyl-
(1-, 2- or 3-)piperazinyl group, 2,3-dimethyl-(1 or
5-)piperazinyl group, and 2,3,4-trimethyl-(1-, 5- or
15 6-)piperazinyl group.

Examples of the pyrrolidinyl group which may
have an oxo group as a substituent on the pyrrolidine
ring include pyrrolidinyl groups which may have 1 or 2
oxo groups as substituents on the pyrrolidine ring such
20 as a (1-, 2- or 3-)pyrrolidinyl group, 2-oxo-(1-, 3-,
4- or 5-)pyrrolidinyl group, 3-oxo-(1-, 2-, 4- or
5-)pyrrolidinyl group, 2,3-dioxo-(1-, 4- or
5-)pyrrolidinyl group, and 2,5-dioxo-(1-, 3- or
4-)pyrrolidinyl group.

25 Examples of the phenyl group which may be
substituted on the phenyl ring with 1 to 3 groups
selected from the group consisting of a lower alkyl
group; a lower alkoxy groups which may have a halogen

atom as a substituent; a halogen atom; an amino lower alkoxy group which may have a lower alkyl group as a substituent; a hydroxyl group substituted lower alkyl group; a phenyl lower alkyl group; a lower alkynyl group; an amino group which may have a lower alkylsulfonyl group as a substituent; a lower alkylthio group; a cycloalkyl group; a phenylthio group; an adamantyl group; an anilino group which may have a halogen atom as a substituent on the phenyl ring; a lower alkoxycarbonyl group; a piperazinyl group which may have a lower alkyl group as a substituent on the piperazine ring; a pyrrolidinyl group which may have an oxo group as a substituent on the pyrrolidine ring; a lower alkanoylamino group; a cyano group; and a phenoxy group include phenyl groups which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms; a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms; a halogen atom; an aminoalkoxy group of which the alkoxy moiety is a linear or branched alkoxy group having 1 to 6 carbon atoms and which may have 1 or 2 linear or branched alkyl groups having 1 to 6 carbon atom as substituents; a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 hydroxyl groups as substituents; a phenylalkyl group of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms; a linear or branched

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alkynyl group having 2 to 6 carbon atoms; an amino group which may have 1 or 2 linear or branched alkylsulfonyl groups having 1 to 6 carbon atoms as substituents; a linear or branched alkylthio group having 1 to 6 carbon atoms; a cycloalkyl group having 3 to 16 carbon atoms; a phenylthio group; an adamantyl group; an anilino group which may have 1 to 3 halogen atoms as substituents on the phenyl ring; a linear or branched alkoxycarbonyl group having 1 to 6 carbon atoms; a piperazinyl group which may have 1 to 3 linear or branched alkyl groups having 1 to 6 carbon atoms as substituents on the piperazine ring; a pyrrolidinyl group which may have 1 or 2 oxo groups as substituents on the pyrrolidine ring; an amino group which may have 1 or 2 linear or branched alkanoyl groups having 2 to 6 carbon atoms; a cyano group; and a phenoxy group such as phenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 2-ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 2-isopropylphenyl, 4-isopropylphenyl, 3-butylphenyl, 4-pentylphenyl, 4-hexylphenyl, 3,4-dimethylphenyl, 3,4-diethylphenyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 3,4,5-trimethylphenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-ethoxyphenyl, 4-isopropoxyphenyl, 3-butoxyphenyl, 4-pentyloxyphenyl, 4-hexyloxyphenyl, 3,4-dimethoxyphenyl, 3,4-diethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 3,4,5-

trimethoxyphenyl, 2-trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-(bromomethoxy)phenyl, 3-(2-chloroethoxy)phenyl, 4-(2,3-dichloropropoxy)phenyl, 4-(4-fluorobutoxy)phenyl, 3-(5-chloropentyloxy)phenyl, 4-(5-bromohexyloxy)phenyl, 4-(5,6-dibromohexyloxy)phenyl, 3,4-di(trifluoromethoxy)phenyl, 3,4-di(4,4,4-trichlorobutoxy)phenyl, 2,4-di(3-chloro-2-methoxypropyl)phenyl, 2,5-di(3-chloropropoxy)phenyl, 2,6-di(2,2,2-trifluoroethoxy)phenyl, 3,4,5-tri(trifluoromethoxy)phenyl, 4-(2,2,2-trichloroethoxy)phenyl, 2-methyl-4-trifluoromethoxyphenyl, 3-ethyl-4-trichloromethoxyphenyl, 2-methoxy-4-trifluoromethoxyphenyl, 3-ethoxy-4-trichloromethoxyphenyl, 2-methyl-3-trifluoromethoxy-4-trifluoromethoxyphenyl, 2-phenoxyphenyl, 3-phenoxyphenyl, 4-phenoxyphenyl, 2,3-diphenoxyphenyl, 3,4-diphenoxyphenyl, 2,6-diphenoxyphenyl, 3,4,5-triphenoxyphenyl, 2-methyl-4-phenoxyphenyl, 3-ethyl-4-phenoxyphenyl, 2-methoxy-4-phenoxyphenyl, 3-ethoxy-4-phenoxyphenyl, 2-methyl-3-phenoxy-4-trifluoromethoxyphenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,3-dichlorophenyl, 2,4-dichlorophenyl, 2,5-dichlorophenyl, 3,4-dichlorophenyl, 2,6-dichlorophenyl, 3,5-dichlorophenyl, 2,4,6-trichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 2,5-difluorophenyl, 2,4-difluorophenyl,

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3,4-difluorophenyl, 3,5-difluorophenyl, 2,6-difluorophenyl, 2,4,6-trifluorophenyl, 2-bromophenyl, 3-bromophenyl, 4-bromophenyl, 2-iodophenyl, 3-iodophenyl, 4-iodophenyl, 2,3-dibromophenyl, 2,4-diiodophenyl, 4-methylthiophenyl, 4-cyclohexylphenyl, 4-chloro-2-anilinophenyl, 2-(4-chloroanilino)-5-ethoxycarbonylphenyl, 4-[2-(N,N-diethylamino)ethoxy]phenyl, 4-(4-methyl-1-piperazinyl)phenyl, 4-(2-oxo-1-pyrrolidinyl)phenyl, 4-methylsulfonylaminophenyl, 4-(2-hydroxyethyl)phenyl, 4-benzylphenyl, 4-ethinylphenyl, 4-phenylthiophenyl, 4-(1-adamantyl)phenyl, 5-acetylamino-2-chlorophenyl, 3-cyanophenyl, 2-cyanophenyl, 4-cyanophenyl, 2-propanoylaminophenyl, 3,4-dicyanophenyl, 3,4,5-tricyanophenyl groups.

Examples of the phenyl lower alkyl group which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a halogen atom, a lower alkoxy group which may have a halogen atom as a substituent, and a lower alkyl group include, in addition to the above described phenyl lower alkyl groups, phenylalkyl groups which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a halogen atom, a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, and a linear or branched alkyl group having 1 to 6 carbon atoms, and of which the alkyl moiety is a linear or

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branched alkyl group having 1 to 6 carbon atoms, such as 4-fluorobenzyl, 2-chlorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 2-(2-fluorophenyl)ethyl, 2-(4-fluorophenyl)ethyl, 2-(4-chlorophenyl)ethyl, 3,4-dibromobenzyl, 3,4-diiodobenzyl, 2,4-difluorobenzyl, 2,5-dichlorobenzyl, 2,6-dichlorobenzyl, 3,4,5-trifluorobenzyl, 3-(4-chlorophenyl)propyl, 1-(2-bromophenyl)ethyl, 4-(3-fluorophenyl)butyl, 5-(4-iodophenyl)pentyl, 6-(4-chlorophenyl)hexyl, 1,1-dimethyl-2-(3-fluorophenyl)ethyl, 2-methyl-3-(4-chlorophenyl)propyl, 2-methylbenzyl, 2-(3-methylphenyl)ethyl, 3-(4-methylphenyl)propyl, 1-(2-ethylphenyl)ethyl, 4-(3-ethylphenyl)butyl, 5-(4-ethylphenyl)pentyl, 6-(4-isopropylphenyl)hexyl, 1,1-dimethyl-2-(3-butylphenyl)ethyl, 2-methyl-3-(4-pentylphenyl)propyl, 4-hexylbenzyl, 3,4-dimethylbenzyl, 3,4-diethylbenzyl, 2,4-dimethylbenzyl, 2,5-dimethylbenzyl, 2,6-dimethylbenzyl, 3,4,5-trimethylbenzyl, 2-methoxybenzyl, 2-(2-methoxyphenyl)ethyl, 2-(3-methoxyphenyl)ethyl, 2-(4-methoxyphenyl)ethyl, 4-methoxybenzyl, 1-(2-ethoxyphenyl)ethyl, 3-(3-ethoxyphenyl)propyl, 4-(4-ethoxyphenyl)butyl, 5-(4-isopropoxyphenyl)pentyl, 6-(3-butoxyphenyl)hexyl, 1,1-dimethyl-2-(4-pentyloxyphenyl)ethyl, 2-methyl-3-(4-hexyloxyphenyl)propyl, 3,4-dimethoxybenzyl, 3,4-diethoxybenzyl, 2,4-dimethoxybenzyl, 2,5-dimethoxybenzyl, 2,6-dimethoxybenzyl, 3,4,5-

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trimethoxybenzyl, 2-trifluoromethoxybenzyl, 3-
 trifluoromethoxybenzyl, 4-trifluoromethoxybenzyl, 2-[2-
 (bromomethoxy)phenyl]ethyl, 1-[3-(2-
 chloroethoxy)phenyl]ethyl, 3-[4-(2,3-
 5 dichloropropoxy)phenyl]propyl, 4-[4-(4-
 fluorobutoxy)phenyl]butyl, 5-[3-(5-
 chloropentyloxy)phenyl]pentyl, 6-[4-(5-
 bromohexyloxy)phenyl]hexyl, 1,1-dimethyl-2-[4-(5,6-
 dibromohexyloxy)phenyl]ethyl, 3,4-
 10 di(trifluoromethoxy)benzyl, 3,4-di(4,4,4-
 trichlorobutoxy)benzyl, 2,4-di(3-chloro-2-
 methoxypropyl)benzyl, 2,5-di(3-chloropropoxy)benzyl,
 2,6-di(2,2,2-trifluoroethoxy)benzyl, 3,4,5-
 tri(trifluoromethoxy)benzyl, 4-(2,2,2-
 15 trichloroethoxy)benzyl, 2-methyl-4-
 trifluoromethoxybenzyl, 3-ethyl-4-
 trichloromethoxybenzyl, 2-methoxy-4-
 trifluoromethoxybenzyl, 3-ethoxy-4-
 trichloromethoxybenzyl, 2-methyl-3-trifluoromethoxy-4-
 20 trifluoromethoxybenzyl, 2-chloro-3-methylbenzyl, 4-
 fluoro-2-trifluoromethoxybenzyl, 3-chloro-2-methyl-4-
 methoxybenzyl groups.

Examples of the phenyl lower alkyl group
 which has a lower alkylenedioxy group as a substituent
 25 on the phenyl ring include phenylalkyl groups which has
 a linear or branched alkylenedioxy group having 1 to 4
 carbon atoms on the phenyl ring and of which the alkyl
 moiety is a linear or branched alkyl group having 1 to

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6 carbon atoms such as a 3,4-methylenedioxybenzyl group, 3,4-trimethylenedioxybenzyl group, 2-(2,3-ethylenedioxyphenyl)ethyl group, 1-(3,4-trimethylenedioxyphenyl)ethyl group, 3-(2,3-tetramethylenedioxyphenyl)propyl group, 4-(3,4-methylenedioxyphenyl)butyl group, 5-(2,3-ethylenedioxyphenyl)pentyl group, 6-(3,4-trimethylenedioxyphenyl)hexyl group, 1,1-dimethyl-2-(2,3-methylenedioxyphenyl)ethyl group, and 2-methyl-3-(3,4-ethylenedioxyphenyl)propyl group.

Examples of the amino group which may have a lower alkanoyl group as a substituent include which may have a linear or branched alkanoyl group having 1 to 6 carbon atoms as a substituent such as an amino group, N-acetylamino group, N-formylamino group, N-propionylamino group, N-butyrylamino group, N-isobutyrylamino group, N-pentanoylamino group, N-tert-butylcarbonylamino group, and N-hexanoylamino group.

Examples of the 1,2,3,4-tetrahydroquinolyl group which may have, on the tetrahydroquinoline ring, 1 to 3 substituents selected from the group consisting of an oxo group, a lower alkoxy group, and a lower alkylenedioxy group include 1,2,3,4-tetrahydroquinolyl groups which may have, on the tetrahydroquinoline ring, 1 to 3 substituents selected from the group consisting of an oxo group, a linear or branched alkoxy group having 1 to 6 carbon atoms, and a linear or branched alkylenedioxy group having 1 to 4 carbon atoms such as

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(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl,
 2-oxo-(1, 3, 4, 5, 6, 7, or 8-)1,2,3,4-
 tetrahydroquinolyl, 2-oxo-6,7-methylenedioxy-(1, 3, 4,
 5, or 8-)1,2,3,4-tetrahydroquinolyl, 4-oxo-(1, 2, 3, 5,
 5 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl, 2,4-dioxo-(1,
 3, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl, 2,4-
 dioxo-6,7-methylenedioxy-(1, 3, 5, or 8-)1,2,3,4-
 tetrahydroquinolyl, 5,6-ethylenedioxy-(1, 2, 3, 4, 7,
 or 8-)1,2,3,4-tetrahydroquinolyl, 7,8-
 10 trimethylenedioxy-(1, 2, 3, 4, 5, or 6-)1,2,3,4-
 tetrahydroquinolyl, 6,7-tetramethylenedioxy-(1, 2, 3,
 4, 5, or 8-)1,2,3,4-tetrahydroquinolyl, 5-methoxy-2-
 oxo-(1, 3, 4, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl,
 2-oxo-6,7-ethylenedioxy-(1, 3, 4, 5, or 8-)1,2,3,4-
 15 tetrahydroquinolyl groups.

Examples of the cycloalkyl lower alkyl group
 include cycloalkylalkyl groups having 3 to 16 carbon
 atoms of which the alkyl moiety is a linear or branched
 alkyl group having 1 to 6 carbon atoms such as a
 20 cyclopropylmethyl group, cyclohexylmethyl group, 2-
 cyclopropylethyl group, 1-cyclobutylethyl group, 3-
 cyclopentylpropyl group, 4-cyclohexylbutyl group, 5-
 cycloheptylpentyl group, 6-cyclooctylhexyl group, 1,1-
 dimethyl-2-cyclononylethyl group, 2-methyl-3-
 25 cyclodecylpropyl group, cycloundecylmethyl group, 2-
 cyclododecylethyl group, 1-cyclotridecylethyl group, 3-
 cyclotetradecylpropyl group, 4-cyclopentadecylbutyl
 group, and 5-cyclodecylpentyl group.

Examples of the pyridyl lower alkyl group include pyridylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a (2,3 or 4-)pyridylmethyl group, 5 2-[(2,3 or 4-)pyridyl]ethyl group, 1-[(2,3 or 4-)pyridyl]ethyl group, 3-[(2,3 or 4-)pyridyl]propyl group, 4-[(2,3 or 4-)pyridyl]butyl group, 1,1-dimethyl-2-[(2,3 or 4-)pyridyl]ethyl group, 5-[(2,3 or 4-)pyridyl]pentyl group, 6-[(2,3 or 4-)pyridyl]hexyl 10 group, 1-[(2,3 or 4-)pyridyl]isopropyl group, and 2-methyl-3-[(2,3 or 4-)pyridyl]propyl group.

Examples of the amino group substituted lower alkyl group which may have a substituent selected from the group consisting of a lower alkyl group and a lower 15 alkanoyl group include linear or branched alkyl groups having 1 to 6 carbon atoms which has an amino group which may have 1 or 2 substituents selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms and a linear or branched 20 alkanoyl group having 1 to 6 carbon atoms such as aminomethyl, 2-aminoethyl, 1-aminoethyl, 3-aminopropyl, 4-aminobutyl, 5-aminopentyl, 6-aminohexyl, 1,1-dimethyl-2-aminoethyl, 2-methyl-3-aminopropyl, methylaminomethyl, 1-ethylaminoethyl, 2- 25 propylaminoethyl, 3-isopropylaminopropyl, 4-butylaminobutyl, 5-pentylaminopentyl, 6-hexylaminoethyl, dimethylaminomethyl, 2-diisopropylaminoethyl, (N-ethyl-N-propylamino)methyl,

2-(N,N-dimethylamino)ethyl, 2-(N-methyl-N-hexylamino)ethyl, formylaminomethyl, acetylaminomethyl, 1-propionylaminoethyl, 2-acetylaminomethyl, 3-butyrylaminoethyl, 4-pentanoylaminoethyl, 5-hexanoylaminoethyl, 6-acetylaminohexyl, N-methyl-N-acetylaminomethyl, 2-(N-ethyl-N-propanoylamino)ethyl, (N-ethyl-N-butyrylamino)methyl, 2-(N-methyl-N-hexanoylamino)ethyl, 3-(N,N-dimethylamino)propyl groups.

Examples of the lower alkoxy lower alkyl group include linear or branched alkyl groups having 1 to 6 carbon atoms which have a linear or branched alkoxy group having 1 to 6 carbon atoms as a substituent such as a methoxymethyl group, 1-ethoxyethyl group, 2-methoxyethyl group, 2-propoxyethyl group, 3-isopropoxypropyl group, 4-butoxybutyl group, 5-pentyloxypropyl group, 6-hexyloxyhexyl group, 1,1-dimethyl-2-methoxyethyl group, 2-methyl-3-ethoxypropyl group, and 3-methoxypropyl group.

Examples of the 1,2,3,4-tetrahydroisoquinolylcarbonyl substituted lower alkyl group include 1,2,3,4-tetrahydroisoquinolylcarbonyl-alkyl groups of which the alkyl moiety is a linear or branched alkyl group such as (1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroisoquinolylcarbonylmethyl, 2-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroisoquinolylcarbonyl]ethyl, 1-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroisoquinolylcarbonyl]ethyl, 3-[(1,

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2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroisoquinolyl-
 carbonyl]propyl, 4-[(1, 2, 3, 4, 5, 6, 7, or
 8-)1,2,3,4-tetrahydroisoquinolylcarbonyl]butyl, 1,1-
 dimethyl-2-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-
 5 tetrahydroisoquinolylcarbonyl]ethyl, 5-[(1, 2, 3, 4, 5,
 6, 7, or 8-)1,2,3,4-tetrahydroisoquinolyl-
 carbonyl]pentyl, 6-[(1, 2, 3, 4, 5, 6, 7, or 8-
)1,2,3,4-tetrahydroisoquinolylcarbonyl]hexyl, 1-[(1, 2,
 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroisoquinolyl-
 10 carbonyl]isopropyl, 2-methyl-3-[(1, 2, 3, 4, 5, 6, 7,
 or 8-)1,2,3,4-tetrahydroisoquinolylcarbonyl]propyl
 groups.

Examples of the piperidinylcarbonyl group
 which may have, on the piperidine ring, a substituent
 15 selected from the group consisting of a lower
 alkoxy carbonyl group, a phenyl lower alkyl group, and a
 furyl lower alkyl group include piperidinylcarbonyl
 groups which may have, on the piperidine ring, 1 to 3
 substituents selected from the group consisting of an
 20 alkoxy carbonyl group of which the alkoxy moiety is a
 linear or branched alkoxy group having 1 to 6 carbon
 atoms, a phenylalkyl group of which the alkyl moiety is
 a linear or branched alkyl group having 1 to 6 carbon
 atoms, and a furylalkyl group of which the alkyl moiety
 25 is a linear or branched alkyl group having 1 to 6
 carbon atoms such as (1, 2, 3, or 4-)piperidinyl-
 carbonyl, 1-benzyl-(2, 3, or 4-)piperidinylcarbonyl, 1-
 (2 or 3-)furylmethyl-(2, 3, or 4-)piperidinylcarbonyl,

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1-(2-phenylethyl)-(2, 3, or 4-)piperidinylcarbonyl, 1-
 {2-[(1 or 2-)furyl]ethyl}-(2, 3, or 4-)piperidinyl-
 carbonyl, 1-(1-phenylethyl)-(2, 3, or 4-)piperidinyl-
 carbonyl, 1-{3-[(1 or 2-)furyl]propyl}-(2, 3, or
 5 4-)piperidinylcarbonyl, 1-(3-phenylpropyl)-(2, 3, or
 4-)piperidinylcarbonyl, 1-{1-[(1 or 2-)furyl]ethyl}-
 (2, 3, or 4-)piperidinylcarbonyl, 1-(4-phenylbutyl)-(2,
 3, or 4-)piperidinylcarbonyl, 1-{4-[(1 or 2-)furyl]-
 butyl}-(2, 3, or 4-)piperidinylcarbonyl, 1-(5-
 10 phenylpentyl)-(2, 3, or 4-)piperidinylcarbonyl, 1-{5-
 [(1 or 2-)furyl]pentyl}-(2, 3, or 4-)piperidinyl-
 carbonyl, 1-(6-phenylhexyl)-(2, 3, or 4-)piperidinyl-
 carbonyl, 1-{6-[(1 or 2-)furyl]hexyl}-(2, 3, or
 4-)piperidinylcarbonyl, 1,2-dibenzyl-(3, 4, 5, or
 15 6-)piperidinylcarbonyl, 1,3-di(1 or 2-)furylmethyl-(2,
 4, 5, or 6-)piperidinylcarbonyl, 1,3,5-tribenzyl-(2, 4,
 or 6-)piperidinylcarbonyl, 1,2,6-tri(1 or
 2-)furylmethyl-(3, 4, or 5-)piperidinylcarbonyl, 1-
 benzyl-3-(1 or 2-)furylmethyl-(2, 4, 5, or
 20 6-)piperidinylcarbonyl, 1-{1-[(1 or 2-)furyl]ethyl}-
 (2, 3, or 4-)piperidinylcarbonyl, 1-methoxycarbonyl-(2,
 3, or 4-)piperidinylcarbonyl, 1-ethoxycarbonyl-(2, 3,
 or 4-)piperidinylcarbonyl, 1-propoxycarbonyl-(2, 3, or
 4-)piperidinylcarbonyl, 1-butoxycarbonyl-(2, 3, or 4-
 25)piperidinylcarbonyl, 1-tert-butoxycarbonyl-(2, 3, or
 4-)piperidinylcarbonyl, 1-pentyloxycarbonyl-(2, 3, or
 4-)piperidinylcarbonyl, 1-hexyloxycarbonyl-(2, 3, or
 4-)piperidinylcarbonyl, 1,2-dimethoxycarbonyl-(3, 4, 5,

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or 6-)piperidinylcarbonyl, 1,2,6-triethoxycarbonyl-(3, 4, or 5-)piperidinylcarbonyl, 1-(1 or 2-)furylmethyl-3-tert-butoxycarbonyl-(3, 4, 5, or 6-)piperidinylcarbonyl, 1-benzyl-2-methoxycarbonyl-(2, 4, 5, or 6-)piperidinylcarbonyl, 1-(1 or 2-)furylmethyl-2,4-dimethoxycarbonyl-(3, 5, or 6-)piperidinylcarbonyl groups.

Examples of the thiazolidinyl lower alkanoyl group which may have an oxo group as a substituent on the thiazolidine ring include thiazolidinylalkanoyl groups which may have 1 to 3 oxo groups as substituents on the thiazolidine ring and of which the alkanoyl moiety is a linear or branched alkanoyl group having 1 to 6 carbon atoms such as 2-[(2, 3, 4, or 5-)thiazolidinyl]acetyl, 3-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 2-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 4-[(2, 3, 4, or 5-)thiazolidinyl]butyryl, 5-[(2, 3, 4, or 5-)1,2,4-thiazolidinyl]pentanoyl, 6-[(2, 3, 4, or 5-)thiazolidinyl]hexanoyl, 2,2-dimethyl-3-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 2-methyl-3-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 2,4-dioxo-(3 or 5-)thiazolidinylacetyl, 3-[2-oxo-(3, 4, or 5-)thiazolidinyl]propionyl, 2-[4-oxo-(2, 3, or 5-)thiazolidinyl]propionyl, 4-[5-oxo-(2, 3, or 4-)thiazolidinyl]butyryl, 5-[2,5-dioxo-(3 or 4-)thiazolidinyl]pentanoyl, 6-[2,4,5-trioxo-3-thiazolidinyl]hexanoyl, 2-[4,5-dioxo-(2 or

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3-)thiazolidinyl]acetyl, 2,2-dimethyl-3-[2,4-dioxo-(3
or 5-)thiazolidinyl]propionyl, 2-methyl-3-[2,4-dioxo-(3
or 5-)thiazolidinyl]propionyl groups.

Examples of the piperidinyl group which may
5 be substituted on the piperidine ring with a group
selected from the group consisting of a lower
alkoxycarbonyl group, a phenyl lower alkyl group, a
lower alkyl group, a benzoyl group and a furyl lower
alkyl group include piperidinyl groups which may be
10 substituted on the piperidine ring with 1 to 3 groups
selected from the group consisting of an alkoxycarbonyl
group of which the alkoxy moiety is a linear or
branched alkoxy group having 1 to 6 carbon atoms, a
phenylalkyl group of which the alkyl moiety is a linear
15 or branched alkyl group having 1 to 6 carbon atoms, a
linear or branched alkyl group having 1 to 6 carbon
atoms, a benzoyl group, and a furylalkyl group of which
the alkyl moiety is a linear or branched alkyl group
having 1 to 6 carbon atoms such as (1, 2, 3, or
20 4-)piperidinyl, 1-benzyl-(2, 3, or 4-)piperidinyl, 1-(2
or 3-)furylmethyl-(2, 3, or 4-)piperidinyl, 1-(2-
phenylethyl)-(2, 3, or 4-)piperidinyl, 1-{2-[(1 or
2-)furyl]ethyl}-(2, 3, or 4-)piperidinyl, 1-(1-
phenylethyl)-(2, 3, or 4-)piperidinyl, 1-{3-[(1 or
25 2-)furyl]propyl}-(2, 3, or 4-)piperidinyl, 1-(3-
phenylpropyl)-(2, 3, or 4-)piperidinyl, 1-{1-[(1 or
2-)furyl]ethyl}-(2, 3, or 4-)piperidinyl, 1-(4-
phenylbutyl)-(2, 3, or 4-)piperidinyl, 1-{4-[(1 or

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2-)furyl]butyl]]-(2, 3, or 4-)piperidinyl, 1-(5-
 phenylpentyl)-(2, 3, or 4-)piperidinyl, 1-{5-[(1 or
 2-)furyl]pentyl]]-(2, 3, or 4-)piperidinyl, 1-(6-
 phenylhexyl)-(2, 3, or 4-)piperidinyl, 1-{6-[(1 or
 5 2-)furyl]hexyl]]-(2, 3, or 4-)piperidinyl, 1,2-
 dibenzyl-(3, 4, 5, or 6-)piperidinyl, 1,3-di(1 or
 2-)furylmethyl-(2, 4, 5, or 6-)piperidinyl, 1,3,5-
 tribenzyl-(2, 4, or 6-)piperidinyl, 1,2,6-tri(1 or
 2-)furylmethyl-(3, 4, or 5-)piperidinyl, 1-benzyl-3-(1
 10 or 2-)furylmethyl-(2, 4, 5, or 6-)piperidinyl, 1-{1-[(1
 or 2-)furyl]ethyl]]-(2, 3, or 4-)piperidinyl, 1-
 benzoyl-(2, 3, or 4-)piperidinyl, 1,2-dibenzoyl-(3, 4,
 5, or 6-)piperidinyl, 1,3,5-tribenzoyl-(2, 4, or
 6-)piperidinyl, 1-methyl-(2, 3, or 4-)piperidinyl, 1-
 15 ethyl-(2, 3, or 4-)piperidinyl, 1-propyl-(2, 3, or
 4-)piperidinyl, 1-isopropyl-(2, 3, or 4-)piperidinyl,
 1-butyl-(2, 3, or 4-)piperidinyl, 1-isobutyl-(2, 3, or
 4-)piperidinyl, 1-tert-butyl-(2, 3, or 4-)piperidinyl,
 1-pentyl-(2, 3, or 4-)piperidinyl, 1-hexyl-(2, 3, or
 20 4-)piperidinyl, 1,2-dimethyl-(3, 4, 5, or
 6-)piperidinyl, 1,2,6-trimethyl-(3, 4, or
 5-)piperidinyl, 1-methyl-3-benzyl-(3, 4, 5, or
 6-)piperidinyl, 1-benzoyl-2-methyl-(2, 4, 5, or
 6-)piperidinyl, 1-(1 or 2-)furylmethyl-2,4-dimethyl-(3,
 25 5, or 6-)piperidinyl, 1-methoxycarbonyl-(2, 3, or
 4-)piperidinyl, 1-ethoxycarbonyl-(2, 3, or
 4-)piperidinyl, 1-propoxycarbonyl-(2, 3, or
 4-)piperidinyl, 1-butoxycarbonyl-(2, 3, or

4-)piperidinyl, 1-tert-butoxycarbonyl-(2, 3, or
 4-)piperidinyl, 1-pentyloxycarbonyl-(2, 3, or
 4-)piperidinyl, 1-hexyloxycarbonyl-(2, 3, or
 4-)piperidinyl, 1,2-dimethoxycarbonyl-(3, 4, 5, or
 5 6-)piperidinyl, 1,2,6-triethoxycarbonyl-(3, 4, or
 5-)piperidinyl, 1-methyl-3-tert-butoxycarbonyl-(3, 4,
 5, or 6-)piperidinyl, 1-benzoyl-2-methoxycarbonyl-(2,
 4, 5, or 6-)piperidinyl, 1-(1 or 2-)furylmethyl-2,4-
 dimethoxycarbonyl-(3, 5, or 6-)piperidinyl, 1-benzyl-
 10 2,4-dimethoxycarbonyl-(3, 5, or 6-)piperidinyl groups.

Examples of the carbonyl lower alkyl group
 substituted with a group:

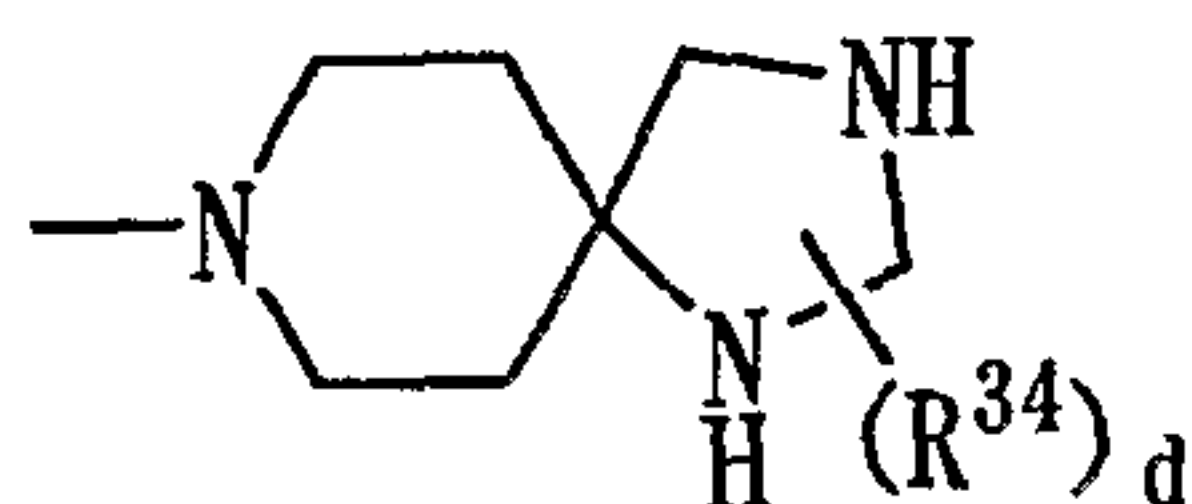


(hereinafter called "A group") include A group
 substituted carbonylalkyl groups of which the alkyl
 15 moiety is a linear or branched alkyl group having 1 to
 6 carbon atoms such as an A group substituted
 carbonylmethyl group, 2-A group substituted
 carbonylethyl group, 1-A group substituted
 carbonylethyl group, 3-A group substituted
 20 carbonylpropyl group, 4-A group substituted
 carbonylbutyl group, 1,1-dimethyl-2-A group substituted
 carbonylethyl group, 5-A group substituted
 carbonylpentyl group, 6-A group substituted
 carbonylhexyl group, 1-A group substituted
 25 carbonylisopropyl group, and 2-methyl-3-A group

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substituted carbonylpropyl group.

Examples of the carbonyl lower alkyl group substituted with a group:



wherein R^{34} is an oxo group or phenyl group, and d is an integer of 0 to 3 (hereinafter called "B group"), B group substituted carbonylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a B group substituted carbonylmethyl group, 2-B group substituted carbonylethyl group, 1-B group substituted carbonylethyl group, 3-B group substituted carbonylpropyl group, 4-B group substituted carbonylbutyl group, 1,1-dimethyl-2-B group substituted carbonylethyl group, 5-B group substituted carbonylpentyl group, 6-B group substituted carbonylhexyl group, 1-B group substituted carbonylisopropyl group, and 2-methyl-3-B group substituted carbonylpropyl group.

Examples of the pyrrolidinyl lower alkyl group include pyrrolidinylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a (1-, 2-, or 3-)pyrrolydinylmethyl group, 2-[(1-, 2-, or 3-)pyrrolydiny]ethyl group, 1-[(1-, 2-, or 3-)pyrrolydiny]ethyl group, 3-[(1-, 2-, or

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3-)pyrrolydinyll]propyl group, 4-[(1-, 2-, or
3-)pyrrolydinyll]butyl group, 5-[(1-, 2-, or
3-)pyrrolydinyll]pentyl group, 6-[(1-, 2-, or
3-)pyrrolydinyll]hexyl group, 1,1-dimethyl-2-[(1-, 2-,
5 or 3-)pyrrolydinyll]ethyl group, and 2-methyl-3-[(1-,
2-, or 3-)pyrrolydinyll]propyl group.

Examples of the morpholino lower alkyl group
include morpholinoalkyl groups of which the alkyl
moiety is a linear or branched alkyl group having 1 to
10 6 carbon atoms such as a (2-, 3- or 4-)morpholinomethyl
group, 2-[(2-, 3- or 4-)morpholino]ethyl group, 1-[(2-,
3- or 4-)morpholino]ethyl group, 3-[(2-, 3- or
4-)morpholino]propyl group, 4-[(2-, 3- or
4-)morpholino]butyl group, 5-[(2-, 3- or
15 4-)morpholino]pentyl group, 6-[(2-, 3- or
4-)morpholino]hexyl group, 1,1-dimethyl-2-[(2-, 3- or
4-)morpholino]ethyl group, and 2-methyl-3-[(2-, 3- or
4-)morpholino]propyl group.

Examples of the phenyl lower alkenyl group
20 include phenylalkenyl groups of which the alkenyl
moiety is a linear or branched alkenyl group having 2
to 6 carbon atoms and which have 1 to 3 double bonds
such as a styryl group, 3-phenyl-2-propenyl group
(trivial name: cinnamyl group), 4-phenyl-2-butenyl
25 group, 4-phenyl-3-butenyl group, 5-phenyl-4-pentenyl
group, 5-phenyl-3-pentenyl group, 6-phenyl-5-hexenyl
group, 6-phenyl-4-hexenyl group, 6-phenyl-3-hexenyl
group, 4-phenyl-1,3-butadienyl group, and 6-phenyl-

1,3,5-hexatrienyl group.

Examples of the anilinocarbonyl lower alkyl group which may have a lower alkyl group as a substituent on the phenyl ring include

- 5 anilinocarbonylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms and which may have 1 to 3 linear or branched alkyl groups having 1 to 6 carbon atoms as substituents on the phenyl ring such as
- 10 anilinocarbonylmethyl, 2-anilinocarbonylethyl, 1-anilinocarbonylethyl, 3-anilinocarbonylpropyl, 4-anilinocarbonylbutyl, 5-anilinocarbonylpentyl, 6-anilinocarbonylhexyl, 1,1-dimethyl-2-anilinocarbonylethyl, 2-methyl-3-anilinocarbonylpropyl,
- 15 (4-methylanilinocarbonyl)methyl, 2-(3-methylanilinocarbonyl)ethyl, 3-(4-methylanilinocarbonyl)propyl, 1-(2-ethylanilinocarbonyl)ethyl, 4-(3-ethylanilinocarbonyl)butyl, 5-(4-ethylanilinocarbonyl)pentyl, 6-(4-
- 20 isopropylanilinocarbonyl)hexyl, 1,1-dimethyl-2-(3-butylanilinocarbonyl)ethyl, 2-methyl-3-(4-pentylanilinocarbonyl)propyl, 4-hexylanilinocarbonylmethyl, 3,4-
- 25 dimethylanilinocarbonylmethyl, 3,4-diethylanilinocarbonylmethyl, 2,4-dimethylanilinocarbonylmethyl, 2,5-dimethylanilinocarbonylmethyl, 2,6-

dimethylanilinocarbonylmethyl, 3,4,5-trimethylanilinocarbonylmethyl groups.

Examples of the piperazinyllower alkyl group which may have, on the piperazine ring, a substituent
5 selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring include piperazinyllalkyl groups of which the alkyl moiety is a linear or branched alkyl group
10 having 1 to 6 carbon atoms and which may have, on the piperazine ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms and a phenylalkyl group which may have a linear or branched alkylenedioxy group
15 having 1 to 4 carbon atoms as a substituent on the phenyl ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(1-, 2-, or 3-)piperazinyll]methyl, 2-[(1-, 2-, or 3-)piperazinyll]ethyl, 1-[(1-, 2-, or
20 3-)piperazinyll]ethyl, 3-[(1-, 2-, or 3-)piperazinyll]propyl, 4-[(1-, 2-, or 3-)piperazinyll]butyl, 5-[(1-, 2-, or 3-)piperazinyll]pentyl, 6-[(1-, 2-, or 3-)piperazinyll]hexyl, 1,1-dimethyl-2-[(1-, 2-, or
25 3-)piperazinyll]ethyl, 2-methyl-3-[(1-, 2-, or 3-)piperazinyll]propyl, [1-methyl-(2-, 3-, or 4-)piperazinyll]methyl, 2-[1-ethyl-(2-, 3-, or 4-)piperazinyll]ethyl, 1-[4-propyl-(1-, 2-, or

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3-)piperazinyl]ethyl, 3-[3-isopropyl-(1-, 2-, 4-, 5-,
 or 6-)piperazinyl]propyl, 4-[2-butyl-(1-, 3-, 4-, 5-, or
 6-)piperazinyl]butyl, 5-[1-isobutyl-(2-, 3-, or
 4-)piperazinyl]pentyl, 3-[4-methyl-(1-, 2-, or
 5 3-)piperazinyl]propyl, 6-[1-tert-butyl-(2-, 3-, or
 4-)piperazinyl]hexyl, 1,1-dimethyl-2-[4-pentyl-(1-, 2-,
 or 3-)piperazinyl]ethyl, [1,2-dimethyl-(3-, 4-, 5-, or
 6-)piperazinyl]methyl, [1,2,6-trimethyl-(3-, 4-, or
 5-)piperazinyl]methyl, 2-[4-(3,4-methylenedioxybenzyl)-
 10 (1-, 2-, or 3-)piperazinyl]ethyl groups.

Examples of the amidino lower alkyl group
 which may have a lower alkyl group as a substituent
 include amidinoalkyl groups of which the alkyl moiety
 is a linear or branched alkyl group having 1 to 6
 15 carbon atoms and which may have 1 or 2 linear or
 branched alkyl groups having 1 to 6 carbon atoms such
 as an amidinomethyl group, 2-amidinoethyl group, 1-
 amidinoethyl group, 3-amidinopropyl group, 4-
 amidinobutyl group, 5-amidinopentyl group, 6-
 20 amidinohexyl group, 1,1-dimethyl-2-amidinoethyl group,
 2-methyl-3-amidinopropyl group, N,N-
 dimethylamidinomethyl group, 2-(N,N-
 dimethylamidino)ethyl group, 1-(N-methylamidino)ethyl
 group, 3-(N-ethylamidino)propyl group, 4-(N-n-
 25 propylamidino)propyl group, 5-(N-n-pentylamidino)pentyl
 group, 6-(N-n-hexylamidino)hexyl group, and (N-methyl-
 N-ethylamidino)methyl group.

Examples of the carbazolyl group which may

have a lower alkyl group as a substituent on the carbazole ring include carbazolyl groups which may have 1 to 3 linear or branched alkyl groups having 1 to 6 carbon atoms as substituents on the carbazole ring such as (1-, 2-, 3-, or 4-)carbazolyl, 9-methyl-(1-, 2-, 3-, or 4-)carbazolyl, 9-ethyl-(1-, 2-, 3-, or 4-)carbazolyl, 1-ethyl-(2-, 3-, 4-, 5-, 6-, 7-, 8-, or 9-)carbazolyl, 2-n-propyl-(1-, 3-, 4-, 5-, 6-, 8-, or 9-)carbazolyl, 3-n-butyl-(1-, 2-, 4-, 5-, 6-, 7-, 8-, or 9-)carbazolyl, 4-n-pentyl-(1-, 2-, 3-, 5-, 6-, 7-, 8-, or 9-)carbazolyl, 5-n-hexyl-(1-, 2-, 3-, 4-, 6-, 7-, 8-, or 9-)carbazolyl, 6,9-dimethyl-(1-, 2-, 3-, 4-, 5-, 7-, or 8-)carbazolyl, 1,7,8-trityl-(2-, 3-, 4-, 5-, 6-, 7-, 8-, or 9-)carbazolyl groups.

Examples of the amidino group which may have a lower alkyl group as a substituent include amidino groups which may have 1 or 2 linear or branched alkyl groups having 1 to 6 carbon atoms as substituents such as an amidino group, N,N-dimethylamidino group, N-methylamidino group, N-ethylamidino group, N-n-propylamidino group, N-n-butylamidino group, N-n-pentylamidino group, N-n-hexylamidino group, N,N-diethylamidino group, and N-methyl-N-ethylamidino group.

Examples of the 5- to 7-membered saturated heterocyclic group formed by binding R^{36} and R^{37} each other, together with nitrogen atoms bound to them, through or not through a nitrogen atom, an oxygen atom

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or a sulfur atom, include a pyrrolidinyl group, piperidinyl group, piperazinyl group, morpholino group, thiomorpholino group, and homopiperazinyl group.

Examples of the 5- to 10-membered saturated or unsaturated heterocyclic group formed by binding R¹⁴ and R¹⁵ each other, together with nitrogen atoms bound to them, through or not through a nitrogen atom, an oxygen atom or a sulfur atom, include 1,2,3,4,5,6-hexahydropyrimidinyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholino, thiomorpholino, homopiperazinyl, homopiperidinyl, thiazolidinyl, 1,2,5,6-tetrahydropyridyl, pyrrolyl, pyrazolyl, imidazolyl, 2-pyrrolinyl, 2-imidazolinyl, imidazolidinyl, 2-pyrazolinyl, pyrazolidinyl, 1,2-dihydropyridyl, 1,2-dihydroquinolyl, 1,2,3,4-tetrahydroquinolyl, 1,2,3,4-tetrahydroisoquinolyl, 1,2-dihydroisoquinolyl, indolyl, isoindolyl, indolinyl, isoindolinyl, 3,4-dihydro-2H-1,4-benzoxadiazinyl, 3,4-dihydro-2H-1,4-benzothiazolidinyl, 1,4-benzothiazinyl, 1,2,3,4-tetrahydroquinoxalinyl, 1,2,3,4-tetrahydrocinnolinyl, 1,2,3,4-tetrahydrophthalazinyl, 1,2,3,4-tetrahydroquinazolinyl, 1,2-dihydroquinoxalinyl, 3,4-dihydroquinoxalinyl, 1,4-dihydroquinoxalinyl, 1,2-dihydrocinnolinyl, 1,2-dihydrophthalazinyl, 3,4-dihydrophthalazinyl, 1,2-dihydroquinazolinyl, 3,4-dihydroquinazolinyl, indazolyl, indazolinyl, 6-azabicyclo[3,2,1]octyl, 3-aza-spiro[5,5]undecyl, thiazolidinyl groups.

Examples of the phenyl lower alkoxy group include phenylalkoxy groups of which the alkoxy moiety is a linear or branched alkoxy group having 1 to 6 carbon atoms such as a benzyloxy group, 2-phenylethoxy group, 1-phenylethoxy group, 3-phenylpropoxy group, 4-phenylbutoxy group, 5-phenylpentyloxy group, 6-phenylhexyloxy group, 1,1-dimethyl-2-phenylethoxy group, and 2-methyl-3-phenylpropoxy group.

Examples of the phenyl substituted lower alkyl group which has 1 or 2 phenyl groups which may be substituted on the phenyl ring with 1 to 3 substituents selected from the group consisting of a lower alkanoyl group, an amino group which may have a lower alkanoyl group as a substituent, a lower alkoxycarbonyl group, a cyano group, a nitro group, a phenyl group, a halogen atom, a lower alkyl group which may have a halogen atom as a substituent, a lower alkoxy group which may have a halogen atom as a substituent, a phenyl lower alkoxy group, a hydroxyl group, and a lower alkylenedioxy groups; and which may have a pyridyl group on the lower alkyl group include, in addition to the above described phenyl lower alkyl groups, phenyl substituted alkyl groups which have 1 or 2 phenyls which may be substituted on the phenyl ring with 1 to 3 substituents selected from the group consisting of a linear or branched alkanoyl group having 1 to 6 carbon atoms, an amino group which may have 1 or 2 linear or branched alkanoyl groups having 1 to 6 carbon atoms as

substituents, a linear or branched alkoxycarbonyl group having 1 to 6 carbon atoms, a cyano group, a nitro group, a phenyl group, a halogen atom, a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, a phenylalkoxy groups of which the alkoxy moiety is a linear or branched alkoxy group having 1 to 6 carbon atoms, a hydroxy group, and a linear or branched alkylenedioxy group having 1 to 4 carbon atoms; and which may have a pyridyl group on the alkyl group, of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms, such as 1-phenyl-1-(2, 3, or 4-)pyridylmethyl, 1,1-diphenylmethyl, 1,1-di(4-fluorophenyl)methyl, 1-phenyl-1-(4-methoxyphenyl)methyl, 3,4-methylenedioxybenzyl, 3,4-ethylenedioxybenzyl, 3,4-trimethylenedioxybenzyl, 2,5-difluorobenzyl, 2,4-difluorobenzyl, 3,4-difluorobenzyl, 3,5-difluorobenzyl, 2,6-difluorobenzyl, 3-trifluoromethylbenzyl, 2-trifluoromethylbenzyl, 4-trifluoromethylbenzyl, 3,4-dimethoxybenzyl, 3,5-dimethoxybenzyl, 2-chlorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 2-methylbenzyl, 3-methylbenzyl, 4-methylbenzyl, 3,4-dimethylbenzyl, 2,3-dimethylbenzyl, 2-methoxybenzyl, 3-methoxybenzyl, 4-cyanobenzyl, 2-cyanobenzyl, 3-cyanobenzyl, 4-methoxybenzyl, 2,3-dichlorobenzyl, 2,4-dichlorobenzyl, 2,5-dichlorobenzyl,

3,4-dichlorobenzyl, 2,6-dichlorobenzyl, 4-fluorobenzyl,
3-fluorobenzyl, 2-fluorobenzyl, 4-nitrobenzyl, 3-
nitrobenzyl, 2-nitrobenzyl, 3-trifluoromethoxybenzyl,
4-trifluoromethoxybenzyl, 2-trifluoromethoxybenzyl, 4-
5 methoxycarbonylbenzyl, 3-methoxycarbonylbenzyl, 4-tert-
butylbenzyl, 4-ethylbenzyl, 4-isopropylbenzyl, 4-
methoxy-3-chlorobenzyl, 2-(4-methoxyphenyl)ethyl, 2-(4-
fluorophenyl)ethyl, 2-(4-chlorophenyl)ethyl, 2-(3-
methoxyphenyl)ethyl, 2-(4-methylphenyl)ethyl, 4-
10 phenylbenzyl, 3,3-diphenylpropyl, 3-methyl-4-
nitrobenzyl, 4-(4-methoxyphenyl)butyl, 2-(4-
methylphenyl)ethyl, 4-tert-butoxycarbonylbenzyl, 3-
chloro-6-methoxybenzyl, 4-acetylamino benzyl, 4-nitro-3-
methylbenzyl, 4-hydroxybenzyl, 3-hydroxybenzyl, 2-
15 hydroxybenzyl, 4-tert-butyrylbenzyl, 4-benzyloxybenzyl,
4-pivaloylbenzyl, 2-(4-acetylphenyl)ethyl, 1-(3-
propionylphenyl)ethyl, 3-(2-butyrylphenyl)propyl, 4-(4-
pentanoylphenyl)butyl, 5-(3-hexanoylphenyl)pentyl, 6-
(2,4-diacetylphenyl)hexyl, 1,1-dimethyl-2-(2,4,6-
20 triacetylphenyl)ethyl, 2-methyl-3-(3,4-
diacetylphenyl)propyl, 2-(4-aminophenyl)ethyl, 1-(3-
propionylaminophenyl)ethyl, 3-(2-
butyrylamino phenyl)propyl, 4-(4-
pentanoylamino)phenylbutyl, 5-
25 (hexanoylamino phenyl)pentyl, 6-(N-acetyl-N-
propionylaminophenyl)hexyl, 1,1-dimethyl-2-(3,4-
diaminophenyl)ethyl, 2-methyl-3-(3,4,5-
triacetylaminophenyl)propyl, 2-(2-

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ethoxycarbonylphenyl)ethyl, 1-(3-propoxycarbonylphenyl)ethyl, 3-(4-pentyloxycarbonylphenyl)propyl, 4-(3-hexyloxycarbonylphenyl)butyl, 5-(3,4-dimethoxycarbonylphenyl)pentyl, 6-(3,4,5-triethoxycarbonylphenyl)hexyl, 1,1-dimethyl-2-(4-butoxycarbonylphenyl)ethyl, 2-methyl-3-(4-methoxycarbonylphenyl)propyl, 2-(2-cyanophenyl)ethyl, 1-(3-cyanophenyl)ethyl, 3-(4-cyanophenyl)propyl, 4-(2-cyanophenyl)butyl, 5-(3-cyanophenyl)pentyl, 6-(4-cyanophenyl)hexyl, 1,1-dimethyl-2-(2,4-dicyanophenyl)ethyl, 2-methyl-3-(2,4,6-tricyanophenyl)propyl, 2-(2-nitrophenyl)ethyl, 1-(3-nitrophenyl)ethyl, 3-(4-nitrophenyl)propyl, 4-(2-nitrophenyl)butyl, 5-(3-nitrophenyl)pentyl, 6-(4-nitrophenyl)hexyl, 1,1-dimethyl-2-(2,4-dinitrophenyl)ethyl, 2-methyl-3-(2,4,6-trinitrophenyl)propyl, 2-(2-phenylphenyl)ethyl, 1-(3-phenylphenyl)ethyl, 3-(4-phenylphenyl)propyl, 4-(2-phenylphenyl)butyl, 5-(3-phenylphenyl)pentyl, 6-(4-phenylphenyl)hexyl, 1,1-dimethyl-2-(2,4-diphenylphenyl)ethyl, 2-methyl-3-(2,4,6-triphenylphenyl)propyl, 2-(2-fluorophenyl)ethyl, 1-(3-bromophenyl)ethyl, 3-(4-iodophenyl)propyl, 4-(2-bromophenyl)butyl, 5-(3-chlorophenyl)pentyl, 6-(4-bromophenyl)hexyl, 1,1-dimethyl-2-(2,4-dichlorophenyl)ethyl, 2-methyl-3-(2,4,6-trifluorophenyl)propyl, 2-(2-ethylphenyl)ethyl, 1-(3-

propylphenyl)ethyl, 3-(4-butylphenyl)propyl, 4-(2-pentylphenyl)butyl, 5-(3-hexylphenyl)pentyl, 6-(4-trifluoromethylphenyl)hexyl, 1,1-dimethyl-2-(2,4-dimethylphenyl)ethyl, 2-methyl-3-[2,4,6-

5 tri(trifluoromethyl)phenyl]propyl, 2-(2-ethoxyphenyl)ethyl, 1-(3-propoxyphenyl)ethyl, 3-(4-butoxyphenyl)propyl, 4-(2-pentyloxyphenyl)butyl, 5-(3-hexyloxyphenyl)pentyl, 6-(4-trifluoromethoxyphenyl)hexyl, 1,1-dimethyl-2-(2,4-

10 dimethoxyphenyl)ethyl, 2-methyl-3-[2,4,6-tri(trifluoromethoxy)phenyl]propyl, 2-(2-benzyloxyphenyl)ethyl, 1-[3-(2-phenylethoxy)phenyl]ethyl, 3-[4-(3-phenylpropoxy)phenyl]propyl, 4-[2-(4-

15 phenylbutoxy)phenyl]butyl, 5-[3-(5-phenylpentyloxy)phenyl]pentyl, 6-[4-(6-phenylhexyloxy)phenyl]hexyl, 1,1-dimethyl-2-(2,4-dibenzyloxyphenyl)ethyl, 2-methyl-3-(2,4,6-

tribenzyloxyphenyl)propyl, 2-(2-hydroxyphenyl)ethyl, 1-

20 (3-hydroxyphenyl)ethyl, 3-(4-hydroxyphenyl)propyl, 4-(2-hydroxyphenyl)butyl, 5-(3-hydroxyphenyl)pentyl, 6-(4-hydroxyphenyl)hexyl, 1,1-dimethyl-2-(2,4-dihydroxyphenyl)ethyl, 2-methyl-3-(2,4,6-

trihydroxyphenyl)propyl, 2-(3,4-

25 methylenedioxyphenyl)ethyl, 1-(2,3-ethylenedioxyphenyl)ethyl, 3-(3,4-trimethylenedioxyphenyl)propyl, 4-(3,4-tetramethylenedioxyphenyl)butyl, 5-(3,4-

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methylenedioxyphenyl)pentyl, 6-(3,4-ethylenedioxyphenyl)hexyl, 1,1-dimethyl-2-(3,4-methylenedioxy)ethyl, 2-methyl-3-(3,4-methylenedioxyphenyl)propyl groups.

5 Examples of the pyridyl lower alkyl group which may have, on the pyridine ring, 1 to 3 substituents selected from the group consisting of a hydroxyl group and a lower alkyl group which may have a hydroxyl group as a substituent include, in addition to
10 the above described pyridyl lower alkyl groups, pyridylalkyl groups which may have, on the pyridine ring, 1 to 3 substituents selected from the group consisting of a hydroxy group and a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1
15 to 3 hydroxy groups as substituents, and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [2-methyl-(3, 4, 5, or 6-)pyridyl]methyl, [2-methyl-3-hydroxy-5-hydroxymethyl-(4 or 6-)pyridyl]methyl, 2-[3-ethyl-(2, 4, 5, or
20 6-)pyridyl]ethyl, 1-[4-propyl-(2, 3, 5, or 6-)pyridyl]ethyl, 3-[2-butyl-(3, 4, 5, or 6-)pyridyl]propyl, 4-[3-pentyl-(2, 4, 5, or 6-)pyridyl]butyl, 1,1-dimethyl-2-[4-hexyl-(2, 3, 5, or 6-)pyridyl]ethyl, 5-[2,3-dimethyl-(4, 5, or
25 6-)pyridyl]pentyl, 6-[2,4,6-trimethyl-(3 or 5-)pyridyl]hexyl, 1-[2-hydroxy-(2, 3, 5, or 6-)pyridyl]isopropyl, 2-methyl-3-[3-hydroxy-(2, 4, 5, or 6-)pyridyl]propyl, [2-hydroxy-(3, 4, 5, or

6-)pyridyl]methyl, 2-[3-hydroxy-(2, 4, 5, or
 6-)pyridyl]ethyl, 1-[4-hydroxy-(2, 3, 5, or
 6-)pyridyl]ethyl, 3-[2-hydroxy-(3, 4, 5, or
 6-)pyridyl]propyl, 4-[3-hydroxy-(2, 4, 5, or
 5 6-)pyridyl]butyl, 1,1-dimethyl-2-[4-hydroxy-(2, 3, 5,
 or 6-)pyridyl]ethyl, 5-[2,3-dihydroxy-(4, 5, or
 6-)pyridyl]pentyl, 6-[2,4,6-trihydroxy-(3 or
 5-)pyridyl]hexyl, [2-hydroxymethyl-(3, 4, 5, or
 6-)pyridyl]methyl, 2-[3-(2-hydroxyethyl)-(2, 4, 5, or
 10 6-)pyridyl]ethyl, 1-[4-(3-hydroxypropyl)-(2, 3, 5, or
 6-)pyridyl]ethyl, 3-[2-(4-hydroxybutyl)-(3, 4, 5, or
 6-)pyridyl]propyl, 4-[3-(5-hydroxypentyl)-(2, 4, 5, or
 6-)pyridyl]butyl, 1,1-dimethyl-2-[4-(6-hydroxyhexyl)-
 (2, 3, 5, or 6-)pyridyl]ethyl, 5-[2,3-
 15 di(hydroxymethyl)-(4, 5, or 6-)pyridyl]pentyl, 6-
 [2,4,6-tri(hydroxymethyl)-(3 or 5-)pyridyl]hexyl, 1-[2-
 hydroxymethyl-(2, 3, 5, or 6-)pyridyl]isopropyl, 2-
 methyl-3-[3-(2,3-dihydroxypropyl)-(2, 4, 5, or
 6-)pyridyl]propyl, [2-methyl-3-(2,2,4-trihydroxybutyl)-
 20 (4, 5, or 6-)pyridyl]methyl, [2-methyl-5-hydroxymethyl-
 (3, 4, or 6-)pyridyl]methyl groups.

Examples of the pyrrolyl lower alkyl group
 which may have 1 to 3 lower alkyl groups as
 substituents on the pyrrole ring include pyrrolylalkyl
 25 groups which may have 1 to 3 linear or branched alkyl
 groups having 1 to 6 carbon atoms on the pyrrole and of
 which the alkyl moiety is a linear or branched alkyl
 group having 1 to 6 carbon atoms such as [(1, 2, or

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3-)pyrrolyl]methyl, 2-[(1, 2, or 3-)pyrrolyl]ethyl,
 1-[(1, 2, or 3-)pyrrolyl]ethyl, 3-[(1, 2, or
 3-)pyrrolyl]propyl, 4-[(1, 2, or 3-)pyrrolyl]butyl,
 5-[(1, 2, or 3-)pyrrolyl]pentyl, 6-[(1, 2, or
 5 3-)pyrrolyl]hexyl, 1,1-dimethyl-2-[(1, 2, or
 3-)pyrrolyl]ethyl, 2-methyl-3-[(1, 2, or
 3-)pyrrolyl]propyl, [1-methyl-(2 or 3-)pyrrolyl]methyl,
 2-[2-ethyl-(1, 3, 4, or 5-)pyrrolyl]ethyl, 1-[3-propyl-
 (1, 2, 4, or 5-)pyrrolyl]ethyl, 3-[1-butyl-(2, 3, or
 10 4-)pyrrolyl]propyl, 4-[2-pentyl-(1, 3, 4, or
 5-)pyrrolyl]butyl, 5-[3-hexyl-(1, 2, 4, or
 5-)pyrrolyl]pentyl, 6-[1,2-dimethyl-(3, 4, or
 5-)pyrrolyl]hexyl, 1,1-dimethyl-2-[1,2,3-trimethyl-(4
 or 5-)pyrrolyl]ethyl, 2-methyl-3-[1-ethyl-2-methyl-(3,
 15 4, or 5-)pyrrolyl]propyl groups.

Examples of the benzoxazolyl lower alkyl
 group include benzoxazolylalkyl groups of which the
 alkyl moiety is a linear or branched alkyl group having
 1 to 6 carbon atoms such as [(2, 4, 5, 6, or
 20 7-)benzoxazolyl]methyl, 2-[(2, 4, 5, 6, or
 7-)benzoxazolyl]ethyl, 1-[(2, 4, 5, 6, or
 7-)benzoxazolyl]ethyl, 3-[(2, 4, 5, 6, or
 7-)benzoxazolyl]propyl, 4-[(2, 4, 5, 6, or
 7-)benzoxazolyl]butyl, 5-[(2, 4, 5, 6, or
 25 7-)benzoxazolyl]pentyl, 6-[(2, 4, 5, 6, or
 7-)benzoxazolyl]hexyl, 1,1-dimethyl-2-[(2, 4, 5, 6, or
 7-)benzoxazolyl]ethyl, 2-methyl-3-[(2, 4, 5, 6, or
 7-)benzoxazolyl]propyl.

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Examples of the benzothiazolyl lower alkyl group include benzothiazolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(2, 4, 5, 6, or 7-)benzothiazolyl]methyl, 2-[(2, 4, 5, 6, or 7-)benzothiazolyl]ethyl, 1-[(2, 4, 5, 6, or 7-)benzothiazolyl]ethyl, 3-[(2, 4, 5, 6, or 7-)benzothiazolyl]propyl, 4-[(2, 4, 5, 6, or 7-)benzothiazolyl]butyl, 5-[(2, 4, 5, 6, or 7-)benzothiazolyl]pentyl, 6-[(2, 4, 5, 6, or 7-)benzothiazolyl]hexyl, 1,1-dimethyl-2-[(2, 4, 5, 6, or 7-)benzothiazolyl]ethyl, 2-methyl-3-[(2, 4, 5, 6, or 7-)benzothiazolyl]propyl.

Examples of the furyl lower alkyl group include furylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a [(2 or 3-)furyl]methyl group, 2-[(2 or 3-)furyl]ethyl group, 1-[(2 or 3-)furyl]ethyl group, 3-[(2 or 3-)furyl]propyl group, 4-[(2 or 3-)furyl]butyl group, 5-[(2 or 3-)furyl]pentyl group, 6-[(2 or 3-)furyl]hexyl group, 1,1-dimethyl-2-[(2 or 3-)furyl]ethyl group, and 2-methyl-3-[(2 or 3-)furyl]propyl group.

Examples of the thiazolidinyl lower alkyl group which may have an oxo group as a substituent on the thiazolidine ring include thiazolidinylalkyl groups which may have 1 to 3 oxo groups as substituents on the thiazolidine ring and of which the alkyl moiety is a

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linear or branched alkyl group having 1 to 6 carbon atoms such as (2, 3, 4, or 5-)thiazolidinylmethyl, 2-[(2, 3, 4, or 5-)thiazolidinyl]ethyl, 1-[(2, 3, 4, or 5-)thiazolidinyl]ethyl, 3-[(2, 3, 4, or 5-)thiazolidinyl]propyl, 4-[(2, 3, 4, or 5-)thiazolidinyl]butyl, 5-[(2, 3, 4, or 5-)thiazolidinyl]pentyl, 6-[(2, 3, 4, or 5-)thiazolidinyl]hexyl, 1,1-dimethyl-2-[(2, 3, 4, or 5-)thiazolidinyl]ethyl, 2-methyl-3-[(2, 3, 4, or 5-)thiazolidinyl]propyl, [2,4-dioxo-(3 or 5-)thiazolidinyl]methyl, 2-[2-oxo-(3, 4, or 5-)thiazolidinyl]ethyl, 1-[4-oxo-(2, 3, or 5-)thiazolidinyl]ethyl, 3-[2-oxo-(3, 4, or 5-)thiazolidinyl]propyl, 4-[5-oxo-(2, 3, or 4-)thiazolidinyl]butyl, 5-[2,5-dioxo-(3 or 4-)thiazolidinyl]pentyl, 6-[2,4,5-trioxo-3-thiazolidinyl]hexyl, 1-[4,5-dioxo-(2 or 3-)thiazolidinyl]ethyl, 2-[4,5-dioxo-(2- or 3-)thiazolidinyl]ethyl, 1,1-dimethyl-2-[2,4-dioxo-(3 or 5-)thiazolidinyl]ethyl, 2-methyl-3-[2,4-dioxo-(3 or 5-)thiazolidinyl]propyl groups.

Examples of the thiazolidinylidene lower alkyl group which may have an oxo group as a substituent on the thiazolidine ring include thiazolidinylidenealkyl groups which may have 1 to 3 oxo groups as substituents on the thiazolidine ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (2, 4, or

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5-)thiazolidinyliidenemethyl, (2, 4, or
 5-)thiazolidinyliideneethyl, (2, 4, or
 5-)thiazolidinyliidenepropyl, (2, 4, or
 5-)thiazolidinyliideneisopropyl, (2, 4, or
 5 5-)thiazolidinyliidenebutyl, (2, 4, or
 5-)thiazolidinyliidenepentyl, (2, 4, or
 5-)thiazolidinyliidenehexyl, 4,5-dioxo-2-
 thiazolidinyliidenemethyl, 2,5-dioxo-4-
 thiazolidinyliidenemethyl, 2,4-dioxo-5-
 10 thiazolidinyliidenemethyl, 4-oxo-(2 or
 5-)thiazolidinyliideneethyl, 5-oxo-(2 or
 4-)thiazolidinyliidenepropyl, 2-oxo-(4, or
 5-)thiazolidinyliidenebutyl groups.

Examples of the benzoyl group which may be
 15 substituted on the phenyl ring with 1 to 3 groups
 selected from the group consisting of a cyano group, an
 amino group which may have a lower alkylsulfonyl group
 as a substituent, a halogen atom, a lower alkoxy group,
 a lower alkyl group which may have a halogen atom, a
 20 thiazolidinyl lower alkyl group which may have an oxo
 group as a substituent on the thiazolidine ring, a
 thiazolidinyliidene lower alkyl group which may have an
 oxo group as a substituent on the thiazolidine ring,
 and a lower alkylenedioxy group include benzoyl groups
 25 which may be substituted on the phenyl ring with 1 to 3
 groups selected from the group consisting of a cyano
 group; an amino group which may have 1 or 2 linear or
 branched alkylsulfonyl groups having 1 to 6 carbon

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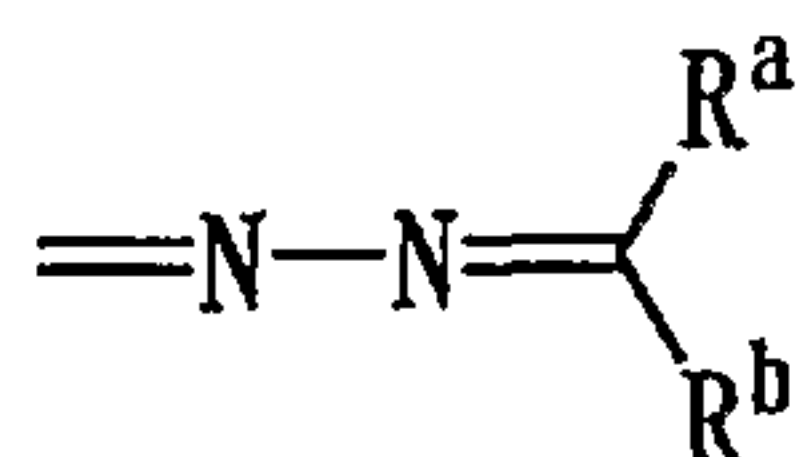
atoms as substituents; a halogen atom; a linear or branched alkoxy group having 1 to 6 carbon atoms; a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents; a thiazolidinylalkyl group which may have 1 to 3 oxo groups as substituents on the thiazolidine ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms; a thiazolidinylidenealkyl group which may have 1 to 3 oxo groups as substituents on the thiazolidine ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms; and a linear or branched alkylenedioxy group having 1 to 4 carbon atoms such as benzoyl, 4-cyanobenzoyl, 3,4-methylenedioxybenzoyl, 2-aminobenzoyl, 3-aminobenzoyl, 4-aminobenzoyl, 3,4-diaminobenzoyl, 2,4,6-triaminobenzoyl, 4-methoxybenzoyl, 4-trifluoromethylbenzoyl, 4-chlorobenzoyl, 3,4-difluorobenzoyl, 2-fluorobenzoyl, 3-bromobenzoyl, 4-iodobenzoyl, 3,4-dimethoxybenzoyl, 4-fluorobenzoyl, 3-cyanobenzoyl, 2-cyanobenzoyl, 2,3-dicyanobenzoyl, 3,4,5-tricyanobenzoyl, 4-methylbenzoyl, 4-(2,4-dioxothiazolidinylmethyl)benzoyl, 4-(2,4-dioxothiazolidinylidenemethyl)benzoyl, 2-methylbenzoyl, 3-methylbenzoyl, 2-ethylbenzoyl, 3-ethylbenzoyl, 4-ethylbenzoyl, 4-isopropylbenzoyl, 3-butylbenzoyl, 4-pentylbenzoyl, 4-hexylbenzoyl, 3,4-dimethylbenzoyl, 3,4-diethylbenzoyl, 2,4-dimethylbenzoyl, 2,5-

dimethylbenzoyl, 2,6-dimethylbenzoyl, 3,4,5-trimethylbenzoyl, 2-methoxybenzoyl, 3-methoxybenzoyl, 2-ethoxybenzoyl, 3-ethoxybenzoyl, 4-ethoxybenzoyl, 4-isopropoxybenzoyl, 3-butoxybenzoyl, 4-pentyloxybenzoyl, 5 4-hexyloxybenzoyl, 3,4-diethoxybenzoyl, 2,4-dimethoxybenzoyl, 2,5-dimethoxybenzoyl, 2,6-dimethoxybenzoyl, 3,4,5-trimethoxybenzoyl, 2-trifluoromethylbenzoyl, 3-trifluoromethylbenzoyl, 4-trifluoromethylbenzoyl, 2-(bromomethyl)benzoyl, 3-(2-chloroethyl)benzoyl, 4-(2,3-dichloropropyl)benzoyl, 4-(4-fluorobutyl)benzoyl, 3-(5-chloropentyl)benzoyl, 4-(5-bromohexyl)benzoyl, 4-(5,6-dibromohexyl)benzoyl, 3,4-di(trifluoromethyl)benzoyl, 3,4-di(4,4,4-trichlorobutyl)benzoyl, 2,4-di(3-chloro-2-methylpropyl)benzoyl, 2,5-di(3-chloropropyl)benzoyl, 15 2,6-di(2,2,2-trifluoroethyl)benzoyl, 3,4,5-tri(trifluoromethyl)benzoyl, 4-(2,2,2-trichloroethyl)benzoyl, 2-methyl-4-trifluoromethylbenzoyl, 3-ethyl-4-trichloromethylbenzoyl, 2-methoxy-4-trifluoromethylbenzoyl, 3-ethyl-4-fluorobenzoyl, 3-ethoxy-4-trichloromethylbenzoyl, 2-methyl-3-trifluoromethyl-4-trifluoromethylbenzoyl, 3-fluorobenzoyl, 4-fluorobenzoyl, 2-bromobenzoyl, 4-bromobenzoyl, 2-iodobenzoyl, 3-iodobenzoyl, 2,3-dibromobenzoyl, 2,4-diiodobenzoyl, 2,5-difluorobenzoyl, 2,6-dichlorobenzoyl, 2,4,6-trichlorobenzoyl, 2,4-difluorobenzoyl, 3,4-difluorobenzoyl, 3,5-

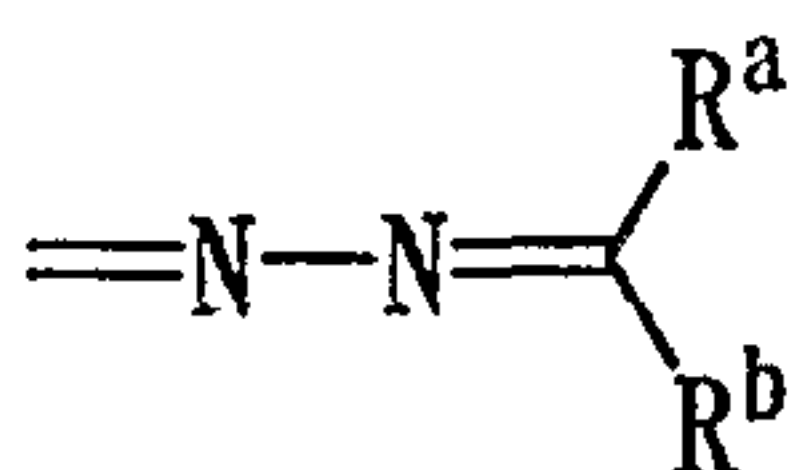
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difluorobenzoyl, 2,6-difluorobenzoyl, 2-chlorobenzoyl,
 3-chlorobenzoyl, 4-chlorobenzoyl, 2,3-dichlorobenzoyl,
 2,4-dichlorobenzoyl, 2,5-dichlorobenzoyl, 3,4-
 dichlorobenzoyl, 2,6-dichlorobenzoyl, 3,5-
 5 dichlorobenzoyl, 2,4,6-trifluorobenzoyl, 2,4-
 difluorobenzoyl, 3,4-difluorobenzoyl, 3,4-
 methylenedioxybenzoyl, 3,4-trimethylenedioxybenzoyl,
 2,3-ethylenedioxybenzoyl, 3,4-trimethylenedioxybenzoyl,
 2,3-tetramethylenedioxybenzoyl, 2,3-
 10 methylenedioxybenzoyl, 3,4-ethylenedioxybenzoyl, 2-
 methanesulfonylaminobenzoyl groups.

Examples of the thiazolidinyl lower alkanoyl
 group which may be substituted on the thiazolidine ring
 with 1 to 3 groups selected from the group consisting
 15 of an oxo group and a group of the formula:



wherein R^a and R^b each represent a lower alkyl group,
 include thiazolidinylalkanoyl groups which may be
 substituted on the thiazolidine ring with 1 to 3
 substituents selected from the group consisting of an
 20 oxo group and a group of the formula:



wherein R^a and R^b each represent a linear or branched
 alkyl group having 1 to 6 carbon atoms, and of which

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the alkanoyl moiety is a linear or branched alkanoyl group having 2 to 6 carbon atoms such as 2-[(2, 3, 4, or 5-)thiazolidinyl]acetyl, 3-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 2-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 4-[(2, 3, 4, or 5-)thiazolidinyl]butyryl, 5-[(2, 3, 4, or 5-)thiazolidinyl]pentanoyl, 6-[(2, 3, 4, or 5-)thiazolidinyl]hexanoyl, 2,2-dimethyl-3-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, 2-methyl-3-[(2, 3, 4, or 5-)thiazolidinyl]propionyl, [2,4-dioxo-(3 or 5-)thiazolidinyl]acetyl, 3-[2-oxo-(3, 4, or 5-)thiazolidinyl]propionyl, 2-[4-oxo-(2, 3, or 5-)thiazolidinyl]propionyl, 4-[5-oxo-(2, 3, or 4-)thiazolidinyl]butyryl, 5-[2,5-dioxo-(3 or 4-)thiazolidinyl]pentanoyl, 6-[2,4,5-trioxo-3-thiazolidinyl]hexanoyl, 2-[4,5-dioxo-(2 or 3-)thiazolidinyl]acetyl, 2,2-dimethyl-3-[2,4-dioxo-(3 or 5-)thiazolidinyl]propionyl, 2-methyl-3-[2,4-dioxo-(3 or 5-)thiazolidinyl]propionyl, 2-[4-oxo-2-isopropylidenehydrazono-(3 or 5-)thiazolidinyl]acetyl, 2-[2-oxo-5-isopropylidenehydrazono-(3 or 4-)thiazolidinyl]acetyl, 2-[2,4-di(isopropylidenehydrazono)-(3 or 5-)thiazolidinyl]acetyl, 3-[2-methylidenehydrazono-(3, 4, or 5-)thiazolidinyl]propionyl, 2-[4-ethylidenehydrazono-(2, 3, or 5-)thiazolidinyl]propionyl, 4-[5-propylidenehydrazono-(2, 3, or 4-)thiazolidinyl]butyryl, 5-[2,5-di(isopropyl-

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idenehydrazono)-(3 or 4-)thiazolidinyl]pentanoyl, 6-[2,4,5-tri(isopropylidenehydrazono)-3-thiazolidinyl]-hexanoyl, 2-[4,5-di(isopropylidenehydrazono)-(2 or 3-)thiazolidinyl]acetyl, 2,2-dimethyl-3-[4-butylidenehydrazono-(2, 3, or 5-)thiazolidinyl]-propionyl, 2-methyl-3-[5-pentylidene-(2, 3, or 4-)thiazolidinyl]propionyl, 2-(hexylidenehydrazono)-(3, 4, or 5-)thiazolidinylacetyl groups.

Examples of the lower alkyl group which may have a substituent selected from the group consisting of a hydroxyl group and a halogen atom include, in addition to the above described lower alkyl groups, linear or branched alkyl groups having 1 to 6 carbon atoms which may have 1 to 3 substituents selected from the group consisting of a hydroxy group and a halogen atom such as hydroxymethyl, 2-hydroxyethyl, 1-hydroxyethyl, 3-hydroxypropyl, 2,3-dihydroxypropyl, 4-hydroxybutyl, 1,1-dimethyl-2-hydroxyethyl, 5,5,4-trihydroxypentyl, 5-hydroxypentyl, 6-hydroxyhexyl, 1-hydroxyisopropyl, 2-methyl-3-hydroxypropyl, trifluoromethyl, trichloromethyl, chloromethyl, bromomethyl, fluoromethyl, iodomethyl, difluoromethyl, dibromomethyl, 2-chloroethyl, 2,2,2-trifluoroethyl, 2,2,2-trichloroethyl, 3-chloropropyl, 2,3-dichloropropyl, 4,4,4-trichlorobutyl, 4-fluorobutyl, 5-chloropentyl, 3-chloro-2-methylpropyl, 5-bromohexyl, 5,6-dibromohexyl, 2-hydroxy-3-fluoropropyl, 2,2-dichloro-3-hydroxybutyl groups.

Examples of the phenyl group which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a carbamoyl group which may have a group selected from the group consisting of a lower alkoxy lower alkyl group and a lower alkyl group, a lower alkoxycarbonyl group, a carboxy group, a cyano group, a phenyl group, a halogen atom, a lower alkyl group which may have a halogen atom as a substituent, a lower alkoxy group which may have a halogen atom as a substituent, a benzoyl group which may have a halogen atom as a substituent on the phenyl ring, a phenyl lower alkyl group which may have a halogen atom as a substituent on the phenyl ring, and a hydroxyl group include phenyl groups which may be substituted on the phenyl group with 1 to 3 groups selected from the group consisting of a carbamoyl group which may have 1 or 2 groups selected from the group consisting of an alkoxyalkyl group of the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms and a linear or branched alkyl group having 1 to 6 carbon atoms, a linear or branched alkoxycarbonyl group having 1 to 6 carbon atoms, a carboxy group, a cyano group, a phenyl group, a halogen atom, a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, a benzoyl group which may have 1 to 3

halogen atoms as substituents on the phenyl ring, a phenylalkyl group which may have 1 to 3 halogen atoms as substituents on the phenyl ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms, and a hydroxyl group such as phenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 2-ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 4-isopropylphenyl, 3-butylphenyl, 4-pentylphenyl, 4-hexylphenyl, 3,4-dimethylphenyl, 3,4-diethylphenyl, 2,4-dimethylphenyl, 2,3-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 3,4,5-trimethylphenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-ethoxyphenyl, 4-isopropoxyphenyl, 3-butoxyphenyl, 4-pentyloxyphenyl, 4-hexyloxyphenyl, 3,4-dimethoxyphenyl, 3,4-diethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 3,4,5-trimethoxyphenyl, 2-trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-(bromomethoxy)phenyl, 3-(2-chloroethoxy)phenyl, 4-(2,3-dichloropropoxy)phenyl, 4-(4-fluorobutoxy)phenyl, 3-(5-chloropentyloxy)phenyl, 4-(5-bromohexyloxy)phenyl, 4-(5,6-dibromohexyloxy)phenyl, 3,4-di(trifluoromethoxy)phenyl, 3,4-di(4,4,4-trichlorobutoxy)phenyl, 2,4-di(3-chloro-2-methoxypropyl)phenyl, 2,5-di(3-chloropropoxy)phenyl, 2,6-di(2,2,2-trifluoroethoxy)phenyl, 3,4,5-tri(trifluoromethoxy)phenyl, 4-(2,2,2-

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- trichloroethoxy)phenyl, 2-methyl-4-
trifluoromethoxyphenyl, 3-ethyl-4-
trichloromethoxyphenyl, 2-methoxy-4-
trifluoromethoxyphenyl, 3-ethoxy-4-
5 trichloromethoxyphenyl, 2-trifluoromethylphenyl, 3-
trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-
(bromomethyl)phenyl, 3-(2-chloroethyl)phenyl, 4-(2,3-
dichloropropyl)phenyl, 4-(4-fluorobutyl)phenyl, 3-(5-
chloropentyl)phenyl, 4-(5-bromohexyl)phenyl, 4-(5,6-
10 dibromohexyl)phenyl, 3,4-di(trifluoromethyl)phenyl,
3,4-di(4,4,4-trichlorobutyl)phenyl, 2,4-di(3-chloro-2-
methylpropyl)phenyl, 2,5-di(3-chloropropyl)phenyl, 2,6-
di(2,2,2-trifluoroethyl)phenyl, 3,4,5-tri(trifluoro-
methyl)phenyl, 4-(2,2,2-trichloroethyl)phenyl, 2-
15 methyl-4-trifluoromethylphenyl, 3-ethyl-4-
trichloromethylphenyl, 2-methoxycarbonylphenyl, 3-
methoxycarbonylphenyl, 4-methoxycarbonylphenyl, 2-
ethoxycarbonylphenyl, 3-ethoxycarbonylphenyl, 4-
ethoxycarbonylphenyl, 4-isopropoxycarbonylphenyl, 3-
20 butoxycarbonylphenyl, 4-tert-butoxycarbonylphenyl, 4-
pentyloxycarbonylphenyl, 4-hexyloxycarbonylphenyl, 3,4-
dimethoxycarbonylphenyl, 3,4-diethoxycarbonylphenyl,
2,4-dimethoxycarbonylphenyl, 2,5-diethoxycarbonyl-
phenyl, 2,6-dimethoxycarbonylphenyl, 3,4,5-
25 triethoxycarbonylphenyl, 2-cyanophenyl, 3-cyanophenyl,
4-cyanophenyl, 3,4-dicyanophenyl, 3,5-dicyanophenyl,
2,4-dicyanophenyl, 2,5-dicyanophenyl, 2,6-
dicyanophenyl, 3,4,5-tricyanophenyl, 2-phenylphenyl, 3-

phenylphenyl, 4-phenylphenyl, 3,4-diphenylphenyl, 3,5-diphenylphenyl, 2,4-diphenylphenyl, 2,5-diphenylphenyl, 2,6-diphenylphenyl, 3,4,5-triphenylphenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,3-dichlorophenyl, 2,4-dichlorophenyl, 2,5-dichlorophenyl, 3,4-dichlorophenyl, 2,6-dichlorophenyl, 3,5-dichlorophenyl, 2,4,6-trichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 2,5-difluorophenyl, 2,4-difluorophenyl, 3,4-difluorophenyl, 3,5-difluorophenyl, 2,6-difluorophenyl, 2,4,6-trifluorophenyl, 2-bromophenyl, 3-bromophenyl, 4-bromophenyl, 2-iodophenyl, 3-iodophenyl, 4-iodophenyl, 2,3-dibromophenyl, 2,4-diiodophenyl, 2-hydroxyphenyl, 3-hydroxyphenyl, 4-hydroxyphenyl, 3,4-dihydroxyphenyl, 3,5-dihydroxyphenyl, 2,4-dihydroxyphenyl, 2,5-dihydroxyphenyl, 2,6-dihydroxyphenyl, 3,4,5-trihydroxyphenyl, 3-benzylphenyl, 2-(2-phenylethyl)phenyl, 4-(1-phenylethyl)phenyl, 2-(3-phenylpropyl)phenyl, 3-(4-phenylbutyl)phenyl, 4-(5-phenylpentyl)phenyl, 2-(6-phenylhexyl)phenyl, 4-(1,1-dimethyl-2-phenylethyl)phenyl, 3-(2-methyl-3-phenylpropyl)phenyl, 2-(4-fluorobenzyl)phenyl, 2-methyl-5-chlorophenyl, 2-methoxy-5-chlorophenyl, 4-(4-fluorobenzoyl)phenyl, 4-(4-fluorobenzyl)phenyl, 3-(2-chlorobenzyl)phenyl, 4-(3-chlorobenzyl)phenyl, 2-(4-chlorobenzyl)phenyl, 3-[2-(4-fluorophenyl)ethyl]phenyl, 4-[2-(4-chlorophenyl)ethyl]phenyl, 2-(3,4-dibromobenzyl)phenyl, 3-(3,4-diiodobenzyl)phenyl, 4-

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(2,4-difluorobenzyl)phenyl, 2-(2,5-dichlorobenzyl)-phenyl, 3-(2,6-dichlorobenzyl)phenyl, 4-(3,4,5-trifluorobenzyl)phenyl, 2-[3-(4-chlorophenyl)propyl]phenyl, 3-[1-(2-bromophenyl)ethyl]phenyl, 4-[4-(3-fluorophenyl)butyl]phenyl, 2-[5-(4-iodophenyl)pentyl]phenyl, 3-[6-(4-chlorophenyl)hexyl]phenyl, 2-[1,1-dimethyl-2-(3-fluorophenyl)ethyl]phenyl, 4-[2-methyl-3-(4-chlorophenyl)propyl]phenyl, 2,4-dibenzylphenyl, 2,4,6-tribenzylphenyl, 2-chloro-4-cyanophenyl, 3-hydroxy-4-phenylphenyl, 3-ethoxycarbonyl-2-benzoylphenyl, 2-benzyl-4-methyl-6-methoxyphenyl, 4-[(2-methoxyethyl)carbamoyl]phenyl, 3-(N-ethyl-N-isopropylcarbamoyl)phenyl, 4-dimethylcarbamoylphenyl, 2-carboxyphenyl, 3-carboxyphenyl, 4-carboxyphenyl, groups.

Examples of the phenyl group which has a lower alkylenedioxy group as a substituent on the phenyl ring include phenyl groups which has a linear or branched alkylenedioxy group having 1 to 4 carbon atom as a substituent on the phenyl ring such as a 3,4-methylenedioxyphenyl group, 3,4-trimethylenedioxyphenyl group, 2,3-ethylenedioxyphenyl group, 2,3-tetramethylenedioxyphenyl group, 2,3-methylenedioxyphenyl group, 3,4-ethylenedioxyphenyl group, and 2,3-trimethylenedioxyphenyl group.

Examples of the naphthyl lower alkyl group

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include naphthylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a (1 or 2-)naphthylmethyl group, 2-[(1 or 2-)naphthyl]ethyl group, 1-[(1 or 2-)naphthyl]ethyl group, 3-[(1 or 2-)naphthyl]propyl group, 4-[(1 or 2-)naphthyl]butyl group, 5-[(1 or 2-)naphthyl]pentyl group, 6-[(1 or 2-)naphthyl]hexyl group, 1,1-dimethyl-2-[(1 or 2-)naphthyl]ethyl group, and 2-methyl-3-[(1 or 2-)naphthyl]propyl group.

10 Examples of the phenoxy group which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a cyano group, a lower alkyl group which may have a halogen atom as a substituent, and a lower alkoxy group which may have a
15 halogen atom as a substituent include phenoxy groups which may be substituted on the phenyl group with 1 to 3 groups selected from the group consisting of a cyano group, a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as
20 substituents, and a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents such as phenoxy, 2-methylphenoxy, 3-methylphenyl, 4-methylphenoxy, 2-ethylphenoxy, 3-ethylphenoxy, 4-ethylphenoxy, 4-isopropylphenoxy, 3-butylphenoxy, 4-pentylphenoxy, 4-hexylphenoxy, 3,4-dimethylphenoxy, 3,4-diethylphenoxy, 2,4-dimethylphenoxy, 2,5-dimethylphenoxy, 2,6-dimethylphenoxy, 3,4,5-trimethylphenoxy, 2-

methoxyphenoxy, 3-methoxyphenoxy, 4-methoxyphenoxy, 2-ethoxyphenoxy, 3-ethoxyphenoxy, 4-ethoxyphenoxy, 4-isopropoxyphenoxy, 3-butoxyphenoxy, 4-pentyloxyphenoxy, 4-hexyloxyphenoxy, 3,4-dimethoxyphenoxy, 3,4-
5 diethoxyphenoxy, 2,4-dimethoxyphenoxy, 2,5-dimethoxyphenoxy, 2,6-dimethoxyphenoxy, 3,4,5-trimethoxyphenoxy, 2-trifluoromethoxyphenoxy, 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 2-(bromomethoxy)phenoxy, 3-(2-chloroethoxy)phenoxy, 4-
10 (2,3-dichloropropoxy)phenoxy, 4-(4-fluorobutoxy)phenoxy, 3-(5-chloropentyloxy)phenoxy, 4-(5-bromohexyloxy)phenoxy, 4-(5,6-dibromohexyloxy)phenoxy, 3,4-di(trifluoromethoxy)phenoxy, 3,4-di(4,4,4-
15 trichlorobutoxy)phenoxy, 2,4-di(3-chloro-2-methoxypropyl)phenoxy, 2,5-di(3-chloropropoxy)phenoxy, 2,6-di(2,2,2-trifluoroethoxy)phenoxy, 3,4,5-tri(trifluoromethoxy)phenoxy, 4-(2,2,2-trichloroethoxy)phenoxy, 2-methyl-4-
20 trifluoromethoxyphenoxy, 3-ethyl-4-trichloromethoxyphenoxy, 2-methoxy-4-trifluoromethoxyphenoxy, 3-ethoxy-4-trichloromethoxyphenoxy, 2-trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 4-trifluoromethylphenoxy, 2-
25 (bromomethyl)phenoxy, 3-(2-chloroethyl)phenoxy, 4-(2,3-dichloropropyl)phenoxy, 4-(4-fluorobutyl)phenoxy, 3-(5-chloropentyl)phenoxy, 4-(5-bromohexyl)phenoxy, 4-(5,6-dibromohexyl)phenoxy, 3,4-di(trifluoromethyl)phenoxy,

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3,4-di(4,4,4-trichlorobutyl)phenoxy, 2,4-di(3-chloro-2-methylpropyl)phenoxy, 2,5-di(3-chloropropyl)phenoxy, 2,6-di(2,2,2-trifluoroethyl)phenoxy, 3,4,5-tri(trifluoromethyl)phenoxy, 4-(2,2,2-trichloroethyl)phenoxy, 2-methyl-4-trifluoromethylphenoxy, 3-ethyl-4-trichloromethylphenoxy, 2-cyanophenoxy, 3-cyanophenoxy, 4-cyanophenoxy, 3,5-dicyanophenoxy, 3,4-dicyanophenoxy, 2,3-dicyanophenoxy, 2,4-dicyanophenoxy, 2,5-dicyanophenoxy, 2,6-dicyanophenoxy, 3,4,5-tricyanophenoxy, 2-cyano-4-methylphenoxy, 3-cyano-4-methoxyphenoxy, 3-cyano-5-trifluoromethylphenoxy, 4-cyano-3-trifluoromethoxyphenoxy groups.

Examples of the phenyl lower alkoxy group which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a halogen atom, a lower alkyl group which may have a halogen atom as a substituent, and a lower alkoxy group which may have a halogen atom as a substituent include, in addition to the above described phenyl lower alkoxy groups, phenylalkoxy groups which may be substituted on the phenyl ring with 1 to 3 groups selected from the group consisting of a halogen atom, a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, and a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, and of which the alkoxy moiety is a

linear or branched alkoxy group having 1 to 6 carbon atoms such as 2,5-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 3,5-difluorobenzyloxy, 2,6-difluorobenzyloxy, 3-trifluoromethylbenzyloxy, 2-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 3,4-dimethoxybenzyloxy, 3,5-dimethoxybenzyloxy, 2-chlorobenzyloxy, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 2-methylbenzyloxy, 3-methylbenzyloxy, 4-methylbenzyloxy, 3,4-dimethylbenzyloxy, 2,3-dimethylbenzyloxy, 2-methoxybenzyloxy, 3-methoxybenzyloxy, 4-methoxybenzyloxy, 2,3-dichlorobenzyloxy, 2,4-dichlorobenzyloxy, 2,5-dichlorobenzyloxy, 3,4-dichlorobenzyloxy, 2,6-dichlorobenzyloxy, 4-fluorobenzyloxy, 3-fluorobenzyloxy, 2-fluorobenzyloxy, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy, 2-trifluoromethoxybenzyloxy, 4-tert-butylbenzyloxy, 4-ethylbenzyloxy, 4-isopropylbenzyloxy, 4-methoxy-3-chlorobenzyloxy, 2-(4-methoxyphenyl)ethoxy, 2-(4-fluorophenyl)ethoxy, 2-(4-chlorophenyl)ethoxy, 2-(3-methoxyphenyl)ethoxy, 2-(4-methylphenyl)ethoxy, 3-methyl-4-chlorobenzyloxy, 4-(4-methoxyphenyl)butoxy, 2-(4-methylphenyl)ethoxy, 4-tert-butoxybenzyloxy, 3-chloro-6-methoxybenzyloxy, 4-methoxy-3-methylbenzyloxy, 2-(2-fluorophenyl)ethoxy, 1-(3-bromophenyl)ethoxy, 3-(4-iodophenyl)propoxy, 4-(2-bromophenyl)butoxy, 5-(3-chlorophenyl)pentyl, 6-(4-bromophenyl)hexyl, 1,1-dimethyl-2-(2,4-

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dichlorophenyl)ethoxy, 2-methyl-3-(2,4,6-trifluorophenyl)propoxy, 2-(2-ethylphenyl)ethoxy, 1-(3-propylphenyl)ethoxy, 3-(4-butylphenyl)propoxy, 4-(2-pentylphenyl)butoxy, 5-(3-hexylphenyl)pentylloxy, 6-(4-trifluoromethylphenyl)hexylloxy, 1,1-dimethyl-2-(2,4-dimethylphenyl)ethoxy, 2-methyl-3-[2,4,6-tri(trifluoromethyl)phenyl]propoxy, 2-(2-ethoxyphenyl)ethoxy, 1-(3-propoxyphenyl)ethoxy, 3-(4-butoxyphenyl)propoxy, 4-(2-pentylloxyphenyl)butoxy, 5-(3-hexylloxyphenyl)pentylloxy, 6-(4-trifluoromethoxyphenyl)hexylloxy, 1,1-dimethyl-2-(2,4-dimethoxyphenyl)ethoxy, 2-methyl-3-[2,4,6-tri(trifluoromethoxy)phenyl]propoxy groups.

Examples of the 1,2,3,4-tetrahydronaphthyl substituted lower alkyl group which may have 1 to 5 lower alkyl groups as substituents on the 1,2,3,4-tetrahydronaphthalene ring include 1,2,3,4-tetrahydronaphthyl substituted alkyl groups which may have 1 to 5 linear or branched alkyl groups having 1 to 6 carbon atoms as substituents on the 1,2,3,4-tetrahydronaphthalene ring, and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (1, 2, 5, or 6-)1,2,3,4-tetrahydronaphthylmethyl, 2-[(1, 2, 5, or 6-)1,2,3,4-tetrahydronaphthyl]ethyl, 1-[(1, 2, 5, or 6-)1,2,3,4-tetrahydronaphthyl]ethyl, 3-[(1, 2, 5, or 6-)1,2,3,4-tetrahydronaphthyl]propyl, 4-[(1, 2, 5, or 6-)1,2,3,4-tetrahydronaphthyl]butyl, 5-[(1, 2, 5, or 6-)1,2,3,4-

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tetrahydronaphthyl]pentyl, 6-[(1, 2, 5, or 6-)1,2,3,4-
 tetrahydronaphthyl]hexyl, 1,1-dimethyl-2-[(1, 2, 5, or
 6-)1,2,3,4-tetrahydronaphthyl]ethyl, 2-methyl-3-[(1, 2,
 5, or 6-)1,2,3,4-tetrahydronaphthyl]propyl, 1,1,4,4-
 5 tetramethyl(2, 3, 5, or 6-)1,2,3,4-
 tetrahydronaphthylmethyl, 1,1,4,4,5-
 pentamethyl(2,3,6,7, or 8-)1,2,3,4-
 tetrahydronaphthylmethyl, 1,4,4-trimethyl(2, 3, 5, 6,
 7, or 8-)1,2,3,4-tetrahydronaphthylmethyl, 5,6-
 10 dimethyl(2, 3, 7, or 8-)1,2,3,4-
 tetrahydronaphthylmethyl, 2-[1-methyl-(1, 2, 3, 4, 5,
 6, 7, or 8-)1,2,3,4-tetrahydronaphthyl]ethyl, 1-[2-
 ethyl-(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-
 tetrahydronaphthyl]ethyl, 3-[3-propyl-(1, 2, 3, 4, 5,
 15 6, 7, or 8-)1,2,3,4-tetrahydronaphthyl]propyl, 4-[(4-
 butyl-1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-
 tetrahydronaphthyl]butyl, 5-[5-pentyl-(1, 2, 3, 4, 6,
 7, or 8-)1,2,3,4-tetrahydronaphthyl]pentyl, 6-[6-hexyl-
 (1, 2, 3, 4, 5, 7, or 8-)1,2,3,4-
 20 tetrahydronaphthyl]hexyl, 1,1-dimethyl-2-[1,7-dimethyl-
 (1, 2, 3, 4, 5, 6, or 8-)1,2,3,4-
 tetrahydronaphthyl]ethyl, 2-methyl-3-[1,1,4-trimethyl-
 (2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-
 tetrahydronaphthyl]propyl groups.

25 Examples of the piperidinyl group which may
 have 1 to 3 lower alkyl groups as substituents on the
 piperidine ring include piperidinyl group which may
 have 1 to 3 linear or branched alkyl groups having 1 to

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6 carbon atoms as substituents on the piperidine ring such as (1, 2, 3, or 4-)piperidinyl, 1-methyl-(2, 3, or 4-)piperidinyl, 1-ethyl-(2, 3, or 4-)piperidinyl, 1-propyl-(2, 3, or 4-)piperidinyl, 1-isopropyl-(2, 3, or 4-)piperidinyl, 1-butyl-(2, 3, or 4-)piperidinyl, 1-isobutyl-(2, 3, or 4-)piperidinyl, 1-tert-butyl-(2, 3, or 4-)piperidinyl, 1-pentyl-(2, 3, or 4-)piperidinyl, 1-hexyl-(2, 3, or 4-)piperidinyl, 1,2-dimethyl-(3, 4, 5, or 6-)piperidinyl, 1,2,6-trimethyl-(3, 4, or 5-)piperidinyl groups.

Examples of the quinolyl lower alkyl group include quinolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a (2,3,4,5,6,7 or 8-)quinolyl-methyl group, 2-[(2,3,4,5,6,7 or 8-)quinolyl]ethyl group, 1-[(2,3,4,5,6,7 or 8-)quinolyl]ethyl group, 3-[(2,3,4,5,6,7 or 8-)quinolyl]propyl group, 4-[(2,3,4,5,6,7 or 8-)quinolyl]butyl group, 5-[(2,3,4,5,6,7 or 8-)quinolyl]pentyl group, and 6-[(2,3,4,5,6,7 or 8-)quinolyl]hexyl group.

Examples of the 1,2,3,4-tetrazolyl lower alkyl group which may have, on the tetrazole ring, a substituent selected from the group consisting of a lower alkyl group and a phenyl lower alkyl group include 1,2,3,4-tetrazolylalkyl groups which may have, on the tetrazole ring, a substituent selected from the group consisting of a linear or branched alkyl group having 1 to 6 carbon atoms and of which the alkyl

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moiety is a linear or branched alkyl group having 1 to 6 carbon atoms, the 1,2,3,4-tetrazolylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms, such as [(1 or 5-)1,2,3,4-tetrazolyl]methyl, 2-[(1 or 5-)1,2,3,4-tetrazolyl]ethyl, 1-[(1 or 5-)1,2,3,4-tetrazolyl]ethyl, 3-[(1 or 5-)1,2,3,4-tetrazolyl]propyl, 4-[(1 or 5-)1,2,3,4-tetrazolyl]butyl, 5-[(1 or 5-)1,2,3,4-tetrazolyl]pentyl, 6-[(1 or 5-)1,2,3,4-tetrazolyl]hexyl, 5-[1-methyl-5-(1,2,3,4-tetrazolyl)]pentyl, 6-[1-methyl-5-(1,2,3,4-tetrazolyl)]hexyl, 5-methyl-1-(1,2,3,4-tetrazolyl)methyl, 2-[5-ethyl-1-(1,2,3,4-tetrazolyl)]hexyl, 1,1-dimethyl-2-[(1 or 5-)1,2,3,4-tetrazolyl]ethyl, 2-methyl-3-[(1 or 5-)1,2,3,4-tetrazolyl]propyl, [1-methyl-5-(1,2,3,4-tetrazolyl)]methyl, [1-ethyl-5-(1,2,3,4-tetrazolyl)]methyl, 2-[1-propyl-5-(1,2,3,4-tetrazolyl)]ethyl, 1-[1-butyl-5-(1,2,3,4-tetrazolyl)]ethyl, 3-[1-pentyl-5-(1,2,3,4-tetrazolyl)]propyl, 3-[5-propyl-1-(1,2,3,4-tetrazolyl)]propyl, 4-[5-butyl-1-(1,2,3,4-tetrazolyl)]butyl, 5-[5-pentyl-1-(1,2,3,4-tetrazolyl)]pentyl, 6-[5-hexyl-1-(1,2,3,4-tetrazolyl)]hexyl, [1-ethyl-5-(1,2,3,4-tetrazolyl)]methyl, [1-benzyl-5-(1,2,3,4-tetrazolyl)]methyl, 1-[(2-phenylethyl)-5-(1,2,3,4-tetrazolyl)]methyl, 2-[1-(3-phenylpropyl)-5-(1,2,3,4-

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tetrazolyl)]ethyl, 1-[1-(4-phenylbutyl)-5-(1,2,3,4-tetrazolyl)]ethyl, 3-[1-(5-phenylpentyl)-5-(1,2,3,4-tetrazolyl)]propyl, 4-[1-(6-phenylhexyl)-5-(1,2,3,4-tetrazolyl)]butyl, 5-[1-(1,1-dimethyl-2-phenylethyl)-5-(1,2,3,4-tetrazolyl)]methyl, 6-[1-(2-methyl-3-phenylpropyl)-5-(1,2,3,4-tetrazolyl)]hexyl, 5-benzyl-1-(1,2,3,4-tetrazolyl)methyl, 2-[5-(1-phenylethyl)-1-(1,2,3,4-tetrazolyl)]ethyl, 3-[5-(3-phenylpropyl)-1-(1,2,3,4-tetrazolyl)]propyl, 4-[5-(4-phenylbutyl)-1-(1,2,3,4-tetrazolyl)]butyl, 5-[5-(5-phenylpentyl)-1-(1,2,3,4-tetrazolyl)]pentyl, 6-[5-(6-phenylhexyl)-1-(1,2,3,4-tetrazolyl)]hexyl groups.

Examples of the thiazolyl lower alkyl group which may have a phenyl group as a substituent on the thiazole ring include thiazolylalkyl groups which may have 1 or 2 phenyl groups as substituents on the thiazole ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(2, 4, or 5-)thiazolyl]methyl, 2-[(2, 4, or 5-)thiazolyl]ethyl, 1-[(2, 4, or 5-)thiazolyl]ethyl, 3-[(2, 4, or 5-)thiazolyl]propyl, 4-[(2, 4, or 5-)thiazolyl]butyl, 5-[(2, 4, or 5-)thiazolyl]pentyl, 6-[(2, 4, or 5-)thiazolyl]hexyl, 1,1-dimethyl-2-[(2, 4, or 5-)thiazolyl]ethyl, 2-methyl-3-[(2, 4, or 5-)thiazolyl]propyl, [2-phenyl-(4 or 5-)thiazolyl]-methyl, 2-[4-phenyl-(2 or 5-)thiazolyl]ethyl, 1-[5-phenyl-(2 or 4-)thiazolyl]ethyl, 3-[2-phenyl-(2 or 5-)thiazolyl]propyl, 4-(2,4-diphenyl-5-thiazolyl)butyl,

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5-(2,5-diphenyl-4-thiazolyl)pentyl, 6-(4,5-diphenyl-2-thiazolyl)hexyl, 1,1-dimethyl-2-[2-phenyl-(4 or 5-)thiazolyl]ethyl, 2-methyl-3-[4-phenyl-(2 or 5-)thiazolyl]propyl, [4-phenyl-(2 or 5-)thiazolyl]-methyl, [5-phenyl-(2 or 4-)thiazolyl]methyl, (2,4-diphenyl-5-thiazolyl)methyl, (2,5-diphenyl-4-thiazolyl)methyl, (4,5-diphenyl-2-thiazolyl)methyl groups.

Examples of the benzoyl lower alkyl group which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a lower alkoxy group and a halogen atom include benzoylalkyl groups which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkoxy group having 1 to 6 carbon atoms and a halogen atom such as benzoylmethyl, 2-benzoylethyl, 1-benzoylethyl, 3-benzoylpropyl, 4-benzoylbutyl, 5-benzoylpentyl, 6-benzoylhexyl, 1,1-dimethyl-2-benzoylethyl, 2-methyl-3-benzoylpropyl, 4-fluorobenzoylmethyl, 2-chlorobenzoylmethyl, 3-chlorobenzoylmethyl, 4-chlorobenzoylmethyl, 2-(4-fluorobenzoyl)ethyl, 2-(4-chlorobenzoyl)ethyl, 3,4-dibromobenzoylmethyl, 3,4-diiodobenzoylmethyl, 2,4-difluorobenzoylmethyl, 2,5-dichlorobenzoylmethyl, 2,6-dichlorobenzoylmethyl, 3,4,5-trifluorobenzoylmethyl, 3-(4-chlorobenzoyl)propyl, 1-(2-bromobenzoyl)ethyl, 4-(3-fluorobenzoyl)butyl, 5-(4-iodobenzoyl)pentyl, 6-(4-chlorobenzoyl)hexyl, 1,1-dimethyl-2-(3-

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fluorobenzoyl)ethyl, 2-methyl-3-(4-chlorobenzoyl)propyl, 2-methoxybenzoylmethyl, 2-(3-methoxybenzoyl)ethyl, 2-(4-methoxybenzoyl)ethyl, 4-methoxybenzoylmethyl, 1-(2-ethoxybenzoyl)ethyl, 3-(3-ethoxybenzoyl)propyl, 4-(4-ethoxybenzoyl)butyl, 5-(4-isopropoxybenzoyl)pentyl, 6-(3-butoxybenzoyl)hexyl, 1,1-dimethyl-2-(4-pentyloxybenzoyl)ethyl, 2-methyl-3-(4-hexyloxybenzoyl)propyl, 3,4-dimethoxybenzoylmethyl, 3,4-diethoxybenzoylmethyl, 2,4-dimethoxybenzoylmethyl, 2,5-dimethoxybenzoylmethyl, 2,6-dimethoxybenzoylmethyl, 3,4,5-trimethoxybenzoylmethyl, 2-chloro-4-methoxybenzoylmethyl, 3-fluoro-5-ethoxybenzoylmethyl groups.

Examples of the piperidinyl lower alkyl group which may have a lower alkyl group as a substituent on the piperidine ring include piperidinylalkyl groups which may have 1 to 3 linear or branched alkyl groups having 1 to 6 carbon atoms on the piperidine ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(1, 2, 3, or 4-)piperidinyl]methyl, 2-[(1, 2, 3, or 4-)piperidinyl]ethyl, 1-[(1, 2, 3, or 4-)piperidinyl]ethyl, 3-[(1, 2, 3, or 4-)piperidinyl]propyl, 4-[(1, 2, 3, or 4-)piperidinyl]butyl, 5-[(1, 2, 3, or 4-)piperidinyl]pentyl, 6-[(1, 2, 3, or 4-)piperidinyl]hexyl, 1,1-dimethyl-2-[(1, 2, 3, or 4-)piperidinyl]ethyl, 2-methyl-3-[(1, 2, 3, or 4-)piperidinyl]propyl, [1-methyl-(2, 3, or

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4-)piperidinyl]methyl, 2-[1-ethyl-(2, 3, or
 4-)piperidinyl]ethyl, 1-[4-propyl-(1, 2, or
 3-)piperidinyl]ethyl, 3-[3-isopropyl-(1, 2, 4, 5, or
 6-)piperidinyl]propyl, 4-[2-butyl-(1, 3, 4, 5, or
 5 6-)piperidinyl]butyl, 5-[1-isobutyl-(2, 3, or
 4-)piperidinyl]pentyl, 6-[1-tert-butyl-(2, 3, or
 4-)piperidinyl]hexyl, 1,1-dimethyl-2-[4-pentyl-(1, 2,
 or 3-)piperidinyl]ethyl, 2-methyl-3-[1-hexyl-(2, 3, or
 4-)piperidinyl]propyl, [1,2-dimethyl-(3, 4, 5, or
 10 6-)piperidinyl]methyl, [1,2,6-trimethyl-(3, 4, or
 5-)piperidinyl]methyl groups.

Examples of the imidazolyl group which may
 have 1 to 3 phenyl groups as substituents on the
 imidazole ring include imidazolyl groups which may have
 15 1 to 3 phenyl groups as substituents on the imidazole
 ring such as a (1,2,4 or 5-)imidazolyl group, 1-phenyl-
 (2,4 or 5-)imidazolyl group, 2-phenyl-(1,4 or
 5-)imidazolyl group, 4-phenyl-(1,2 or 5-)imidazolyl
 group, 5-phenyl-(1,2 or 4-)imidazolyl group, 1,2-
 20 diphenyl-(4 or 5-)imidazolyl group, 2,4-diphenyl-(1 or
 5-)imidazolyl group, 4,5-diphenyl-(1 or 2-)imidazolyl
 group, 2,5-diphenyl-(1 or 4-)imidazolyl group, and
 2,4,5-triphenyl-1-imidazolyl group.

Examples of the benzimidazolyl group which
 25 may have 1 to 3 lower alkyl groups as substituents on
 the benzimidazole ring include benzimidazolyl group
 which may have 1 to 3 linear or branched alkyl groups
 having 1 to 6 carbon atoms as substituents on the

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benzimidazole ring such as (1, 2, 4, 5, 6, or
 7-)benzimidazolyl, 1-methyl-(2, 4, 5, 6, or
 7-)benzimidazolyl, 2-ethyl-(1, 4, 5, 6, or
 7-)benzimidazolyl, 4-propyl-(1, 2, 5, 6, or
 5 7-)benzimidazolyl, 5-butyl-(1, 2, 4, 6, or
 7-)benzimidazolyl, 6-pentyl-(1, 2, 4, 5, or
 7-)benzimidazolyl, 7-hexyl-(1, 2, 4, 5, or
 6-)benzimidazolyl, 1-ethyl-(2, 4, 5, 6, or
 7-)benzimidazolyl]hexyl, 1-butyl-(2, 4, 5, 6, or
 10 7-)benzimidazolyl, 1-isopropyl-(1, 2, 4, 5, 6, or
 7-)benzimidazolyl, 1,2-dimethyl-(4, 5, 6, or
 7-)benzimidazolyl, 1-methyl-4-ethyl-(2, 5, 6, or
 7-)benzimidazolyl, 1-propyl-5-methyl-(2, 4, 6, or
 7-)benzimidazolyl, 1,2,5-trimethyl-(2, 4, 5, 6, or
 15 7-)benzimidazolyl groups.

Examples of the pyridyl lower alkoxy group
 include pyridylalkoxy group of which the alkyl moiety
 is a linear or branched alkyl group having 1 to 6
 carbon atoms such as a (2,3 or 4-)pyridylmethoxy group,
 20 2-[(2,3 or 4-)pyridyl]ethoxy group, 1-[(2,3 or
 4-)pyridyl]ethoxy group, 3-[(2,3 or 4-)pyridyl]propoxy
 group, 4-[(2,3 or 4-)pyridyl]butoxy group, 1-1-
 dimethyl-2-[(2,3 or 4-)pyridyl]ethoxy group, 5-[(2,3 or
 4-)pyridyl]pentyloxy group, 6-[(2,3 or
 25 4-)pyridyl]hexyloxy group, 1-[(2,3 or
 4-)pyridyl]isopropoxy group, and 2-methyl-3-[(2,3 or
 4-)pyridyl]propoxy group.

Examples of the 1,2,3,4-tetrahydroquinolyl

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lower alkyl group which may have an oxo group as a substituent on the tetrahydroquinoline ring include 1,2,3,4-tetrahydroquinolylalkyl groups which may have 1 or 2 oxo groups as substituents on the

5 tetrahydroquinoline ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolylmethyl, 2-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]ethyl, 1-[(1, 2,

10 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]ethyl, 3-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]propyl, 4-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]butyl, 5-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]pentyl, 6-[(1,

15 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]hexyl, 1,1-dimethyl-2-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]ethyl, 2-methyl-3-[(1, 2, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]propyl, [2-oxo-(1, 3, 4, 5, 6, 7, or

20 8-)1,2,3,4-tetrahydroquinolyl]methyl, [4-oxo-(1, 2, 3, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]methyl, [2,4-dioxo-(1, 3, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]methyl, 2-[2-oxo-(1, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]ethyl, 3-[4-oxo-(1, 2,

25 3, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]propyl, 4-[2,4-dioxo-(1, 3, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]butyl, 5-[2-oxo-(1, 3, 4, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]pentyl, 6-[4-oxo-(1,

2, 3, 5, 6, 7, or 8-)1,2,3,4-tetrahydroquinolyl]hexyl groups.

Examples of the 1,3,4-oxadiazolyl lower alkyl group which may have an oxo group as a substituent on the oxadiazole ring include 1,3,4-oxadiazolylalkyl groups which may have an oxo group as a substituent on the oxadiazole ring and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as (2 or 5-)1,3,4-oxadiazolylmethyl, 2-[(2 or 5-)1,3,4-oxadiazolyl]ethyl, 1-[(2 or 5-)1,3,4-oxadiazolyl]ethyl, 3-[(2 or 5-)1,3,4-oxadiazolyl]propyl, 4-[(2 or 5-)1,3,4-oxadiazolyl]butyl, 5-[(2 or 5-)1,3,4-oxadiazolyl]pentyl, 6-[(2 or 5-)1,3,4-oxadiazolyl]hexyl, 1,1-dimethyl-2-[(2 or 5-)1,3,4-oxadiazolyl]ethyl, 2-methyl-3-[(2 or 5-)1,3,4-oxadiazolyl]propyl, 2-oxo-[(3 or 5-)1,3,4-oxadiazolyl]methyl, 5-oxo-[(2 or 3-)1,3,4-oxadiazolyl]methyl, 2-[2-oxo-(3 or 5-)(1,3,4-oxadiazolyl)]ethyl, 1-[5-oxo-(2 or 3-)1,3,4-oxadiazolyl]ethyl, 3-[(2 or 5-)1,3,4-oxadiazolyl]propyl, 4-[2-oxo(3 or 5-)1,3,4-oxadiazolyl]butyl, 5-[5-oxo(2 or 3-)1,3,4-oxadiazolyl]pentyl, 6-[2-oxo(3 or 5-)1,3,4-oxadiazolyl]hexyl, 1,1-dimethyl-2-[5-oxo(2 or 3-)1,3,4-oxadiazolyl]ethyl, 2-methyl-3-[2-oxo(3 or 5-)1,3,4-oxadiazolyl]propyl groups.

Examples of the thienyl lower alkyl group

include thienylalkyl groups of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as a (2 or 3-)thienylmethyl group, 2-[(2 or 3-)thienyl]ethyl group, 1-[(2 or 3-)thienyl]ethyl group, 3-[(2 or 3-)thienyl]propyl group, 4-[(2 or 3-)thienyl]butyl group, 5-[(2 or 3-)thienyl]pentyl group, 6-[(2 or 3-)thienyl]hexyl group, 1,1-dimethyl-2-[(2 or 3-)thienyl]ethyl group, and 2-methyl-3-[(2 or 3-)thienyl]propyl group.

10 Examples of the pyrimidinylcarbonyl group which may have an oxo group as a substituent on the pyrimidine ring include pyrimidinylcarbonyl groups which may have 1 to 3 oxo groups as substituents on the pyrimidine ring such as a (2,3,4 or
15 6-)pyrimidinylcarbonyl group, 2,6-dioxo-(1,3,4 or 5-)pyrimidinylcarbonyl group, 2-oxo-(1,3,4,5 or 6-)pyrimidinylcarbonyl group, 6-oxo-(1,2,3,4 or 5-)pyrimidinylcarbonyl group, 4-oxo-(1,2,3,4 or 6-)pyrimidinylcarbonyl group, 2,4-dioxo-(1,3,4 or
20 6-)pyrimidinylcarbonyl group, and 2,4,6-trioxo-(1,3 or 5-)pyrimidinylcarbonyl group.

 Examples of the lower alkoxy lower alkoxy group include linear or branched alkoxy groups having 1 to 6 carbon atoms which may have a linear or branched
25 alkoxy group having 1 to 6 carbon atoms as a substituent such as a methoxymethoxy group, 1-ethoxyethoxy group, 2-methoxyethoxy group, 2-propoxyethoxy group, 3-isopropoxypropoxy group, 4-

butoxybutoxy group, 5-pentyloxybutoxy group, 6-hexyloxyhexyloxy group, 1,1-dimethyl-2-methoxyethoxy group, 2-methyl-3-ethoxypropoxy group, and 3-methoxypropoxy group.

5 Examples of the lower alkoxycarbonyl lower alkoxy group include alkoxycarbonylalkoxy groups of which both alkoxy moieties are linear or branched alkoxy groups having 1 to 6 carbon atoms such as methoxycarbonylmethoxy, ethoxycarbonylmethoxy, 2-
10 methoxycarbonylethoxy, 2-ethoxycarbonylethoxy, 1-ethoxycarbonylethoxy, 3-methoxycarbonylpropoxy, 3-ethoxycarbonylpropoxy, 4-ethoxycarbonylbutoxy, 5-isopropoxycarbonylpentyloxy, 6-propoxycarbonylhexyloxy, 1,1-dimethyl-2-butoxycarbonylethoxy, 2-methyl-3-tert-
15 butoxycarbonylpropoxy, 2-pentyloxycarbonylethoxy, hexyloxycarbonylmethoxy groups.

 Examples of the carboxy lower alkoxy group include carboxyalkoxy groups of which the alkoxy moiety is a linear or branched alkoxy group having 1 to 6
20 carbon atoms such as a carboxymethoxy group, 2-carboxyethoxy group, 1-carboxyethoxy group, 3-carboxypropoxy group, 4-carboxybutoxy group, 5-carboxypentyloxy group, 6-carboxyhexyloxy group, 1,1-dimethyl-2-carboxyethoxy group, and 2-methyl-3-
25 carboxypropoxy group.

 Examples of the phenoxy lower alkanoyl group include phenoxyalkanoyl groups of which the alkanoyl moiety is a linear or branched alkanoyl group having 2

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to 6 carbon atoms such as a 2-phenoxyacetyl group, 3-phenoxypropionyl group, 2-phenoxypropionyl group, 4-phenoxybutyryl group, 5-phenoxyentanoyl group, 6-phenoxyhexanoyl group, 2,2-dimethyl-2-phenoxypropionyl group, and 2-methyl-3-phenoxypropionyl group.

Examples of the 1,2,3,4-tetrahydroquinolylcarbonyl group which may have an oxo group as a substituent on the tetrahydroquinoline ring include 1,2,3,4-tetrahydroquinolylcarbonyl groups which may have 1 or 2 oxo groups as substituents on the tetrahydroquinoline ring such as a [(1,3,4,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl]carbonyl group, [2-oxo-(1,3,4,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl]carbonyl group, [4-oxo-(1,2,3,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl]carbonyl group, and [2,4-dioxo-(1,3,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl]carbonyl group.

Examples of the 1,2,3,4-tetrahydroquinolyl group which may have an oxo group as a substituent on the tetrahydroquinoline ring include 1,2,3,4-tetrahydroquinolyl groups which may have 1 or 2 oxo groups as substituents on the tetrahydroquinoline ring such as a (1,2,3,4,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl group, 2-oxo-(1,3,4,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl group, 4-oxo-(1,2,3,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl group, and 2,4-dioxo-(1,3,5,6,7 or 8-)1,2,3,4-tetrahydroquinolyl group.

Examples of the amino group which may have a

lower alkoxycarbonyl group as a substituent include amino groups which may have a linear or branched chain alkoxycarbonyl group having 1 to 6 carbon atoms such as an amino group, methoxycarbonylamino group,

5 ethoxycarbonylamino group, propoxycarbonylamino group, isopropoxycarbonylamino group, butoxycarbonylamino group, tert-butoxycarbonylamino group, pentyloxycarbonylamino group, and hexyloxycarbonylamino group.

10 Examples of the benzoyl group which may have 1 to 3 lower alkoxy groups as substituents on the phenyl ring include benzoyl groups which may have 1 to 3 linear or branched alkoxy groups having 1 to 6 carbon atoms as substituents on the phenyl ring such as a
15 benzoyl group, 2-methoxybenzoyl group, 3-methoxybenzoyl group, 4-methoxybenzoyl group, 2-ethoxybenzoyl group, 3-ethoxybenzoyl group, 4-ethoxybenzoyl group, 4-isopropoxybenzoyl group, 3-butoxybenzoyl group, 4-pentyloxybenzoyl group, 4-hexyloxybenzoyl group, 3,4-dimethoxybenzoyl group, 3,4-diethoxybenzoyl group, 2,4-dimethoxybenzoyl group, 2,5-dimethoxybenzoyl group, 2,6-dimethoxybenzoyl group, and 3,4,5-trimethoxybenzoyl
20 group.

Examples of the lower alkyl group which have
25 1 or 2 phenyls which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a lower alkoxycarbonyl group, a cyano group, a nitro group, a phenyl group, a halogen atom, a lower alkyl

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group which may have a halogen atom as a substituent, a lower alkoxy group, and a lower alkylthio group include, in addition to the above described phenyl lower alkyl groups, linear or branched alkyl groups which have 1 to 6 carbon atoms which may have, on the phenyl ring, 1 to 3 substituents selected from the group consisting of a linear or branched alkoxycarbonyl group having 1 to 6 carbon atoms, a cyano group, a nitro group, a phenyl group, a halogen atom, a linear or branched alkyl group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, a linear or branched alkoxy group having 1 to 6 carbon atoms which may have 1 to 3 halogen atoms as substituents, and a linear or branched alkylthio group having 1 to 6 carbon atoms such as 1,1-diphenylmethyl, 1,1-di(4-fluorophenyl)methyl, 1-phenyl-1-(4-methoxyphenyl)methyl, 3,3-diphenylpropyl, 2,5-difluorobenzyl, 2,4-difluorobenzyl, 3,4-difluorobenzyl, 3,5-difluorobenzyl, 2,6-difluorobenzyl, 3-trifluoromethylbenzyl, 2-trifluoromethylbenzyl, 4-trifluoromethylbenzyl, 3,4-dimethoxybenzyl, 3,5-dimethoxybenzyl, 2-chlorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 2-methylbenzyl, 3-methylbenzyl, 4-methylbenzyl, 3,4-dimethylbenzyl, 2,3-dimethylbenzyl, 2-methoxybenzyl, 3-methoxybenzyl, 4-cyanobenzyl, 2-cyanobenzyl, 3-cyanobenzyl, 4-methoxybenzyl, 2,3-dichlorobenzyl, 2,4-dichlorobenzyl, 2,5-dichlorobenzyl, 3,4-dichlorobenzyl, 2,6-dichlorobenzyl, 4-fluorobenzyl,

3-fluorobenzyl, 2-fluorobenzyl, 4-nitrobenzyl, 3-nitrobenzyl, 2-nitrobenzyl, 3-trifluoromethoxybenzyl, 4-trifluoromethoxybenzyl, 2-trifluoromethoxybenzyl, 4-methoxycarbonylbenzyl, 3-methoxycarbonylbenzyl, 4-tert-butylbenzyl, 4-ethylbenzyl, 4-isopropylbenzyl, 4-methoxy-3-chlorobenzyl, 2-(4-methoxyphenyl)ethyl, 2-(4-fluorophenyl)ethyl, 2-(4-chlorophenyl)ethyl, 2-(3-methoxyphenyl)ethyl, 2-(4-methylphenyl)ethyl, 4-phenylbenzyl, 3,3-diphenylpropyl, 3-methyl-4-nitrobenzyl, 4-(4-methoxyphenyl)butyl, 2-(4-methylphenyl)ethyl, 4-tert-butoxycarbonylbenzyl, 3-chloro-6-methoxybenzyl, 4-nitro-3-methylbenzyl, 4-tert-butylbenzyl, 2-(2-ethoxycarbonylphenyl)ethyl, 1-(3-propoxycarbonylphenyl)ethyl, 3-(4-pentyloxycarbonylphenyl)propyl, 4-(3-hexyloxycarbonylphenyl)butyl, 5-(3,4-dimethoxycarbonylphenyl)pentyl, 6-(3,4,5-diethoxycarbonylphenyl)hexyl, 1,1-dimethyl-2-(4-butoxycarbonylphenyl)ethyl, 2-methyl-3-(4-methoxycarbonylphenyl)propyl, 2-(2-cyanophenyl)ethyl, 1-(3-cyanophenyl)ethyl, 3-(4-cyanophenyl)propyl, 4-(2-cyanophenyl)butyl, 5-(3-cyanophenyl)pentyl, 6-(4-cyanophenyl)hexyl, 1,1-dimethyl-2-(2,4-dicyanophenyl)ethyl, 2-methyl-3-(2,4,6-tricyanophenyl)propyl, 2-(2-nitrophenyl)ethyl, 1-(3-nitrophenyl)ethyl, 3-(4-nitrophenyl)propyl, 4-(2-nitrophenyl)butyl, 5-(3-nitrophenyl)pentyl, 6-(4-nitrophenyl)hexyl, 1,1-dimethyl-2-(2,4-

dinitrophenyl)ethyl, 2-methyl-3-(2,4,6-trinitrophenyl)propyl, 2-(2-phenylphenyl)ethyl, 1-(3-phenylphenyl)ethyl, 3-(4-phenylphenyl)propyl, 4-(2-phenylphenyl)butyl, 5-(3-phenylphenyl)pentyl, 6-(4-phenylphenyl)hexyl, 1,1-dimethyl-2-(2,4-diphenylphenyl)ethyl, 2-methyl-3-(2,4,6-triphenylphenyl)propyl, 2-(2-fluorophenyl)ethyl, 1-(3-bromophenyl)ethyl, 3-(4-iodophenyl)propyl, 4-(2-bromophenyl)butyl, 5-(3-chlorophenyl)pentyl, 6-(4-bromophenyl)hexyl, 1,1-dimethyl-2-(2,4-dichlorophenyl)ethyl, 2-methyl-3-(2,4,6-trifluorophenyl)propyl, 2-(2-ethylphenyl)ethyl, 1-(3-propylphenyl)ethyl, 3-(4-butylphenyl)propyl, 4-(2-pentylphenyl)butyl, 5-(3-hexylphenyl)pentyl, 6-(4-trifluoromethylphenyl)hexyl, 1,1-dimethyl-2-(2,4-dimethylphenyl)ethyl, 2-methyl-3-[2,4,6-tri(trifluoromethyl)phenyl]propyl, 2-(2-ethoxyphenyl)ethyl, 1-(3-propoxyphenyl)ethyl, 3-(4-butoxyphenyl)propyl, 4-(2-pentyloxyphenyl)butyl, 5-(3-hexyloxyphenyl)pentyl, 6-(4-trifluoromethoxyphenyl)hexyl, 1,1-dimethyl-2-(2,4-dimethoxyphenyl)ethyl, 2-methyl-3-[2,4,6-tri(trifluoromethoxy)phenyl]propyl, 2-methylthiobenzyl, 3-methylthiobenzyl, 4-methylthiobenzyl, 3,4-dimethylthiobenzyl, 2,3-dimethylthiobenzyl, 2-(2-ethylthiophenyl)ethyl, 2-(4-methylthiophenyl)ethyl, 1-(3-propylthiophenyl)ethyl, 3-(4-butylthiophenyl)propyl, 4-(2-pentylthiophenyl)butyl, 5-(3-

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hexylthiophenyl)pentyl, 6-(4-methylthiophenyl)hexyl,
1,1-dimethyl-2-(2,4-dimethylthiophenyl)ethyl, 2-methyl-
3-[2,4,6-trimethylthiophenyl]propyl, 2-methyl-4-
cyanobenzyl, 3-ethoxy-4-ethoxycarbonylbenzyl, 4-phenyl-
5 3-nitrobenzyl, 3-fluoro-4-methoxybenzyl, 4-
trifluoromethyl-3-cyanobenzyl, 3-trifluoromethoxy-3-
fluorobenzyl groups.

Examples of the phenyl group which may have,
on the phenyl ring, 1 to 3 groups selected from the
10 group consisting of a linear or branched alkoxy group
having 1 to 6 carbon atoms which may have a halogen
atom as a substituent and a linear or branched alkyl
group having 1 to 6 carbon atoms which may have a
halogen atom as a substituent include phenyl groups
15 which may have, on the phenyl ring, 1 to 3 groups
selected from the group consisting of a linear or
branched alkoxy group having 1 to 6 carbon atoms which
may have 1 to 3 halogen atoms as substituents and a
linear or branched alkyl group having 1 to 6 carbon
20 atoms which may have 1 to 3 halogen atoms as
substituents such as phenyl, 2-methylphenyl, 3-
methylphenyl, 4-methylphenyl, 2-ethylphenyl, 3-
ethylphenyl, 4-ethylphenyl, 4-isopropylphenyl, 3-
butylphenyl, 4-pentylphenyl, 4-hexylphenyl, 3,4-
25 dimethylphenyl, 3,4-diethylphenyl, 2,4-dimethylphenyl,
2,5-dimethylphenyl, 2,6-dimethylphenyl, 3,4,5-
trimethylphenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-
methoxyphenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-

ethoxyphenyl, 4-isopropoxyphenyl, 3-butoxyphenyl, 4-pentyloxyphenyl, 4-hexyloxyphenyl, 3,4-dimethoxyphenyl, 3,4-diethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 3,4,5-trimethoxyphenyl, 2-trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-(bromomethoxy)phenyl, 3-(2-chloroethoxy)phenyl, 4-(2,3-dichloropropoxy)phenyl, 4-(4-fluorobutoxy)phenyl, 3-(5-chloropentyloxy)phenyl, 4-(5-bromohexyloxy)phenyl, 4-(5,6-dibromohexyloxy)phenyl, 3,4-di(trifluoromethoxy)phenyl, 3,4-di(4,4,4-trichlorobutoxy)phenyl, 2,4-di(3-chloro-2-methoxypropyl)phenyl, 2,5-di(3-chloropropoxy)phenyl, 2,6-di(2,2,2-trifluoroethoxy)phenyl, 3,4,5-tri(trifluoromethoxy)phenyl, 4-(2,2,2-trichloroethoxy)phenyl, 2-methyl-4-trifluoromethoxyphenyl, 3-ethyl-4-trichloromethoxyphenyl, 2-methoxy-4-trifluoromethoxyphenyl, 3-ethoxy-4-trichloromethoxyphenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-(bromomethyl)phenyl, 3-(2-chloroethyl)phenyl, 4-(2,3-dichloropropyl)phenyl, 4-(4-fluorobutyl)phenyl, 3-(5-chloropentyl)phenyl, 4-(5-bromohexyl)phenyl, 4-(5,6-dibromohexyl)phenyl, 3,4-di(trifluoromethyl)phenyl, 3,4-di(4,4,4-trichlorobutyl)phenyl, 2,4-di(3-chloro-2-methylpropyl)phenyl, 2,5-di(3-chloropropyl)phenyl, 2,6-di(2,2,2-trifluoroethyl)phenyl, 3,4,5-

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tri(trifluoromethyl)phenyl, 4-(2,2,2-trichloroethyl)phenyl, 2-methyl-4-trifluoromethylphenyl, 3-ethyl-4-trichloromethylphenyl groups.

- 5 Examples of the pyrrolidinyl lower alkyl group which may have, on the pyrrolidine ring, 1 to 3 lower alkyl groups which may have a hydroxyl group as a substituent include pyrrolidinylalkyl groups which may have, on the pyrrolidine ring, 1 to 3 linear or
- 10 branched alkyl groups having 1 to 6 carbon atoms which may have 1 to 3 hydroxyl groups as substituents and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(1, 2, or 3-)pyrrolidinyl]methyl, 2-[(1, 2, or 3-)pyrrolidinyl]-
- 15 ethyl, 1-[(1, 2, or 3-)pyrrolidinyl]ethyl, 3-[(1, 2, or 3-)pyrrolidinyl]propyl, 4-[(1, 2, or 3-)pyrrolidinyl]butyl, 5-[(1, 2, or 3-)pyrrolidinyl]pentyl, 6-[(1, 2, or 3-)pyrrolidinyl]hexyl, 1,1-dimethyl-2-[(1, 2, or 3-)pyrrolidinyl]ethyl, 2-methyl-3-[(1, 2, or
- 20 3-)pyrrolidinyl]propyl, [1-methyl-(2 or 3-)pyrrolidinyl]methyl, 2-[2-ethyl-(1, 3, 4, or 5-)pyrrolidinyl]ethyl, 1-[3-propyl-(1, 2, 4, or 5-)pyrrolidinyl]ethyl, 3-[1-butyl-(2 or 3-)pyrrolidinyl]propyl, 4-[2-pentyl-(1, 3, 4, or
- 25 5-)pyrrolidinyl]butyl, 5-[3-hexyl-(1, 2, 4, or 5-)pyrrolidinyl]pentyl, 6-[1,2-dimethyl-(3, 4, or 5-)pyrrolidinyl]hexyl, 1,1-dimethyl-2-[1,2,3-trimethyl-(4 or 5-)pyrrolidinyl]ethyl, 2-methyl-3-[1-ethyl-2-

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methyl-(3, 4, or 5-)pyrrolidinyl]propyl, [1-(2-
 hydroxyethyl)-(2 or 3-)pyrrolidinyl]methyl, [2-
 hydroxymethyl-(1, 3, 4, or 5-)pyrrolidinyl]methyl, 2-
 [2-hydroxymethyl-(1, 3, 4, or 5-)pyrrolidinyl]ethyl, 1-
 5 [3-(3-hydroxypropyl)-(1, 2, 4, or
 5-)pyrrolidinyl]ethyl, 3-[1-(4-hydroxybutyl)-(2 or
 3-)pyrrolidinyl]propyl, 4-[2-(5-hydroxypentyl)-(1, 3,
 4, or 5-)pyrrolidinyl]butyl, 5-[3-(6-hydroxyhexyl)-(1,
 2, 4, or 5-)pyrrolidinyl]pentyl, 6-[1,2-
 10 dihydroxymethyl-(3, 4, or 5-)pyrrolidinyl]hexyl, 1,1-
 dimethyl-2-[1,2,3-trihydroxymethyl-(4 or
 5-)pyrrolidinyl]ethyl, 2-methyl-3-[2-(1,2-
 hydroxyethyl)-(1, 3, 4, or 5-)pyrrolidinyl]propyl, [2-
 (2,3,4-trihydroxybutyl)-(1, 3, 4, or
 15 5-)pyrrolidinyl]methyl groups.

Examples of the amino substituted lower alkyl
 group which may have a substituent selected from the
 group consisting of a phenyl group and a lower alkyl
 group include linear or branched alkyl groups having 1
 20 to 6 carbon atoms substituted with an amino group which
 may have 1 or 2 substituents selected from the group
 consisting of a phenyl group and a linear or branched
 alkyl group having 1 to 6 carbon atoms such as
 aminomethyl, 2-aminomethyl, 1-aminoethyl, 3-
 25 aminopropyl, 4-aminobutyl, 5-aminopentyl, 6-aminoethyl,
 1,1-dimethyl-2-aminoethyl, N,N-diethyl-2-aminoethyl, 2-
 methyl-3-aminopropyl, methylaminomethyl, 1-
 ethylaminoethyl, 2-propylaminoethyl, 3-

isopropylaminopropyl, 4-butylaminobutyl, 5-pentylaminopentyl, 6-hexylaminohexyl, dimethylaminomethyl, 2-diisopropylaminoethyl, (N-ethyl-N-propylamino)methyl, 2-(N-methyl-N-hexylamino)ethyl, 5 phenylaminomethyl, 1-phenylaminoethyl, 2-phenylaminoethyl, 3-phenylaminopropyl, 4-phenylaminobutyl, 5-phenylaminopentyl, 6-phenylaminohexyl, N-methyl-N-phenylaminomethyl, 2-(N-ethyl-N-phenylamino)ethyl, (N-ethyl-N-phenylamino)methyl, 2-(N-methyl-N-phenylamino)ethyl groups.

Examples of the tetrahydrofuryl lower alkyl group which may have a hydroxyl group as a substituent on the lower alkyl group include tetrahydrofurylalkyl groups which may have a hydroxyl group as a substituent on the lower alkyl group and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as [(2 or 3-)tetrahydrofuryl]methyl, 2-[(2 or 3-)tetrahydrofuryl]ethyl, 1-[(2 or 3-)tetrahydrofuryl]ethyl, 3-[(2 or 3-)tetrahydrofuryl]propyl, 4-[(2 or 3-)tetrahydrofuryl]butyl, 5-[(2 or 3-)tetrahydrofuryl]pentyl, 6-[(2 or 3-)tetrahydrofuryl]hexyl, 1,1-dimethyl-2-[(2 or 3-)tetrahydrofuryl]ethyl, 2-methyl-3-[(2 or 3-)tetrahydrofuryl]propyl, 1-hydroxy-1-[(2 or 3-)tetrahydrofuryl]methyl, 2-hydroxy-2-[(2 or 3-)tetrahydrofuryl]ethyl, 2-hydroxy-1-[(2 or 3-)tetrahydrofuryl]ethyl, 3-hydroxy-3-[(2 or

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3-)tetrahydrotetrahydrofuryl]propyl, 4-hydroxy-4-[(2 or
 3-)tetrahydrofuryl]butyl, 5-hydroxy-5-[(2 or
 3-)tetrahydrofuryl]pentyl, 6-hydroxy-6-[(2 or
 3-)tetrahydrofuryl]hexyl, 2-hydroxy-1,1-dimethyl-2-[(2
 5 or 3-)tetrahydrofuryl]ethyl, 3-hydroxy-2-methyl-3-[(2
 or 3-)tetrahydrofuryl]propyl groups.

Examples of the phenoxy lower alkyl group
 which may have, on the phenyl ring, 1 to 3 substituents
 selected from the group consisting of a lower alkyl
 10 group and a nitro group include, in addition to the
 above described phenoxy lower alkyl groups,
 phenoxyalkyl groups which may have, on the phenyl ring,
 1 to 3 substituents selected from the group consisting
 of a linear or branched alkyl group having 1 to 6
 15 carbon atoms and a nitro group and of which the alkyl
 moiety is a linear or branched alkyl group having 1 to
 6 carbon atoms such as 2-methylphenoxyethyl, 3-
 methylphenoxyethyl, 4-methylphenoxyethyl, 3,4-
 dimethylphenoxyethyl, 2,3-dimethylphenoxyethyl,
 20 3,4,5-trimethylphenoxyethyl, 2-(2-ethylphenoxy)ethyl,
 2-(3-methylphenoxy)ethyl, 2-(4-methylphenoxy)ethyl, 1-
 (3-propylphenoxy)ethyl, 3-(4-butylphenoxy)propyl, 4-(2-
 pentylphenoxy)butyl, 5-(3-hexylphenoxy)pentyl, 6-(4-
 methylphenoxy)hexyl, 1,1-dimethyl-2-(2,4-
 25 dimethylphenoxy)ethyl, 2-methyl-3-(2,4,6-
 trimethylphenoxy)propyl, 2-(4-nitro-3-
 methylphenoxy)ethyl, 4-nitrophenoxyethyl, 3-
 nitrophenoxyethyl, 2-nitrophenoxyethyl, 2-(2-

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nitrophenoxy)ethyl, 2-(4-nitrophenoxy)ethyl, 1-(3-nitrophenoxy)ethyl, 3-(4-nitrophenoxy)propyl, 4-(2-nitrophenoxy)butyl, 5-(3-nitrophenoxy)pentyl, 6-(4-nitrophenoxy)hexyl, 1,1-dimethyl-2-(2,4-dinitrophenoxy)ethyl, 2-methyl-3-(2,4,6-trinitrophenoxy)propyl.

Examples of the phenyl lower alkanoyl group include phenylalkanoyl groups of which the alkanoyl moiety is a linear or branched alkanoyl group having 2 to 6 carbon atoms such as a 2-phenylacetyl group, 3-phenylpropionyl group, 2-phenylpropionyl group, 4-phenylbutyryl group, 5-phenylpentanoyl group, 6-phenylhexanoyl group, 2,2-dimethyl-3-phenylpropionyl group, and 2-methyl-3-phenylpropionyl group.

Examples of the 5- to 7- membered saturated heterocyclic group formed by mutually binding R^{20} and R^{21} , R^{22} and R^{23} , R^{26} and R^{27} , R^{29} and R^{30} or R^{32} and R^{33} together with the nitrogen atoms bound to them, through or not through a nitrogen atom, a oxygen atom or a sulfur atom, include a pyrrolidinyl group, piperidinyl group, piperazinyl group, morpholino group, thiomorpholino group, and homopiperazinyl group.

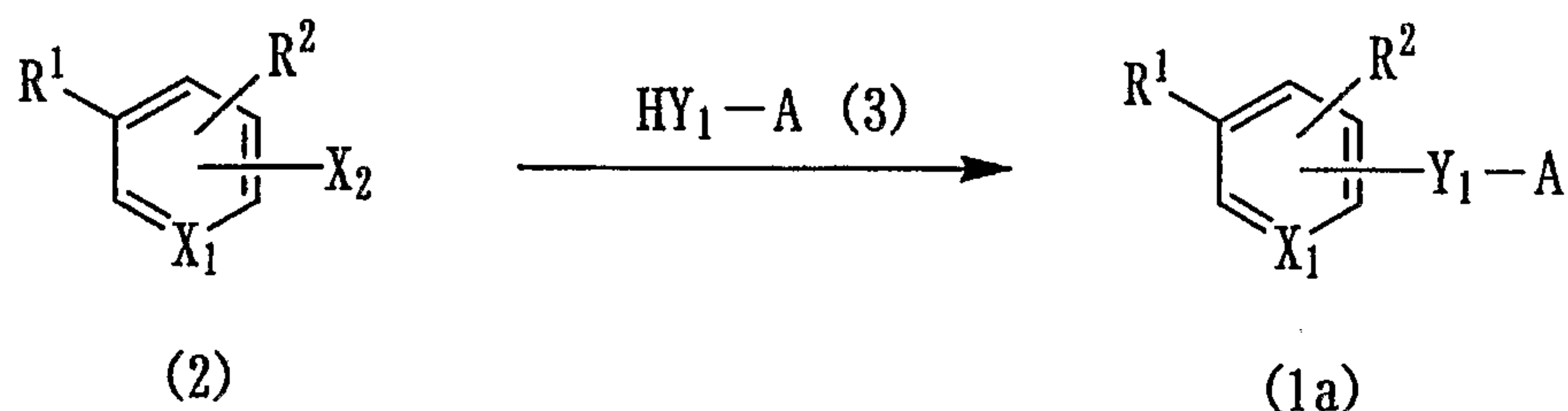
Examples of the phenoxy lower alkyl group which may have a lower alkyl group as a substituent on the phenyl ring include, in addition to the above described phenoxy lower alkyl groups, phenoxyalkyl groups which may have, on the phenyl ring, 1 to 3 linear or branched alkyls having 1 to 6 carbon atoms as

substituents and of which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms such as 2-methylphenoxyethyl, 3-methylphenoxyethyl, 4-methylphenoxyethyl, 3,4-dimethylphenoxyethyl, 2,3-dimethylphenoxyethyl, 3,4,5-trimethylphenoxyethyl, 2-(2-ethylphenoxy)ethyl, 2-(4-methylphenoxy)ethyl, 1-(3-propylphenoxy)ethyl, 3-(4-butylphenoxy)propyl, 4-(2-pentylphenoxy)butyl, 5-(3-hexylphenoxy)pentyl, 6-(4-methylphenoxy)hexyl, 1,1-dimethyl-2-(2,4-dimethylphenoxy)ethyl, 2-methyl-3-(2,4,6-trimethylphenoxy)propyl groups.

Methods for producing the compound of the present invention will be described below.

The compound of the present invention of the general formula (1) which have various Ys is produced, for example, as shown by the following reaction formulas 1 to 4.

[Reaction formula 1]



In the formula, R¹, R², X₁ and A are the same as described before, Y₁ represents an -O- group, an -S- group or an -NH group, and X₂ represents a halogen atom.

The reaction between the compound (2) and the compound (3) is generally carried out in an appropriate

solvent or without a solvent, and in the presence or absence of a basic compound.

Examples of the inert solvent used include aromatic hydrocarbons such as benzene, toluene, and xylene, ethers such as diethyl ether, tetrahydrofuran, dioxane, monoglyme, and diglyme, halogenated hydrocarbons such as dichloromethane, dichloroethane, chloroform, and carbon tetrachloride, lower alcohols such as methanol, ethanol, isopropanol, butanol, tert-butanol, and ethylene glycol, fatty acids such as acetic acid, esters such as ethyl acetate and methyl acetate, ketones such as acetone and methyl ethyl ketone, acetonitrile, pyridine, dimethylsulfoxide, N,N-dimethylformamide, N-methylpyrrolidone, and hexamethylphosphoric acid triamide, and a mixture thereof.

Examples of the basic compound include carbonates such as sodium carbonate, potassium carbonate, sodium bicarbonate, potassium bicarbonate, and cesium carbonate, metal hydroxides such as sodium hydroxide, potassium hydroxide, and calcium hydroxide, sodium hydride, potassium hydride, potassium, sodium, sodium amide, metal alcoholates such as sodium methylate, sodium ethylate, and sodium n-butoxide, and organic bases such as pyridine, imidazole, N-ethyldiisopropylamine, dimethylaminopyridine, triethylamine, trimethylamine, dimethylaniline, N-methylmorpholine, 1,5-diazabicyclo[4.3.0]nonene-5

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(DBN), 1,8-diazabicyclo[5.4.0]undecene-7 (DBU), and 1,4-diazabicyclo[2.2.2]octane (DABCO), and a mixture thereof.

When the reaction is carried out in the presence of a basic compound, the basic compound is used in an amount typically equimolar to the compound (2), and preferably 1 to 10 times of the compound (2) on a molar basis.

The compound (3) is used in an amount typically at least equimolar to the compound (2), and preferably 1 to 10 times of the compound (2) on a molar basis.

The reaction is carried out typically at -30 to 200°C, and preferably at about -30 to 150°C, and is generally completed in about 5 minutes to 80 hours.

To this reaction system, an alkali metal halide such as sodium iodide or potassium iodide may be added, and a phase-transfer catalyst may be added.

Examples of the phase-transfer catalyst include quaternary ammonium salts substituted with a group selected from the group consisting of a linear or branched alkyl group having 1 to 18 carbon atoms, a phenyl lower alkyl group which the alkyl moiety is a linear or branched alkyl group having 1 to 6 carbon atoms and a phenyl group, such as tetrabutylammonium chloride, tetrabutylammonium bromide, tetrabutylammonium fluoride, tetrabutylammonium iodide, tetrabutylammonium hydroxide, tetrabutylammonium

hydrogensulfite, tributylmethyammonium chloride,
tributylbenzylammonium chloride, tetrapentylammonium
chloride, tetrapentylammonium bromide,
tetrahexylammonium chloride,
5 benzyltrimethyloctylammonium chloride,
methyltrihexylammonium chloride,
benzyltrimethyloctadecanylammonium chloride,
methyltridecanylammonium chloride,
benzyltripropylammonium chloride,
10 benzyltriethylammonium chloride, phenyltriethylammonium
chloride, tetraethylammonium chloride,
tetramethylammonium chloride; phosphonium salts
substituted with a linear or branched having 1 to 18
carbon atoms such as tetrabutylphosphonium chloride;
15 and pyridinium salts substituted with a linear or
branched alkyl group having 1 to 18 carbon atoms such
as 1-dodecanylpyridinium chloride. These phase-
transfer catalysts are used singly or in a combination
of two or more.

20 Typically the phase-transfer catalyst is used
in an amount of 0.1 to 1 times of the compound (2), and
preferably 0.1 to 0.5 times of the compound (2).

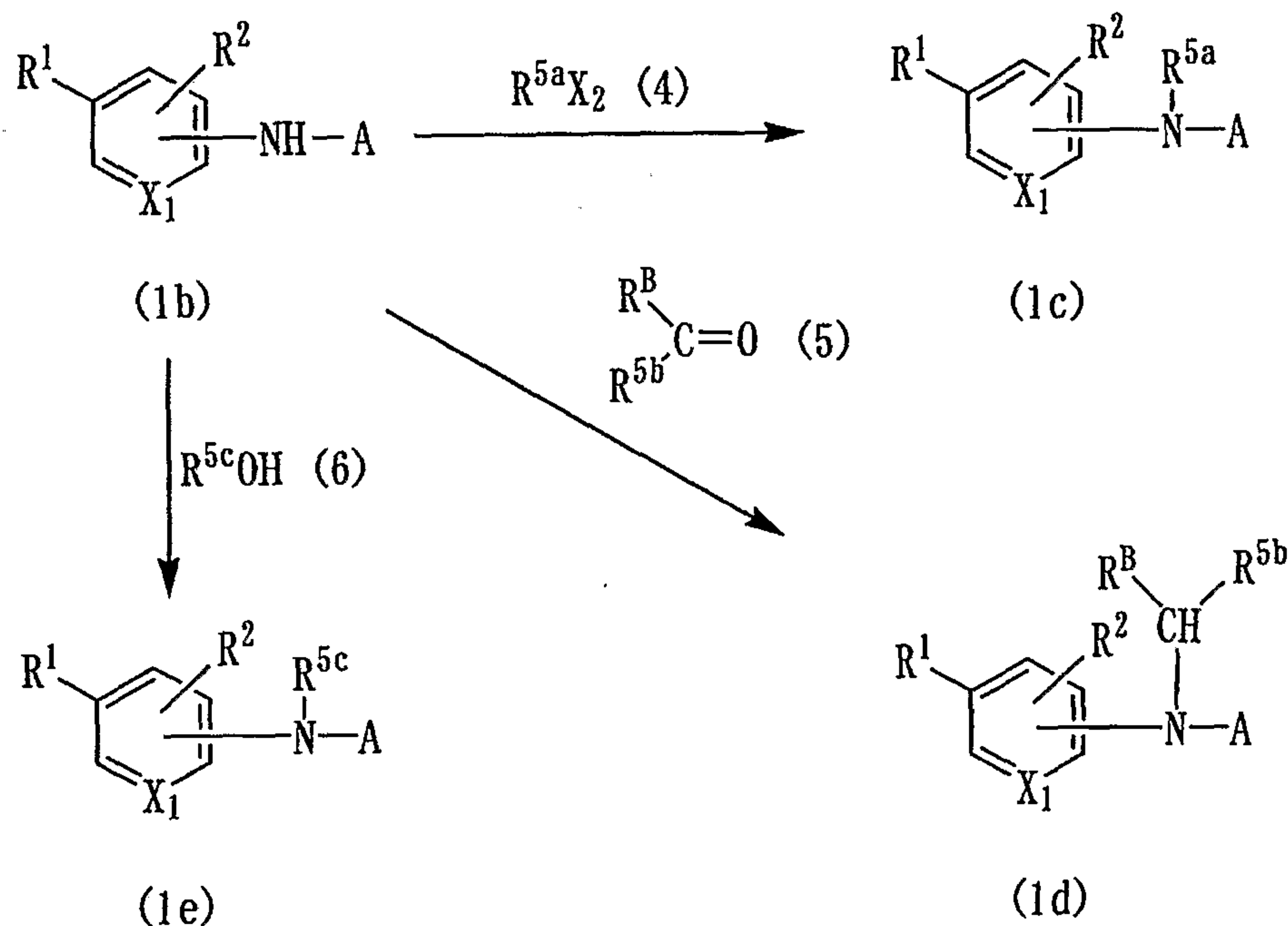
The compound (1a), wherein Y₁ represents an
-NH group, may also be produced by reacting the
25 compound (2) with the compound (3) in the presence of
an acid in place of a base. Examples of the acid used
here include mineral acids such as hydrochloric acid,
sulfuric acid, and hydrobromic acid, and organic acids

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such as acetic acid, trifluoroacetic acid, and p-toluenesulfonic acid. These acids are used singly or as a mixture of two or more.

The compound (1), wherein Y represents an -N(R⁵)- group, and R⁵ is R⁵ other than a hydrogen atom, may be produced from the corresponding compound (1) wherein Y represents an -NH- group, as shown in the following reaction formula 2.

[Reaction formula 2]



wherein R¹, R², X₁, A and X₂ are the same as described above, R^{5a} represents a lower alkyl group, phenyl lower alkyl group or cycloalkyl group, R^{5b} represents a hydrogen atom, lower alkyl group, phenyl group or phenyl lower alkyl group, R^{5c} represents a lower alkanoyl group or benzoyl group. R^B represents a

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hydrogen atom or lower alkyl group, and R^{5b} and R^B , together with carbon atoms bound to these groups, may form a cycloalkyl ring by binding each other, provided that the alkyl moiety in the $-CHR^BR^{5b}$ group of the
5 compound (1d) has 1 to 6 carbon atoms.

The reaction of the compound (1b) with the compound (4) is carried out under the similar condition as that for the reaction of the compound (2) with the compound (3) as shown by the above described reaction
10 formula 1.

The reaction of the compound (1b) with the compound (5) is carried out, for example, in the presence of a reducing agent without a solvent or with an appropriate solvent. Hereinafter, this method is
15 called "method A".

Examples of the solvent used here include water, lower alcohols such as, methanol, ethanol, isopropanol, butanol, tert-butanol, and ethylene glycol, acetonitrile, fatty acids such as formic acid,
20 and acetic acid, ethers such as diethyl ether, tetrahydrofuran, dioxane, monoglyme, and diglyme, aromatic hydrocarbons such as benzene, toluene, and xylene, and halogenated hydrocarbons such as dichloromethane, dichloroethane, chloroform, and carbon
25 tetrachloride, and a mixture thereof.

Examples of the reducing agent include fatty acids and alkali metal salts thereof such as formic acid, sodium formate, and sodium acetate, hydride

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reducing agents such as sodium borohydride, sodium cyanoborohydride, sodium triacetyloxyborohydride, and aluminum lithium hydride, or a mixture of these hydride reducing agents, and catalytic hydrogen reducing agents
5 such as palladium black, palladium-carbon, platinum oxide, platinum black, and Raney nickel.

In using a fatty acid or an alkali metal salt thereof such as formic acid, sodium formate, or sodium acetate as a reducing agent, the appropriate reaction
10 temperature is typically from room temperature to about 200°C, and preferably about 50 to about 150°C, and the reaction is completed generally in about 10 minutes to 10 hours. It is preferable to use a fatty acid or an alkali metal salt thereof in a large excess amount with
15 respect to the compound (1b).

In using a hydride reducing agent, the appropriate reaction temperature is typically -80 to 100°C, and preferably -80 to 70°C, and the reaction is completed in general in 30 minutes to 60 hours. The
20 hydride reducing agent is used in an amount typically 1 to 20 times of the compound (1b), and preferably 1 to 6 times of the compound (1b) on a molar basis.

Especially in using aluminum lithium hydride as a hydride reducing agent, it is preferable to employ an
25 ether such as diethyl ether, tetrahydrofuran, dioxane, monoglyme, or diglyme, or an aromatic hydrocarbon such as benzene, toluene, or xylene. To the reaction system, an amine such as trimethylamine, triethylamine,

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and N-ethyldiisopropylamine, or molecular sieves such as Molecular Sieves 3A (MS-3A) or Molecular Sieves 4A (MS-4A) may be added.

In using a catalytic hydrogen reducing agent, the reaction is preferably carried out in a hydrogen atmosphere typically at a normal pressure to about 20 atm, and preferably at a normal atmosphere to about 10 atm, or in the presence of a hydrogen donor such as formic acid, ammonium formate, cyclohexene, or hydrazine hydrate, at a temperature of typically -30 to 100°C, and preferably 0 to 60°C. The above described reaction is in general completed in about 1 to 12 hours. The catalytic hydrogen reducing agent is used typically in an amount of about 0.1% to 40% by weight, and about 1 to 20% by weight based on the compound (1b).

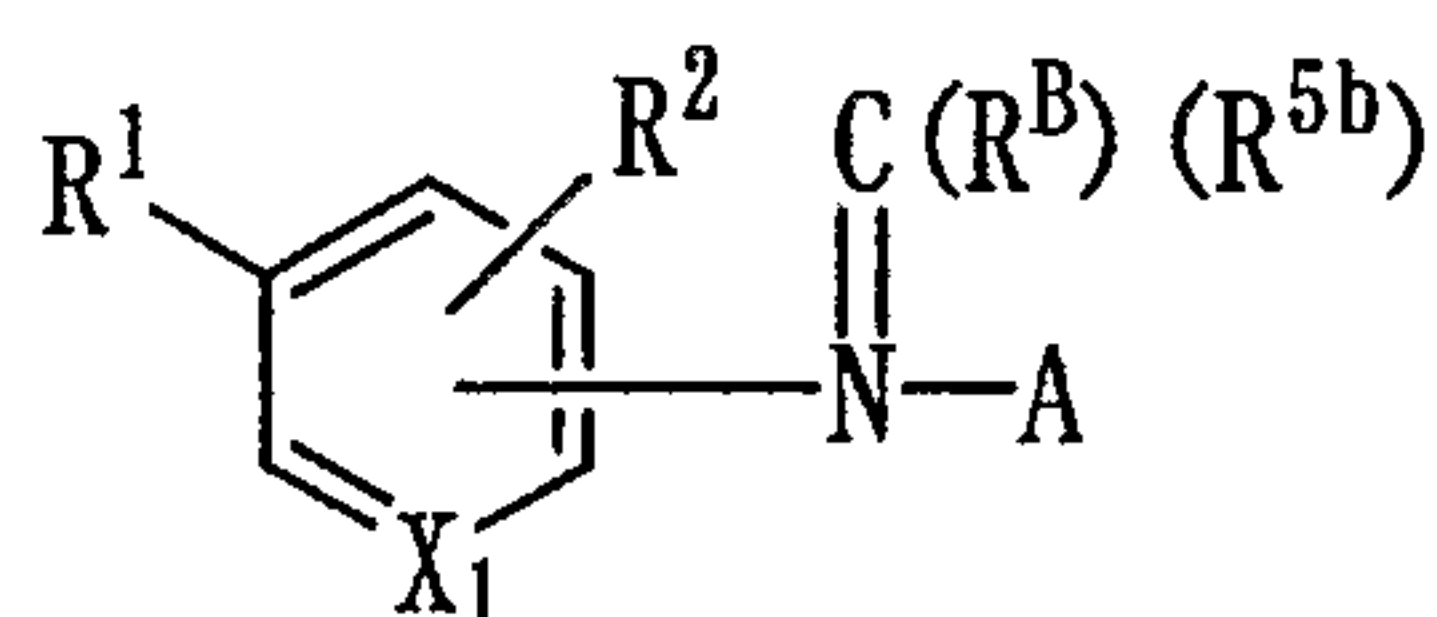
In the reaction of the compound (1b) with the compound (5), the compound (5) is typically used in an amount at least equimolar to the compound (1b), and preferably used in an equal amount to a large excess amount of compound (5) on a molar basis.

When the compound (5), wherein R^B and R^{5b} are mutually bound together with the carbon atoms which bind to these groups to form a cycloalkyl ring, is used as a starting material, and the hydride reducing agent is used to carry out the reaction, cycloalkyloxytrialkylsilane such as [(1-ethoxycyclopropyl)oxy]trimethylsilane may be used in

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place of the compound (5) as the starting material to produce the above described compound (5) in the reaction system.

The compound (1d) may be produced by reacting the compound (1b) with compound (5) under the reaction condition similar to the reaction condition of the compound (1f) with hydroxylamine of the later described reaction formula 3, and then reducing the resulting compound represented by the general formula:



wherein R^1 , R^2 , X_1 , R^{B} and $\text{R}^{5\text{b}}$ are the same as described above.

A reaction condition similar to that of the method A may be applied to this reducing reaction.

The reaction of the compound (1b) with the compound (6) is carried out by a method for reacting the compound (1b) with carboxylic acid of the compound (6) in a typical reaction for producing an amide bond. Known reactions for producing an amide bond may be applied to this reaction for producing an amide bond. Specific methods thereof include: (a) a mixed acid anhydride method, specifically, a method of reacting an alkylhalocarboxylic acid with the carboxylic acid (6) to prepare a mixed acid anhydride, and then reacting

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the amine (1b) with the mixed acid anhydride; (b) an active ester method, specifically, a method of preparing, from the carboxylic acid (6), an active ester such as a phenyl ester, p-nitrophenyl ester, N-hydroxysuccinimide ester, or 1-hydroxybenzotriazole ester, or an active amide with benzoxazoline-2-thione, and then reacting the active ester or amide with the amine (1b); (c) a carbodiimide method, specifically, a method of condensation reaction of wherein the carboxylic acid (6) with the amine (1b) in the presence of an activator such as dicyclohexylcarbodiimide, 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide (WSC), or carbonyldiimidazole; (d) other methods, for example, a method of preparing carboxylic anhydride from the carboxylic acid (6) by the action of a dehydrator such as acetic anhydride, and then reacting the carboxylic anhydride with the amine (1b), a method of reacting an ester of the carboxylic acid (6) with a lower alcohol with the amine (1b) at a high pressure and a high temperature, and a method of reacting an acid halide of the carboxylic acid (6), that is, carboxylic acid halide, with the amine (1b).

The mixed acid anhydride used in the mixed anhydride method (a) described above, may be obtained by a typical Schotten-Baumann reaction, and the compound of the present invention of the general formula (1e) can be produced by reacting the amine (2) with the mixed acid anhydride without isolation.

The Schotten-Baumann reaction described above is carried out in the presence of a basic compound.

The basic compounds used include compounds commonly used in Schotten-Baumann reaction, for example, organic bases such as triethylamine, trimethylamine, pyridine, dimethylaniline, N-ethyldiisopropylamine, dimethylaminopyridine, N-methylmorpholine, 1,5-diazabicyclo[4.3.0]nonene-5 (DBN), 1,8-diazabicyclo[5.4.0]undecene-7, and 1,4-diazabicyclo[2.2.2]octane (DABCO), and inorganic bases such as carbonates such as sodium carbonate, potassium carbonate, sodium bicarbonate, and potassium bicarbonate, metal hydroxides such as sodium hydroxide, potassium hydroxide, and calcium hydroxide, potassium hydride, sodium hydride, potassium, sodium, sodium amide, and metal alcoholates such as sodium methylate and sodium ethylate. These basic compounds are used singly or in a combination of two or more. The reaction is carried out at typically about -20 to 100°C, and preferably about 0 to 50°C, and the reaction time is about 5 minutes to 10 hours, and preferably about 5 minutes to 2 hours.

The resulting mixed acid anhydride is reacted with the amine (1b) at typically about -20 to 150°C, preferably about 10 to 50°C, and the reaction time is about 5 minutes to 10 hours, and preferably about 5 minutes to 5 hours.

The mixed acid anhydride method is, in

general, carried out in a solvent. Any of the solvent conventionally used for the mixed acid anhydride method may be used. Specific examples of the solvent include halogenated hydrocarbons such as chloroform,
5 dichloromethane, dichloroethane, and carbon tetrachloride, aromatic hydrocarbons such as benzene, toluene and xylene, ethers such as diethyl ether, diisopropyl ether, tetrahydrofuran, and dimethoxyethane, esters such as methyl acetate, ethyl
10 acetate, and isopropyl acetate, and aprotic polar solvents such as N,N-dimethylformamide, dimethylsulfoxide, and hexamethylphosphoric acid triamide, and a mixture thereof.

Examples of the alkylhalocarboxylic acid used
15 in the mixed acid anhydride method include methyl chloroformate, methyl bromoformate, ethyl chloroformate, ethyl bromoformate, and isobutyl chloroformate.

In the mixed acid anhydride method, it is typically preferable to use the carboxylic acid (6),
20 alkylhalocarboxylic acid and the amine (1b) equimolar to each other. However, each of alkyl halocarboxylic acid and the carboxylic acid (6) may be used 1 to 1.5 times of the amine (1b) on a molar basis, respectively.

In the above described method (c) of
25 condensation reaction in the presence of an activator, the reaction is carried out in an appropriate solvent in the presence or absence of a basic compound. Any of the solvents and basic compounds used in the reaction

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in the other methods (d) described above of reacting carboxylic acid halide with the amine may be used for this reaction. It is appropriate to use the activator in an amount typically at least equimolar to the compound (1b), and preferably 1 to 5 times of the compound (1b) on a molar basis. When WSC is used as an activator, the reaction may be carried out advantageously by adding 1-hydroxybenzotriazole and/or an acid such as hydrochloric acid. This reaction is carried out at typically about -20 to 180°C, and preferably about 0 to 150°C, and is completed typically in about 5 minutes to 90 hours.

In the other method (d) described above, wherein the amine (1b) is reacted with carboxylic acid halide, the reaction is carried out in an appropriate solvent in the presence of a basic compound. As such a basic compound, known basic compounds may be widely used, and, for example, any of compounds used for the Shotten-Baumann reaction described above may be used. Examples of the solvent include, in addition to the solvents used in the mixed acid anhydride method described above, alcohols such as methanol, ethanol, isopropanol, propanol, butanol, 3-methoxy-1-butanol, ethyl cellosolve, and methyl cellosolve, acetonitrile, pyridine, acetone, and water. The ratio of the amine (1b) to the carboxylic acid halide in the reaction is not specified and may be appropriately selected in a wide range. Typically, the former may be used in an

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amount at least about equimolar to the latter, and preferably about 1 to 5 times of the latter on a molar basis. This reaction is carried out at typically about -20 to 180°C, and preferably about 0 to 150°C, and is
5 completed typically in 5 minutes to 50 hours.

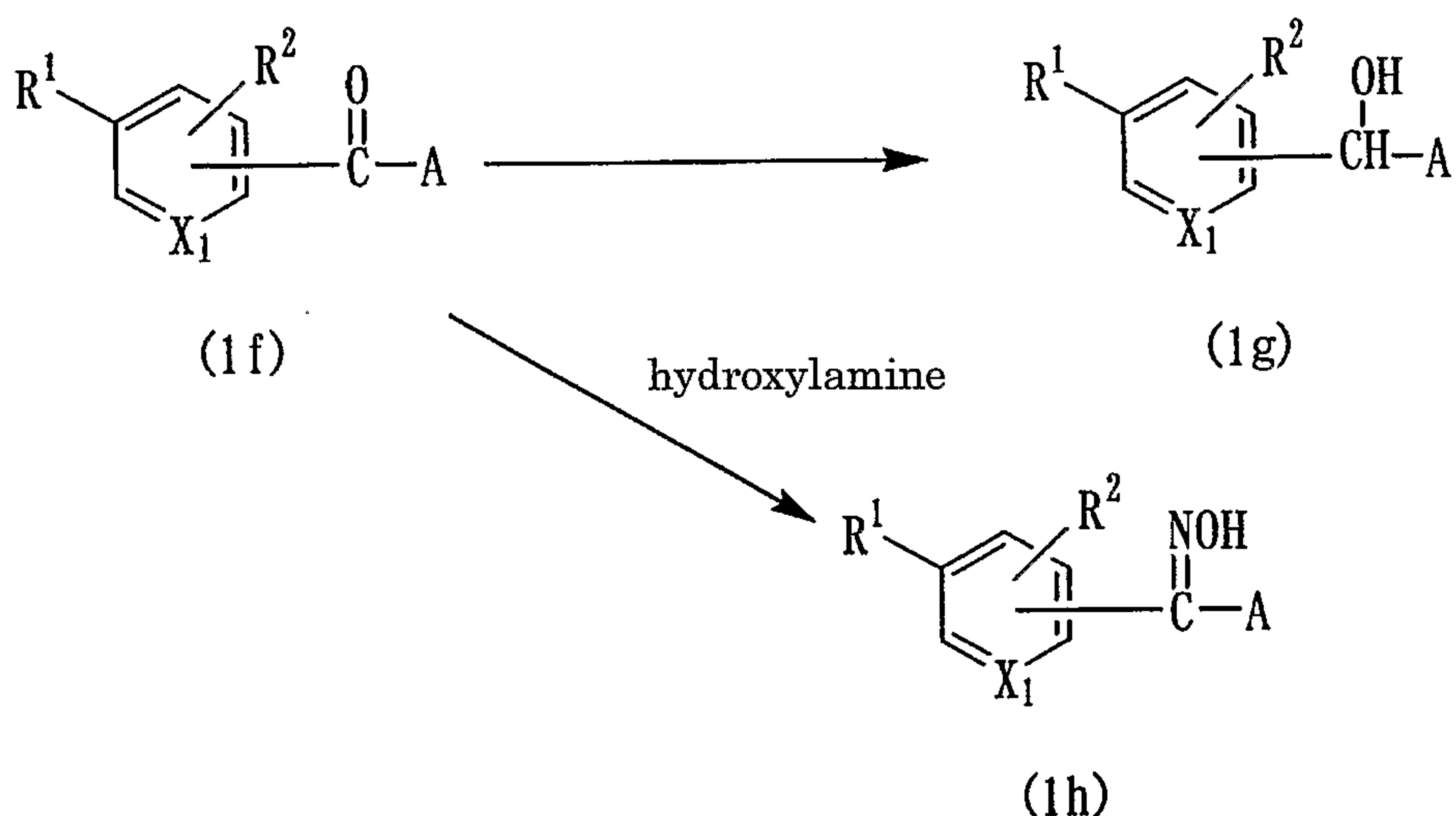
Further, the reaction for producing an amide bond shown in the above described reaction formula 2 may be carried out by reacting the carboxylic acid (6) and the amine (1b) in the presence of a condensation
10 agent of a phosphorus compound such as triphenylphosphine, diphenylphosphinyl chloride, phenyl-N-phenylphosphoramidate chloridate, diethyl chlorophosphate, diethyl cyanophosphate, diphenylphosphoric acid azide, or bis(2-oxo-3-
15 oxazolidinyl)phosphinic chloride. The condensation agent described above is used singly or in a combination of two or more.

The above described reaction is carried out, in the presence of the solvent and the basic compound
20 which are used in the method for reacting the carboxylic acid halide with the amine (1b) described above, at typically about -20 to 150°C, and preferably about 0 to 100°C, and is completed typically in 5 minutes to about 30 hours. The condensation agent and
25 the carboxylic acid (6) may be used respectively in an amount at least about equimolar to the amine (1b), and preferably about 1 to 2 times of the amine (1b) on a molar basis.

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The compound (1), wherein Y represents a -CH(OH)- or -C(=N-OH) group, is produced from the corresponding compound wherein Y represents a -CO- group, as shown in the reaction formula 3.

5 [Reaction formula 3]



wherein R^1 , R^2 , X_1 and A are the same as described above.

The compound (1g) is produced by reducing the compound (1f).

In the reducing reaction described above, a
 10 reducing method employing a hydride reducing agent is favorably used. Examples of the reducing agent used include aluminum lithium hydride, sodium borohydride, borane, diborane, and lithium borohydride-trimethoxyborane. These reducing agents are used
 15 singly or in a mixture of two or more. The reducing agent may be used in an amount typically at least equimolar to the compound (1f), and preferably 1 to 15 times of the compound (1f) on a molar basis. This

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reducing reaction is typically carried out in an appropriate solvent, for example, water, a lower alcohol such as methanol, ethanol, or isopropanol, an ether such as tetrahydrofuran, diethyl ether, diisopropyl ether, or diglyme, or a halogenated hydrocarbon such as dichloromethane, chloroform, or carbon tetrachloride, or a mixture thereof, at about -60 to 150°C, preferably from about -30 to 100°C, in general for about 10 minutes to 40 hours. In the case where aluminum lithium hydride or borane is used as the reducing agent, it is preferable to use an anhydrous solvent of tetrahydrofuran, diethyl ether, diisopropyl ether, diglyme, or the like.

The compound (1h) is produced by reacting the compound (1f) and hydroxylamine in an appropriate inert solvent in the presence or absence of a basic compound.

Examples of the basic compound used in this reaction include inorganic basic compounds such as sodium hydroxide, potassium hydroxide, calcium hydroxide, sodium carbonate, and potassium carbonate, fatty acid alkali metal salts such as sodium acetate, organic bases such as piperidine, piperidinium acetate, triethylamine, trimethylamine, pyridine, dimethylaniline, N-ethyldiisopropylamine, dimethylaminopyridine, N-methylmorpholine, 1,5-diazabicyclo[4.3.0]nonene-5 (DBN), 1,8-diazabicyclo[5.4.0]undecene-7 (DBU), and 1,4-diazabicyclo[2.2.2]octane (DABCO). These basic

compounds may be used singly or in a mixture of two or more.

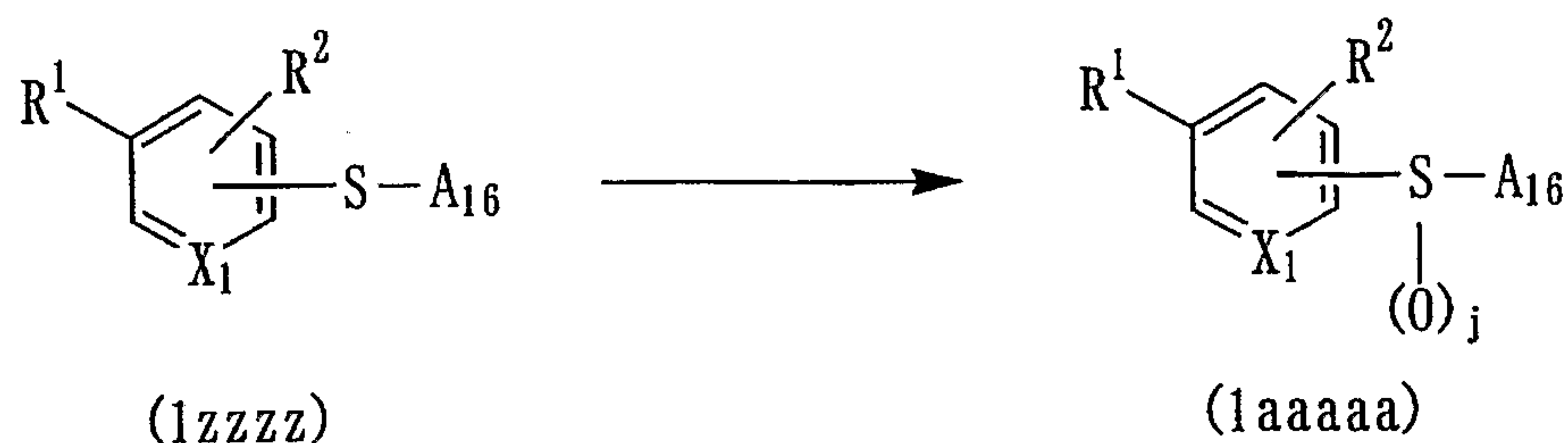
Any of inert solvents which do not have adverse effects on the reaction may be used. Examples thereof include water, aromatic hydrocarbons such as benzene, toluene, and xylene, ethers such as diethyl ether, tetrahydrofuran, dioxane, monoglyme, and diglyme, halogenated hydrocarbons such as dichloromethane, dichloroethane, chloroform, and carbon tetrachloride, lower alcohols such as methanol, ethanol, isopropanol, butanol, tert-butanol, and ethylene glycol, fatty acids such as acetic acid, esters such as ethyl acetate and methyl acetate, ketones such as acetone and methyl ethyl ketone, acetonitrile, pyridine, dimethyl sulfoxide, N,N-dimethylformamide, and hexamethyl phosphate triamide, and a mixture thereof.

Hydroxylamine is used in an amount typically at least equimolar to the compound (1f), and preferably 1 to 5 times of the compound (1f) on a molar basis. The reaction temperature is typically at room temperature to 200°C, and preferably about 50 to 150°C, and the reaction is in general completed in about 5 minutes to 30 hours.

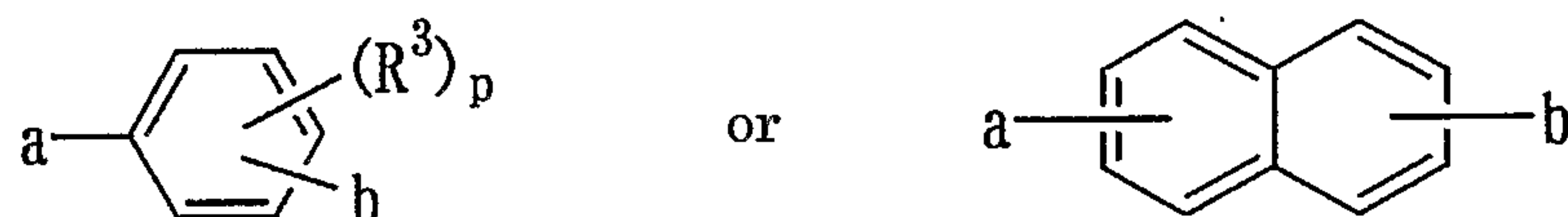
The compound (1), wherein Y represents an -S(O)_n group (n = 1 or 2), is produced from the corresponding compound wherein Y represents an -S- group, as shown in the reaction formula 4.

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[Reaction formula 4]



wherein R^1 , R^2 , X_1 and A are the same as described above, A_{16} represents a $-\text{A}$ group or a $-\text{A}_{10}-\text{T}_2-\text{COOR}^{59a}$ group, T_2 represents an $-\text{N}(\text{R}^{17})-\text{B}_3-$ group, a $-\text{B}^{19}-\text{N}(\text{R}^{18})-$ group, a $-\text{B}_4-$ group, a $-\text{Q}-\text{B}_5-$ group, a $-\text{B}_6-\text{N}(\text{R}^{19})-\text{B}_7-$ group, a $-\text{CO}-\text{B}_{10}-$ group, a $-\text{CH}(\text{OH})-\text{B}_{11}-$ group, a $-\text{B}_{23a}-\text{CO}-$ group, or a direct bond, wherein R^{17} , B_3 , B_{19} , R^{18} , B_4 , B_5 , B_6 , R^{19} , B_7 , B_{10} and B_{11} are the same as described above, A^{10} represents a group of the formula:



wherein R^3 and p are the same as described above, provided that the a is bound to a $-\text{S}$ group or a $-\text{S}(\text{O})_j$ group, and the b is bound to $-\text{T}_2$, R^{59a} is a hydrogen atom or a lower alkyl group, and j is 1 or 2.

The reaction for converting the compound (1zzzz) into the compound (1aaaaa) is carried out in an appropriate solvent and in the presence of an oxidizing agent.

Examples of the solvent include water, fatty

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acids such as formic acid, acetic acid, and trifluoroacetic acid, alcohols such as methanol and ethanol, and halogenated hydrocarbons such as chloroform and dichloromethane, and a mixture thereof.

5 Examples of the oxidizing agent include peracids such as performic acid, peracetic acid, pertrifluoroacetic acid, perbenzoic acid, m-chloroperbenzoic acid, and o-carboxyperbenzoic acid, hydrogen peroxide, sodium metaperiodate, dichromic
10 acid, dichromates such as sodium dichromate and potassium dichromate, permanganic acid, permanganates such as sodium permanganate and potassium permanganate, and lead salts such as lead tetraacetate. These
oxidizing agents are used singly or in a mixture of two
15 or more.

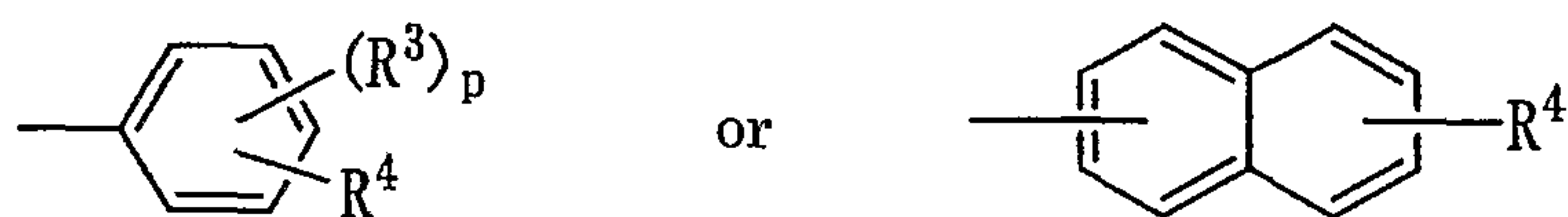
The oxidizing agent is appropriately used in an amount typically at least equimolar to the compound (1zzzz), and preferably 1 to 2 times of the compound (1zzzz) on a molar basis. In the oxidizing reaction
20 which converts a sulfur atom into a sulfonyl group (j=2), it is appropriate to use the oxidizing agent in an amount typically at least two times of the compound (1zzzz), and preferably 2 to 4 times of the compound (1zzzz) on a molar basis.

25 The above described reaction is carried out at typically -10 to 150°C, and preferably about -10 to 100°C and is, in general, completed in about 1 to 100 hours.

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The compound of the present invention, which has the general formula (1) with various As, is produced, for example, as shown in the following reaction formulas 5 to 36.

5 The compound (1), wherein A represents a group of the formula:

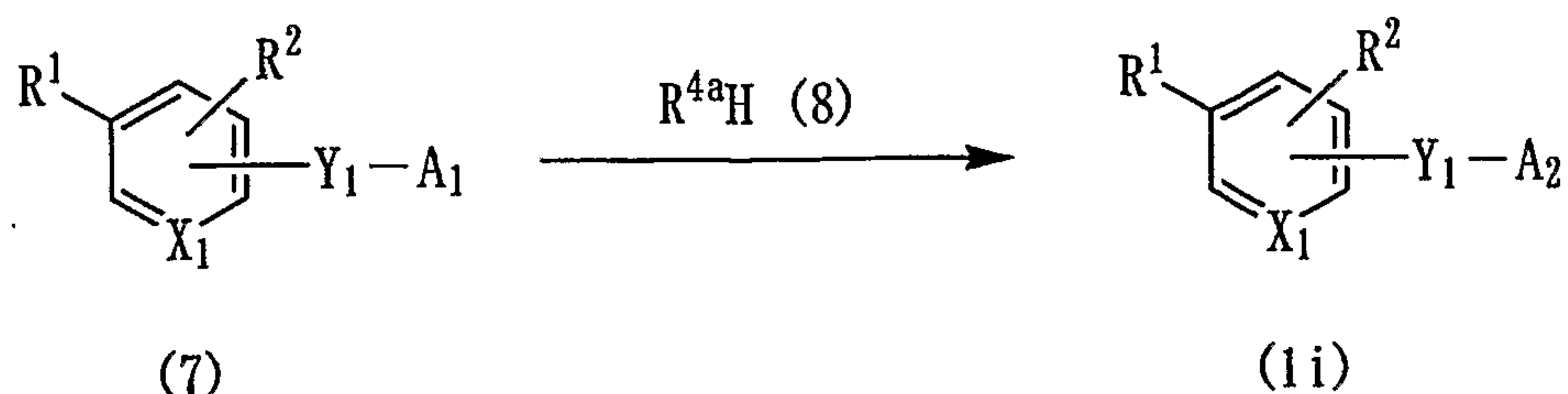


wherein R^4 represents an imidazolyl lower alkyl group, a 1,2,4-triazolyl lower alkyl group, a 1,2,3-triazolyl lower alkyl group, a 1,2,5-triazolyl lower alkyl group, a pyrazolyl lower alkyl group, a pyrimidinyl lower alkyl group which may have an oxo group as a substituent on the pyrimidine ring, a 1,2,4-oxadiazolyl lower alkyl group which may have an lower alkyl group as a substituent on the 1,2,4-oxadiazole ring, a thiazolidinyl lower alkyl group which may have an oxo group as a substituent on the thiazolidine ring, or a $-(T)_1-NR^{14}R^{15}$ group, wherein T is a lower alkylene group and 1 is 1, is produced by reacting the compound (7) with the compound (8) as shown in the reaction formula

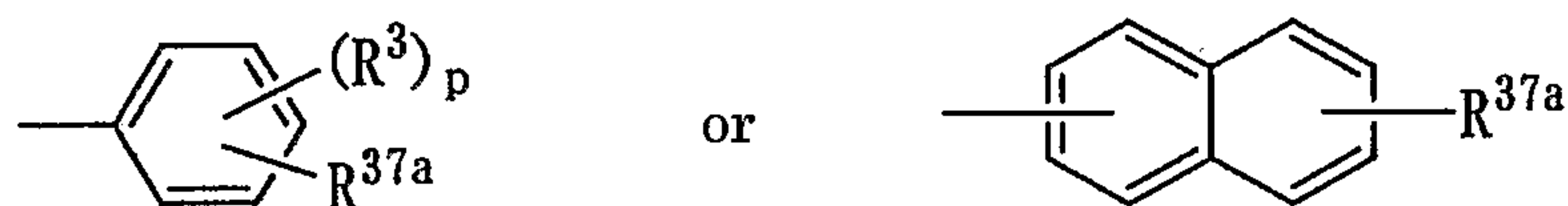
20 5.

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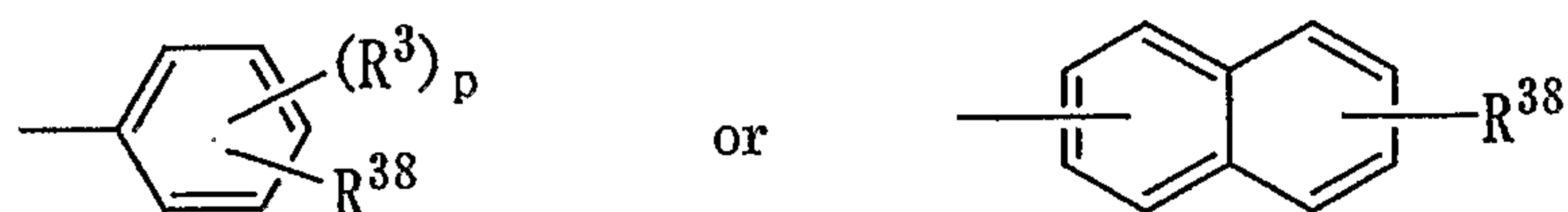
[Reaction formula 5]



wherein R^1 , R^2 , Y_1 and X_1 are the same as described above,
 A_1 represents a group of the formula:



wherein R^3 and p are the same as described above, R^{37a}
 5 represents a $-\text{B}_{21}\text{-X}_2$ group, B_{21} represents a lower
 alkylene group, and X_2 is the same as described above,
 and A_2 represents a group of the formula:



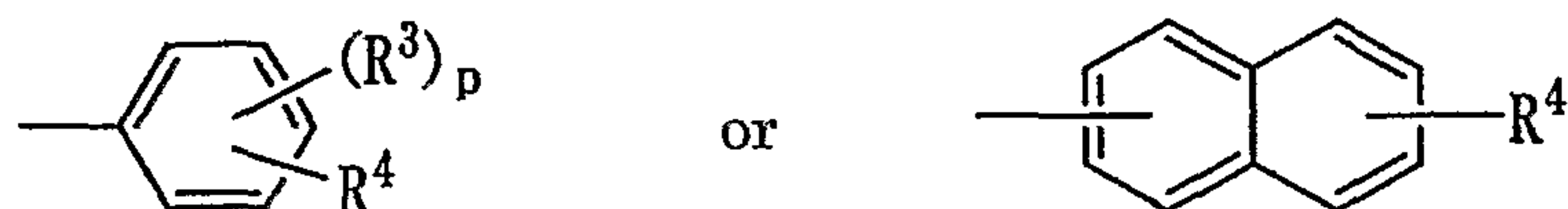
wherein R^3 and p are the same as described above, R^{38}
 represents a $-\text{B}_{21}\text{-R}^{4a}$ group, B_{21} is the same as described
 10 above, R^{4a} represents an imidazolyl group, a 1,2,4-
 triazolyl group, a 1,2,3-triazolyl group, a 1,2,5-
 triazolyl group, a pyrazolyl group, a pyrimidynyl group
 which has an oxo group as a substituent on the
 pyrimidine ring, a 1,2,4-oxadiazolyl group which may

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have as a lower alkyl group as a substituent on the
 1,2,4-oxadiazole ring, a thiazolidinyl group which may
 have an oxo group as a substituent on the thiazolidine
 ring, or an $-NR^{14}R^{15}$ group, and R^{14} and R^{15} are the same
 5 as described above.

The reaction of the compound (7) with the
 compound (8) is carried out under the reaction
 condition similar to that of the reaction of the
 compound (2) with the compound (3) of the above
 10 described reaction formula 1.

The compound (1), wherein A represents a
 group of the formula:

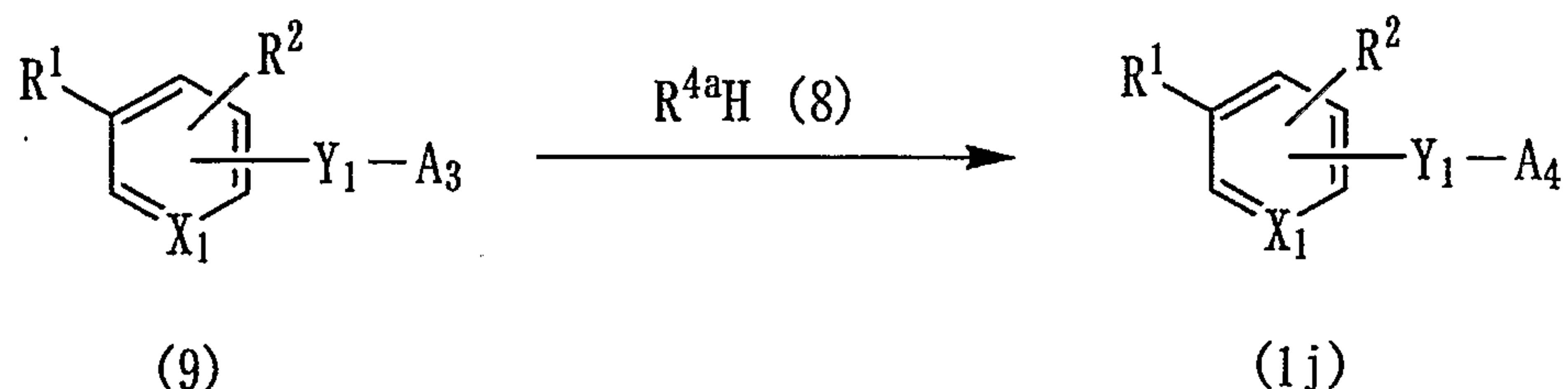


wherein R^4 is an imidazolyl lower alkyl group, a 1,2,4-
 triazolyl lower alkyl group, a 1,2,3-triazolyl lower
 15 alkyl group, a 1,2,5-triazolyl lower alkyl group, a
 pyrazolyl lower alkyl group, a pyrimidinyl lower alkyl
 group which has an oxo group as a substituent on the
 pyrimidine ring, a 1,2,4-oxadiazolyl lower alkyl group
 which has a lower alkyl group as a substituent on the
 20 1,2,4-oxadiazole ring, a thiazolidinyl lower alkyl
 group which has an oxo group as a substituent on the
 thiazolidin ring, or a $(T)_1-NR^{14}R^{15}$ group, wherein T is a
 lower alkylene group and 1 is 1, is also produced by
 reacting the compound (8) with the compound (9) as

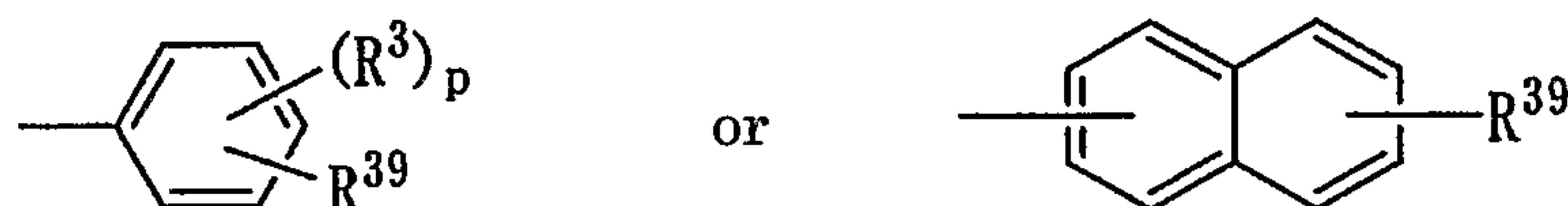
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shown in the reaction formula 6.

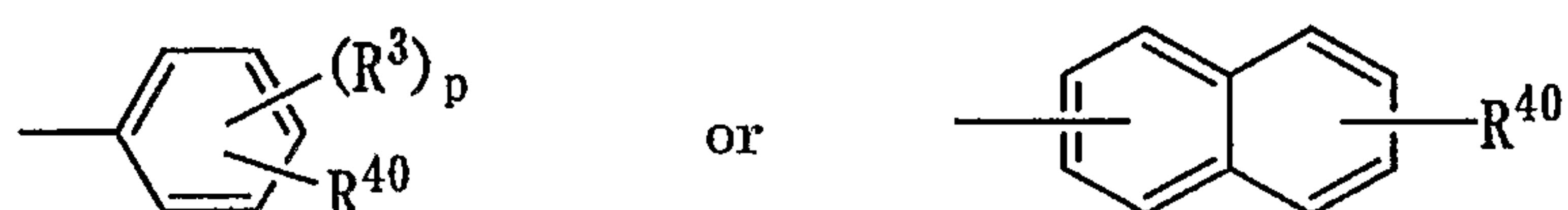
[Reaction formula 6]



wherein R^1 , R^2 , X_1 and Y_1 and R^{4a} are the same as described above, A_3 represents a group of the formula:



5 wherein R^3 and p are the same as described above, R^{39} represents a $(\text{B}_{21})_f\text{COR}^A$ group, B_{21} is the same as described above, R^A represents a hydrogen atom or a lower alkyl group, and f represents 0 or 1, and A_4 represents a group of the formula:



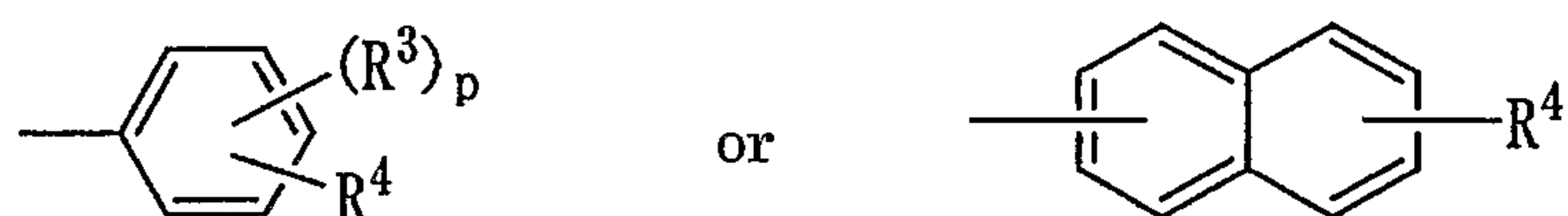
10 wherein R^3 and p are the same as described above, R^{40} represents a $-(\text{B}_{21})_f\text{CHR}^A\text{R}^{4a}$ group, and B_{21} , R^A , f and R^{4a} are the same as described above, provided that the alkyl moiety of the $-(\text{B}_{21})_f\text{CHR}^A\text{R}^{4a}$ group has not more than 6 carbon atoms.

15 The reaction of the compound (9) with the compound (8) is carried out under the same condition as in the reaction of the compound (1b) with the compound

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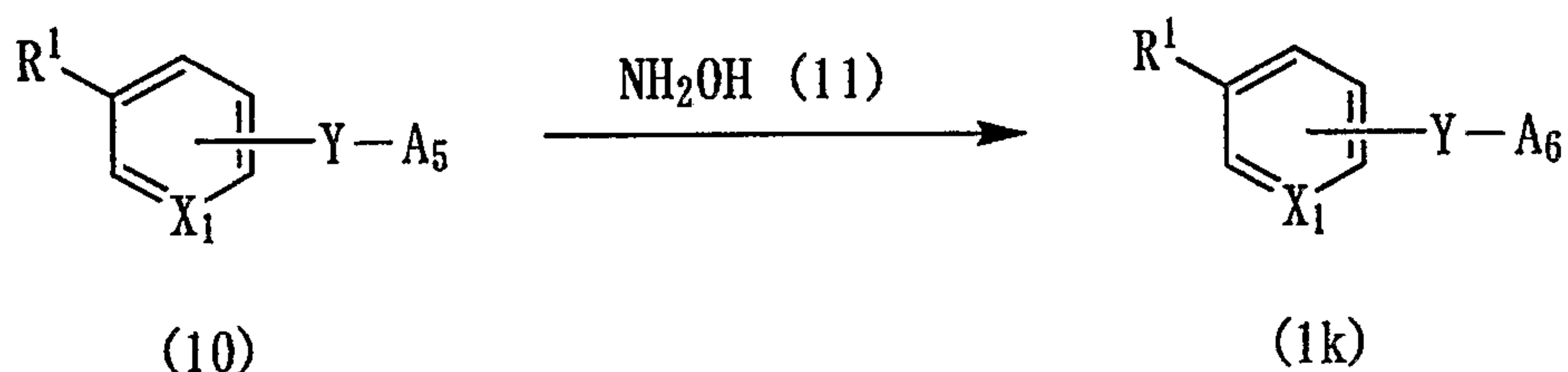
(5) of the above described reaction formula 2.

The compound (1), wherein A represents a group of the formula:



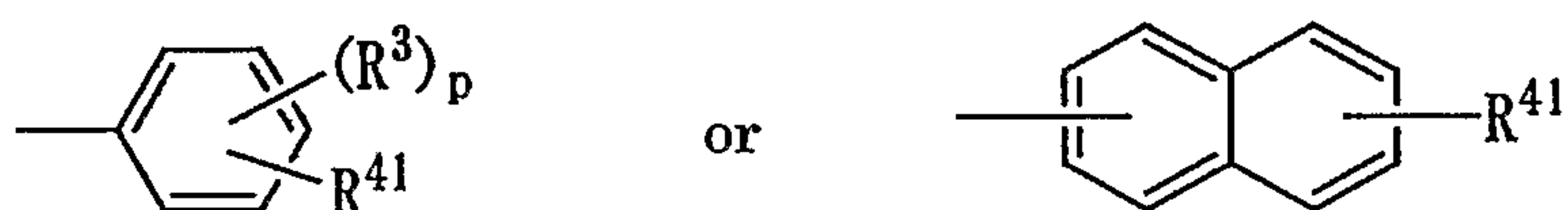
wherein R^4 represents a 3,5-dioxoisooxazolidinyl lower alkylidene group which may have an oxo group as a substituent on the 3,5-dioxoisooxazolidine ring, is produced by reacting the compound (11) with the compound (10) as shown in the reaction formula 7.

[Reaction formula 7]



wherein R^1 , R^2 , X_1 and Y are the same as described above,

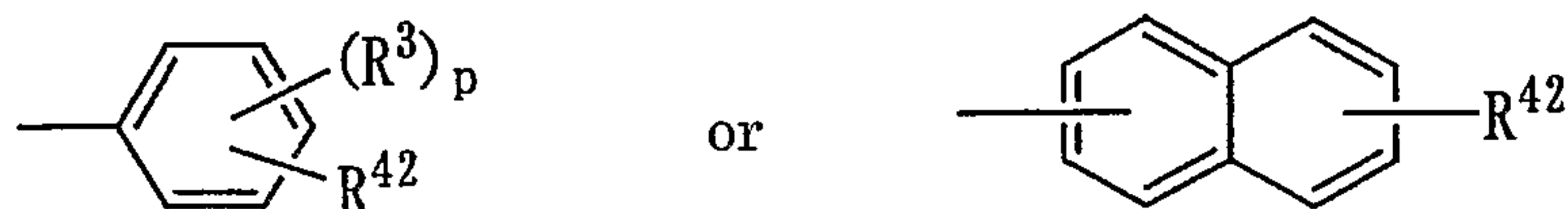
A^5 represents a group of the formula:



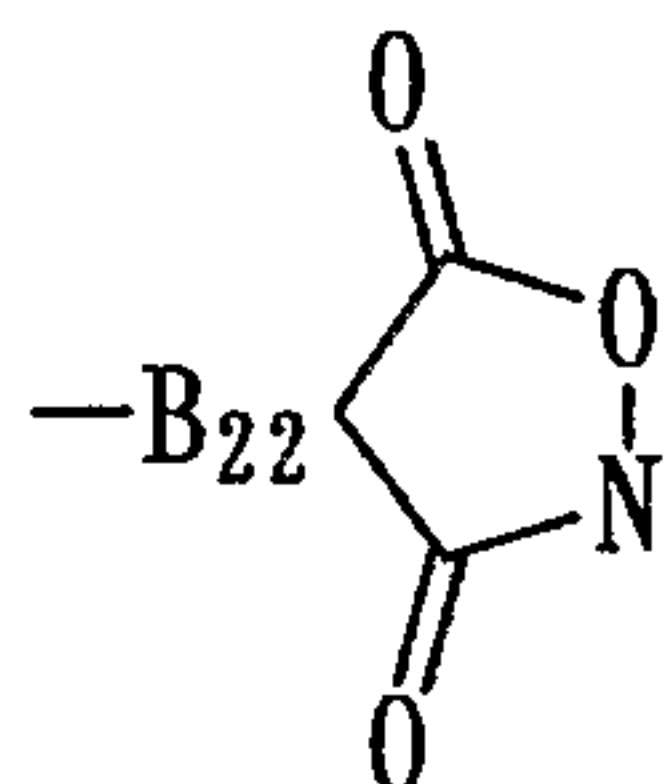
wherein R^3 and p are the same as described above, R^41 represents a $-\text{B}_{22}(\text{CO}_2\text{R}^{43})(\text{CO}_2\text{R}^{44})$ group, B_{22} represents a lower alkylidene group, and R^{43} and R^{44} represent a lower alkyl group, and

A^6 represents a group of the formula:

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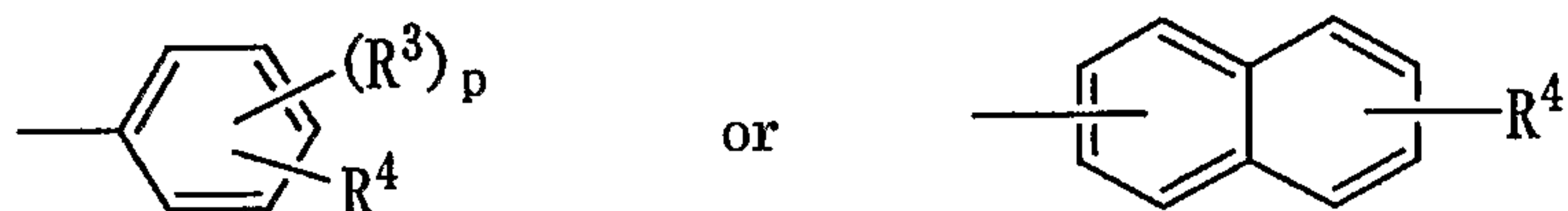
wherein R^3 and p are the same as described above, and R^{42} represents



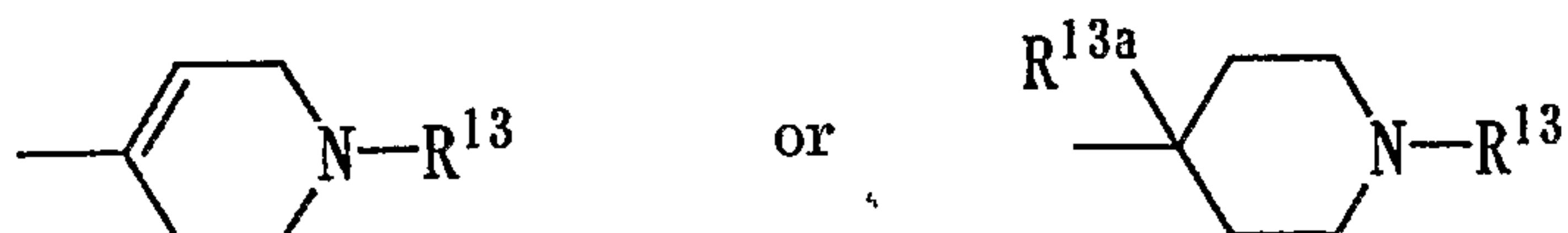
wherein B_{22} is the same as described above.

The reaction of the compound (10) with the compound (11) is carried out under the same condition as that of the reaction which converts the compound (1f) into the compound (1h) of the reaction formula 3.

The compound (1), wherein A represents a group of the formula:



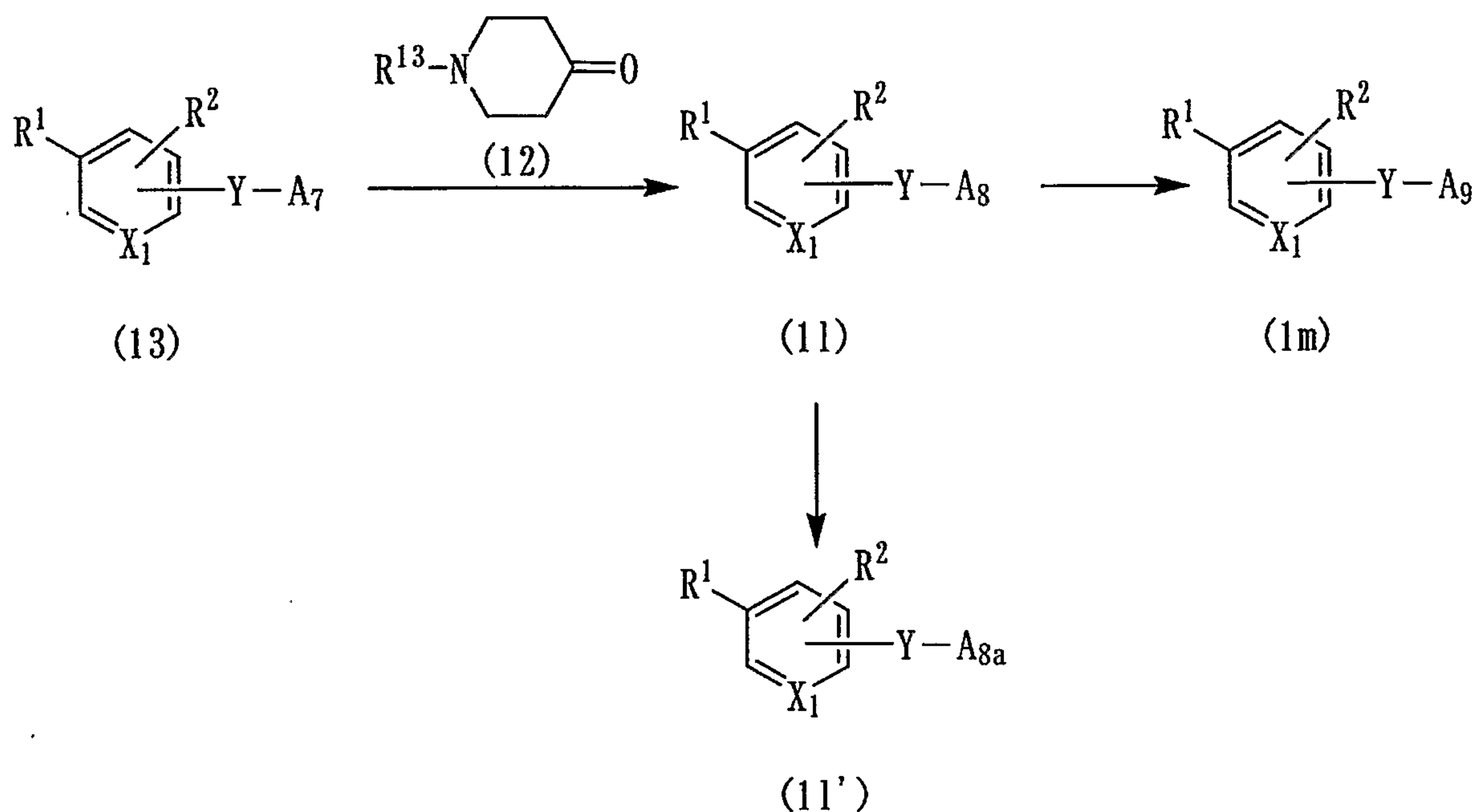
wherein R^4 represents a group of the formula:



is produced from the compound (13), as shown in the reaction formula 8.

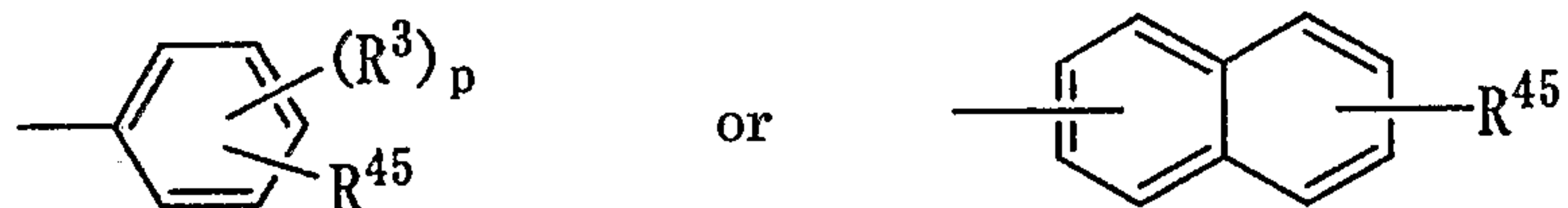
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[Reaction formula 8]



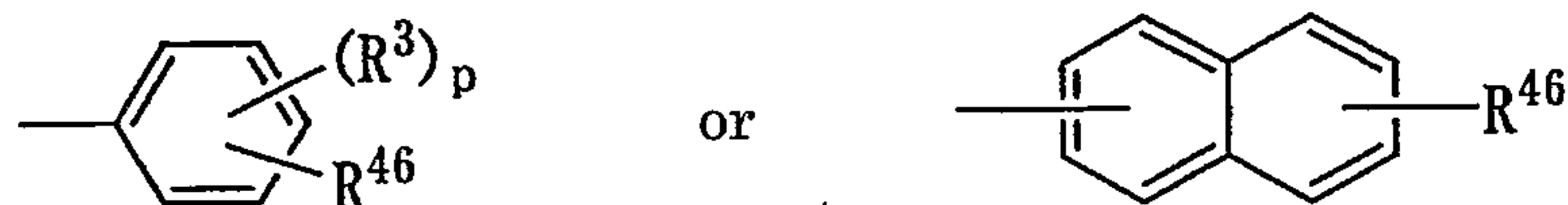
wherein R^1 , R^2 , X_1 , Y and R^{13} are the same as described above,

A_7 represents of the formula:

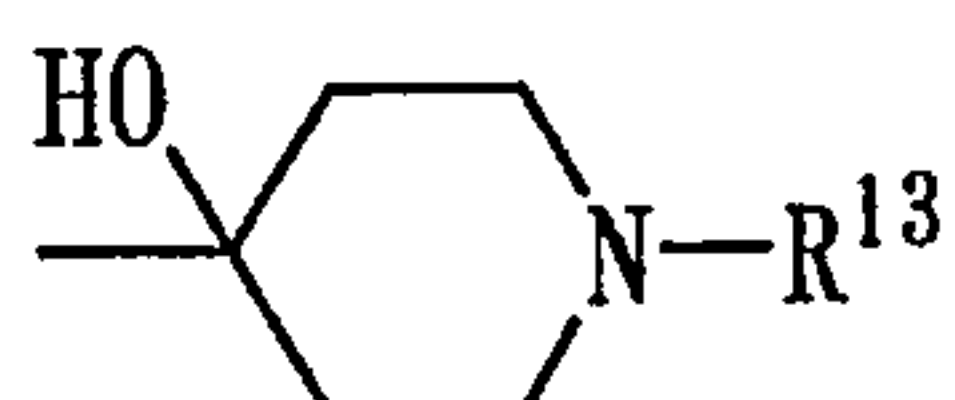


5 wherein R^3 and p are the same as described above, and R^{45} represents a halogen atom,

A_8 represents a group of the formula:



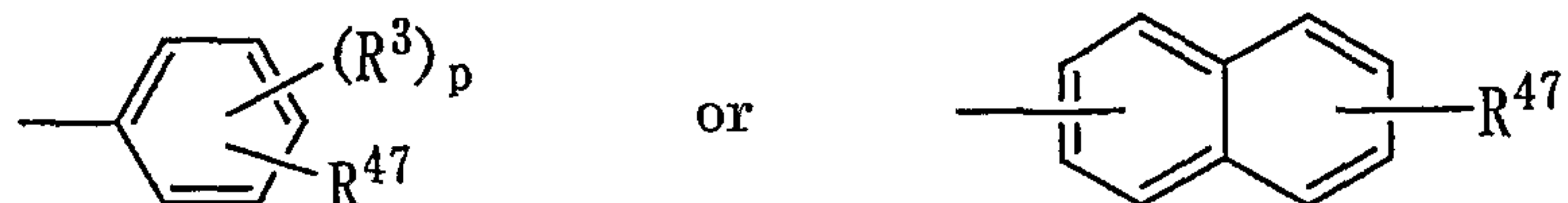
wherein R^3 and p are the same as described above, and R^{46} represents



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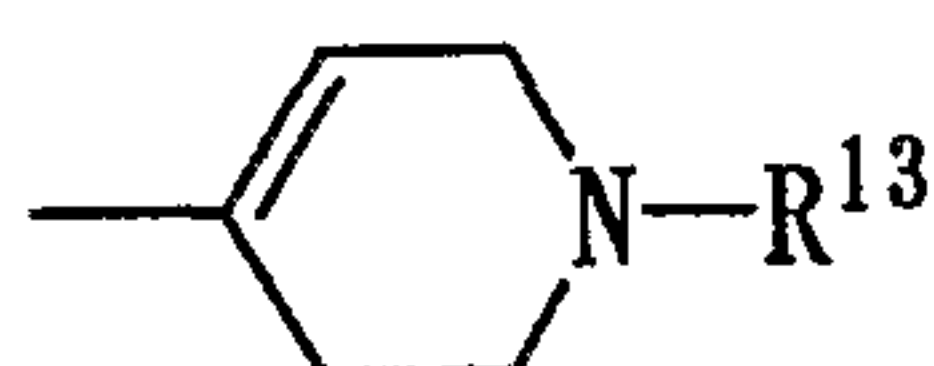
wherein R^{13} is the same as described above,

A^9 represents a group of the formula:



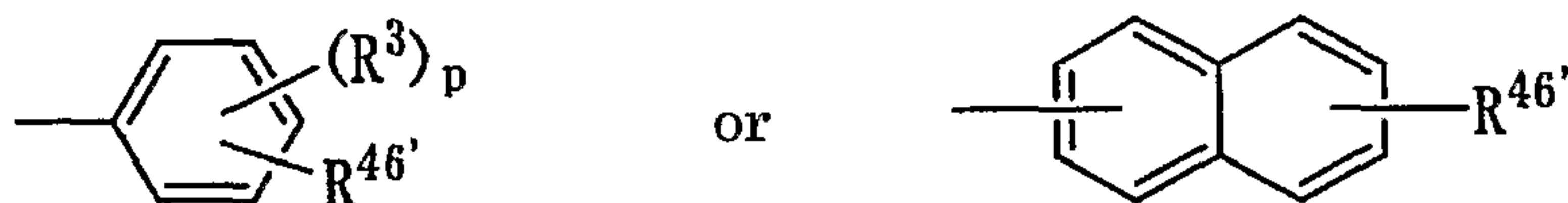
wherein R^3 and p are the same as described above, and

R^{47} represents a group of the formula:



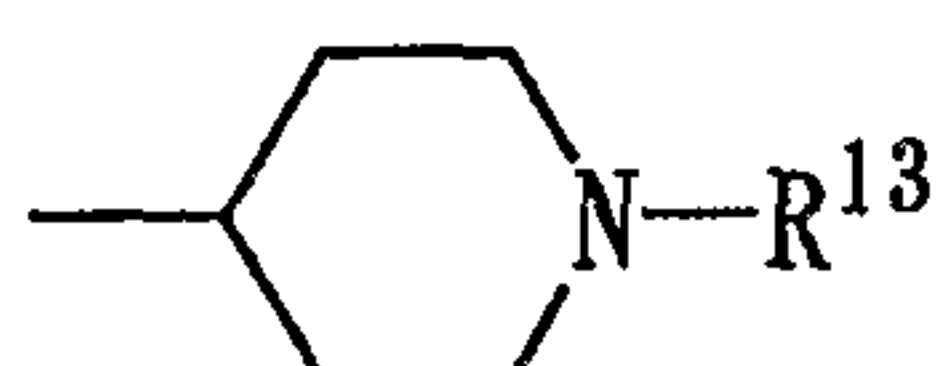
5 wherein R^{13} is the same as described above, and

A^{8a} represents a group of the formula:



wherein R^3 and p are the same as described above, and

$R^{46'}$ represents a group



wherein R^{13} is the same as described above.

10 The reaction of the compound (13) with the compound (12) is carried out in an appropriate inert solvent in the presence of a basic compound.

Examples of the basic compound used here include such as sodium, potassium, magnesium, sodium
15 hydride, sodium amide, metal alcoholates such as sodium methyllate, sodium ethyllate, and potassium tert-

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butoxide, and alkyl and aryl lithiums or lithium amides such as methyl lithium, n-butyl lithium, phenyl lithium, and lithium diisopropylamide. These basic compounds are used singly or in a mixture of two or
5 more.

The basic compound is appropriately used in an amount typically at least equimolar to the compound (13), and preferably 1 to 5 times of the compound (13) on a molar basis.

10 Examples of the inert solvent used include aromatic hydrocarbons such as benzene, toluene, and xylene, ethers such as diethyl ether, tetrahydrofuran, dioxane, monoglyme, and diglyme, aliphatic hydrocarbons such as n-hexane, heptane, and cyclohexane, halogenated
15 hydrocarbons such as chloroform, dichloromethane, dichloroethane, and carbon tetrachloride, dimethylsulfoxide, and N,N-dimethylformamide, and a mixture thereof.

The reaction is carried out at typically
20 about -90 to 150°C, and preferably about -90 to 120°C, and is completed in general in about 10 minutes to 10 hours.

The compound (12) is appropriately used in an amount typically at least equimolar to the compound
25 (13), and preferably 1 to 5 times of the compound (13) on a molar basis.

The reaction which converts the compound (11) into the compound (1m) is carried out in an appropriate

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inert solvent and in the presence of an acid.

Examples of the acid used here include mineral acids such as hydrochloric acid, sulfuric acid, and hydrobromic acid, and organic acids such as
5 sulfonic acids including p-toluenesulfonic acid. These acids are used singly or in a mixture of two or more.

It is appropriate to use the acid typically in an amount at least equimolar to the compound (11), and preferably in an equal amount to a large excess
10 amount with respect to the compound (11) on a molar basis.

Any of the inert solvents used in the reaction of the compound (13) with the compound (12) may be used in this reaction.

15 This reaction is suitably carried out at typically room temperature to 200°C, preferably room temperature to about 150°C, and is completed in general in about 1 to 20 hours.

The reaction which converts the compound (11)
20 into the compound (11') is carried out in an appropriate solvent and in the presence of an acid and a catalyst.

Examples of the solvent used include water, lower alcohols such as methanol, ethanol, and
25 isopropanol, ketones such as acetone and methyl ethyl ketone, halogenated hydrocarbons such as dichloromethane, dichloroethane, chloroform, and carbon tetrachloride, ethers such as diethyl ether,

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dimethoxyethane, tetrahydrofuran, diisopropyl ether, diglyme, and 1,4-dioxane, aromatic hydrocarbons such as benzene, toluene, and xylene, acetonitrile, dimethyl sulfoxide, N,N-dimethylacetamide, N,N-
5 dimethylformamide, and N-methylpyrrolidone, and a mixture thereof.

Examples of the acid used here include inorganic acids such as hydrochloric acid, sulfuric acid, and hydrobromic acid, and organic acids such as
10 boron trifluoride diethyl etherate, formic acid, acetic acid, trifluoroacetic acid, and p-toluenesulfonic acid.

Examples of the catalyst include alkylsilane compounds such as triethylsilane.

The acids and the catalysts described above
15 are respectively used typically in an amount about 0.01 to 5 times of the compound (11), and preferably about 0.01 to 1 time of the compound (11) on a molar basis.

The above described reaction is carried out at about room temperature to 200°C, and preferably about
20 room temperature to 150°C, and is completed in general in about 1 to 10 hours.

The reaction which converts the compound (11) into the compound (11') may be carried out in an appropriate solvent and in the presence of a catalytic
25 hydrogen reducing agent.

Examples of the solvent used include water, fatty acids such as acetic acid, alcohols such as methanol, ethanol, and isopropanol, aliphatic

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hydrocarbons such as n-hexane, alicyclic hydrocarbons such as cyclohexane, ethers such as diethyl ether, dimethoxyethane, tetrahydrofuran, monoglyme, diglyme, and 1,4-dioxane, esters such as methyl acetate, ethyl acetate, and butyl acetate, and aprotic polar solvents such as N,N-dimethylformamide, N,N-dimethylacetamide, N-methylpyrrolidone, and a mixture thereof.

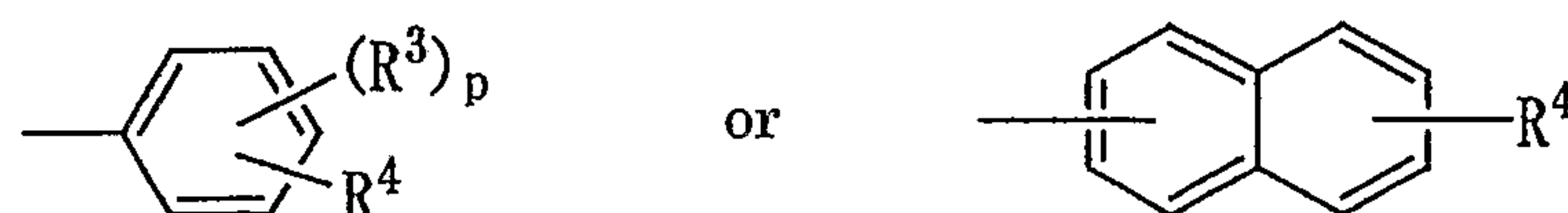
Examples of the catalytic hydrogen reducing agent include palladium, palladium-black, palladium-carbon, palladium hydroxide-carbon, rhodium-alumina, platinum, platinum oxide, copper chromite, Raney nickel, and palladium acetate.

The catalytic hydrogen reducing agent is used typically in an amount of 0.01 to 1 times of the compound (11) on a weight basis.

The above described reaction favorably proceeds at typically about -20 to 100°C, and preferably about 0 to 80°C, and is completed generally in about 0.5 to 20 hours, and the hydrogen pressure is typically at 1 to 10 atm.

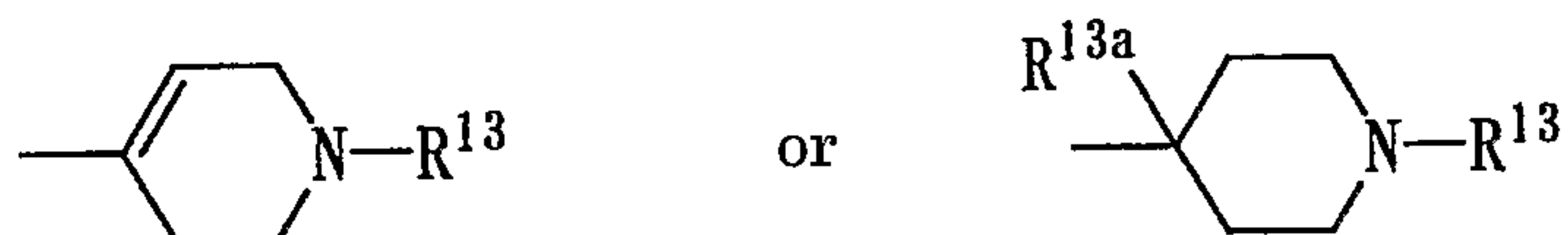
It is preferable to add a mineral acid such as hydrochloric acid to this reaction system.

The compound (1), wherein A represents a group of the formula:



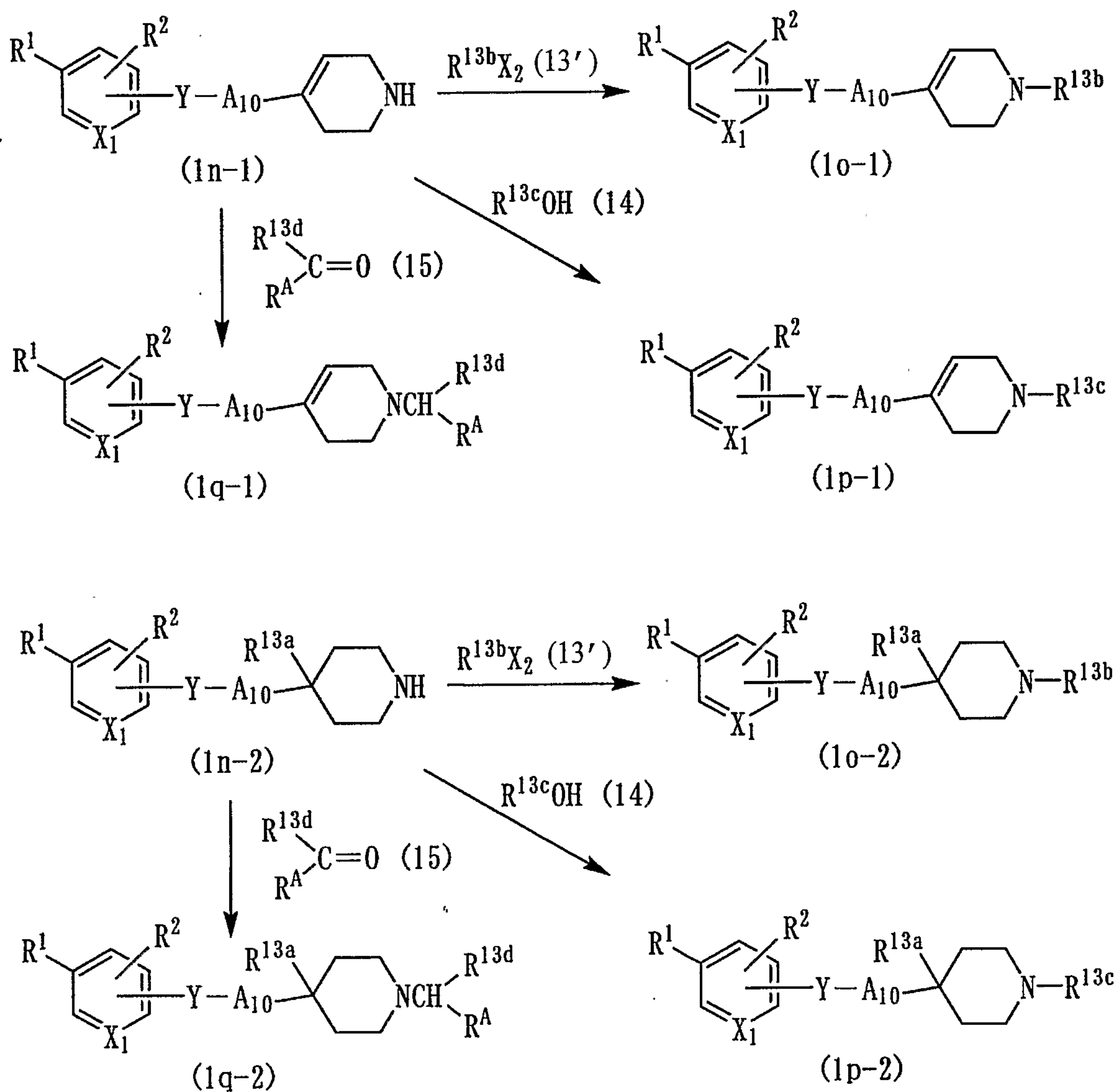
wherein R^4 represents a group of the formula:

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wherein R^{13} represents a group other than a hydrogen atom, is produced from the corresponding compound wherein R^{13} is a hydrogen atom, as shown in the following reaction formula 9.

[Reaction formula 9]



wherein R^1 , R^2 , X_1 , Y , A_{10} , R^A , R^{13a} and X_2 are the same as

described above, provided that the a and the b of A₁₀ are bound to Y and the piperidinyl group, respectively, R^{13b} represents a lower alkyl group which may have a halogen atom as a substituent, a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring, an imidazolyl lower alkyl group, a lower alkoxycarbonyl lower alkyl group, a carboxy lower alkyl group, a piperazinylcarbonyl lower alkyl group which may be substituted on the piperazine ring with a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring, or a morpholinocarbonyl substituted lower alkyl group,

R^{13c} represents a lower alkanoyl group which may have a halogen atom as a substituent, a lower alkoxy carbonyl group, a benzoyl group, a morpholino substituted alkanoyl group, a piperazinyl lower alkanoyl group which may be substituted on the piperazine ring with a phenyl lower alkyl group which may have a lower alkylenedioxy group on the phenyl ring; or an imidazolyl lower alkanoyl group, and

R^{13d} represents a hydrogen atom, a lower alkyl group which may have a halogen atom as a substituent, a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring, a phenyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring, an imidazolyl group, an imidazolyl lower alkyl

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group, a lower alkoxycarbonyl lower alkyl group, a
carboxy lower alkyl group, a piperazinylcarbonyl lower
alkyl group which may be substituted on the piperazine
ring with a phenyl lower alkyl group which may have a
5 lower alkylenedioxy group as a substituent on the
phenyl ring, or a morpholinocarbonyl substituted lower
alkyl group,
provided that the alkyl moiety of the side chain
(-CHR^AR^{13d}) of the compound (1q) has not more than 6
10 carbon atoms.

The reaction of the compound (1n-1) with the
compound (13') is carried out under the condition
similar to that of the reaction of the compound (1b)
with the compound (4) of the above described reaction
15 formula 2.

The reaction of the compound (1n-1) with the
compound (14) is carried out under the condition
similar to that of the reaction of the compound (1b)
with the compound (6) of the above described reaction
20 formula 2.

The reaction of the compound (1n-1) with the
compound (15) is carried out under the condition to
similar that of the reaction of the compound (1b) with
the compound (5) of the above described reaction
25 formula 2.

Also, the reaction of the compound (1n-2)
with the compound (13') is carried out under the
condition similar to that of the reaction of the

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compound (1b) with the compound (4) of the above described reaction formula 2, the reaction of the compound (1n-2) with the compound (14) is carried out under the condition similar to that of the reaction of the compound (1b) with the compound (6) of the above described reaction formula 2, and the reaction of the compound (1n-2) with the compound (15) is carried out under the condition to similar that of the reaction of the compound (1b) with the compound (5) of the above described reaction formula 2.

In the reaction formula 9, the hydrolysis of the compounds (1o-1) and (1o-2), wherein R^{13b} represents a lower alkoxy carbonyl lower alkyl group, may produce the corresponding compounds (1o-1) and (1o-2), wherein R^{13b} represents a carboxy lower alkyl group.

In the reaction formula 9, the hydrolysis of compounds (1p-1) and (1p-2), wherein R^{13c} represents a lower alkoxy carbonyl group, may produce the corresponding compounds (1p-1) and (1p-2), wherein R^{13c} is a hydrogen atom.

The hydrolysis reaction (hereinafter this hydrolysis reaction is called "hydrolysis B") may be carried out in an appropriate solvent or without a solvent, in the presence of an acidic or basic compound.

Examples of the solvent used include water, lower alcohols such as methanol, ethanol, isopropanol, and tert-butanol, ketones such as acetone and methyl

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ethyl ketone, ethers such as diethyl ether, dioxane, tetrahydrofuran, monoglyme, and diglyme, fatty acids such as acetic acid and formic acid, esters such as methyl acetate and ethyl acetate, halogenated

5 hydrocarbons such as chloroform, dichloromethane, dichloroethane, and carbon tetrachloride, dimethylsulfoxide, N,N-dimethylformamide, and hexamethylphosphoric acid triamide, and a mixture thereof.

10 Examples of the acid include mineral acids such as hydrochloric acid, sulfuric acid, and hydrobromic acid, organic acids such as formic acid, acetic acid, trifluoroacetic acid, sulfonic acids including p-toluenesulfonic acid, and Lewis acids such
15 as boron tribromide and boron trichloride. These acids are used singly or in a mixture of two or more.

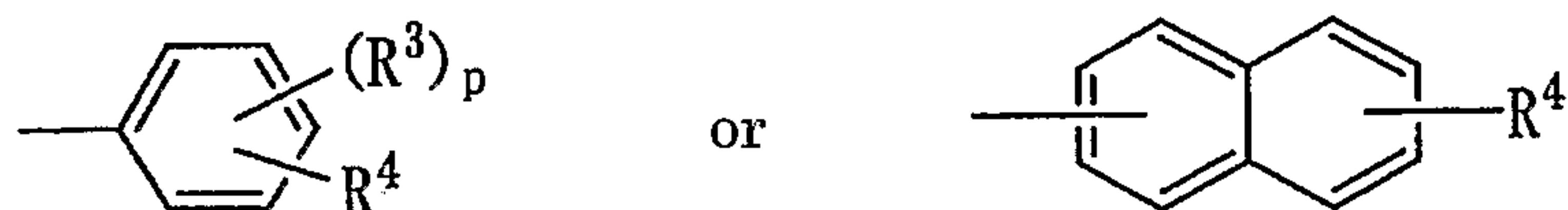
 Examples of the basic compound include carbonates such as sodium carbonate, potassium carbonate, sodium bicarbonate, and potassium
20 bicarbonate, and metal hydroxides such as sodium hydroxide, potassium hydroxide, calcium hydroxide, and lithium hydroxide. These basic compounds are used singly or in a mixture of two or more.

 The hydrolysis reaction is favorably carried
25 out at typically about 0 to about 200°C, and preferably about 0 to 150°C, and is completed in general in about 10 minutes to 50 hours.

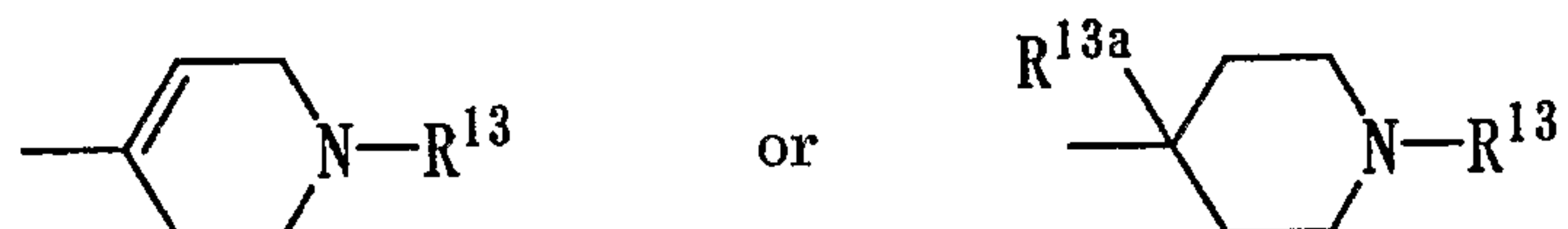
 The compound (1), wherein A represents a

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group of the formula:



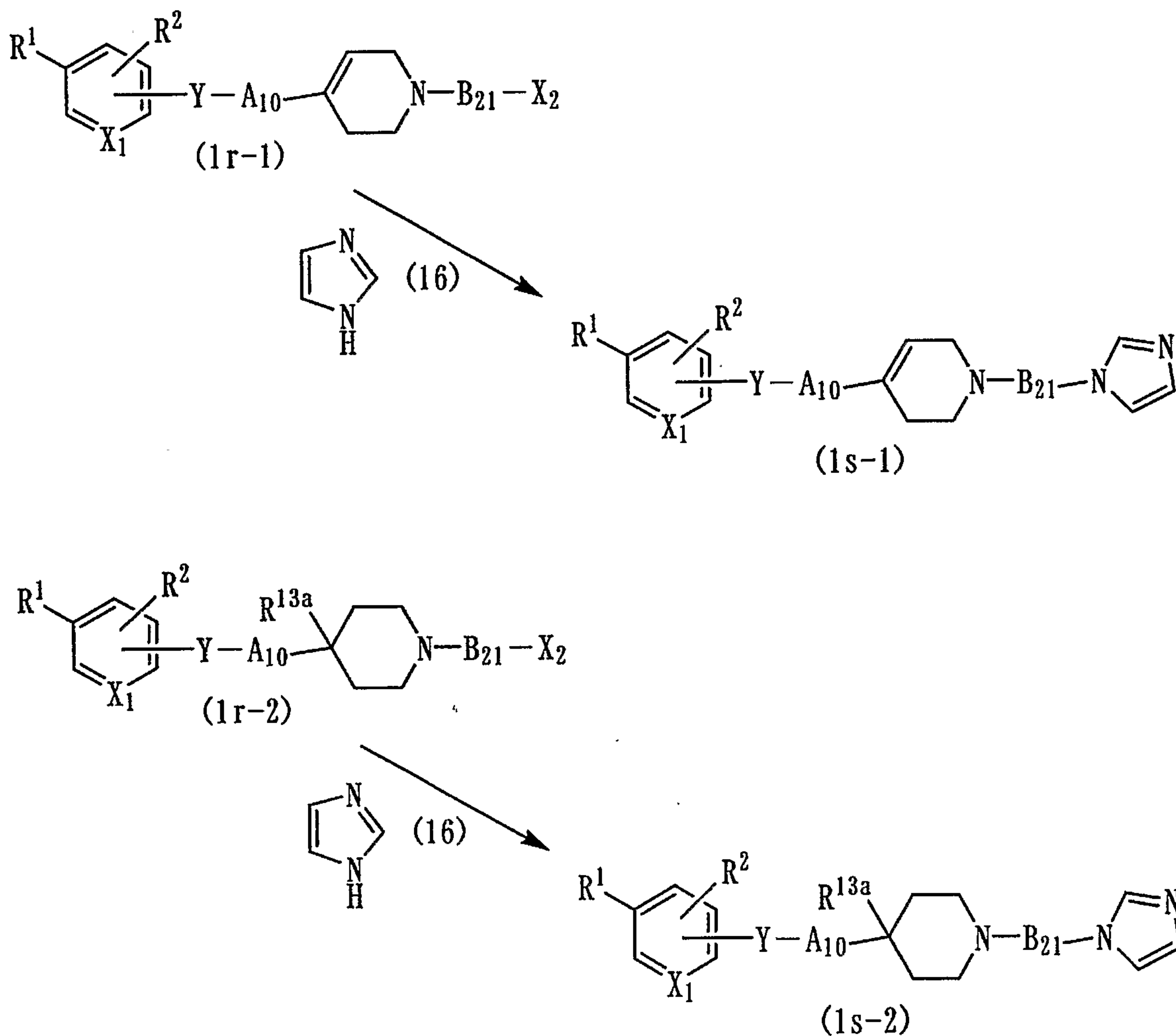
wherein R^4 represents a group of the formula:



wherein R^{13} represents an imidazolyl lower alkyl group,
is produced as shown in the following reaction formula

5 10.

[Reaction formula 10]

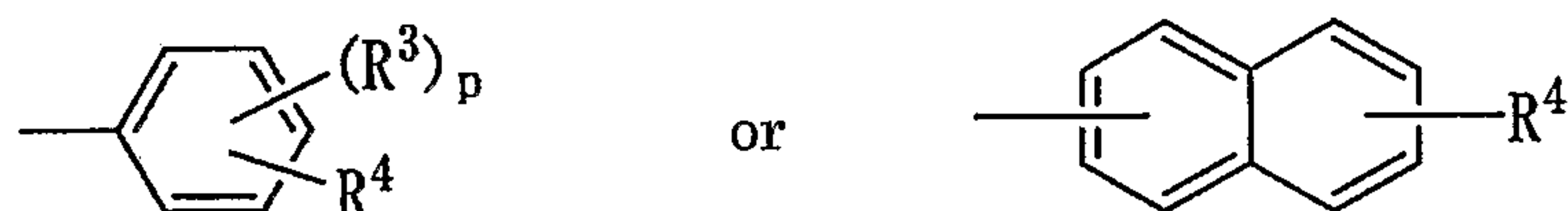


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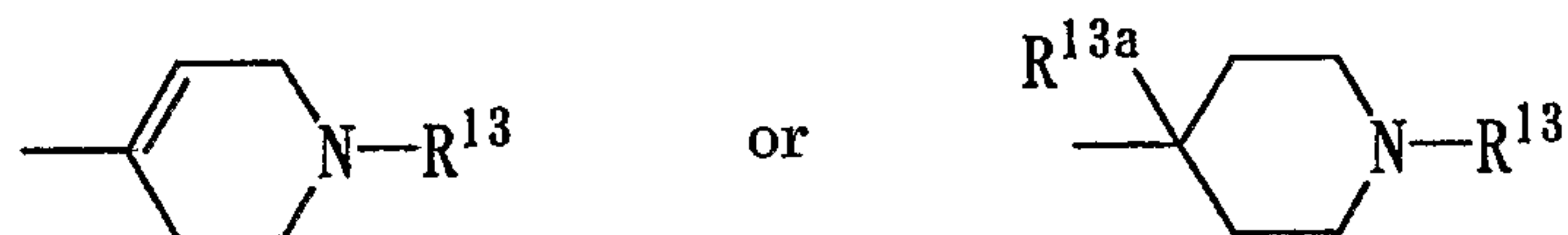
wherein R^1 , R^2 , X_1 , Y , A_{10} , R^{13a} , B_{21} and X_2 are the same as described above, provided that the a and b of A_{10} are bound to Y and the piperidinyl group, respectively.

The reaction of the compound (1r-1) with the
 5 compound (16) with and the reaction of the compound
 (1r-2) with the compound (16) are carried out under the
 condition similar to that of the reaction of the
 compound (2) with the compound (3) of the above
 described reaction formula 1.

10 The compound (1), wherein A represents a
 group of the formula:

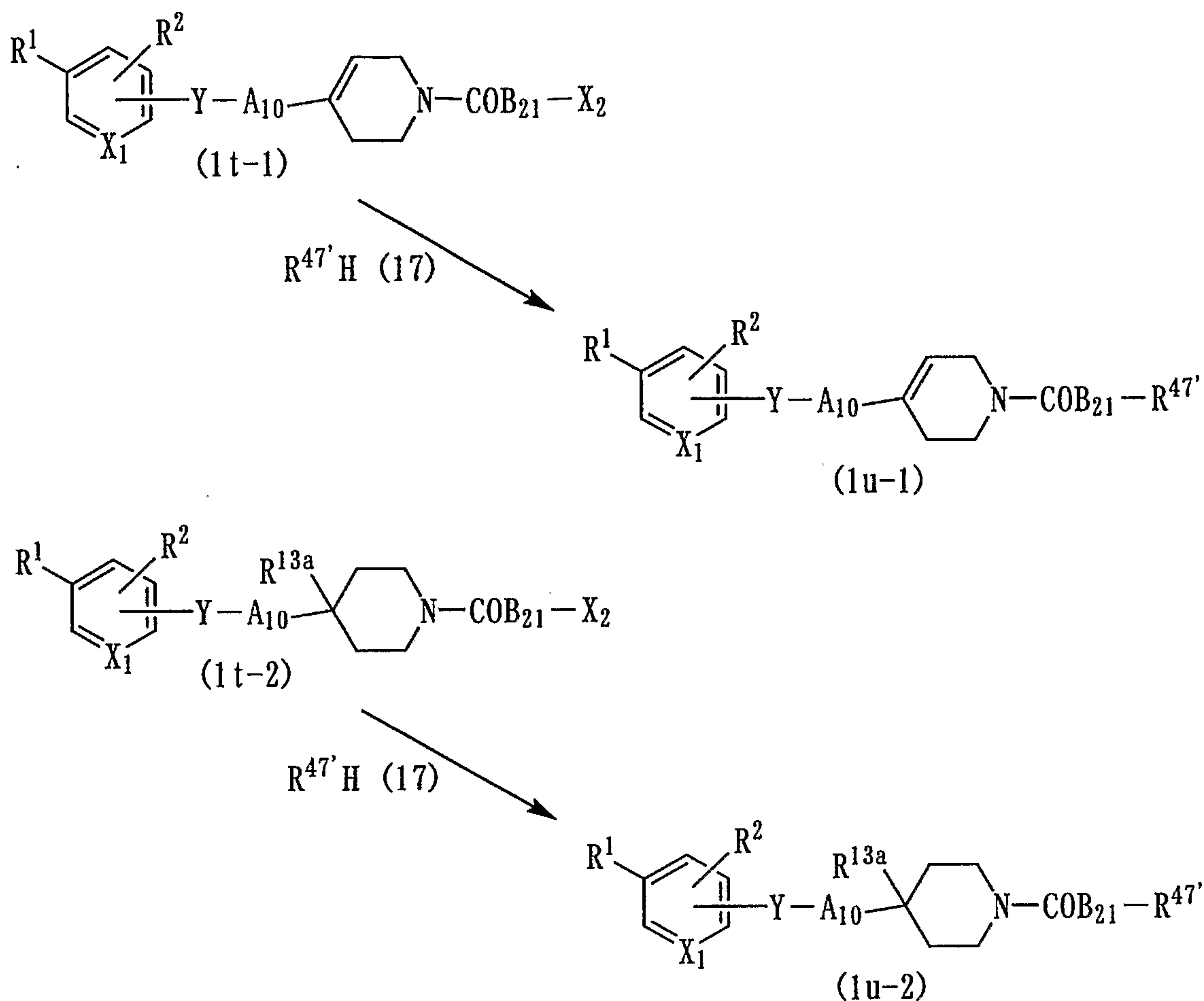


wherein R^4 represents a group of the formula:



wherein R^{13} represents a morpholino substituted alkanoyl
 group, a piperazinyll lower alkanoyl group which may be
 15 substituted on the piperazine ring with a phenyl lower
 alkyl group which has a lower alkylenedioxy group as a
 substituent on the phenyl ring, or an imidazolyl lower
 alkanoyl group, may be produced from the corresponding
 compound, wherein R^{13} represents a lower alkanoyl group
 20 which may have a halogen atom as a substituent, as
 shown in the following reaction formula 11.

[Reaction formula 11]



wherein R¹, R², X₁, Y, R^{13a}, B₂₁ and X₂ are the same as described above, and R^{47'} is a morpholino group, a piperazinyll group which may be substituted on the

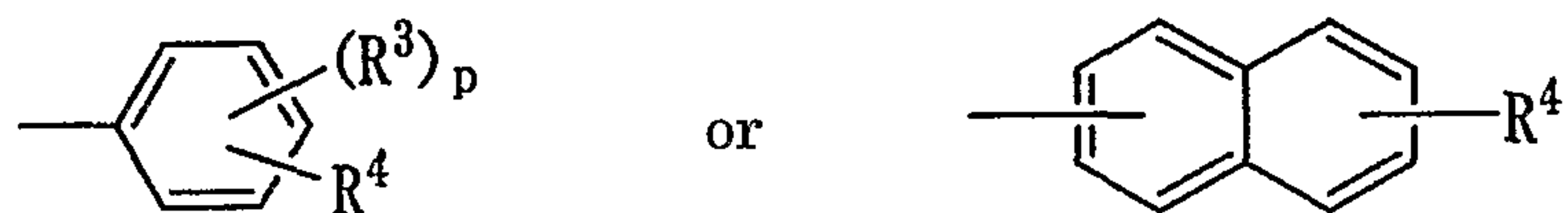
5 piperazine ring with a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring, or an imidazolyl group, provided that the a and b of A₁₀ are bound to Y and the piperidinyl group, respectively.

10 The reaction of the compound (1t-1) with the compound (17) and the reaction of the compound (1t-2) with the compound (17) are carried out under the

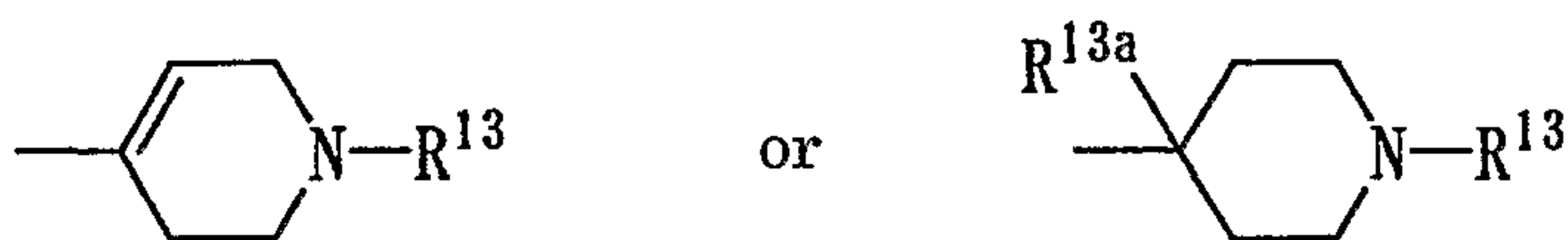
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condition similar to that of the reaction of the compound (2) with the compound (3) of the above described reaction formula 1.

The compound (1), wherein A represents a
5 group of the formula:



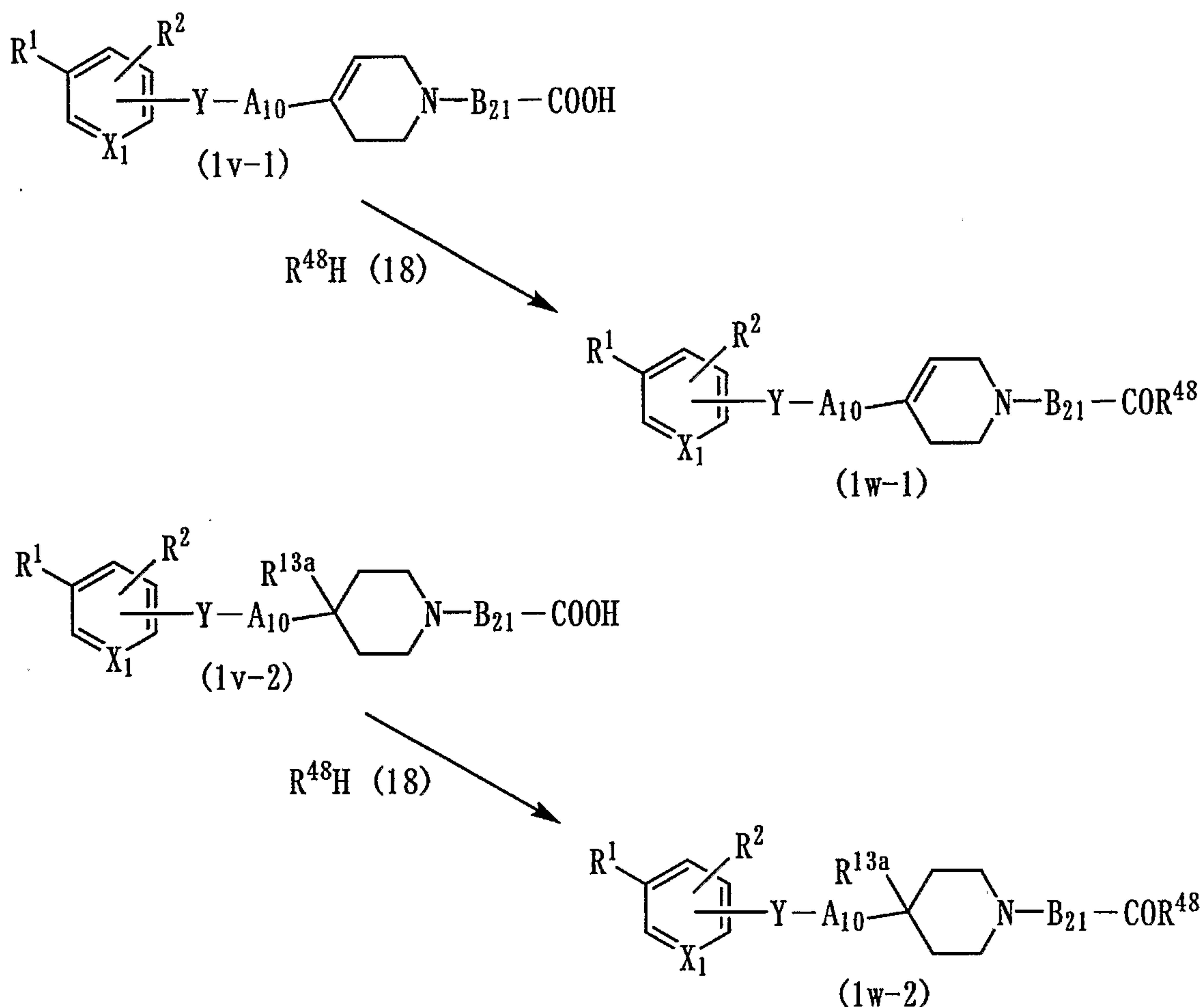
wherein R^4 represents a group of the formula:



wherein R^{13} represents a piperazinylcarbonyl lower alkyl group which is substituted on the piperazine ring with a phenyl lower alkyl group which may have a lower
10 alkylenedioxy group as a substituent on the phenyl ring, or a morpholinocarbonyl substituted lower alkyl group, is produced from the corresponding compound, wherein R^{13} is a carboxy group, as shown in the following reaction formula 12.

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[Reaction formula 12]



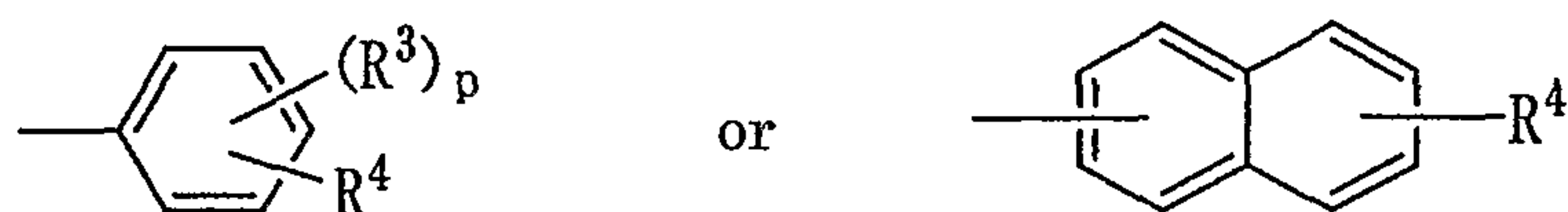
wherein R^1 , R^2 , X_1 , Y , A_{10} , R^{13a} , and B_{21} are the same as described above, R^{48} is a piperazinyl group which may be substituted on the piperazine ring with a phenyl lower alkyl group which may have a lower alkylenedioxy group as a substituent on the phenyl ring, or a morpholino group, provided that the a and b of A_{10} are bound to Y and the piperidinyl group, respectively.

The reaction of the compound (1v-1) with the compound (18) and the reaction of the compound (1v-2) with the compound (18) are carried out under the condition similar to that of the reaction of the

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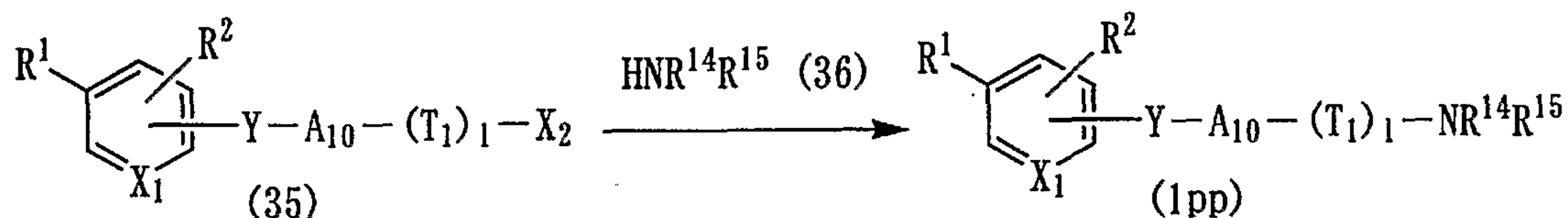
compound (1b) with the compound (6) of the above described reaction formula 2.

The compound (1), wherein A represents a group of the formula:



5 wherein R^4 represents $-(T)_1-NR^{14}R^{15}$, is produced as shown in the reaction formulas 13 and 14.

[Reaction formula 13]



In the formula, R^1 , R^2 , X_1 , Y , A_{10} , X_2 , l , R^{14} and R^{15} are the same as described above, T_1 is a lower
 10 alkylene group, $-\text{COB}_8-$, $-\text{SO}_2-$ or a $-\text{CH}(\text{OH})-\text{B}_9-$, and B^8 and B^9 are the same as described above, provided that, in the compounds (35) and (1pp), the a and b of A_{10} are bound to Y and $-(T_1)_1$, respectively.

The reaction of the compound (35) with the
 15 compound (36) is carried out in the reaction condition similar to that of the reaction of the compound (2) with the compound (3) of the above described reaction formula 1.

The compound (35), wherein l is 0, may also
 20 be produced by reacting the corresponding compound (35)

DEMANDES OU BREVETS VOLUMINEUX

**LA PRÉSENTE PARTIE DE CETTE DEMANDE OU CE BREVETS
COMPREND PLUS D'UN TOME.**

CECI EST LE TOME __1__ DE __3__

NOTE: Pour les tomes additionels, veuillez contacter le Bureau Canadien des Brevets.

JUMBO APPLICATIONS / PATENTS

**THIS SECTION OF THE APPLICATION / PATENT CONTAINS MORE
THAN ONE VOLUME.**

THIS IS VOLUME __1__ OF __3__

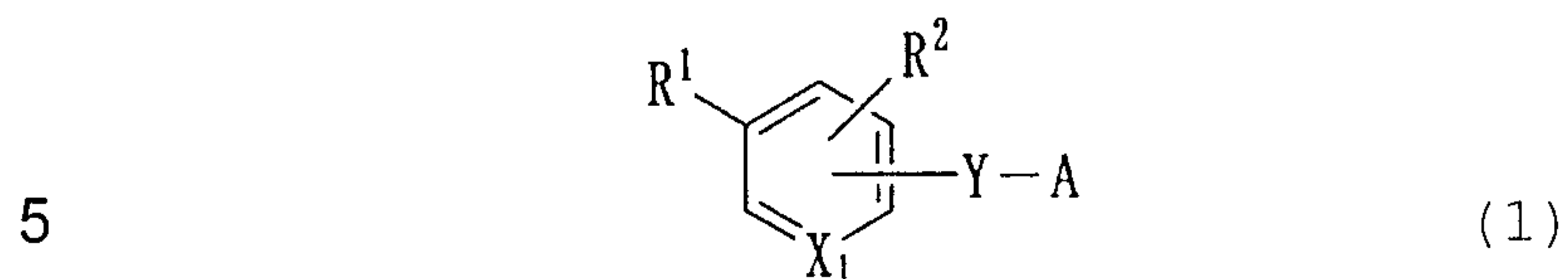
NOTE: For additional volumes please contact the Canadian Patent Office.

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CLAIMS:

1. An aromatic compound represented by the following general formula (1) or a salt thereof:



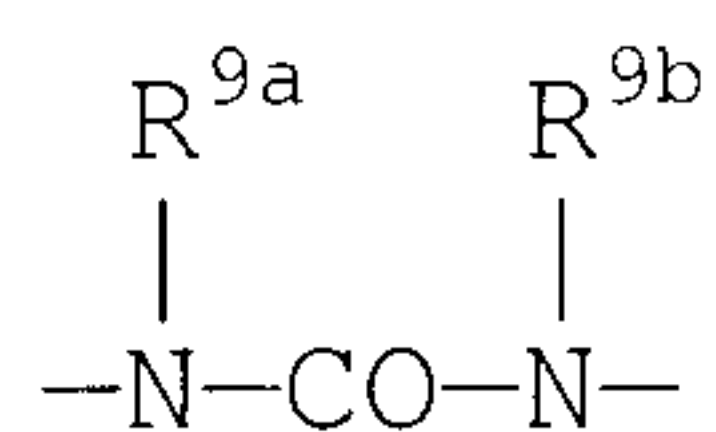
wherein X_1 represents a nitrogen atom or a group $-CH=$,

R^1 represents a group $-Z-R^6$,

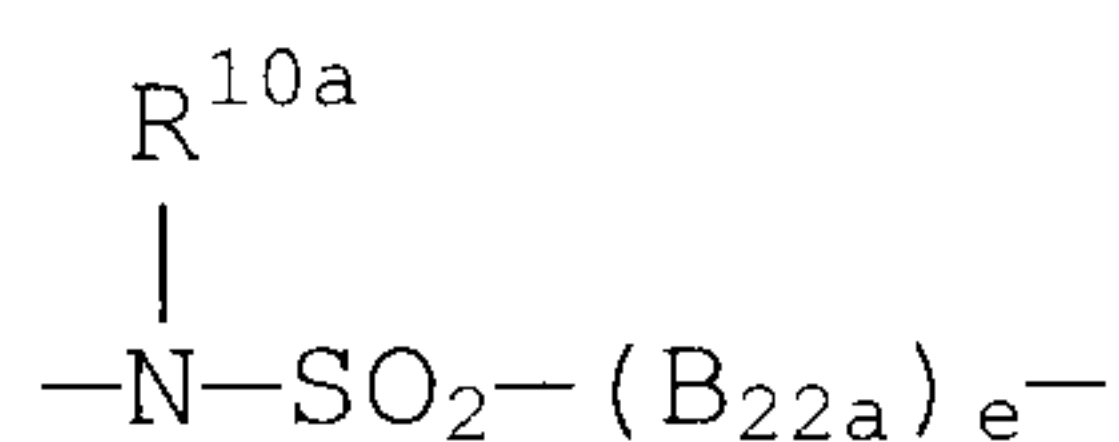
Z represents a group $-N(R^8)-B-$, a group $-B-N(R^8)-$, a group $-B_0-O-$, a group



a group $-CO-$, a group $-CH(OH)-$, a group



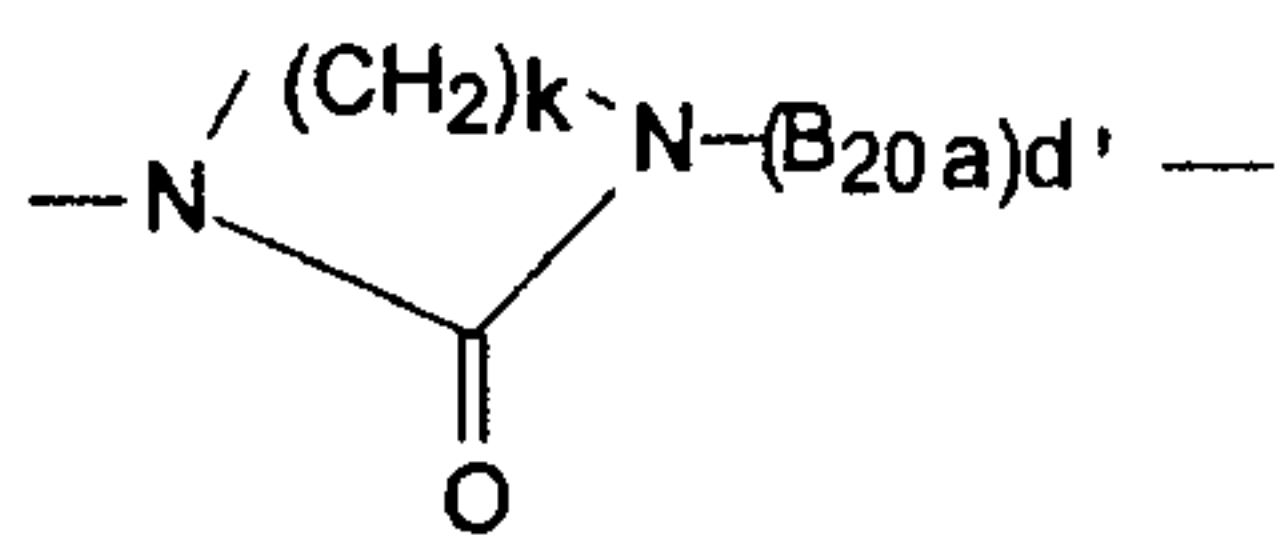
15 a group $-N=CH-$, a group



a C_2-C_6 alkenylene group, a group $-NHCO-B_1-$, a group $-NHCO-B_2-(W)u-$, a group $-B_0-O-B_{19a}-$, a group

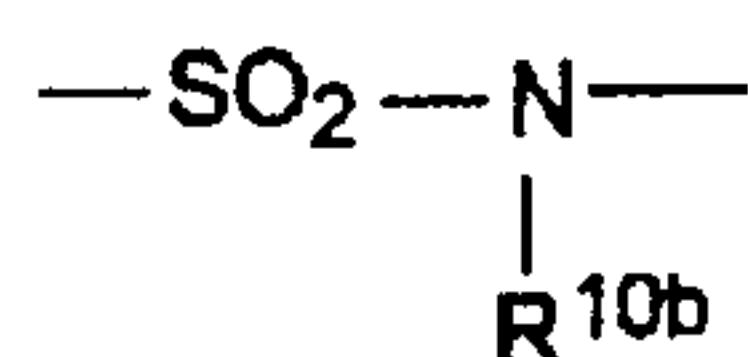
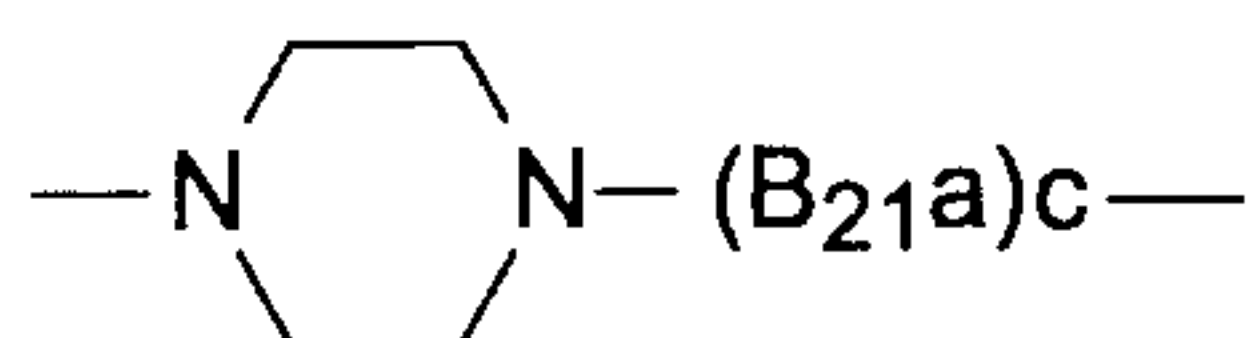
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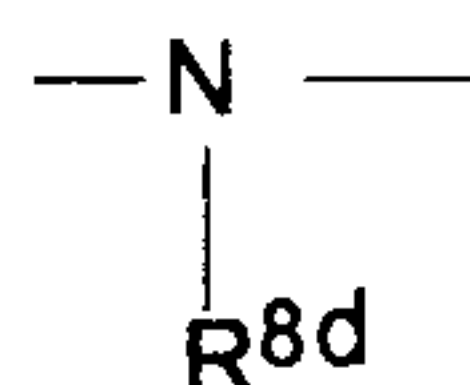
a group

5 a group



a group -S-, a C₂-C₆ alkynylene group, a C₁-C₆ alkylene group, a group

10



or a group $\text{---CO---NH---B}_{18\text{a}}\text{---}$,

wherein R⁸ represents a hydrogen atom, a C₁-C₆ alkyl group that may have a C₁-C₆ alkoxy group as a substituent, a C₁-C₆ alkanoyl group, a phenyl C₁-C₆ alkyl group, or a C₁-C₆ alkylsulfonyl group,

B represents a group -CO- or a C₁-C₆ alkylene group,

B₀ represents a C₁-C₆ alkylene group,

each of R^{9a} and R^{9b}, which are identical or different,

20 represents a hydrogen atom or a C₁-C₆ alkyl group

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R^{10a} represents a hydrogen atom or a C_1-C_6 alkyl group, B_{22a} represents a C_1-C_6 alkylene group or a C_1-C_6 alkenylene group, e represents 0 or 1,

5 B_1 represents a C_1-C_6 alkenylene group that may have a phenyl group as a substituent,

B_2 represents a C_1-C_6 alkylene group that may be substituted by a group selected from the group consisting of a C_1-C_6 alkoxy group and a phenyl group,

W represents an oxygen atom, a group $-NH-$, or a sulfur atom,

10 u represents 0 or 1,

B_{18a} represents a C_1-C_6 alkylene group,

B_{19a} represents a C_1-C_6 alkylene group,

B_{20a} represents a C_1-C_6 alkylene group,

B_{21a} represents a C_1-C_6 alkylene group,

15 R^{8d} represents a hydrogen atom or a C_1-C_6 alkyl group,

k represents 2 or 3,

c represents 0 or 1,

d' represents 0 or 1,

R^{10b} represents a hydrogen atom or a C_1-C_6 alkyl group,

20 R^6 represents a 5- to 15-membered monocyclic, dicyclic, or tricyclic saturated or unsaturated heterocyclic group having 1

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to 4 nitrogen atoms, oxygen atoms, or sulfur atoms (wherein, the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of an oxo group; an optionally halogenated C₁-C₆ alkoxy group; an optionally

5 halogenated C₁-C₆ alkyl group; a halogen atom; a C₁-C₆ alkylsulfonyl group; a phenyl group that may be substituted, on the phenyl ring, by an optionally halogenated C₁-C₆ alkyl group; a C₁-C₆ alkylthio group; a pyrrolyl group; a benzoyl group; a C₁-C₆ alkanoyl group; a C₁-C₆ alkoxycarbonyl group; and

10 an amino group that may have a group selected from the group consisting of a C₁-C₆ alkyl group and a C₁-C₆ alkanoyl group as a substituent), an adamantyl group, a naphthyl group (wherein, the naphthalene ring may be substituted by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group, a

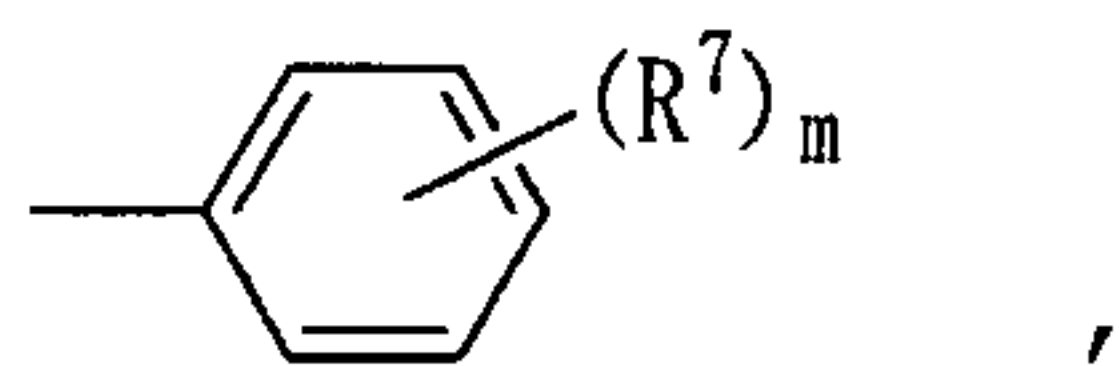
15 halogen atom, and an amino group that may have a group selected from the group consisting of a C₁-C₆ alkyl group and a C₁-C₆ alkanoyl group as a substituent), an alkyl group that may have a C₁-C₆ alkoxy group as a substituent, a C₃-C₁₆ cycloalkyl group that may be substituted, on the C₃-C₁₆ cycloalkyl ring, by a

20 group selected from the group consisting of an amino-substituted C₁-C₆ alkyl group that may have a C₁-C₆ alkyl group on the amino group and a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a C₂-C₆ alkenyl group that may have a halogen atom as a substituent, a C₁-C₆ alkanoyl group, a

25 benzoyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group that may have a halogen atom as a substituent and a halogen atom, a group

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a halogen atom-substituted C₁-C₆ alkyl group, or a C₃-C₁₆ cycloalkyl C₁-C₆ alkyl group,

R⁷ represents a hydrogen atom, a phenyl group, a carboxy group,
 5 a hydroxyl group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a phenoxy group, a C₁-C₆ alkoxy group that may have a halogen atom as a substituent, a C₁-C₄ alkylenedioxy group, an amino group that may have, as a substituent, a group selected from the group consisting of a
 10 C₁-C₆ alkyl group, a C₁-C₆ alkanoyl group, a benzoyl group, and a C₃-C₁₆ cycloalkyl group, a cyano group, a C₁-C₆ alkanoyl group that may have a halogen atom as a substituent, a C₁-C₆ alkylsulfonyl group, an aminosulfonyl group, a C₁-C₆ alkoxycarbonyl group, a C₂-C₆ alkanoyloxy group, a 5- or 6-
 15 membered saturated or unsaturated heterocyclic group having 1 to 4 nitrogen atoms, oxygen atoms, or sulfur atoms (wherein the heterocyclic ring may be substituted, by an oxo group), or a C₁-C₆ alkoxycarbonyl C₁-C₆ alkyl group,

m represents an integer between 1 and 5, wherein when m
 20 represents 2 to 5, two to five R⁷s may be identical or different,

R² represents a hydrogen atom, a halogen atom, or a C₁-C₆ alkyl group,

Y represents a group -O-, a group -N(R⁵)-, a group -CO-, a
 25 group -CH(OH)-, a C₁-C₆ alkylene group, a group -S(O)_n-, or a group -C(=N-OH)-,

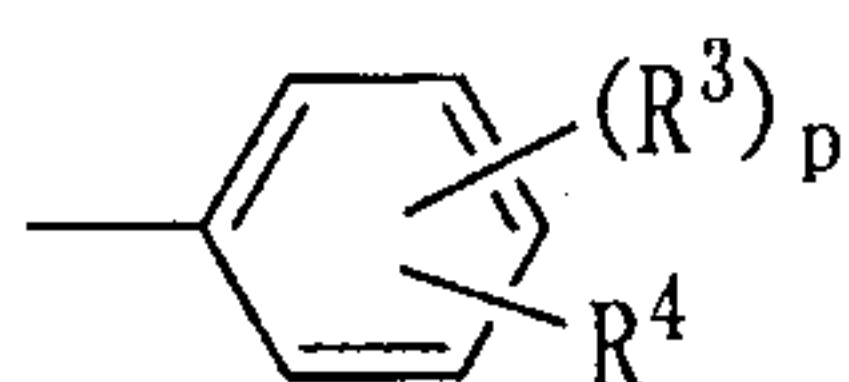
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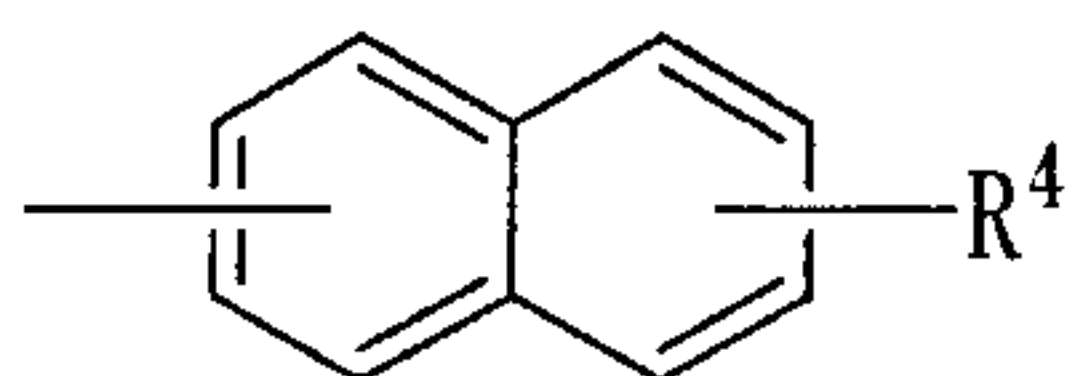
R^5 represents a hydrogen atom, a C_1 - C_6 alkyl group, a C_1 - C_6 alkanoyl group, a benzoyl group, a phenyl C_1 - C_6 alkyl group, or a C_3 - C_{16} cycloalkyl group,

n represents 0, 1, or 2,

5 A represents a group



or a group



10

p represents 1 or 2,

R^3 represents a hydrogen atom, a C_1 - C_6 alkoxy group, a halogen atom, a C_1 - C_6 alkyl group that may have a halogen atom as a substituent, a C_1 - C_6 alkoxycarbonyl group, a carboxy group, a
 15 group $-CONR^{11}R^{12}$, or a cyano group,

wherein each of R^{11} and R^{12} , which are identical or different, represents a hydrogen atom, a C_1 - C_6 alkyl group, a C_3 - C_{16} cycloalkyl group, or a phenyl group, or R^{11} and R^{12} , together with the nitrogen atom to which they bind, may bind to each
 20 other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring,

R^4 represents a group $-(T)_1-N(R^{14})R^{15}$,

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T represents a C₁-C₆ alkylene group, a group -N(R¹⁷)-B₃-CO-, a group -B₁₉-N(R¹⁸)-CO-, a group -B₄-CO-, a group -Q-B₅-CO-, a group -B₆-N(R¹⁹)-B₇-CO-, a group -CO-B₈-, a group -CH(OH)-B₉-, a group -CO-B₁₀-CO-, a group -CH(OH)-B₁₁-CO-, a
 5 group -CO-, a group -SO₂-, or a group -B_{23a}-CO-CO-,

wherein R¹⁷ represents a hydrogen atom, a C₁-C₆ alkyl group, a C₃-C₁₆ cycloalkyl group, a C₃-C₁₆ cycloalkylcarbonyl group, a C₂-C₆ alkanoyl group that may have a halogen atom as a substituent, a C₂-C₆ alkenyl group, an amino-substituted C₂-C₆
 10 alkanoyl group that may have a C₁-C₆ alkyl group as a substituent, or a C₁-C₆ alkylsulfonyl group,

B₃ represents a C₁-C₆ alkylene group,

B₁₉ represents a C₁-C₆ alkylene group,

R¹⁸ represents a hydrogen atom or a C₁-C₆ alkyl group,

15 B₄ represents a C₂-C₆ alkenylene group or a C₁-C₆ alkylene group that may have a hydroxyl group as a substituent,

Q represents an oxygen atom or a group -S(O)_n- (wherein n has the same meanings as described above),

B₅ represents a C₁-C₆ alkylene group,

20 B₆ represents a C₁-C₆ alkylene group,

R¹⁹ represents a hydrogen atom or a C₁-C₆ alkanoyl group,

B₇ represents a C₁-C₆ alkylene group,

B₈ represents a C₁-C₆ alkylene group,

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B₉ represents a C₁-C₆ alkylene group,

B₁₀ represents a C₁-C₆ alkylene group,

B₁₁ represents a C₁-C₆ alkylene group,

B_{23a} represents a C₁-C₆ alkylene group,

5 1 represents 0 or 1,

R¹⁴ and R¹⁵, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 10-membered saturated or unsaturated heterocyclic ring; or a group

10



wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of (28) a phenyl-substituted C₁-C₆ alkyl group, which has 1 to 2 phenyl groups

15 and which may have a pyridyl group on the C₁-C₆ alkyl group, wherein the phenyl ring may be substituted by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkanoyl group, an amino group that may have a C₁-C₆ alkanoyl group as a substituent, a C₁-C₆ alkoxy carbonyl group, a cyano group, a

20 nitro group, a phenyl group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a C₁-C₆ alkoxy group that may have a halogen atom as a substituent, a phenyl C₁-C₆ alkoxy group, a hydroxyl group, and a C₁-C₄ alkylenedioxy group, (29) a carbamoyl group, (30) a pyridyl
25 C₁-C₆ alkyl group that may have, as a substituent(s) on the

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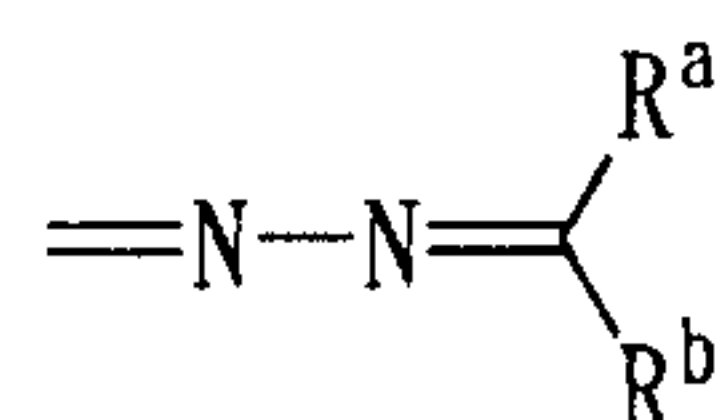
pyridine ring, 1 to 3 groups selected from the group consisting of a hydroxyl group and a C₁-C₆ alkyl group that may have a hydroxyl group as a substituent, (31) a pyrrolyl C₁-C₆ alkyl group that may have 1 to 3 C₁-C₆ alkyl groups as a

5 substituent(s) on the pyrrole ring, (32) a benzoxazolyl C₁-C₆ alkyl group, (33) a benzothiazolyl C₁-C₆ alkyl group, (34) a furyl C₁-C₆ alkyl group, (35) a benzoyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from

10 the group consisting of a cyano group, an amino group that may have a C₁-C₆ alkylsulfonyl group as a substituent, a halogen atom, a C₁-C₆ alkoxy group, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, a thiazolidinyl C₁-C₆ alkyl group that may have an oxo group as a substituent on the thiazolidine ring, a thiazolidinylidene C₁-C₆ alkyl group that

15 may have an oxo group as a substituent on the thiazolidine ring, and a C₁-C₄ alkylenedioxy group, (36) a pyrimidinyl group, (37) a pyrazinyl group, (38) a pyridyl group, (39) a C₁-C₆ alkoxycarbonyl group, (40) a thiazolidinyl C₁-C₆ alkanoyl group that may be substituted, on the thiazolidine ring, by a

20 group selected from the group consisting of an oxo group and a group



(wherein each of R^a and R^b represents a C₁-C₆ alkyl group),

(41) a C₁-C₆ alkyl group that may have a group selected from

25 the group consisting of a hydroxyl group and a halogen atom as a substituent, (42) a C₂-C₆ alkanoyl group that may have a halogen atom as a substituent, (43) a phenyl group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a carbamoyl group that may have a group

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selected from the group consisting of a C₁-C₆ alkoxy C₁-C₆ alkyl group and a C₁-C₆ alkyl group, a C₁-C₆ alkoxy carbonyl group, a carboxy group, a cyano group, a phenyl group, a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom as a

5 substituent, a C₁-C₆ alkoxy group that may have a halogen atom as a substituent, a benzoyl group that may have a halogen atom as a substituent on the phenyl ring, a phenyl C₁-C₆ alkyl group that may have a halogen atom as a substituent on the phenyl ring, and a hydroxyl group, (44) a phenyl group that may have a

10 C₁-C₄ alkylenedioxy group as a substituent on the phenyl ring, (45) a naphthyl C₁-C₆ alkyl group, (46) a phenoxy group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a cyano group, a C₁-C₆ alkyl group that may have a halogen atom as a substituent, and

15 a C₁-C₆ alkoxy group that may have a halogen atom as a substituent, (47) a phenoxy C₁-C₆ alkyl group, (48) a phenyl C₁-C₆ alkoxy group that may be substituted, on the phenyl ring, by 1 to 3 groups selected from the group consisting of a halogen atom, a C₁-C₆ alkyl group that may have a halogen atom

20 as a substituent, and a C₁-C₆ alkoxy group that may have a halogen atom as a substituent, (49) a group $-(B_{12}CO)t-N(R^{20})R^{21}$, (50) a group $-(CO)o-B_{13}-N(R^{22})R^{23}$, (51) a 1,2,3,4-tetrahydronaphthyl-substituted C₁-C₆ alkyl group that may be substituted, on the 1,2,3,4-tetrahydronaphthalene ring, by 1

25 to 5 C₁-C₆ alkyl groups as a substituent(s), (52) a C₃-C₁₆ cycloalkyl group that may have a hydroxyl group as a substituent, (53) a piperidinyl group that may be substituted, on the piperidine ring, by 1 to 3 C₁-C₆ alkyl groups as a substituent(s), (54) a quinolyl C₁-C₆ alkyl group, (55) a

30 1,2,3,4-tetrazolyl C₁-C₆ alkyl group that may have a group

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selected from the group consisting of a C₁-C₆ alkyl group and a phenyl C₁-C₆ alkyl group as a substituent on the tetrazole ring, (56) a thiazolyl C₁-C₆ alkyl group that may have a phenyl group as a substituent on the thiazole ring, (57) a benzoyl C₁-C₆ alkyl group that may have 1 to 3 groups selected from the group consisting of a C₁-C₆ alkoxy group and a halogen atom as a substituent(s) on the phenyl ring, (58) a piperidinyl C₁-C₆ alkyl group that may have a C₁-C₆ alkyl group as a substituent on the piperidine ring, (59) an imidazolyl group that may have 1 to 3 phenyl groups as a substituent(s) on the imidazole ring, (60) a benzimidazolyl group that may have 1 to 3 C₁-C₆ alkyl groups as a substituent(s) on the benzimidazole ring, (61) a pyridyl C₁-C₆ alkoxy group, (62) a 1,2,3,4-tetrahydroquinolyl C₁-C₆ alkyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (63) a 1,3,4-oxadiazolyl C₁-C₆ alkyl group that may have an oxo group as a substituent on the 1,3,4-oxadiazole ring, (64) a C₃-C₁₆ cycloalkyl C₁-C₆ alkyl group, (65) a tetrahydropyranyl group, (66) a thienyl C₁-C₆ alkyl group, (67) a pyrimidinylcarbonyl group that may have an oxo group as a substituent on the pyrimidine ring, (68) a hydroxyl group, (69) a carboxy group, (70) a C₁-C₆ alkoxy C₁-C₆ alkyl group, (71) a C₁-C₆ alkoxy C₁-C₆ alkoxy group, (72) a benzoyloxy group, (73) a C₁-C₆ alkoxycarbonyl C₁-C₆ alkoxy group, (74) a carboxy C₁-C₆ alkoxy group, (75) a phenoxy C₂-C₆ alkanoyl group, (76) a 1,2,3,4-tetrahydroquinolylcarbonyl group that may have an oxo group as a substituent on the tetrahydroquinoline ring, (77) a phenylsulfonyl group, (78) an imidazolyl C₂-C₆ alkanoyl group, (79) an imidazolyl C₁-C₆ alkyl group, (80) a pyridylcarbonyl group, (81) an imidazolylcarbonyl group, (82) a C₁-C₆ alkoxycarbonyl C₁-C₆ alkyl group, (83) a

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carboxy C₁-C₆ alkyl group, (84) a group -(O-B₁₅)s-CO-N(R²⁶)R²⁷,
 (85) a group -N(R²⁸)-CO-B₁₆-N(R²⁹)R³⁰, (86) a group -N(R³¹)-B₁₇-CO-
 N(R³²)R³³, (87) a benzoxazolyl group, (88a) a benzothienyl
 group, (89a) an oxo group, and (90a) a 1,2,3,4-

- 5 tetrahydroquinolyl group that may have an oxo group as a
 substituent on the tetrahydroquinoline ring,

B₁₂ represents a C₁-C₆ alkylene group,

t represents 0 or 1,

each of R²⁰ and R²¹, which are identical or different,

- 10 represents a hydrogen atom; a C₃-C₁₆ cycloalkyl group; an amino
 group that may have a C₁-C₆ alkoxycarbonyl group as a
 substituent; a benzoyl group that may have 1 to 3 C₁-C₆ alkoxy
 groups as a substituent(s) on the phenyl ring; a C₁-C₆ alkyl
 group; a C₁-C₆ alkyl group having 1 to 2 phenyl groups that may
 15 be substituted, on the phenyl ring, by 1 to 3 groups selected
 from the group consisting of a C₁-C₆ alkoxycarbonyl group, a
 cyano group, a nitro group, a phenyl group, a halogen atom, a
 C₁-C₆ alkyl group that may have a halogen atom as a
 substituent, a C₁-C₆ alkoxy group that may have a halogen atom
 20 as a substituent, and a C₁-C₆ alkylthio group; a phenyl group
 that may be substituted, on the phenyl ring, by 1 to 3 groups
 selected from the group consisting of a C₁-C₆ alkoxy group that
 may have a halogen atom as a substituent and a C₁-C₆ alkyl
 group that may have a halogen atom as a substituent; a C₁-C₆
 25 alkoxycarbonyl group; a C₃-C₁₆ cycloalkyl C₁-C₆ alkyl group; a
 pyrrolidinyl C₁-C₆ alkyl group that may have 1 to 3 C₁-C₆ alkyl
 groups that may have a hydroxyl group as a substituent on the
 pyrrolidine ring; an amino-substituted C₁-C₆ alkyl group that

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may have a group selected from the group consisting of a phenyl group and a C₁-C₆ alkyl group as a substituent; a 1,2,3,4-tetrahydronaphthyl-substituted C₁-C₆ alkyl group that may have 1 to 5 C₁-C₆ alkyl groups as a substituent(s) on the 1,2,3,4-tetrahydronaphthalene ring; a naphthyl C₁-C₆ alkyl group; a pyridyl C₁-C₆ alkyl group; a quinolyl C₁-C₆ alkyl group; a 1,2,3,4-tetrazolyl C₁-C₆ alkyl group that may have 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group and a phenyl C₁-C₆ alkyl group as a substituent(s) on the tetrazole ring; a 1,2,4-triazolyl C₁-C₆ alkyl group; a tetrahydrofuryl C₁-C₆ alkyl group that may have a hydroxyl group as a substituent on the C₁-C₆ alkyl group; a phenoxy C₁-C₆ alkyl group that may have 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group and a nitro group as a substituent(s) on the phenyl ring; a phenyl C₂-C₆ alkanoyl group; a C₂-C₆ alkanoyl group that may have a halogen atom as a substituent; an imidazolyl C₂-C₆ alkanoyl group; a C₁-C₆ alkoxycarbonyl C₁-C₆ alkyl group; a pyridyl group; or a carboxy C₁-C₆ alkyl group, or R²⁰ and R²¹, together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic ring, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a C₁-C₆ alkyl group, a phenyl group that may have 1 to 3 groups selected from the group consisting of a halogen atom and a C₁-C₆ alkyl group that may have a halogen atom as a substituent(s) on the phenyl ring, and a phenyl C₁-C₆ alkyl group that may have a C₁-C₄ alkylenedioxy group as a substituent on the phenyl ring,

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o represents 0 or 1,

B₁₃ represents a C₁-C₆ alkylene group,

each of R²² and R²³, which are identical or different,
represents a hydrogen atom, a C₁-C₆ alkyl group, a benzoyl
5 group that may have 1 to 3 C₁-C₆ alkoxy groups as a
substituent(s) on the phenyl ring, a phenoxy C₁-C₆ alkyl group
that may have a C₁-C₆ alkyl group as a substituent on the
phenyl ring, a phenyl C₁-C₆ alkyl group, or a phenyl group, or
R²² and R²³, together with the nitrogen atom to which they bind,
10 may bind to each other, directly or via a nitrogen atom, oxygen
atom, or sulfur atom to form a 5- to 7-membered saturated
heterocyclic ring, wherein the heterocyclic ring may be
substituted by 1 to 3 groups selected from the group consisting
of a C₁-C₆ alkyl group and a phenyl C₁-C₆ alkyl group that may
15 have a C₁-C₄ alkylenedioxy group as a substituent on the phenyl
ring,

B₁₅ represents a C₁-C₆ alkylene group,

s represents 0 or 1,

each of R²⁶ and R²⁷, which are identical or different,
20 represents a hydrogen atom, a C₁-C₆ alkyl group, a phenyl C₁-C₆
alkyl group, or an imidazolyl C₁-C₆ alkyl group, or R²⁶ and R²⁷,
together with the nitrogen atom to which they bind, may bind to
each other, directly or via a nitrogen atom, oxygen atom, or
sulfur atom to form a 5- to 7-membered saturated heterocyclic
25 ring, wherein the heterocyclic ring may be substituted by 1 to
3 phenyl C₁-C₆ alkyl groups that may have a C₁-C₄ alkylenedioxy
group as a substituent on the phenyl ring, as a substituent(s),

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R^{28} represents a hydrogen atom or a C_1-C_6 alkyl group,

B_{16} represents a C_1-C_6 alkylene group,

R^{29} and R^{30} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen
5 atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a C_1-C_6 alkyl group, a phenyl group, and a phenyl C_1-C_6 alkyl group that may have a C_1-C_4 alkylenedioxy group as a
10 substituent on the phenyl ring,

R^{31} represents a hydrogen atom or a C_1-C_6 alkyl group,

B_{17} represents a C_1-C_6 alkylene group,

R^{32} and R^{33} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen
15 atom, or sulfur atom to form a 5- to 7-membered saturated heterocyclic group, wherein the heterocyclic ring may be substituted by 1 to 3 groups selected from the group consisting of a C_1-C_6 alkyl group, a phenyl group, and a phenyl C_1-C_6 alkyl group that may have a C_1-C_4 alkylenedioxy group as a
20 substituent on the phenyl ring,

provided that the above described aromatic compound or a salt thereof satisfy the following requirements (i) and (ii):

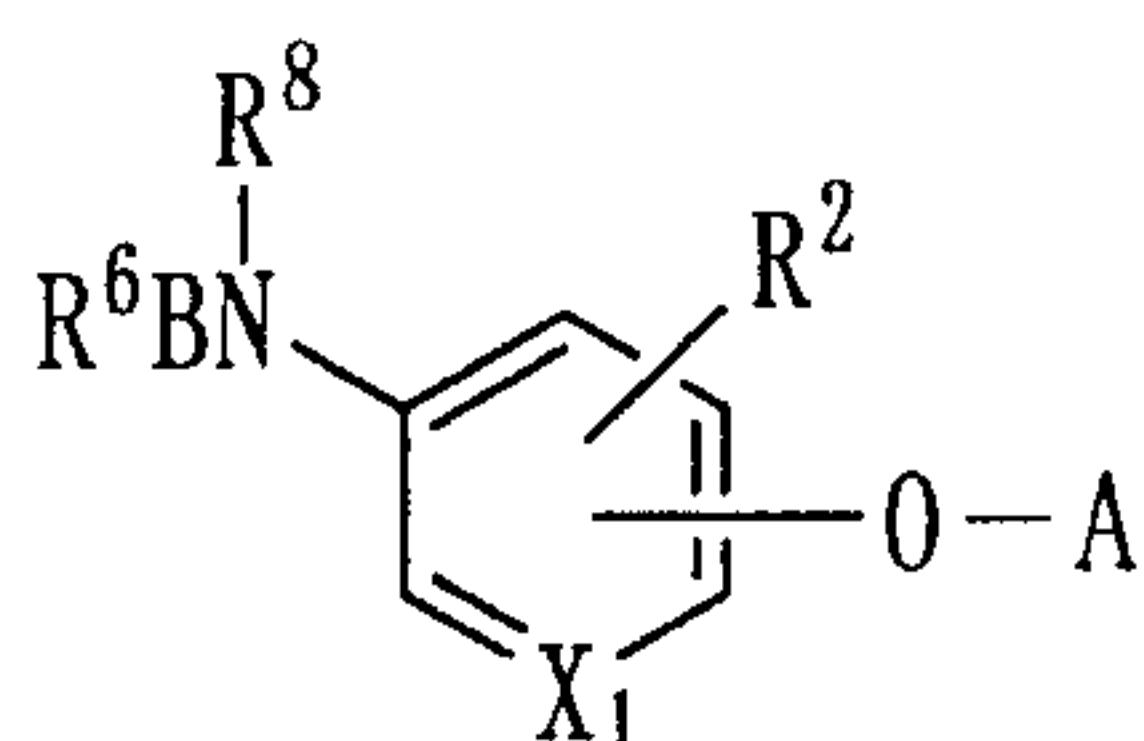
(i) when X_1 represents a group $-CH=$, then R^3 represents a hydrogen atom; and

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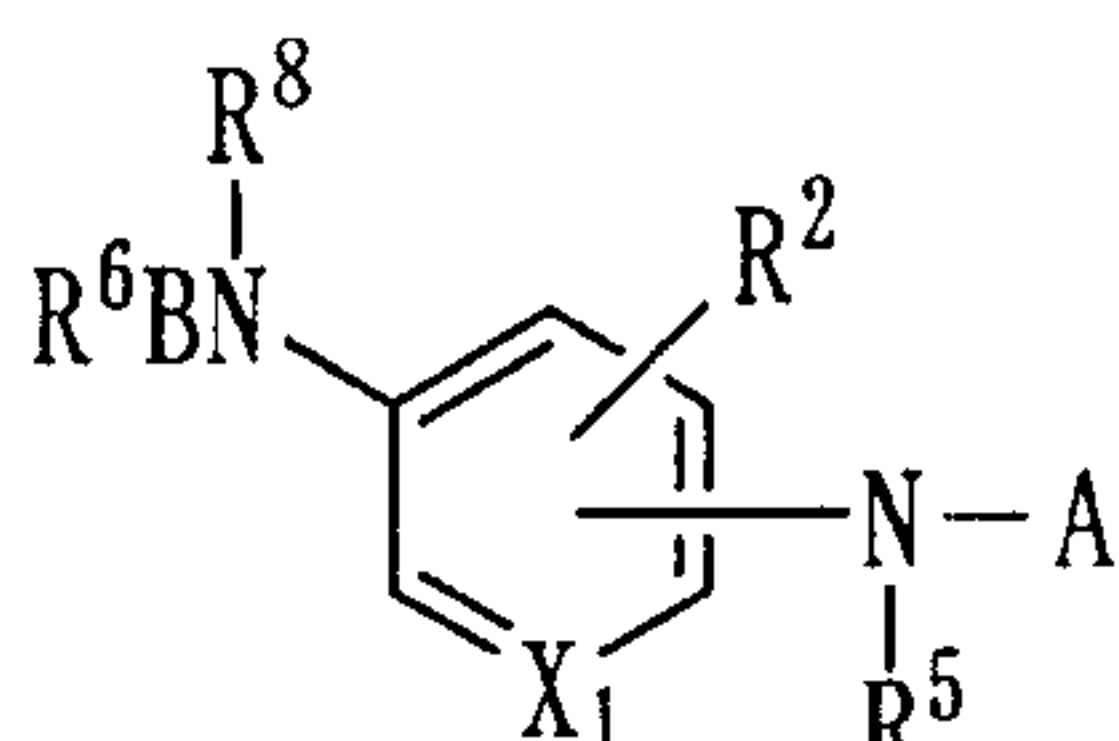
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(ii) when X_1 represents a group $-\text{CH}=-$, 1 represents 1, and T represents $-\text{N}(\text{R}^{17})-\text{B}_3-\text{CO}-$, then R^{14} and R^{15} , together with the nitrogen atom to which they bind, may bind to each other, directly or via a nitrogen atom, oxygen atom, or sulfur atom to form a 5- to 10-membered saturated or unsaturated heterocyclic ring, wherein the heterocyclic ring is substituted by 1 to 3 groups of (28) described above.

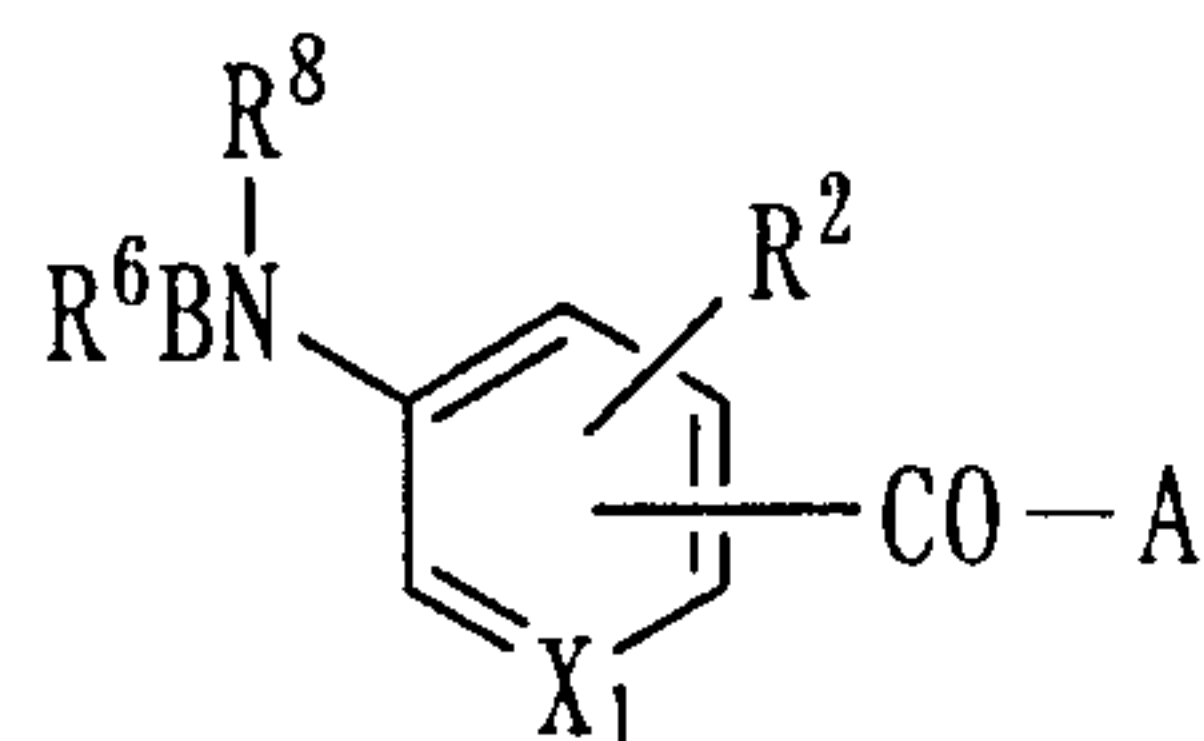
2. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-1) to (1-7):



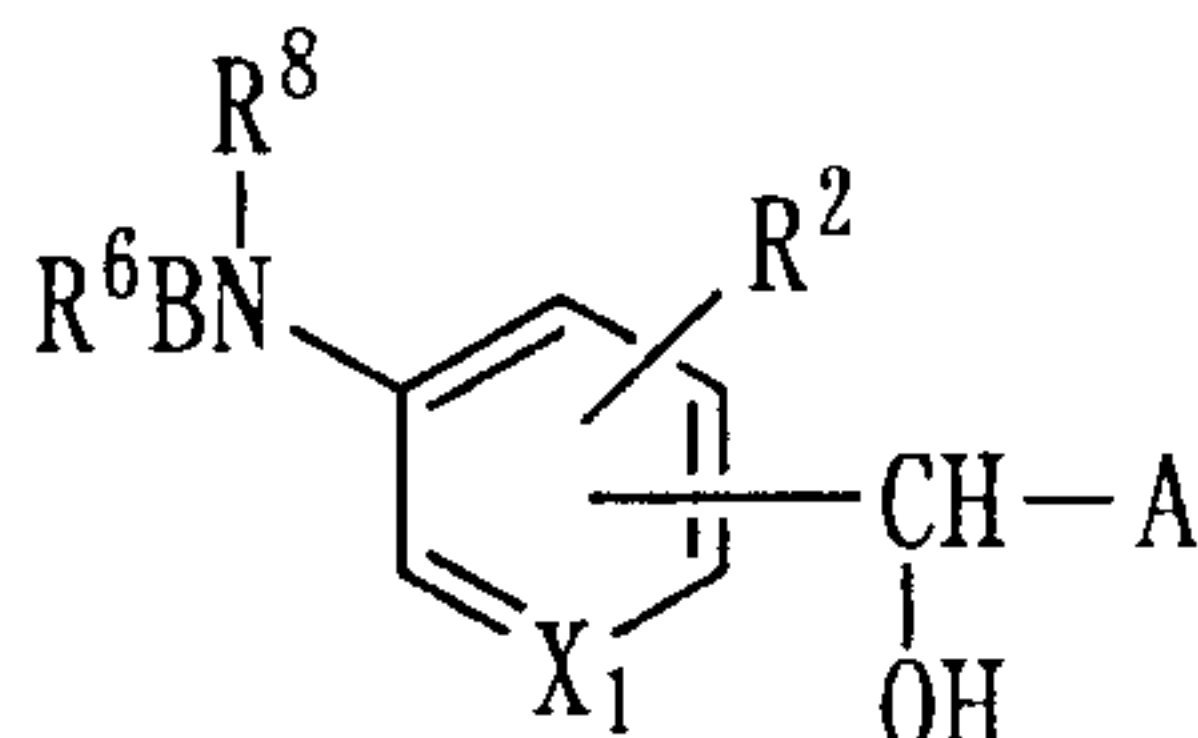
(1-1)



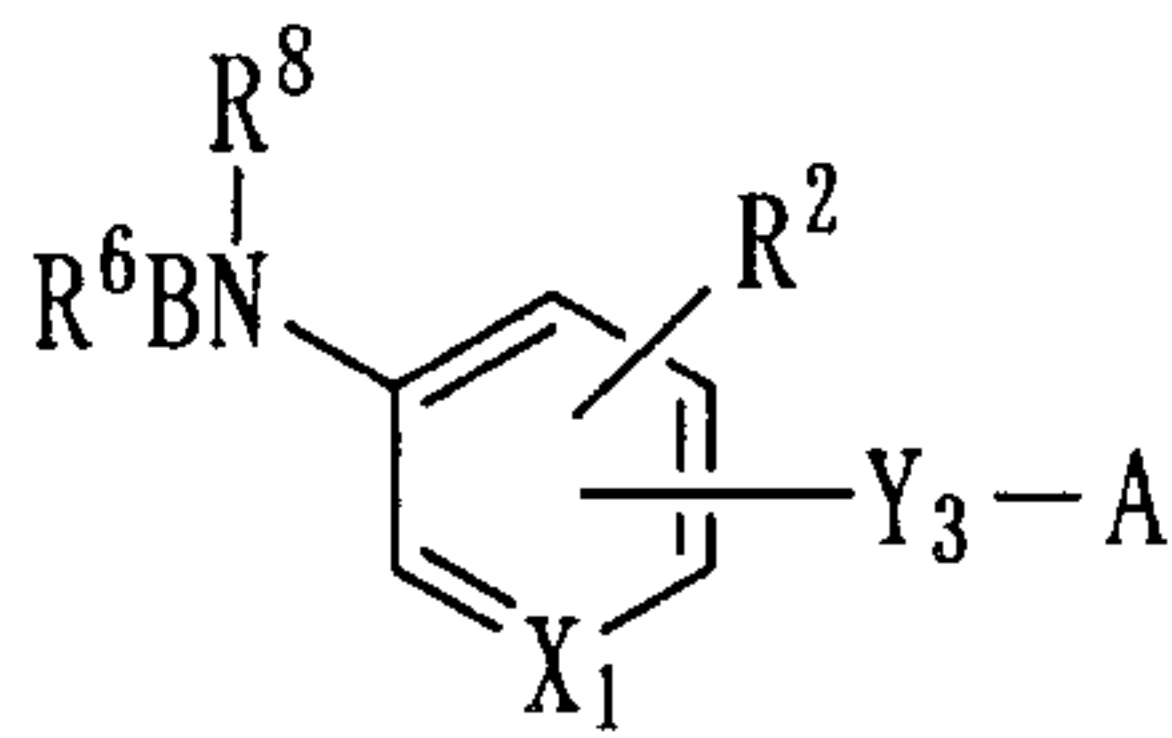
(1-2)



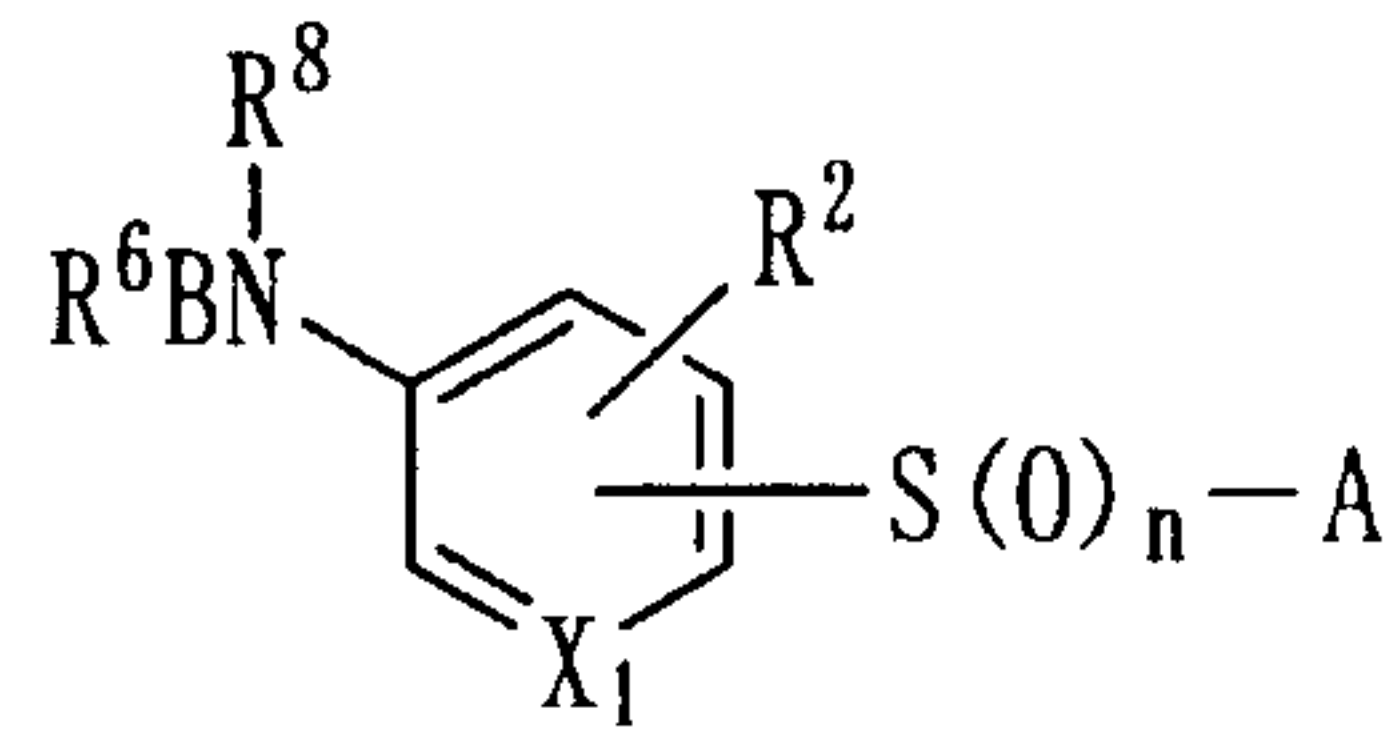
(1-3)



(1-4)

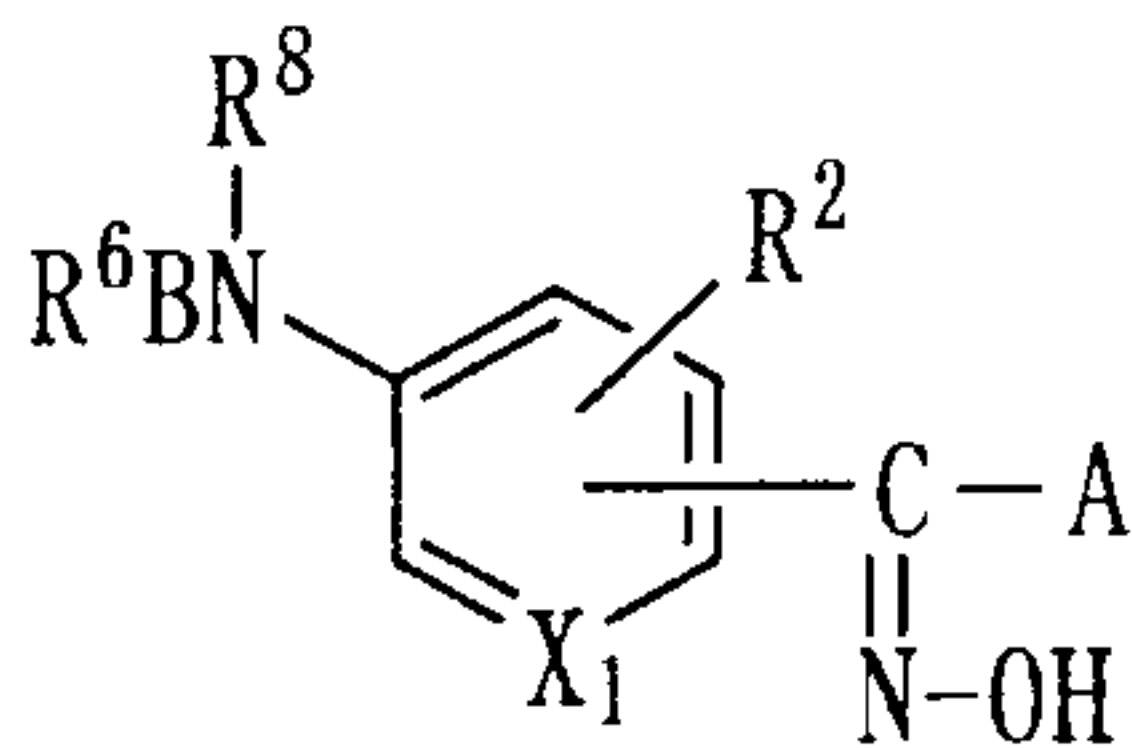


(1-5)



(1-6)

and



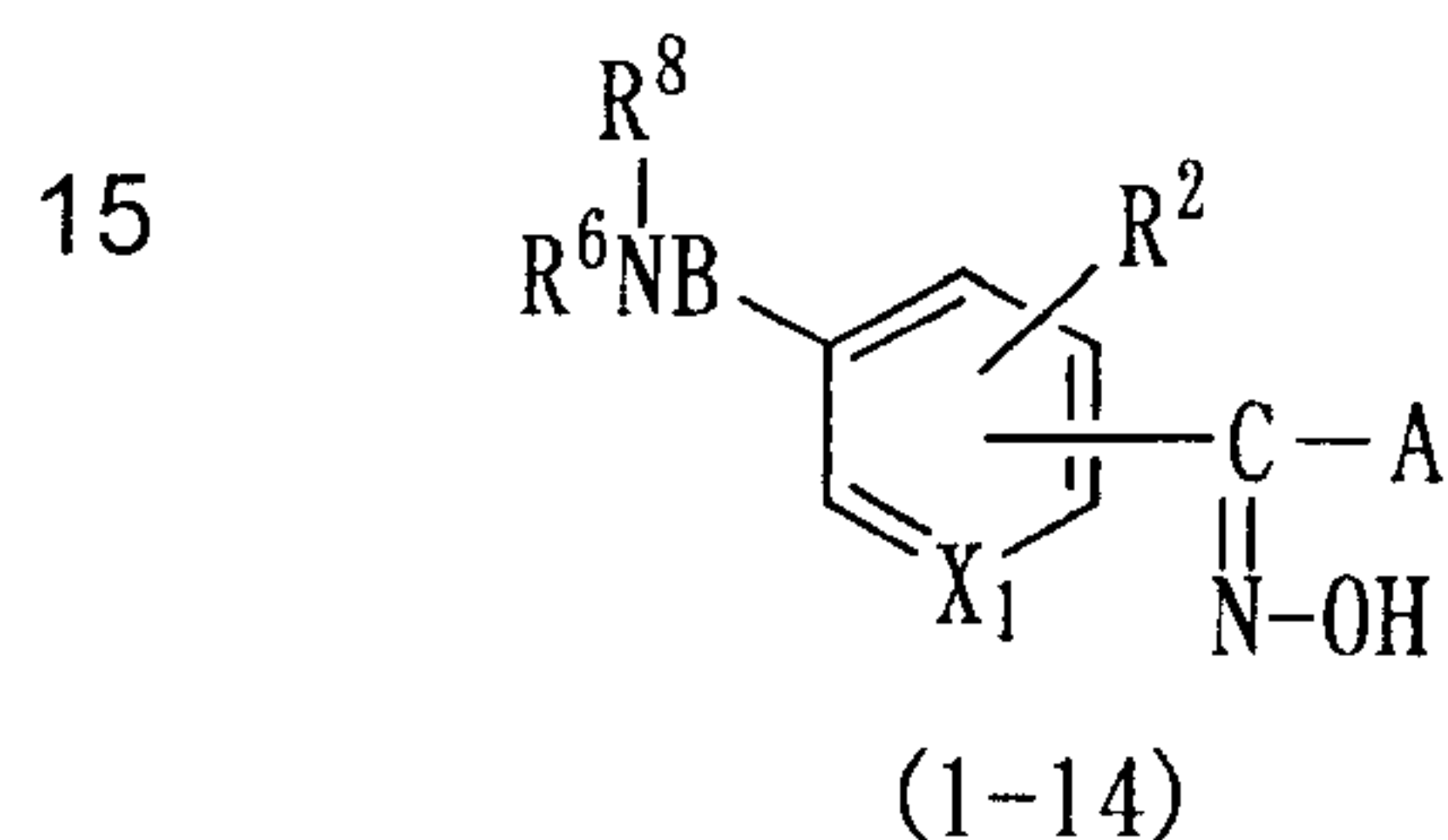
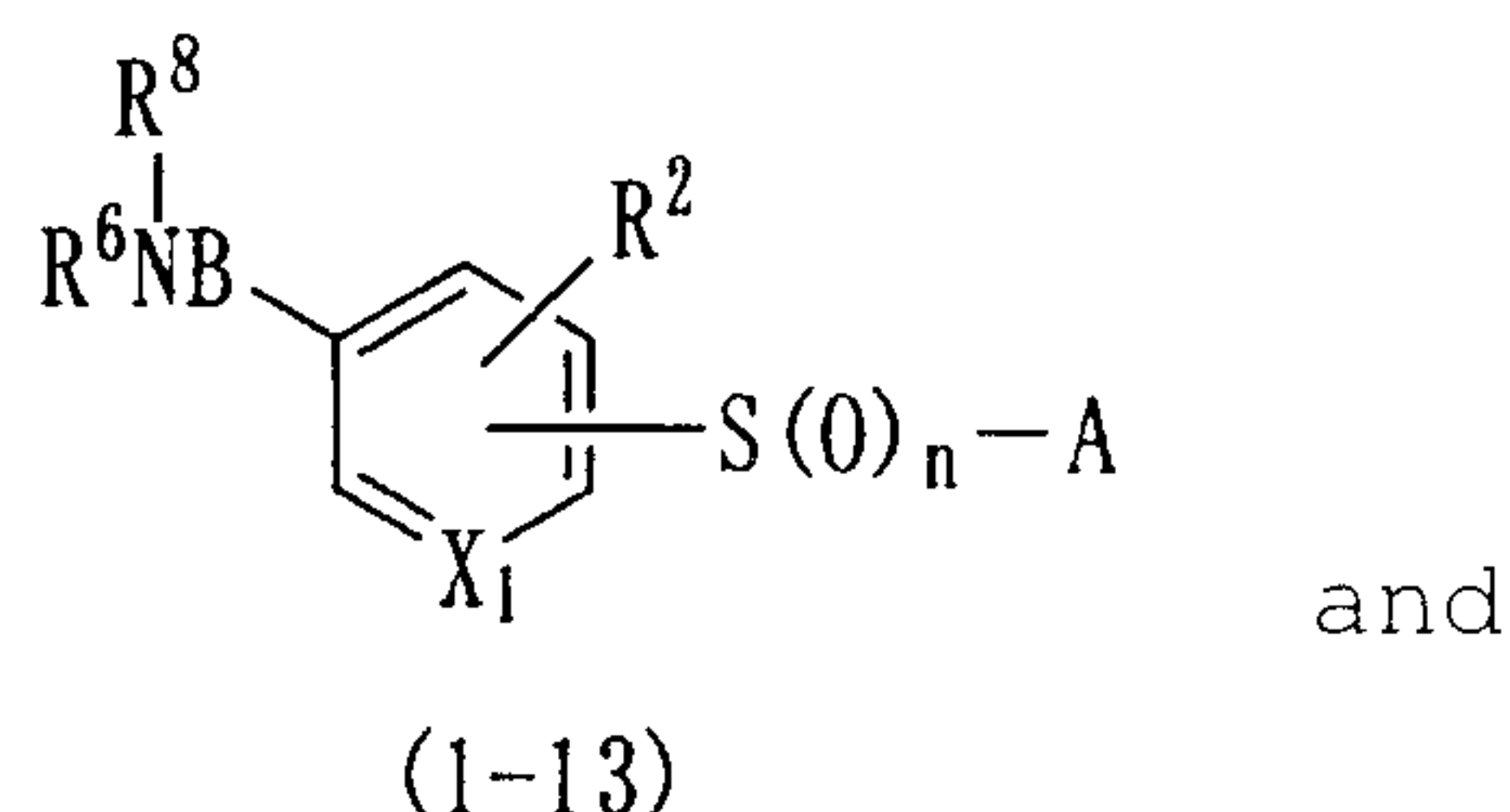
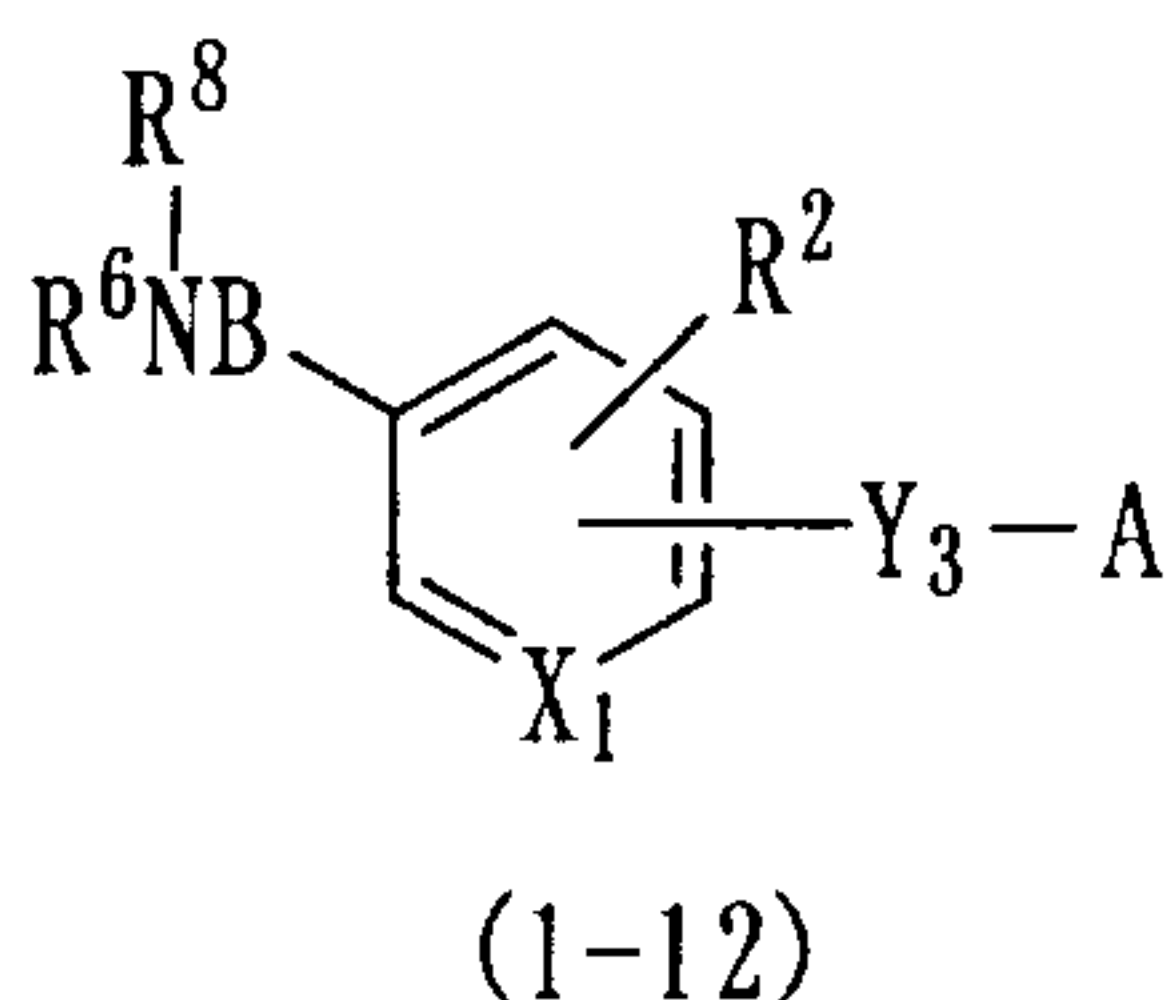
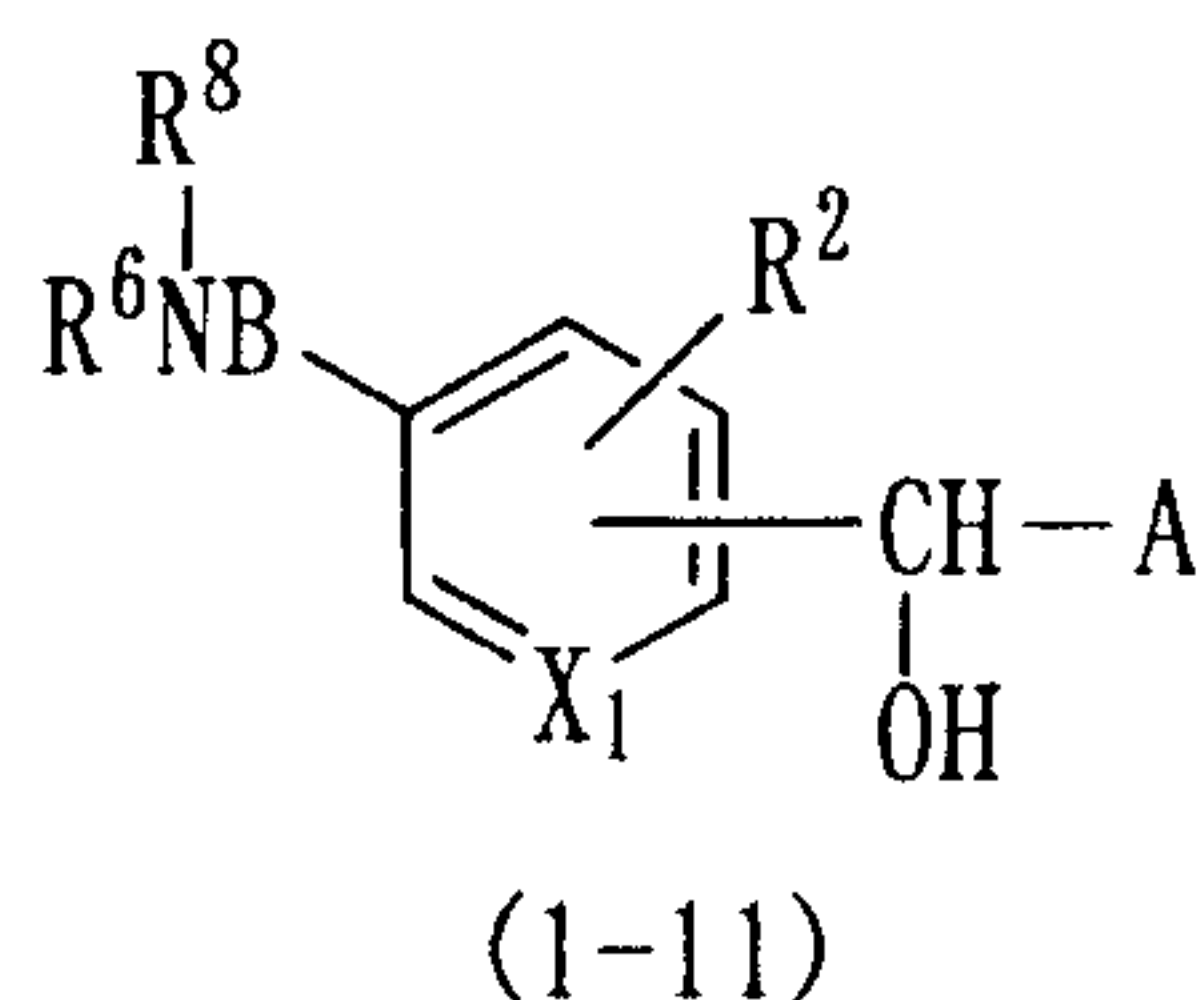
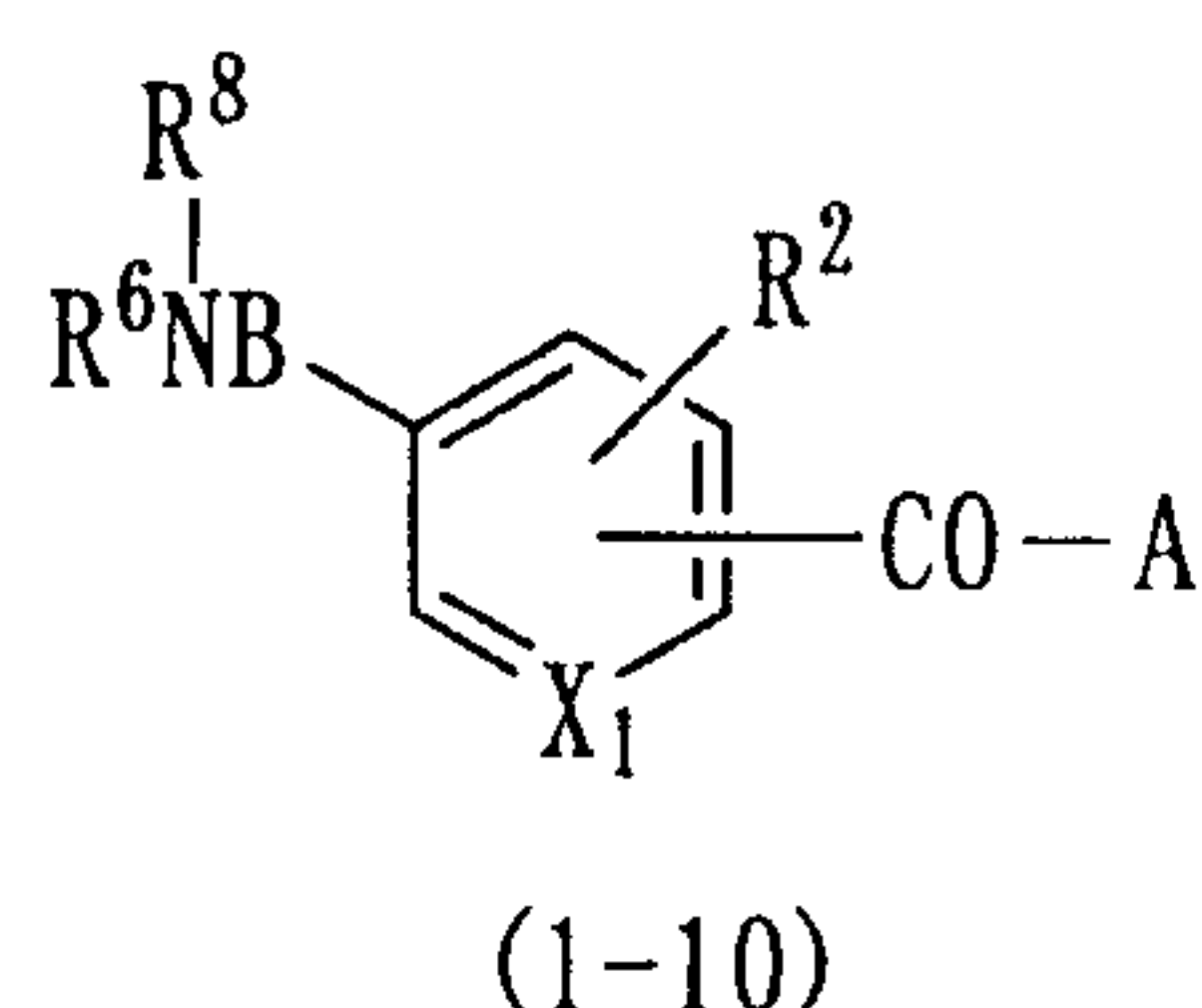
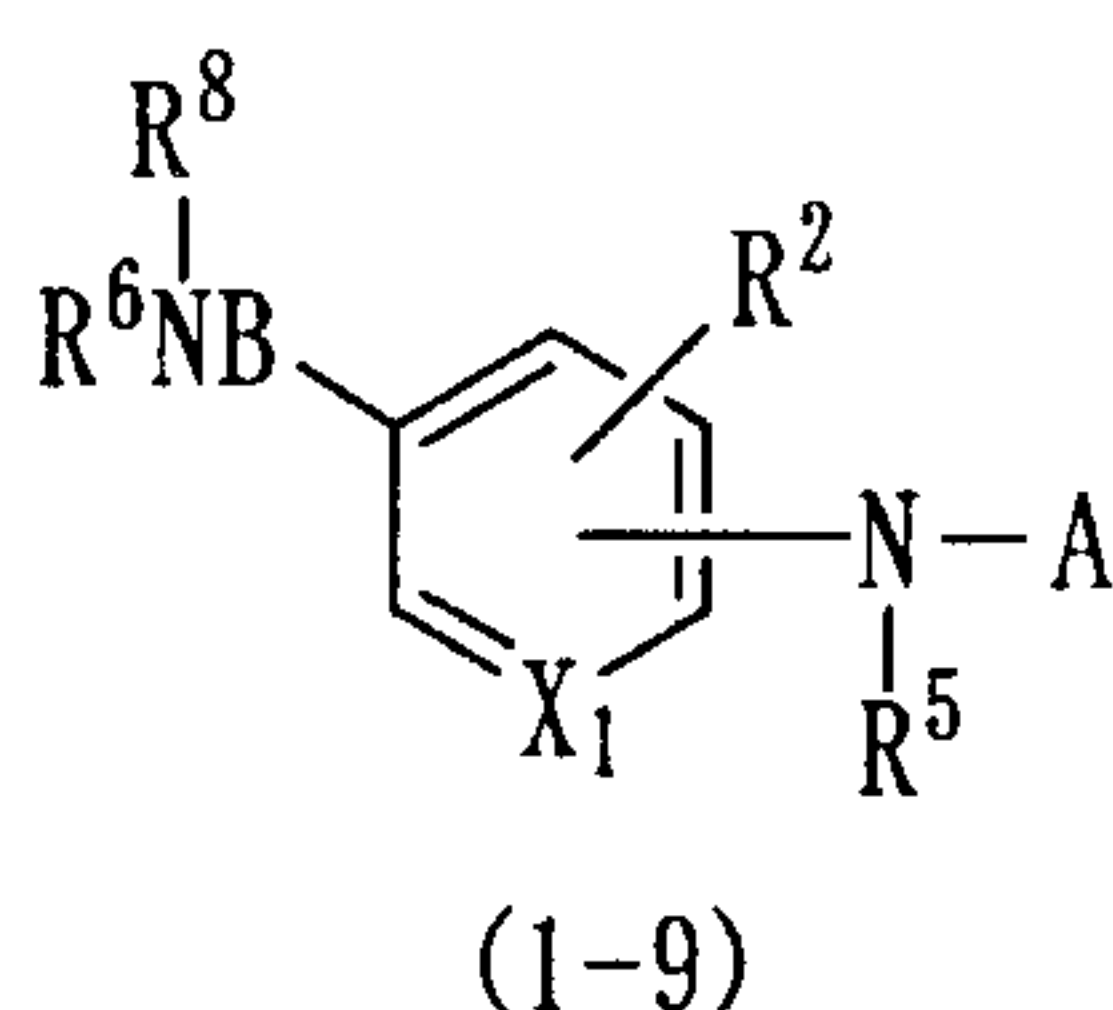
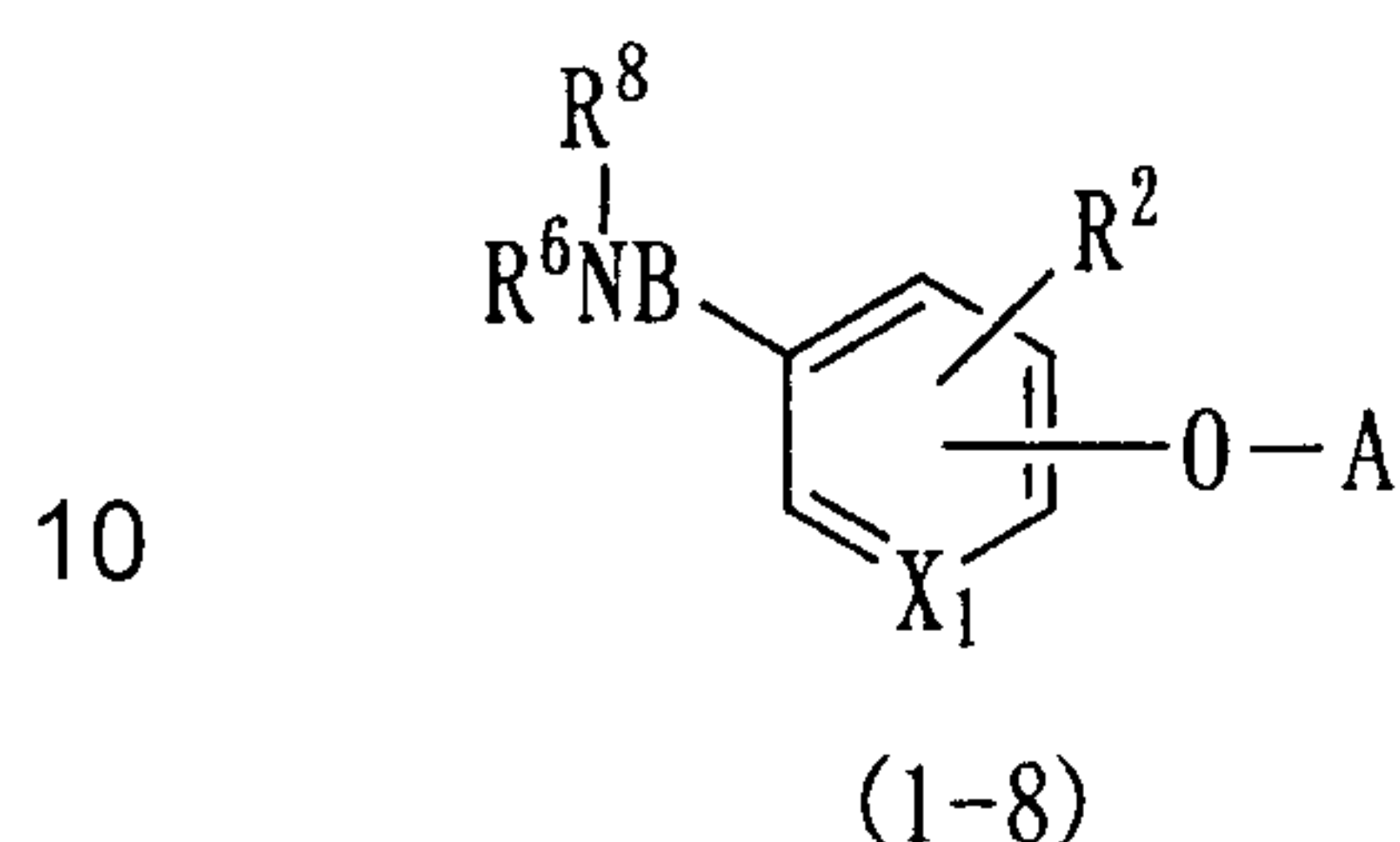
(1-7)

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wherein, in said general formulas (1-1) to (1-7), R^6 , B, R^8 , R^2 , R^5 , n, X_1 , and A have the same meanings as described in claim 1, and Y_3 represents a C_1 - C_6 alkylene group.

3. The aromatic compound or a salt thereof according to
 5 claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-8) to (1-14):

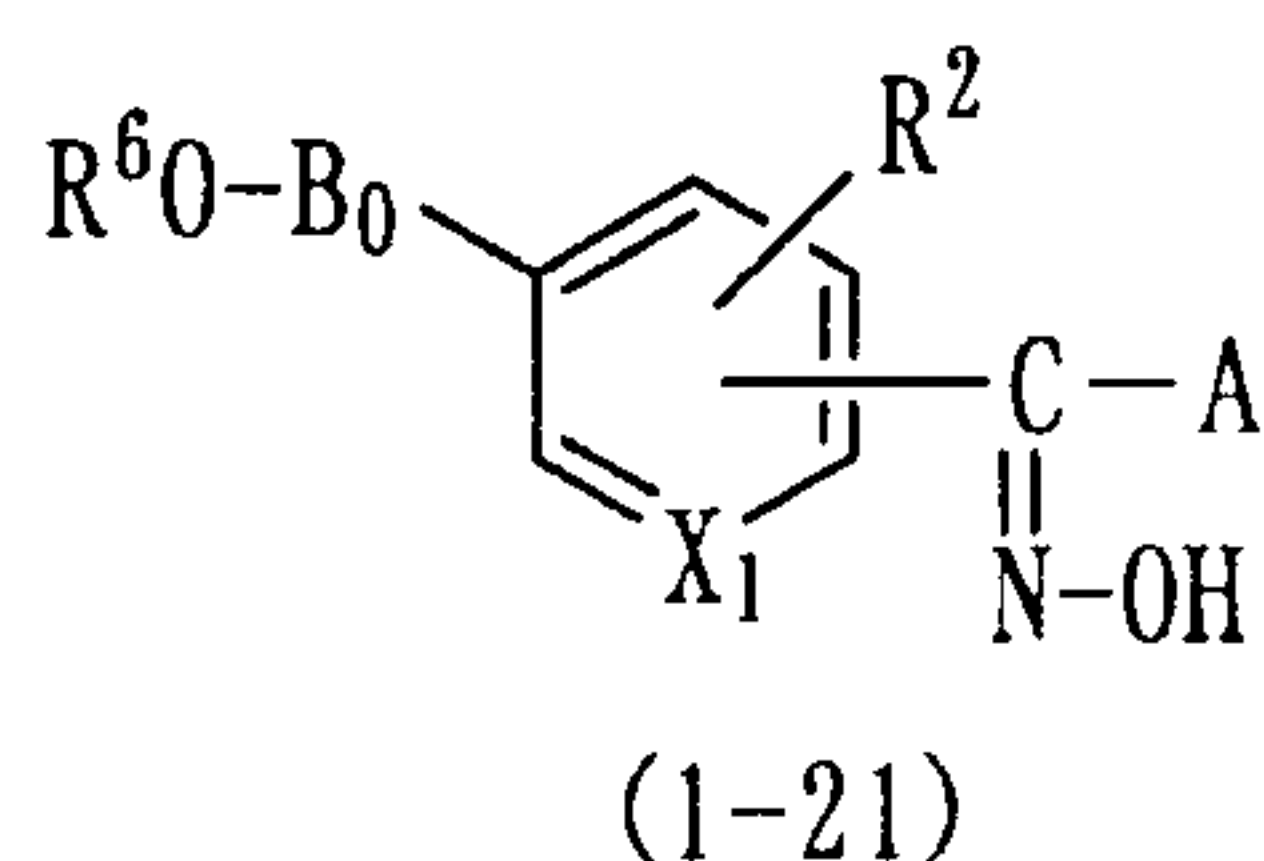
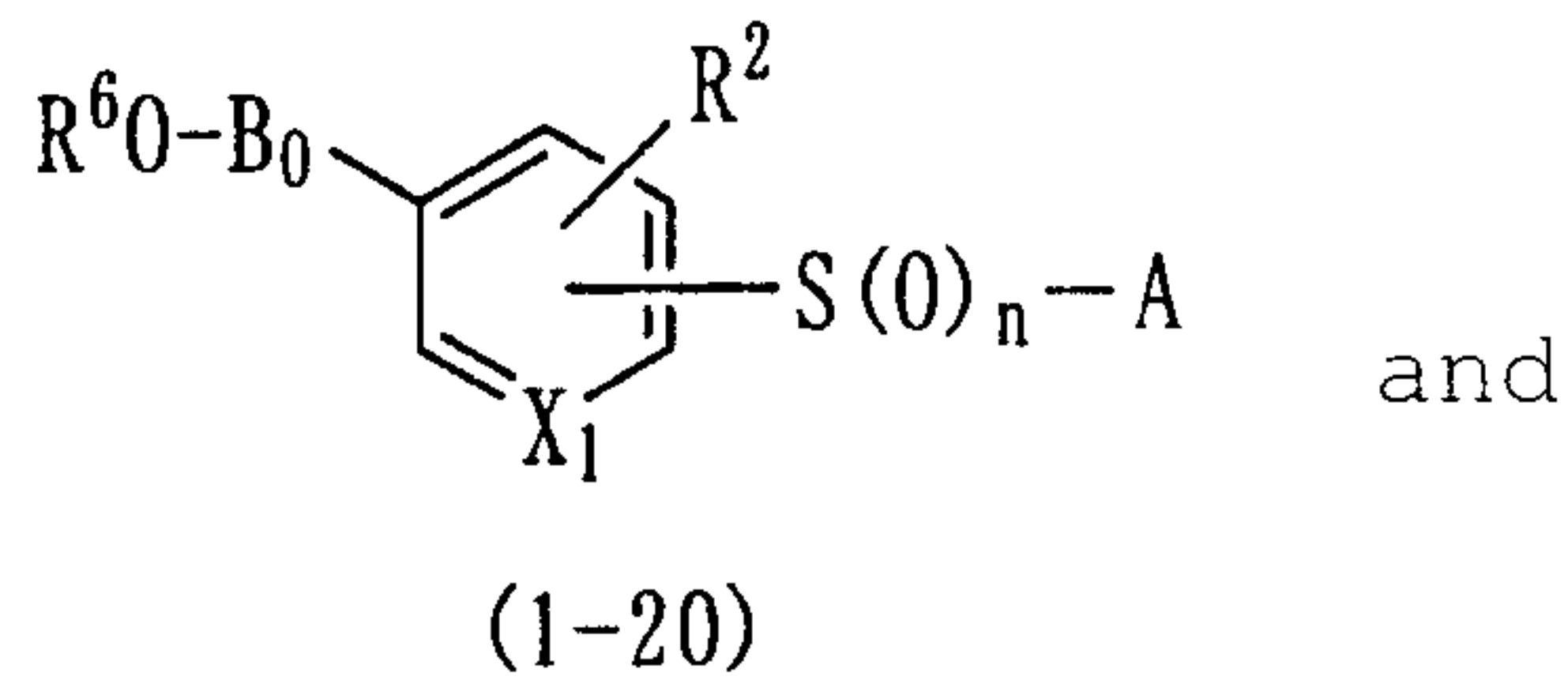
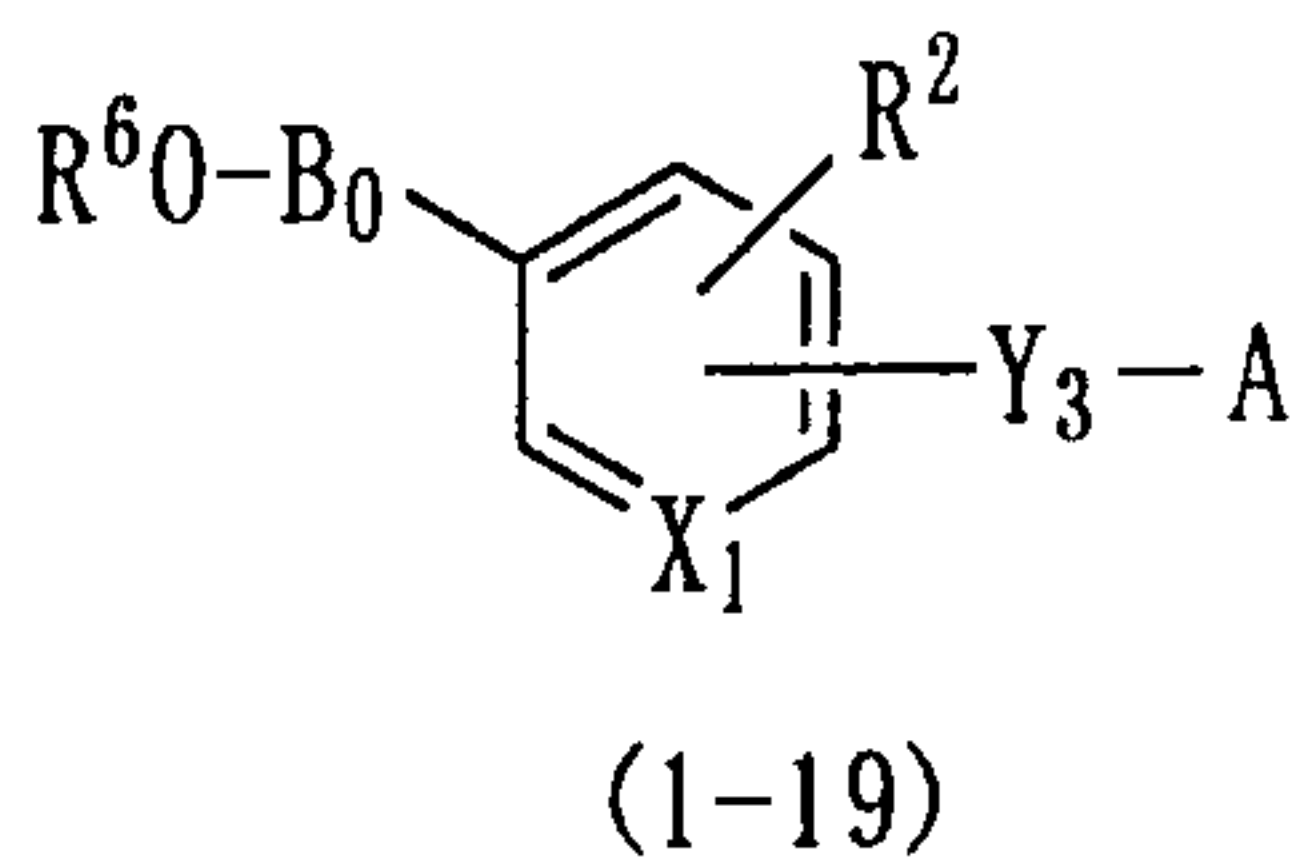
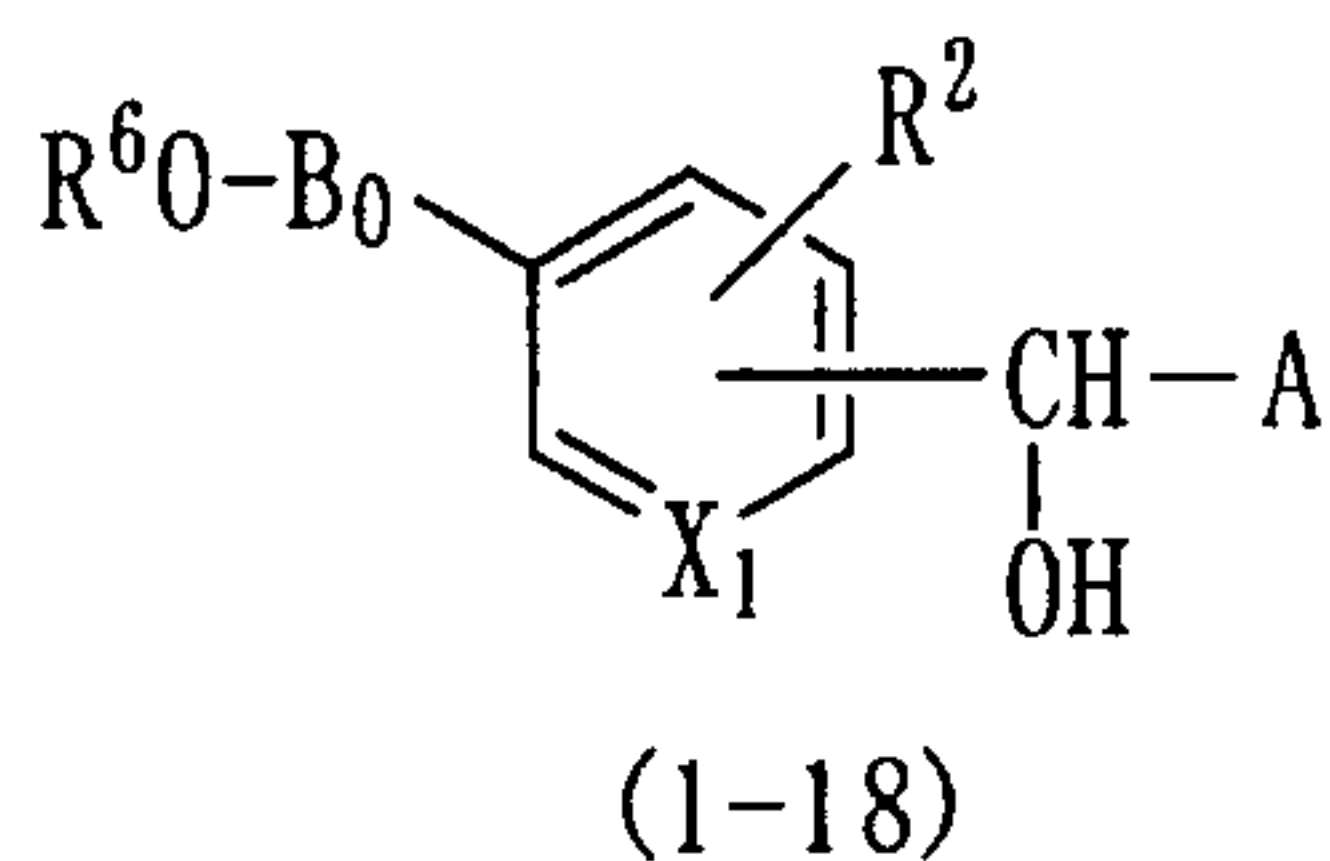
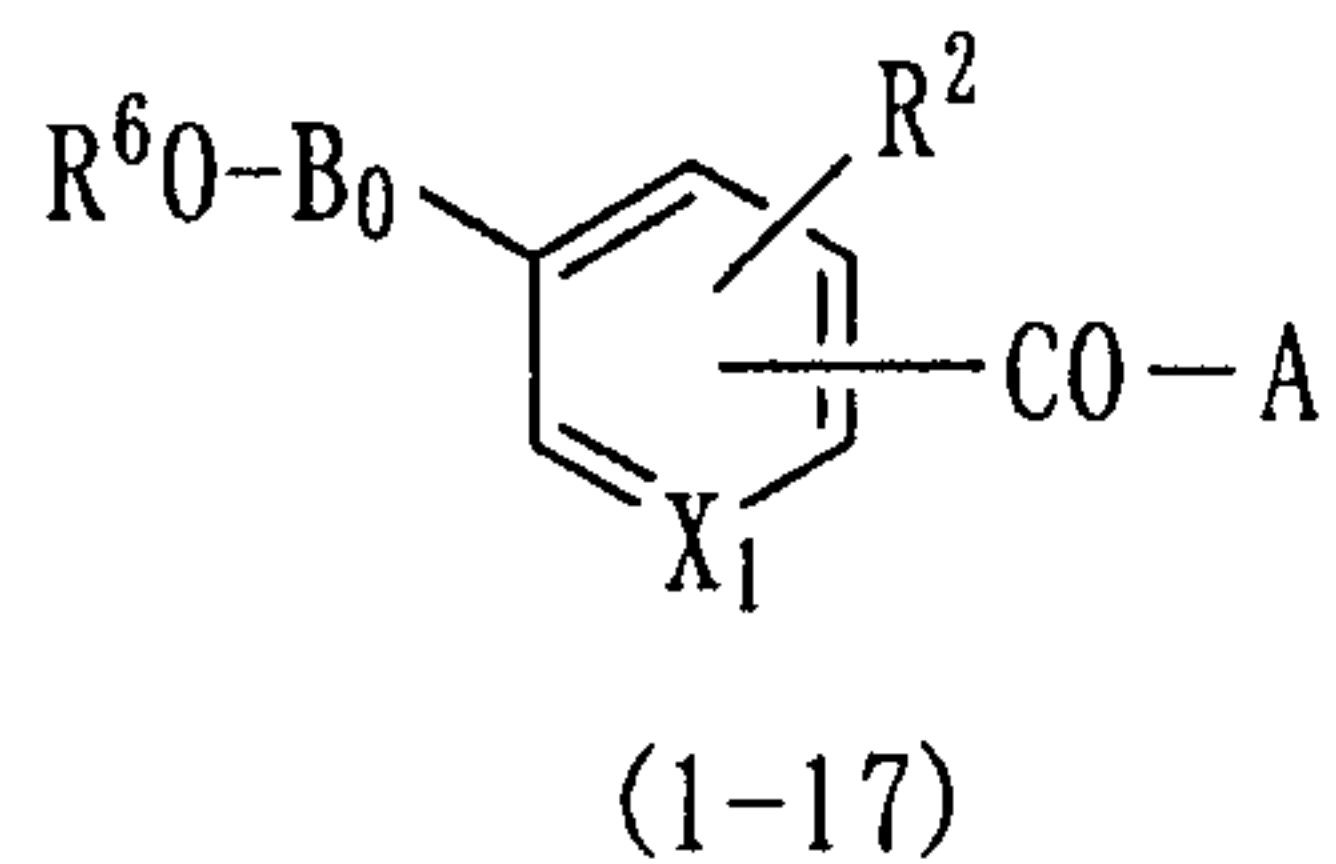
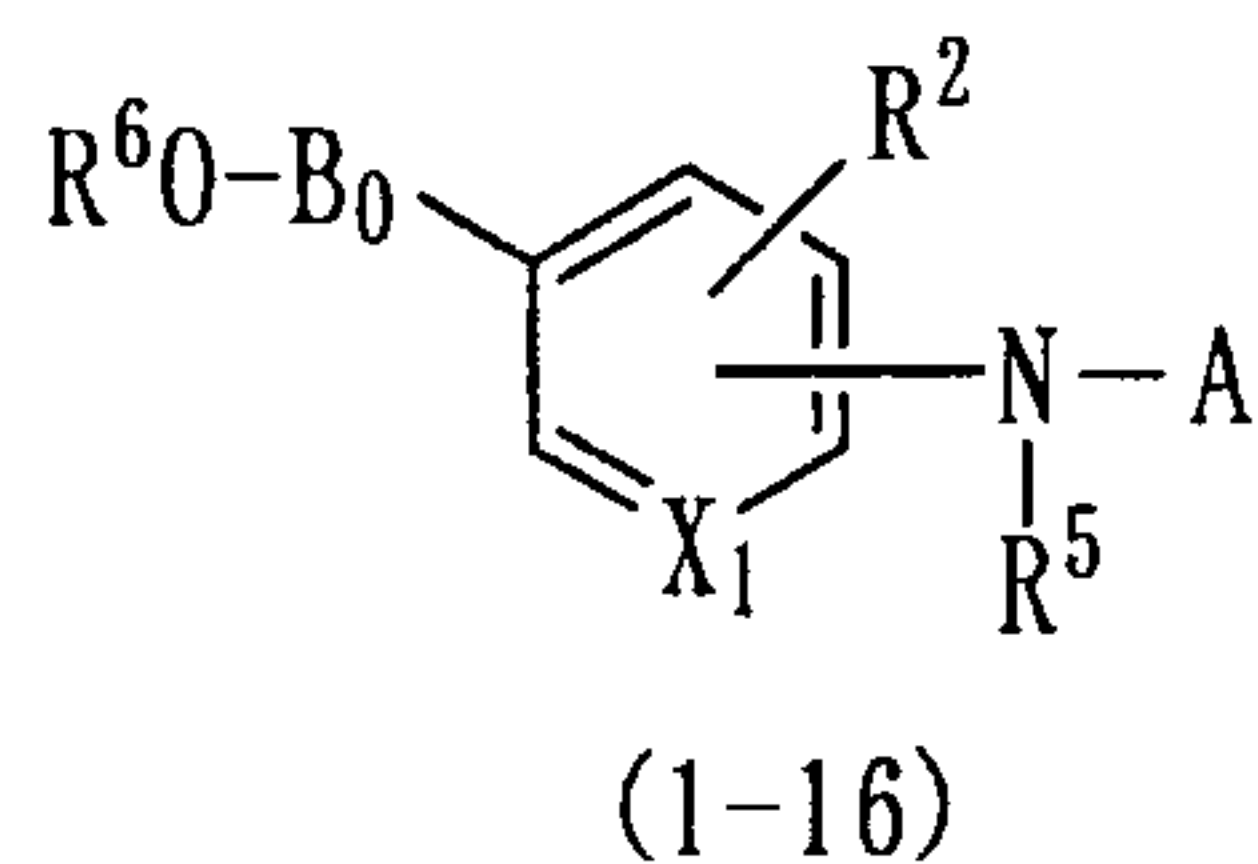
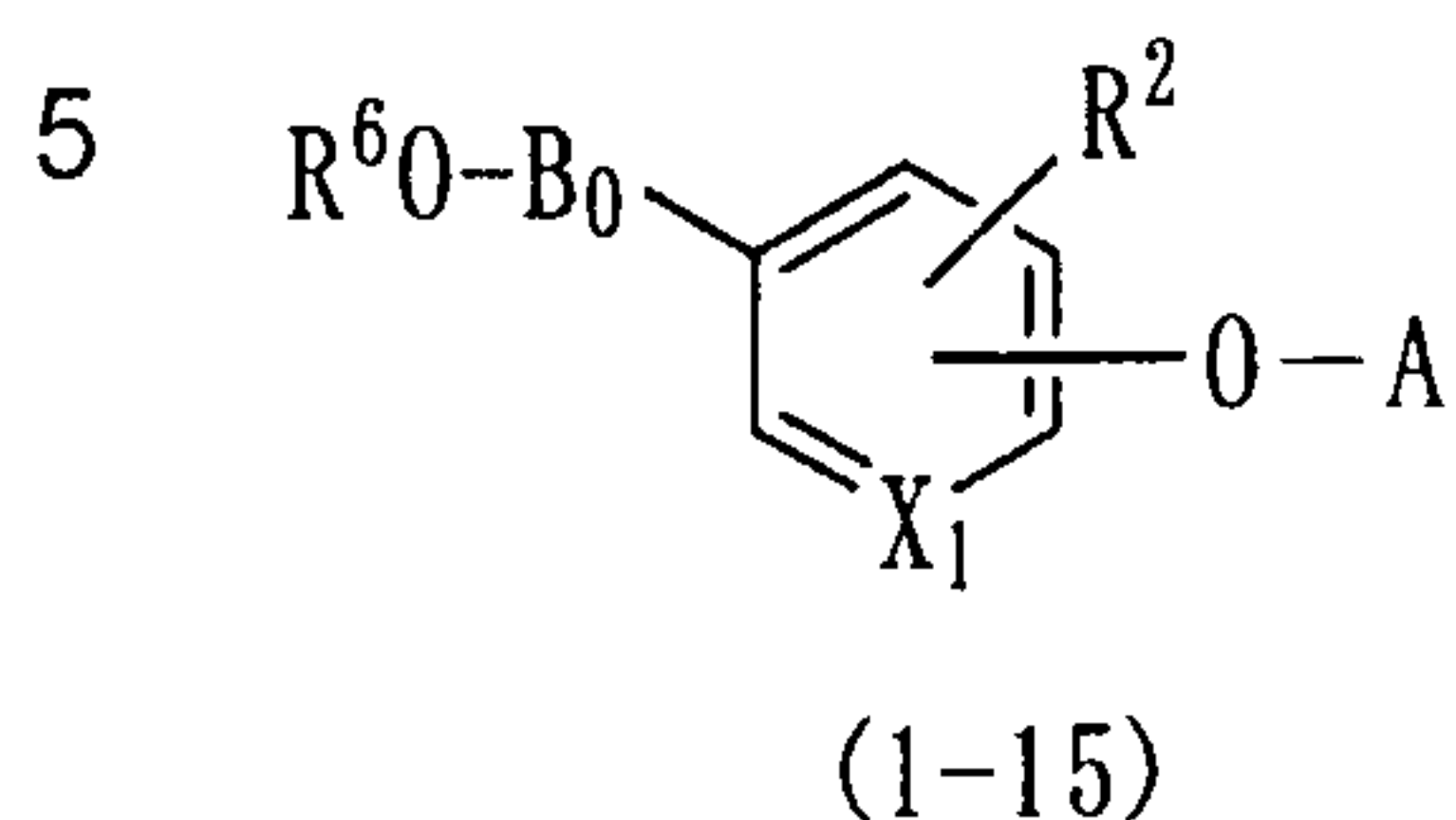


wherein, in said general formulas (1-8) to (1-14), R^6 , B, R^8 , R^2 , R^5 , n, X_1 , and A have the same meanings as described in
 20 claim 1, and Y_3 has the same meanings as described in claim 2.

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996

4. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-15) to (1-21):

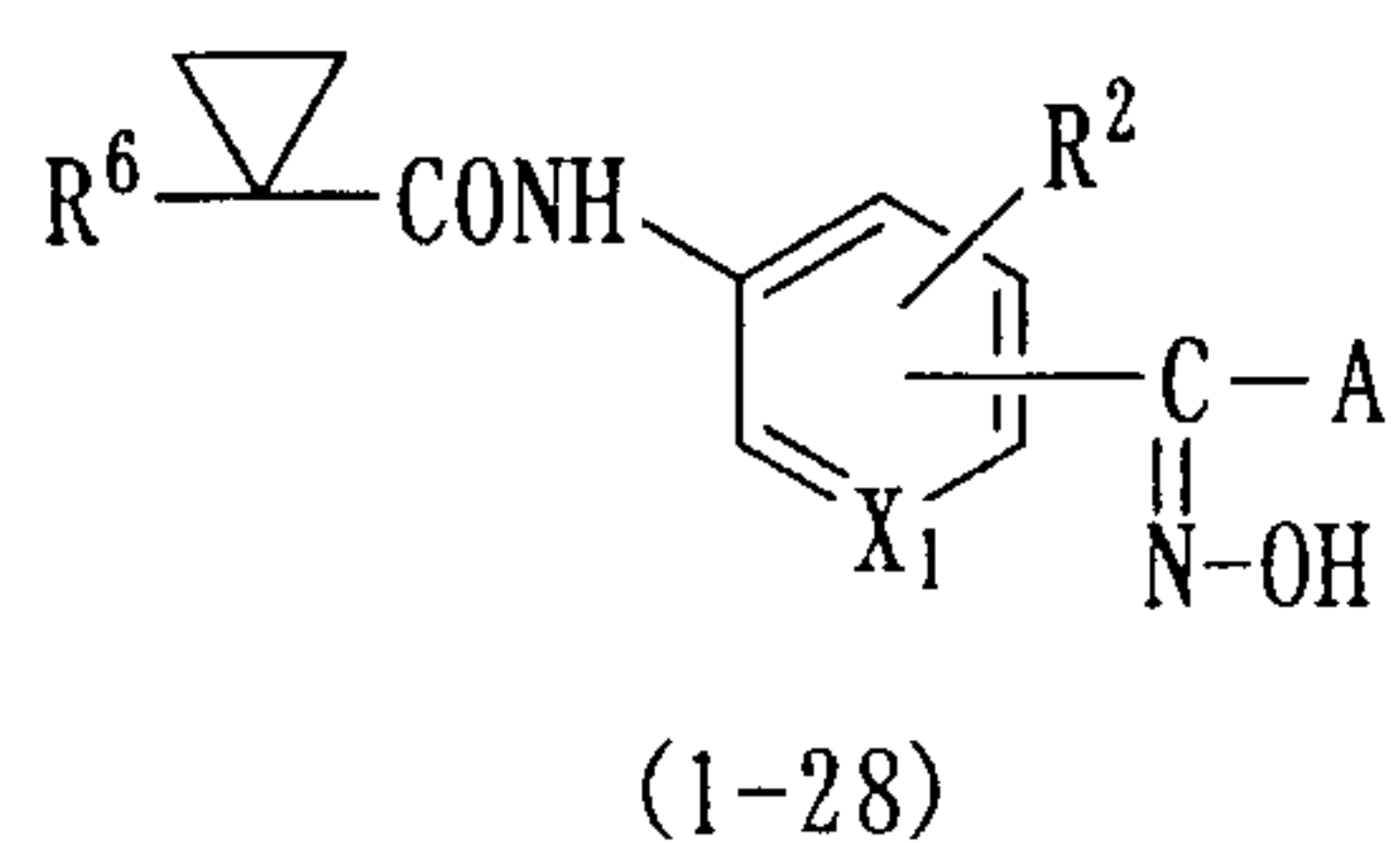
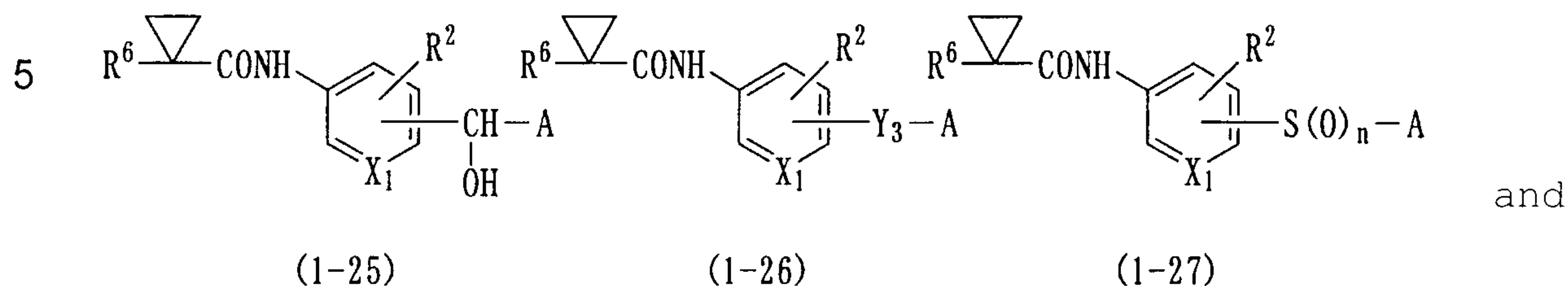
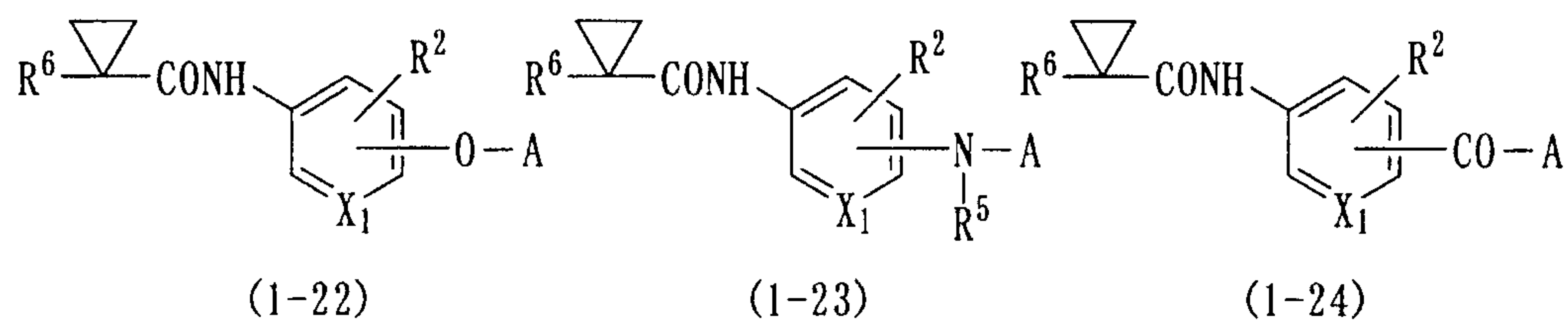


wherein, in said general formulas (1-15) to (1-21), R^6 , B_0 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

5. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-22) to (1-28):

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997

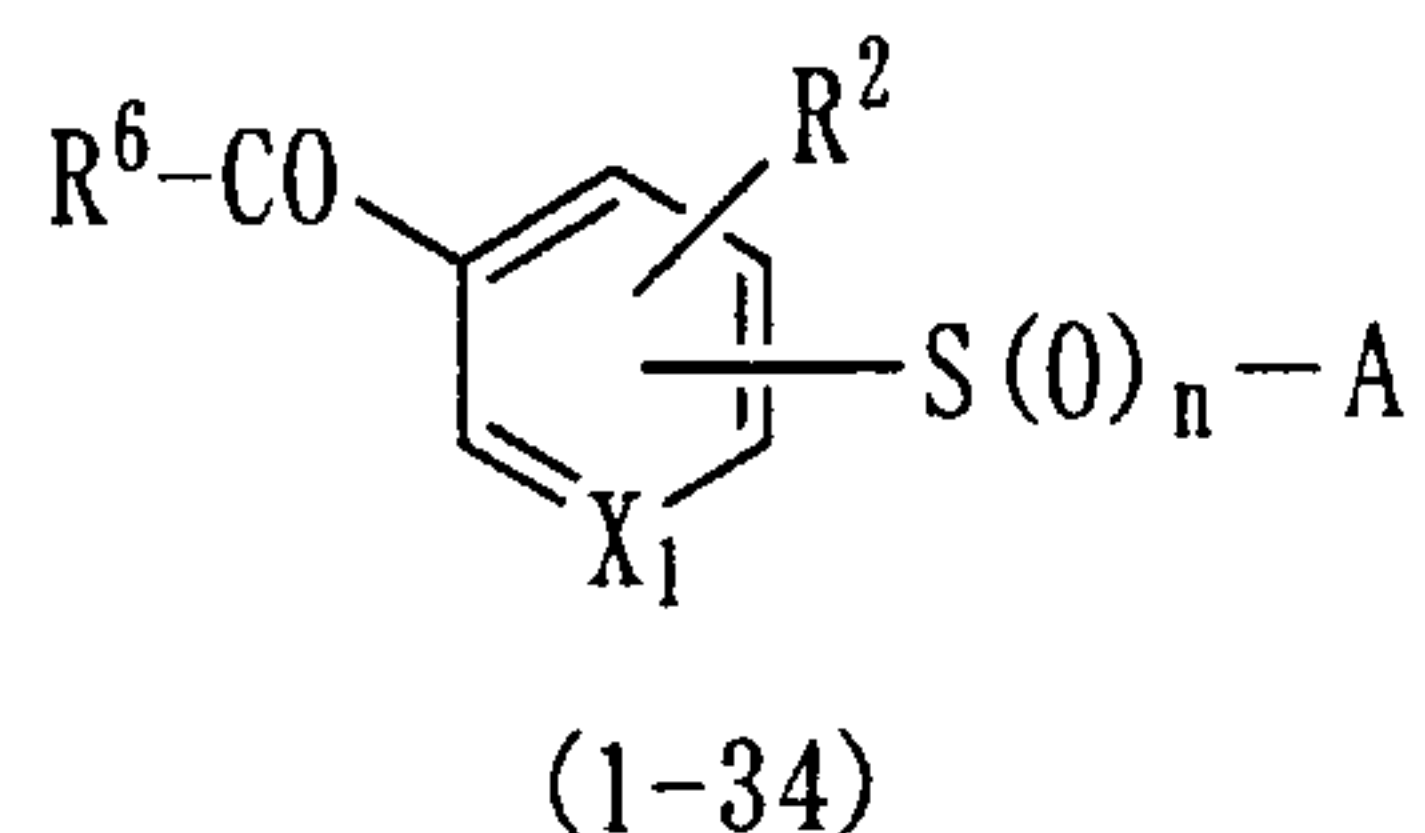
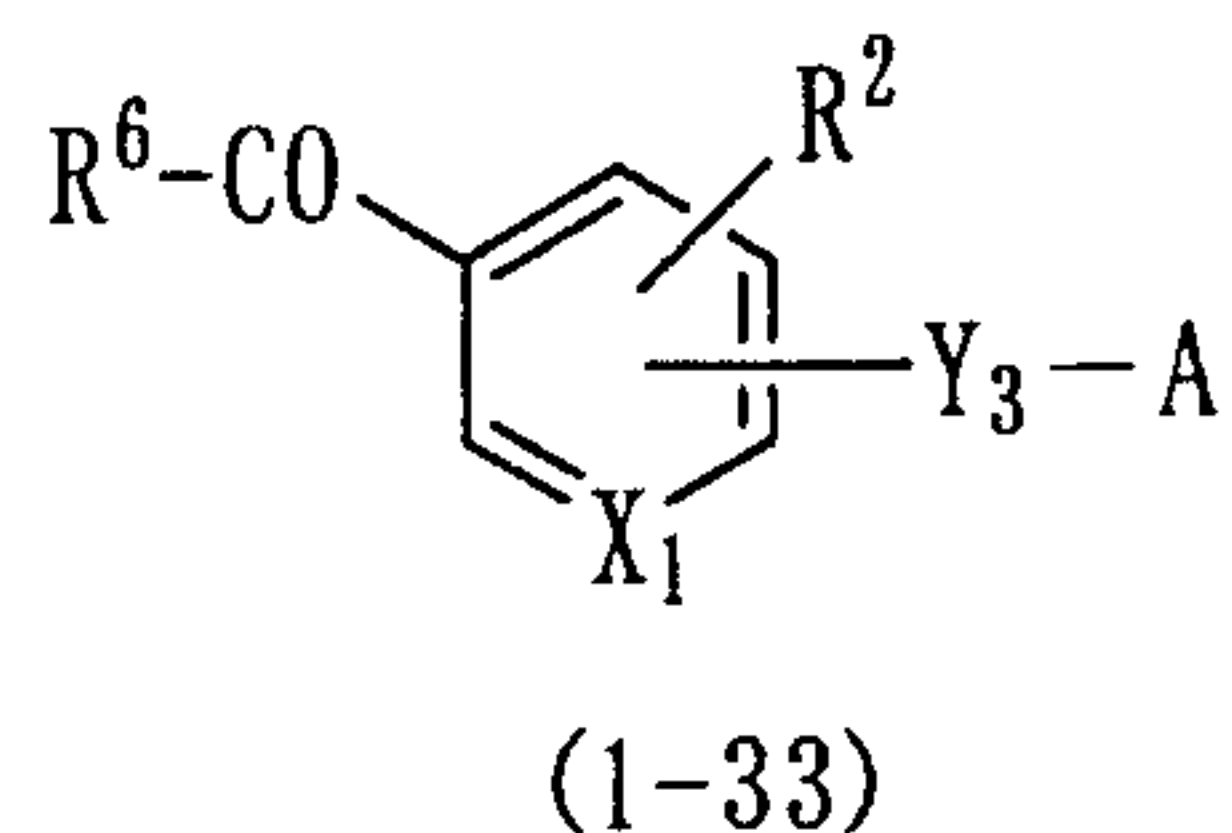
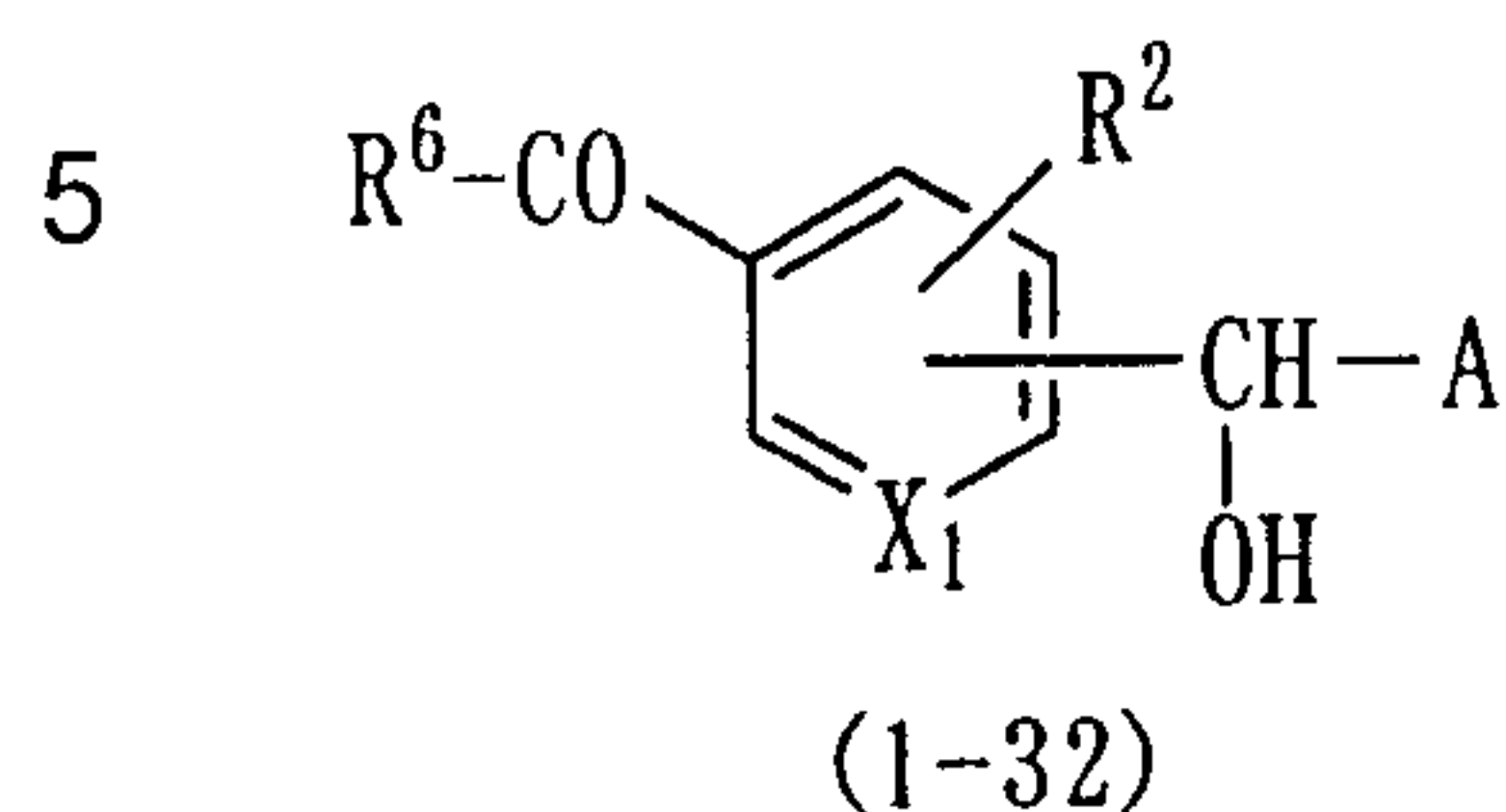
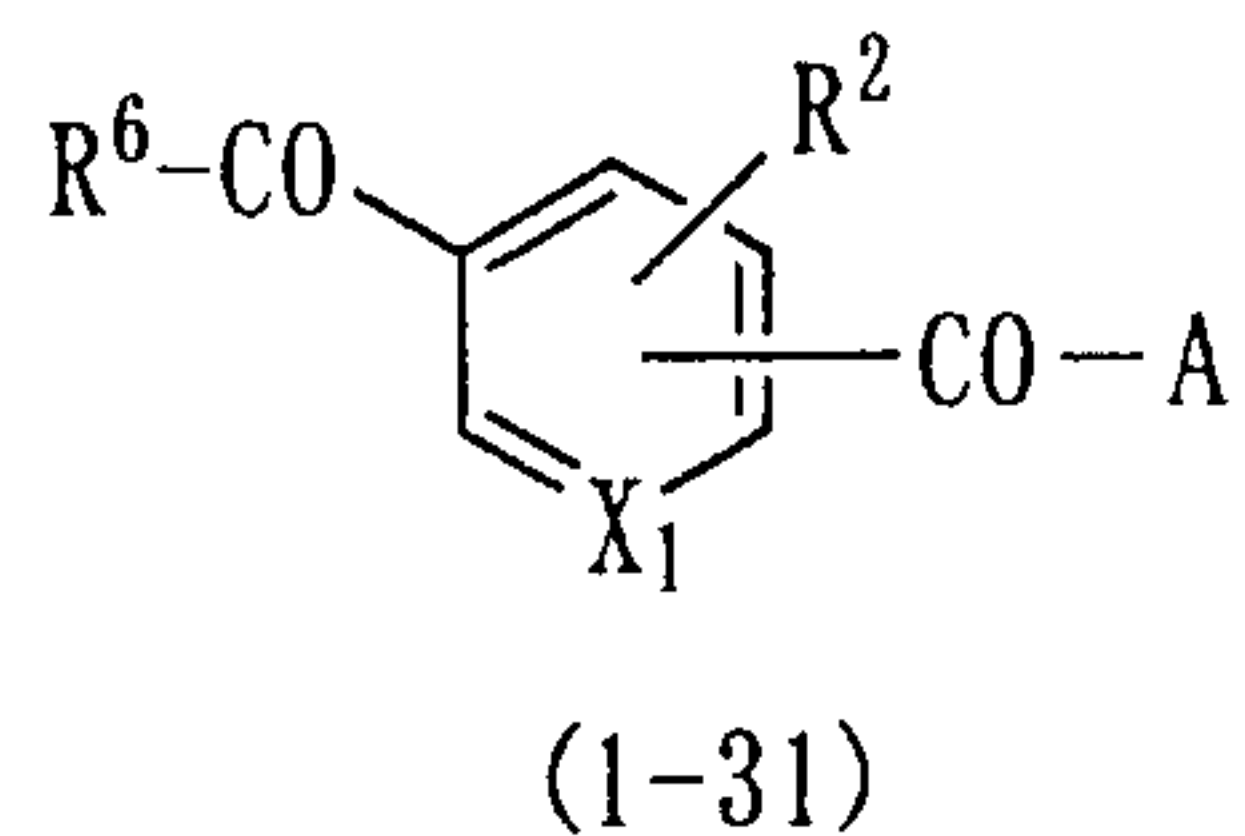
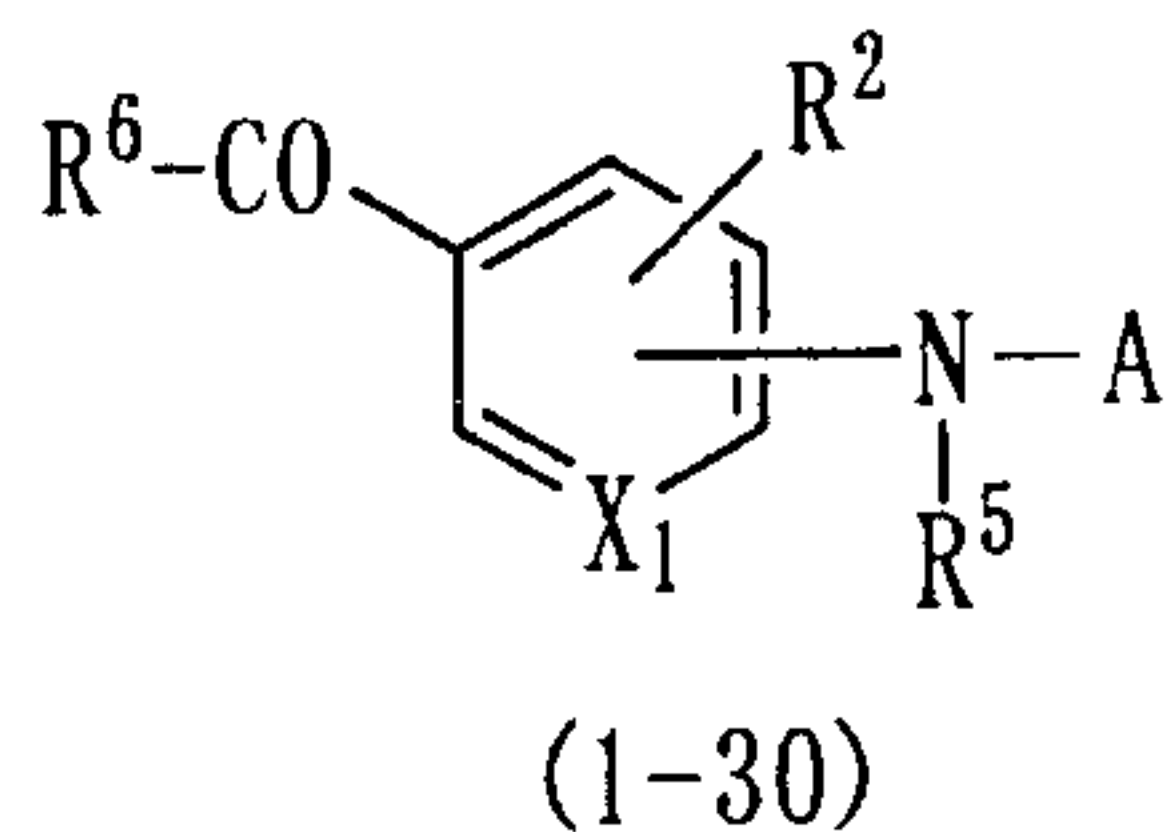
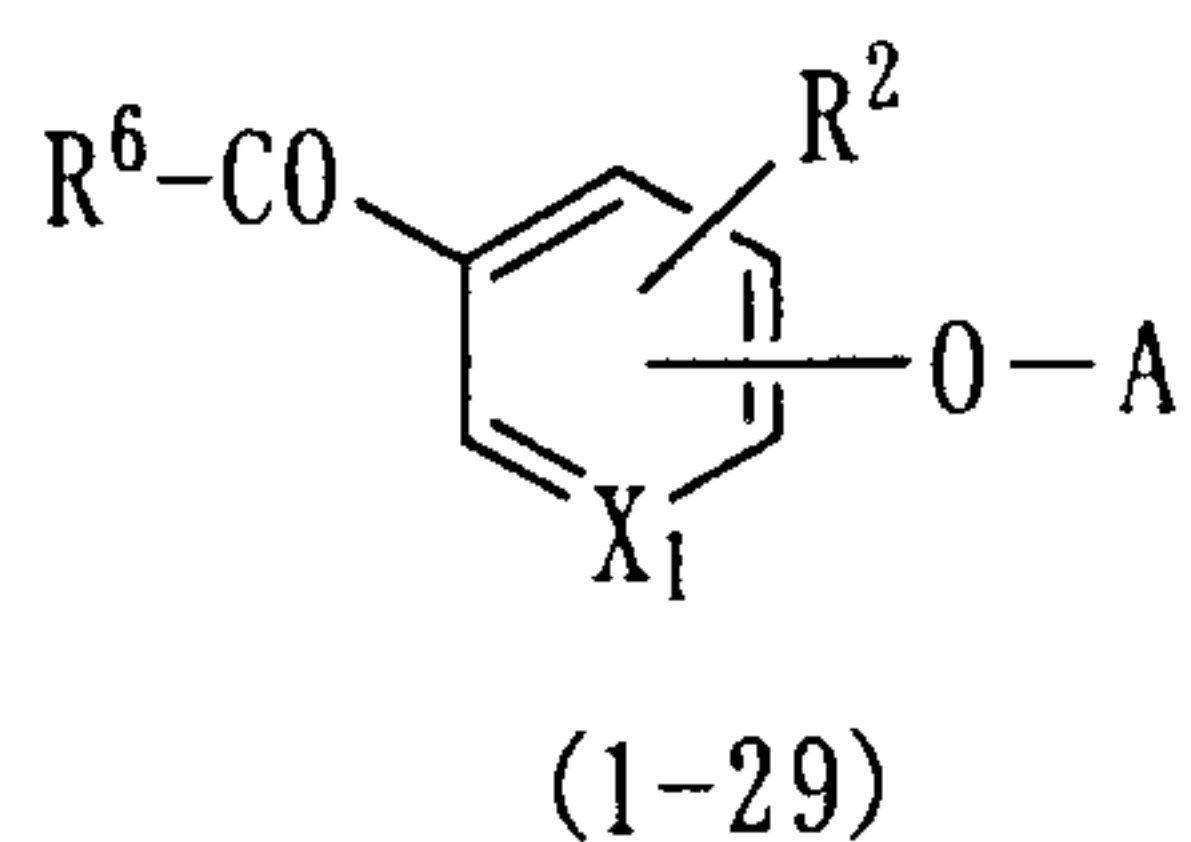


wherein, in said general formulas (1-22) to (1-28), R^6 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

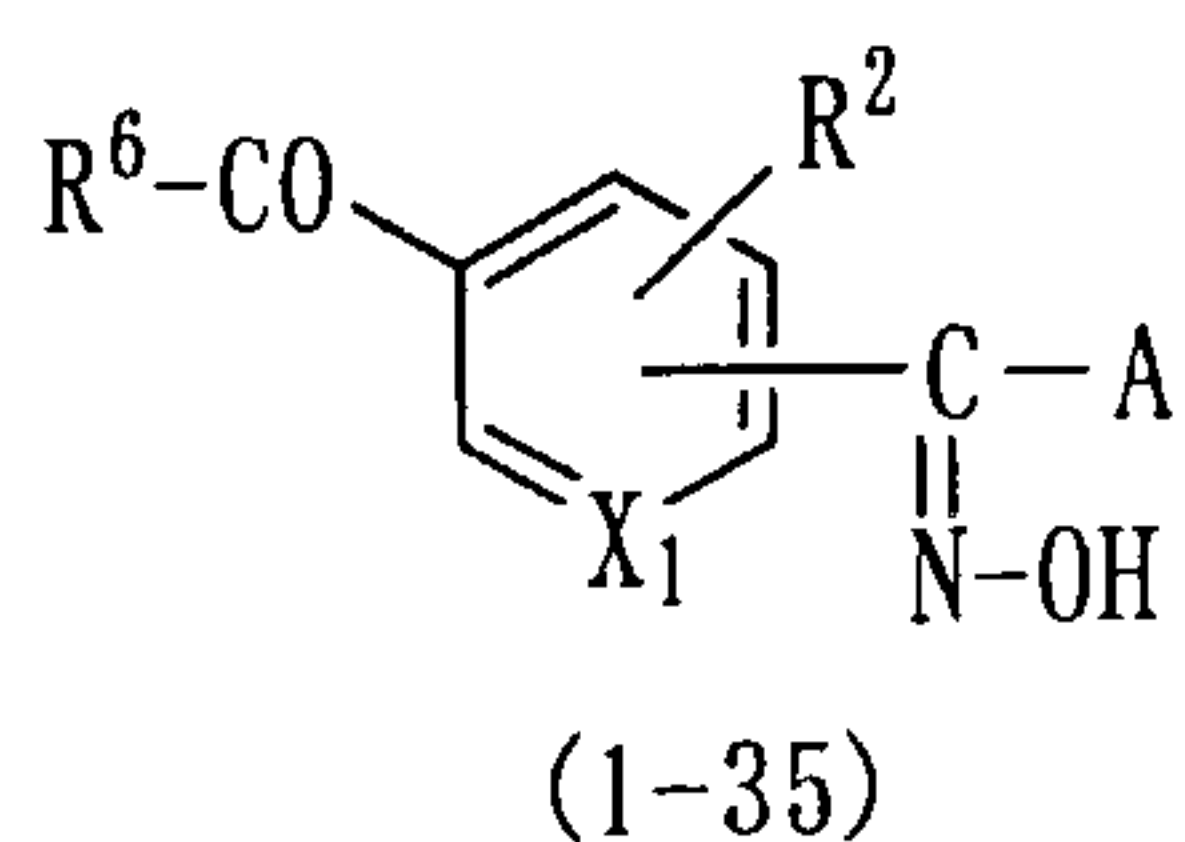
6. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-29) to (1-35):

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998



and



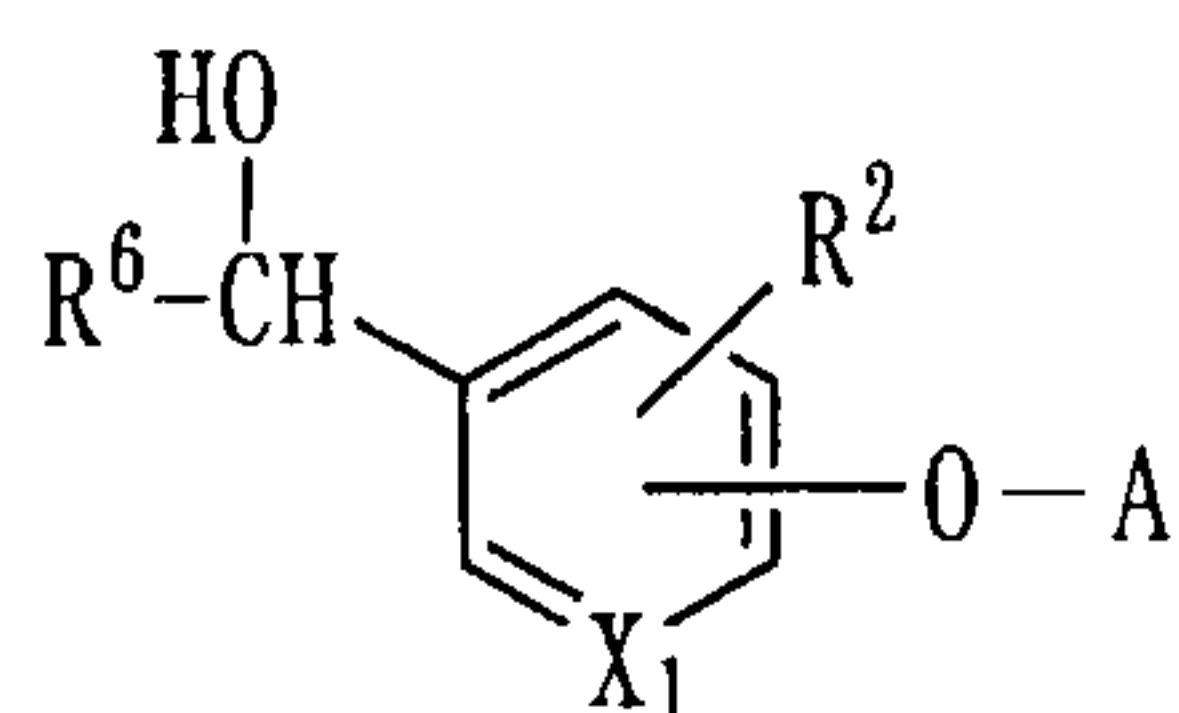
10

wherein, in said general formulas (1-29) to (1-35), R^6 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

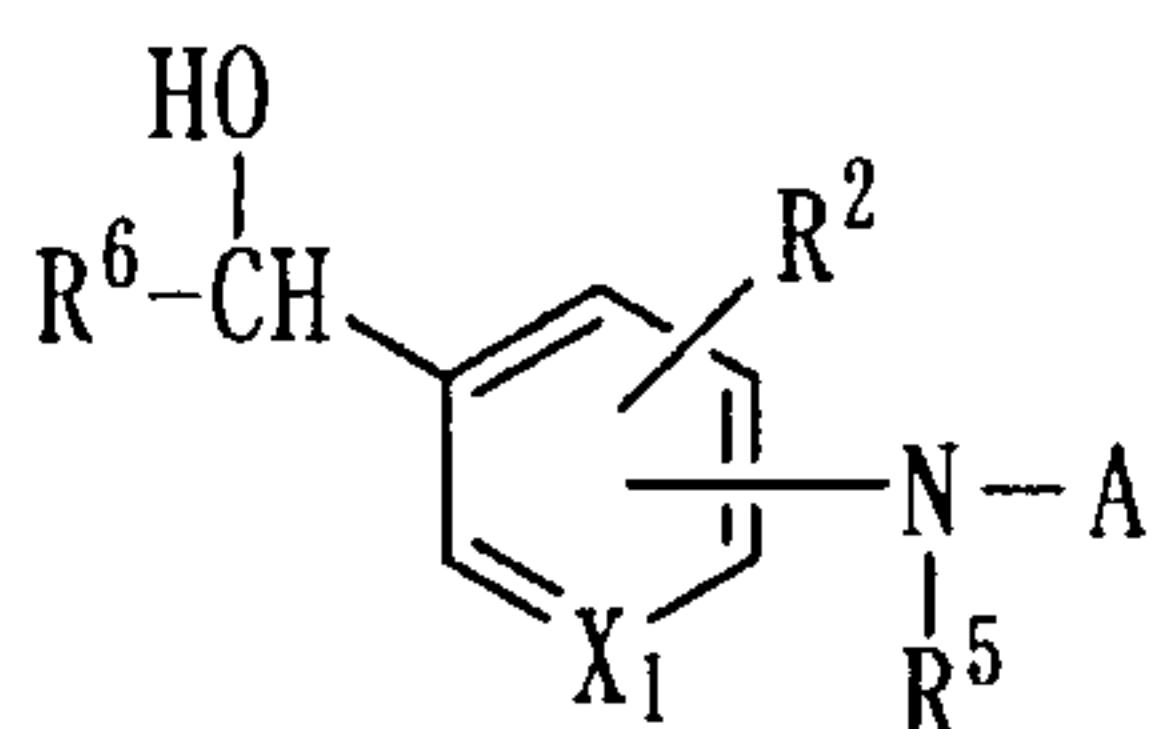
7. The aromatic compound or a salt thereof according to
 15 claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-36) to (1-42):

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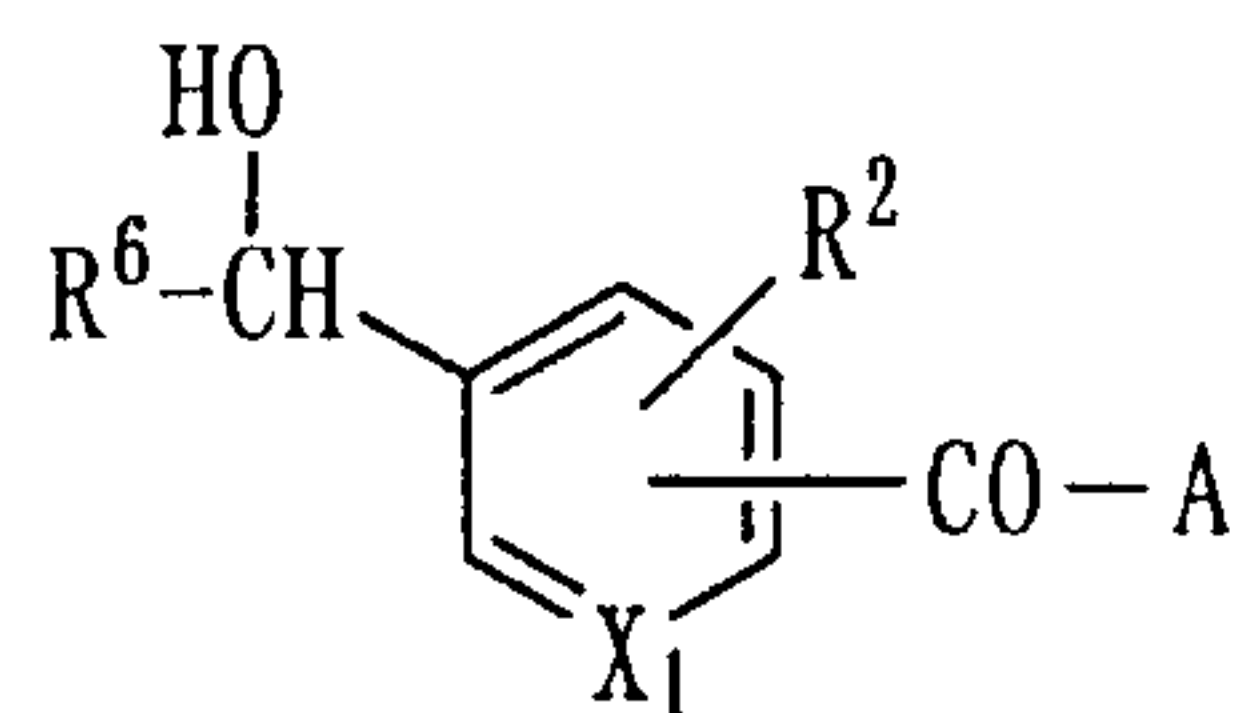
999



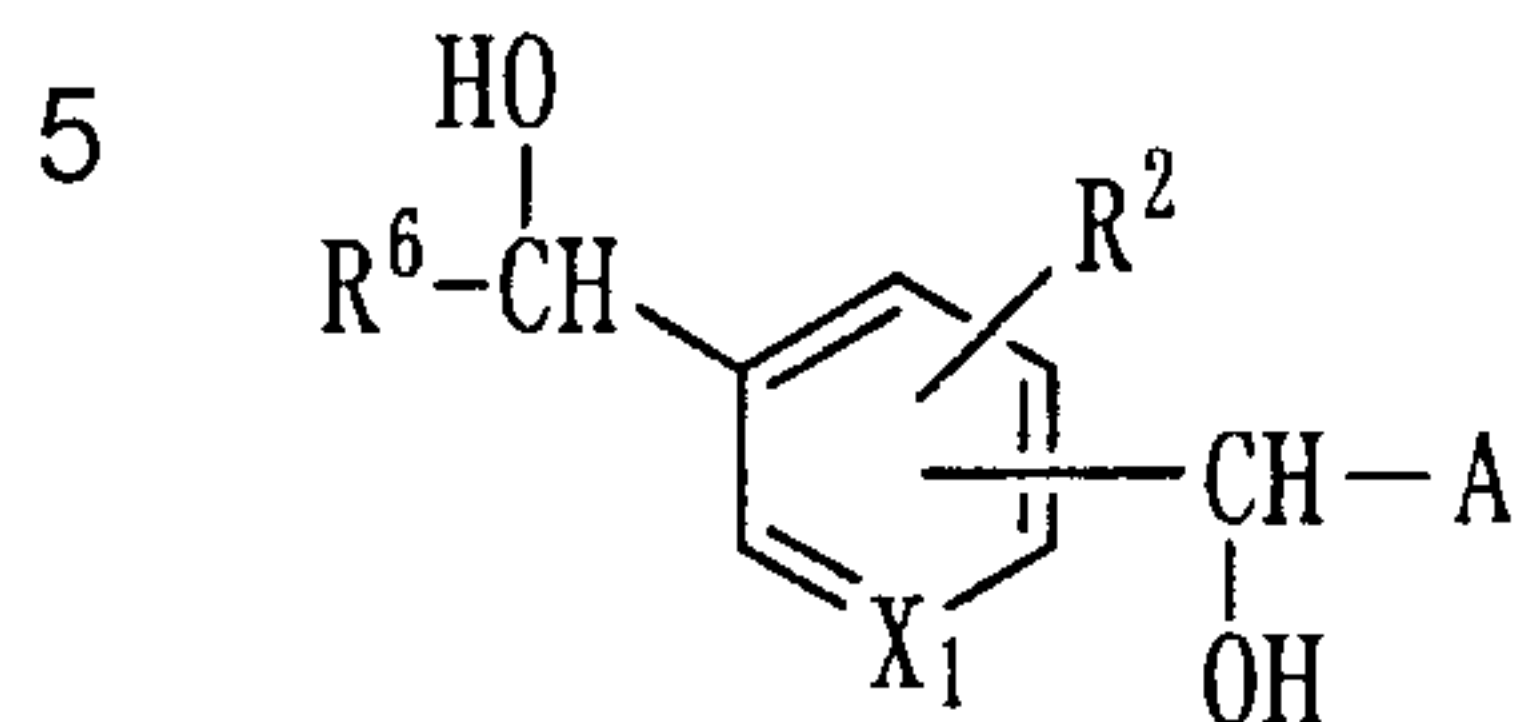
(1-36)



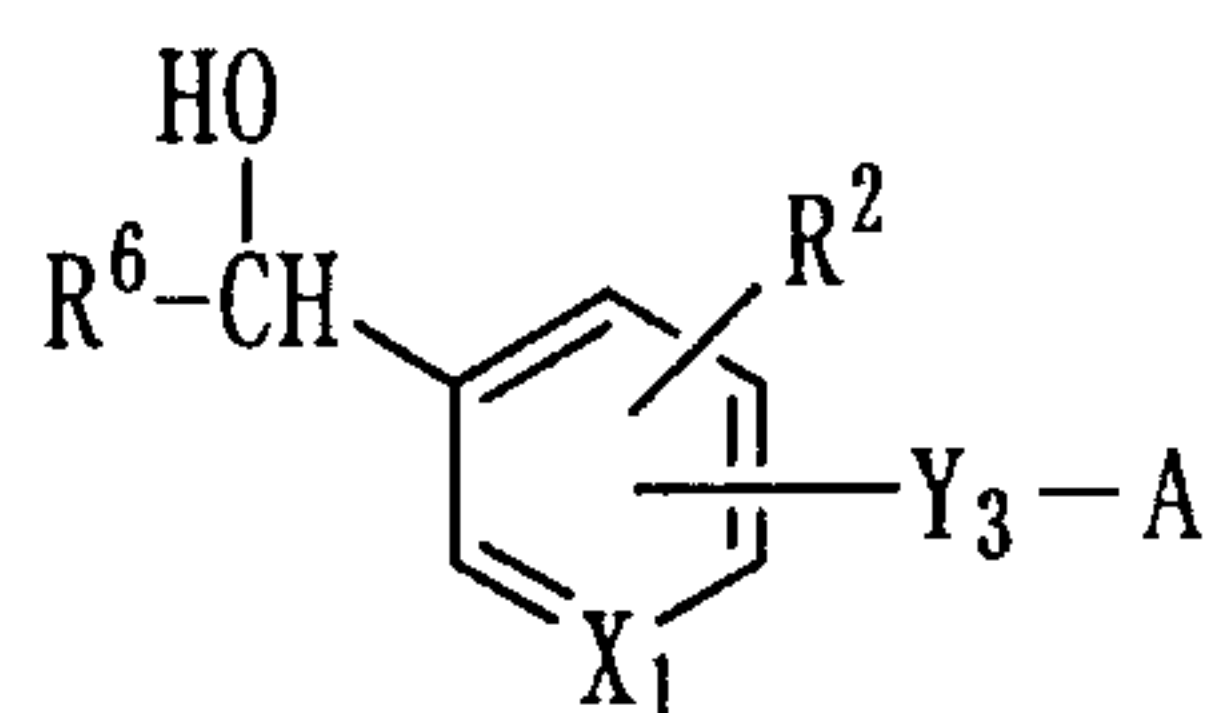
(1-37)



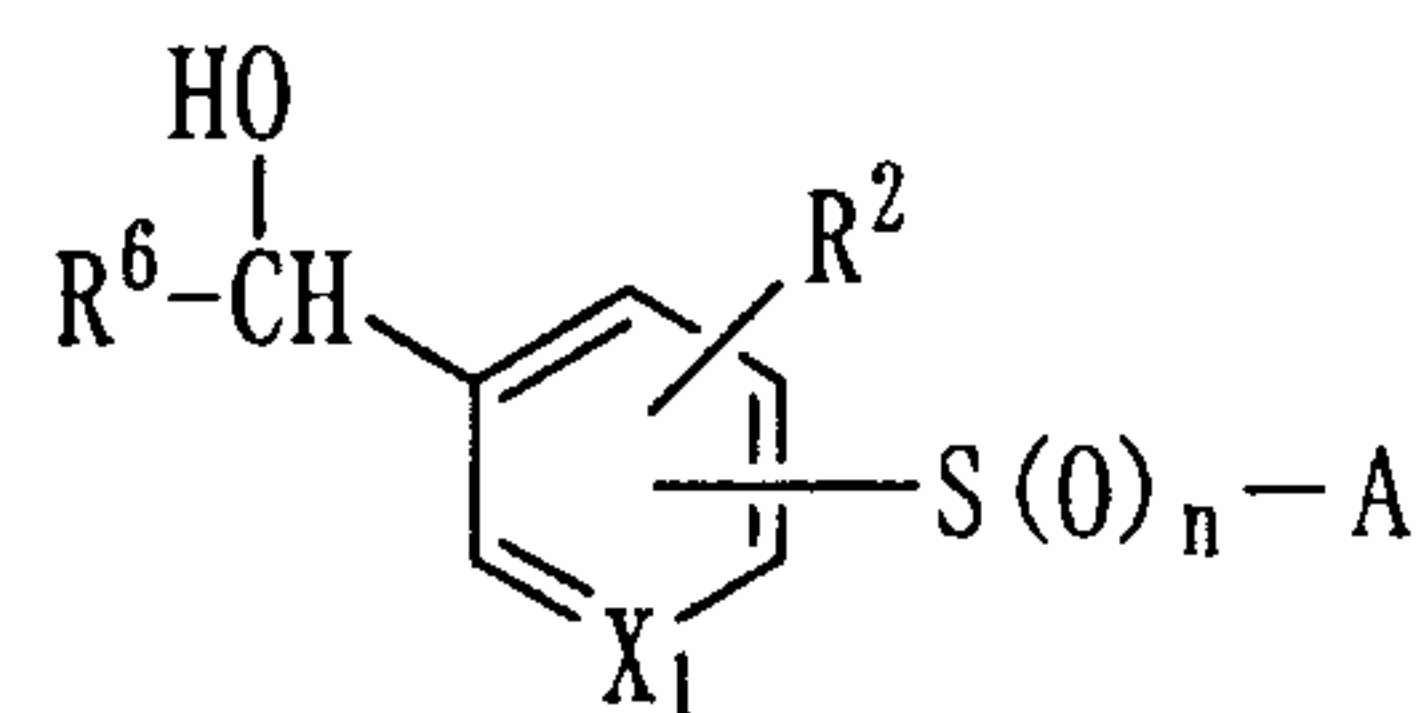
(1-38)



(1-39)

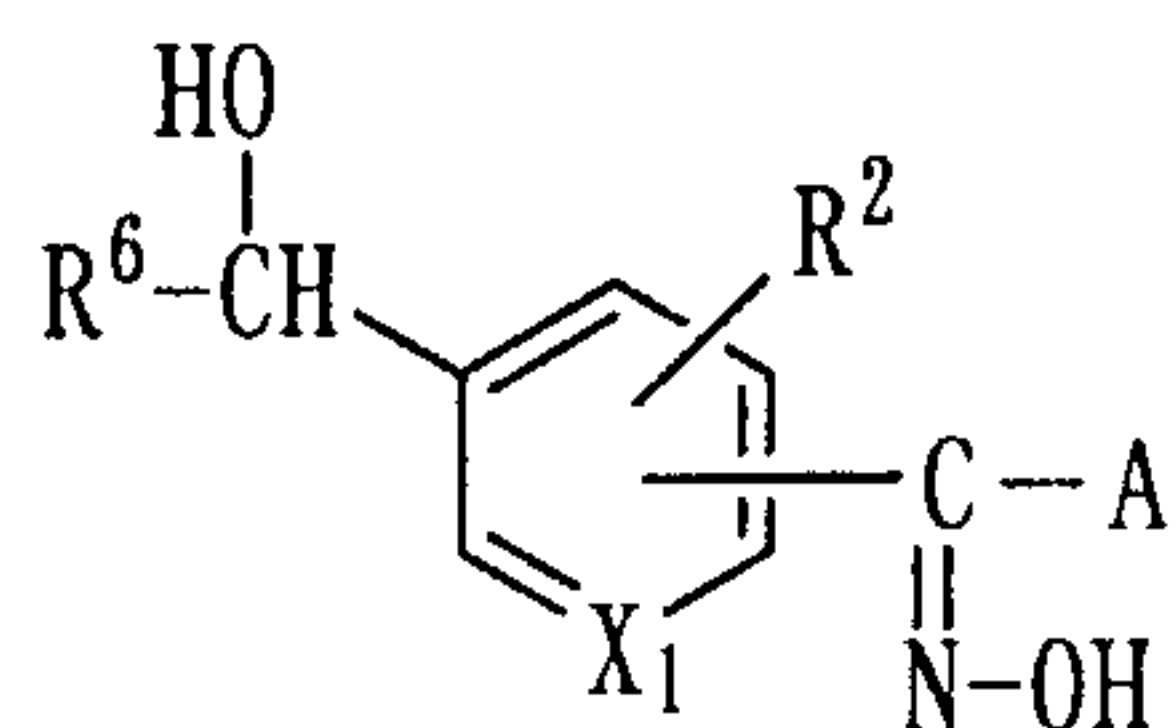


(1-40)



(1-41)

and



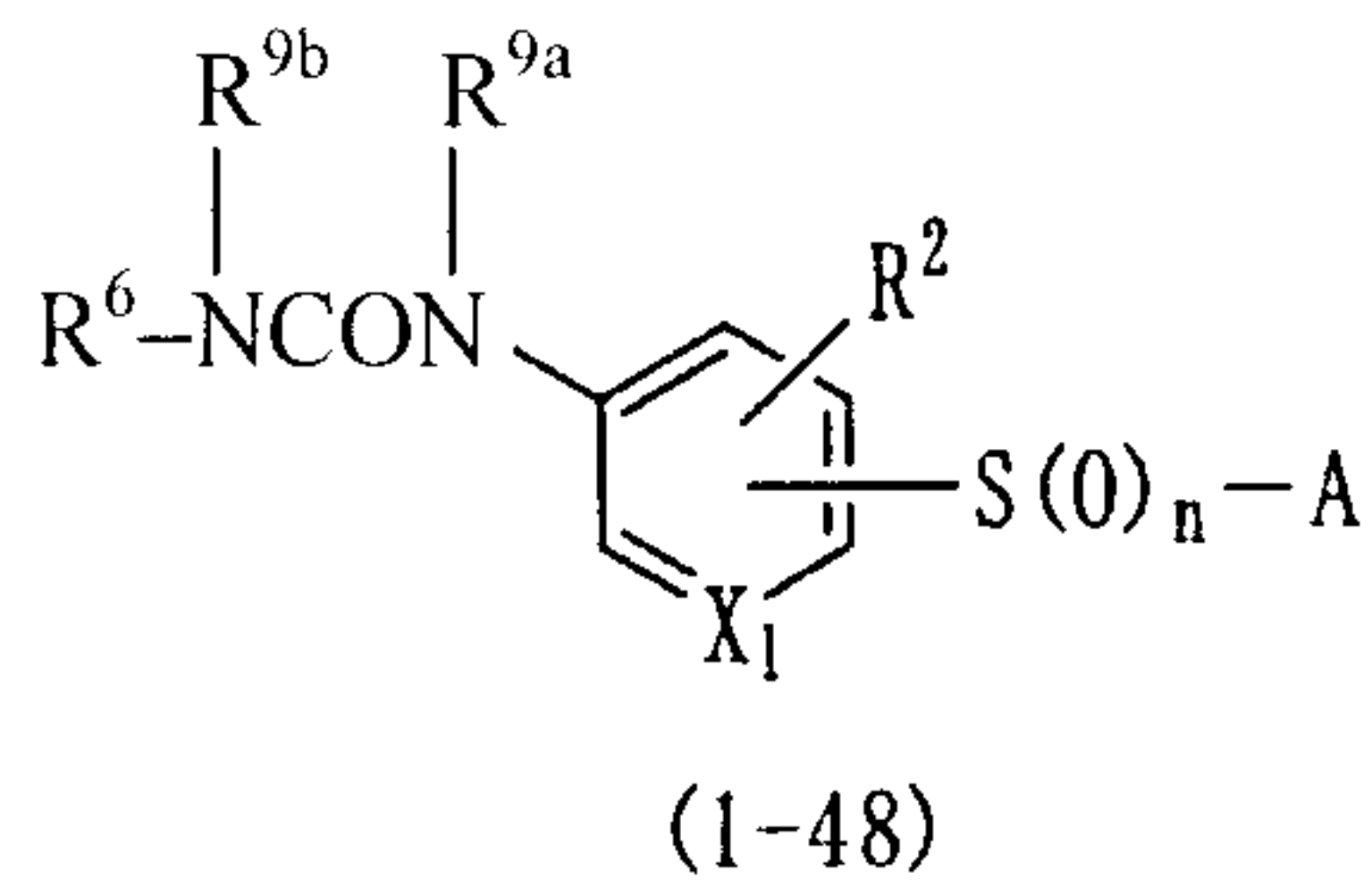
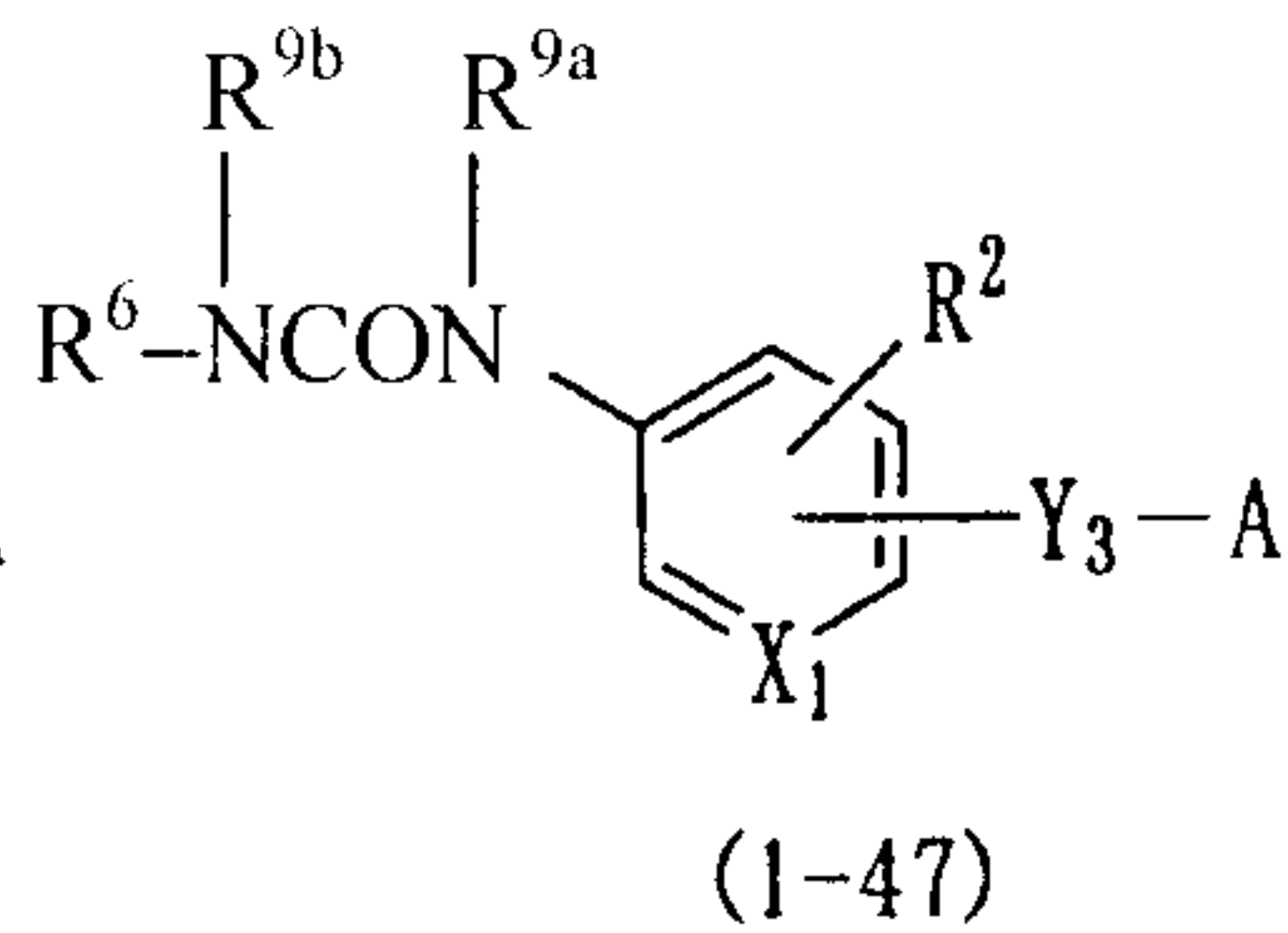
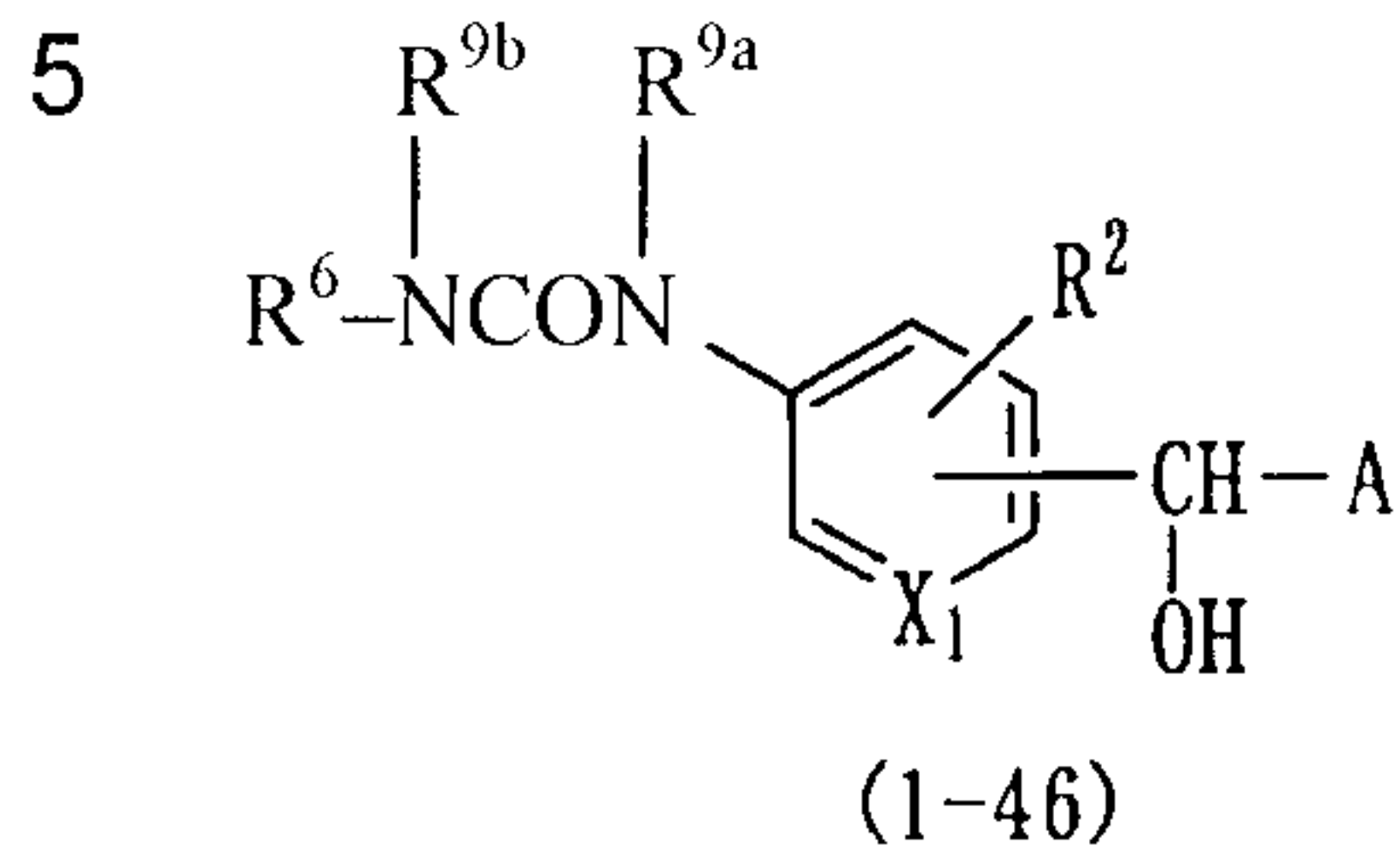
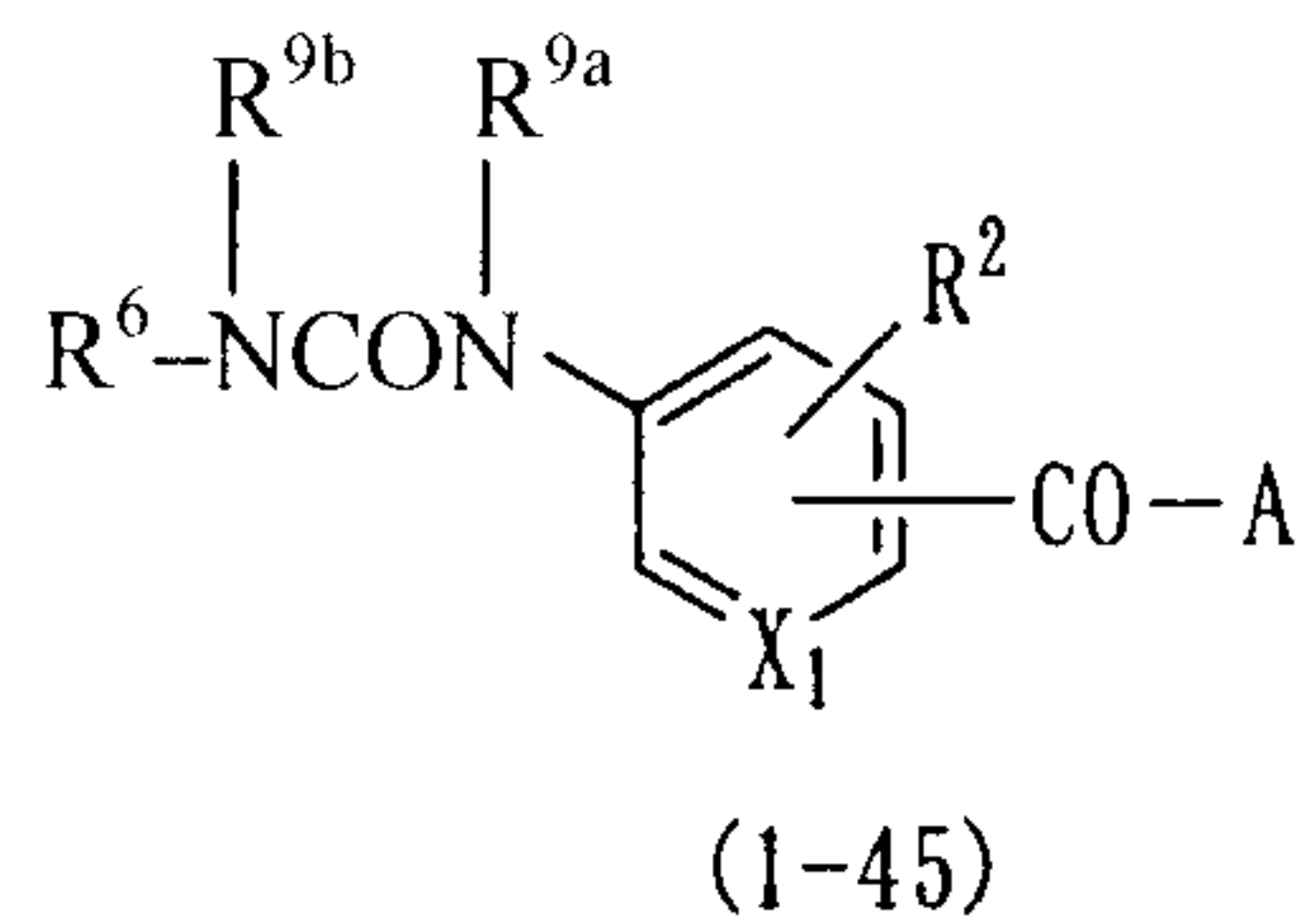
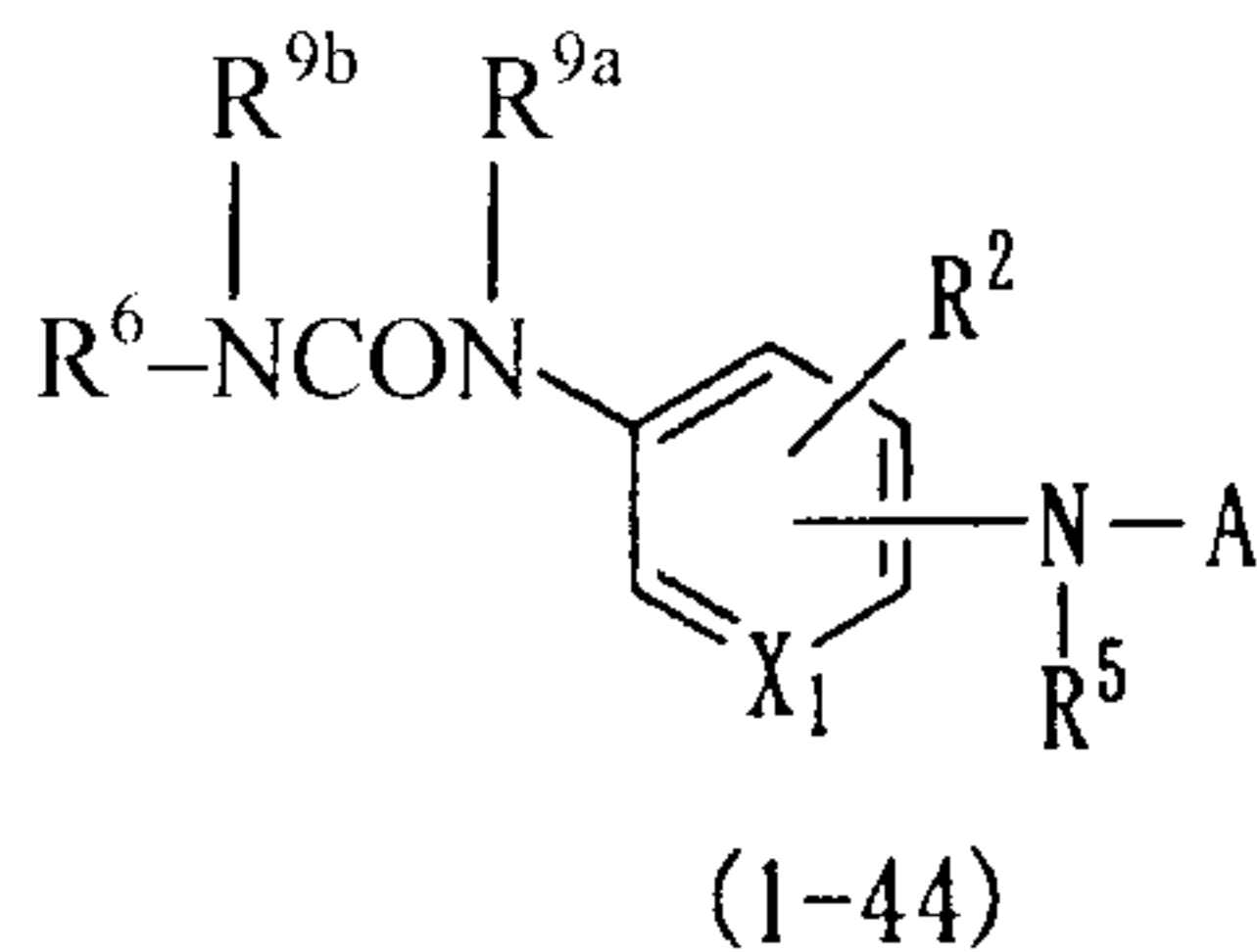
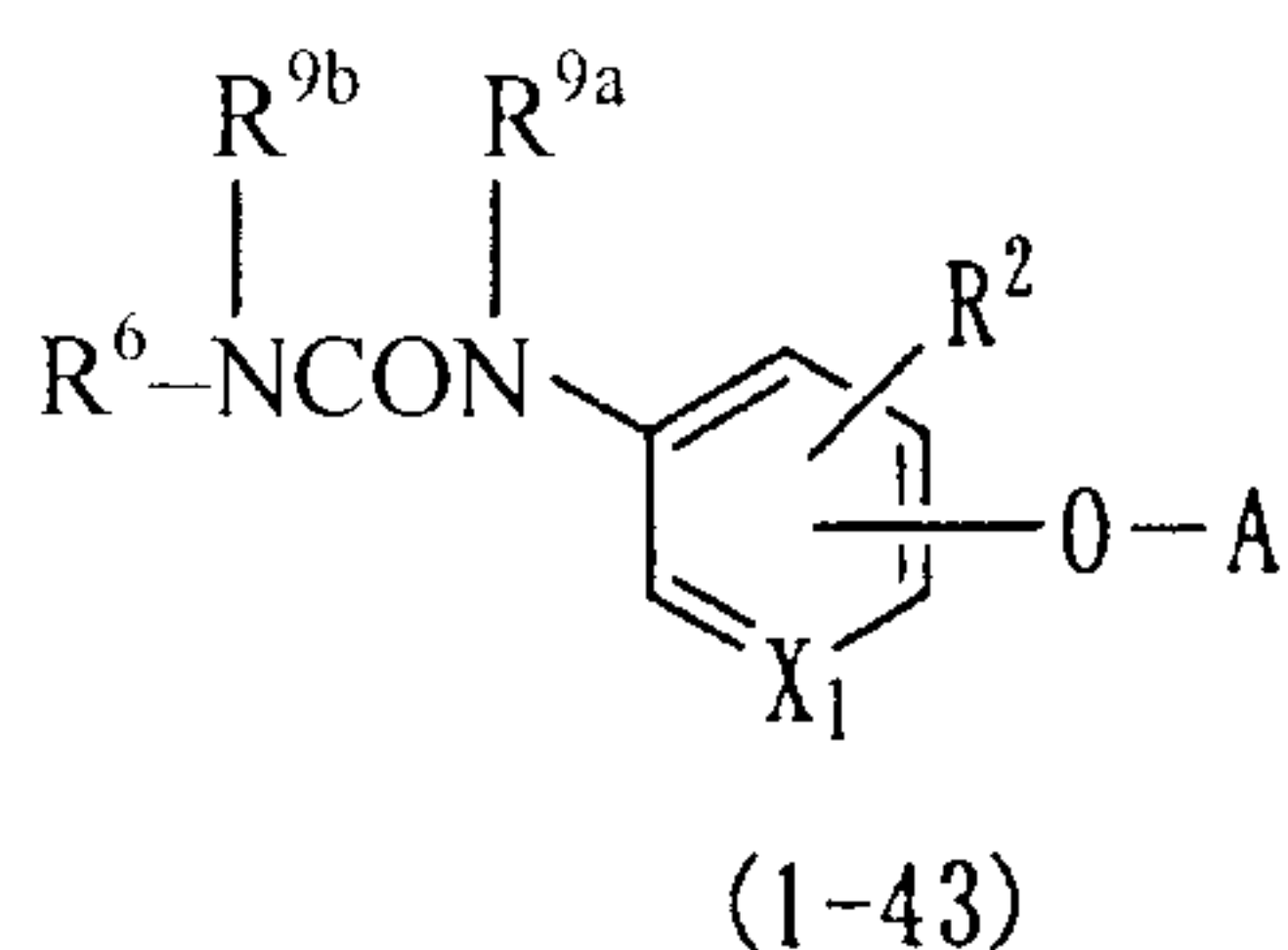
(1-42)

wherein, in said general formulas (1-36) to (1-42), R^6 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

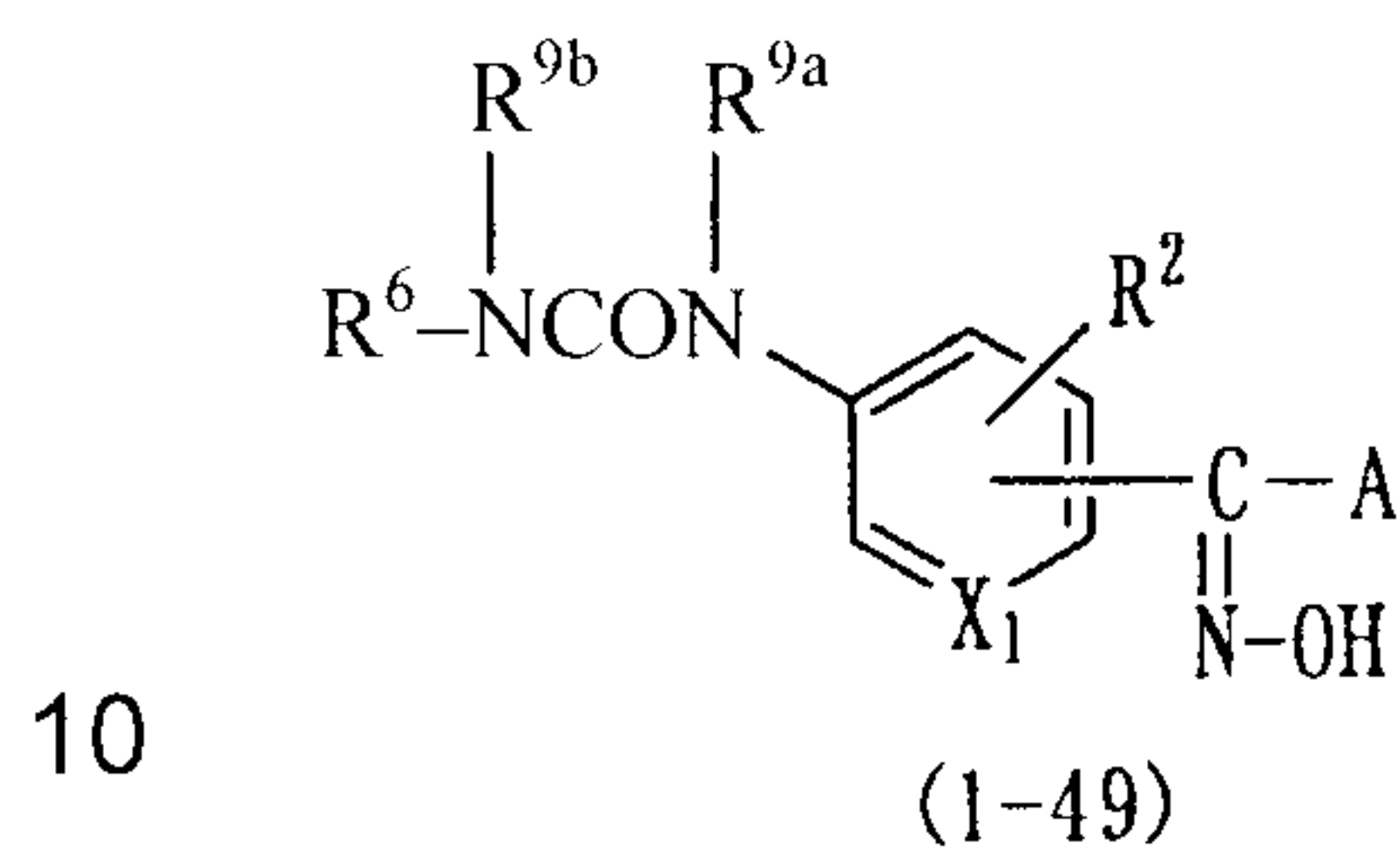
- 15 8. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-43) to (1-49):

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and

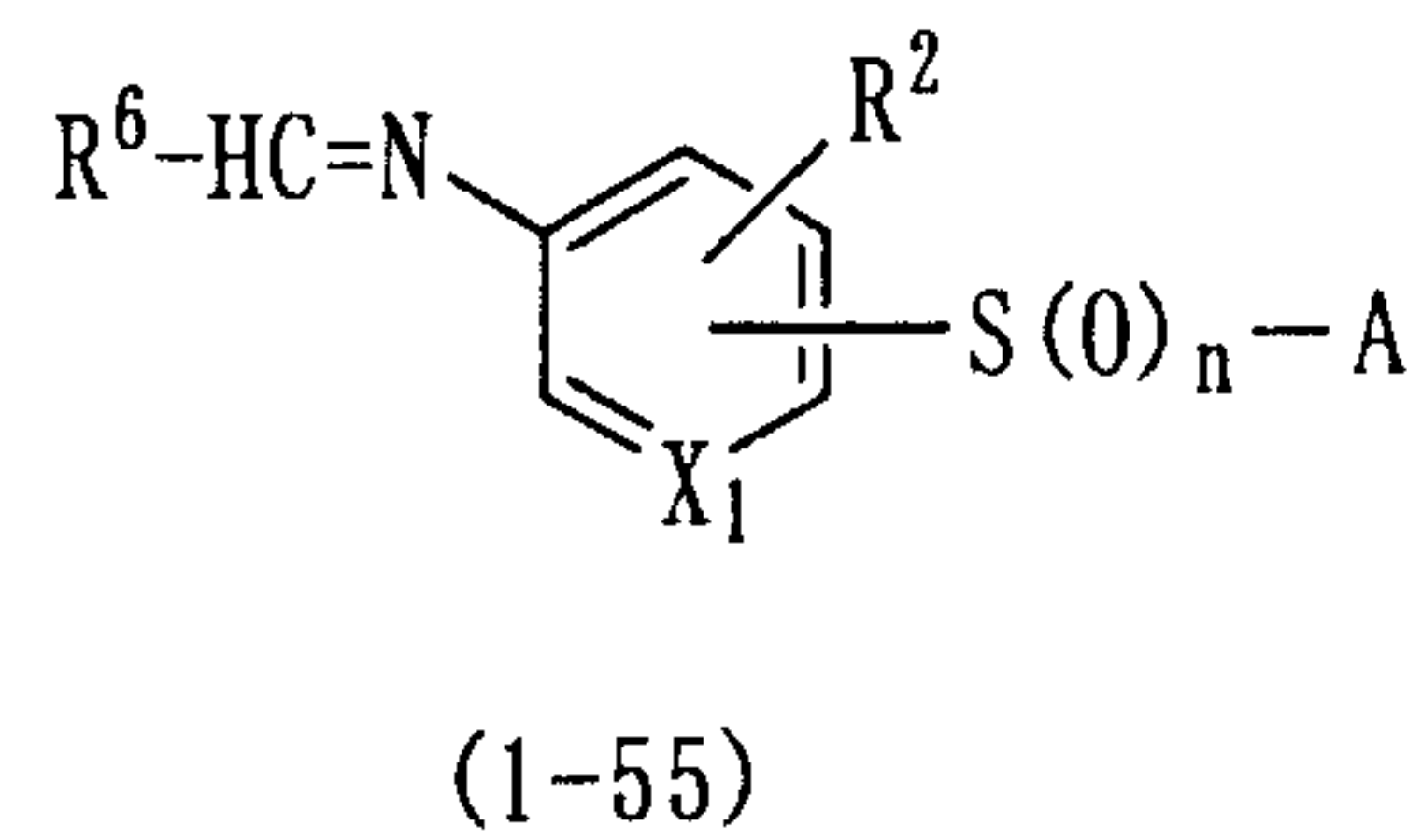
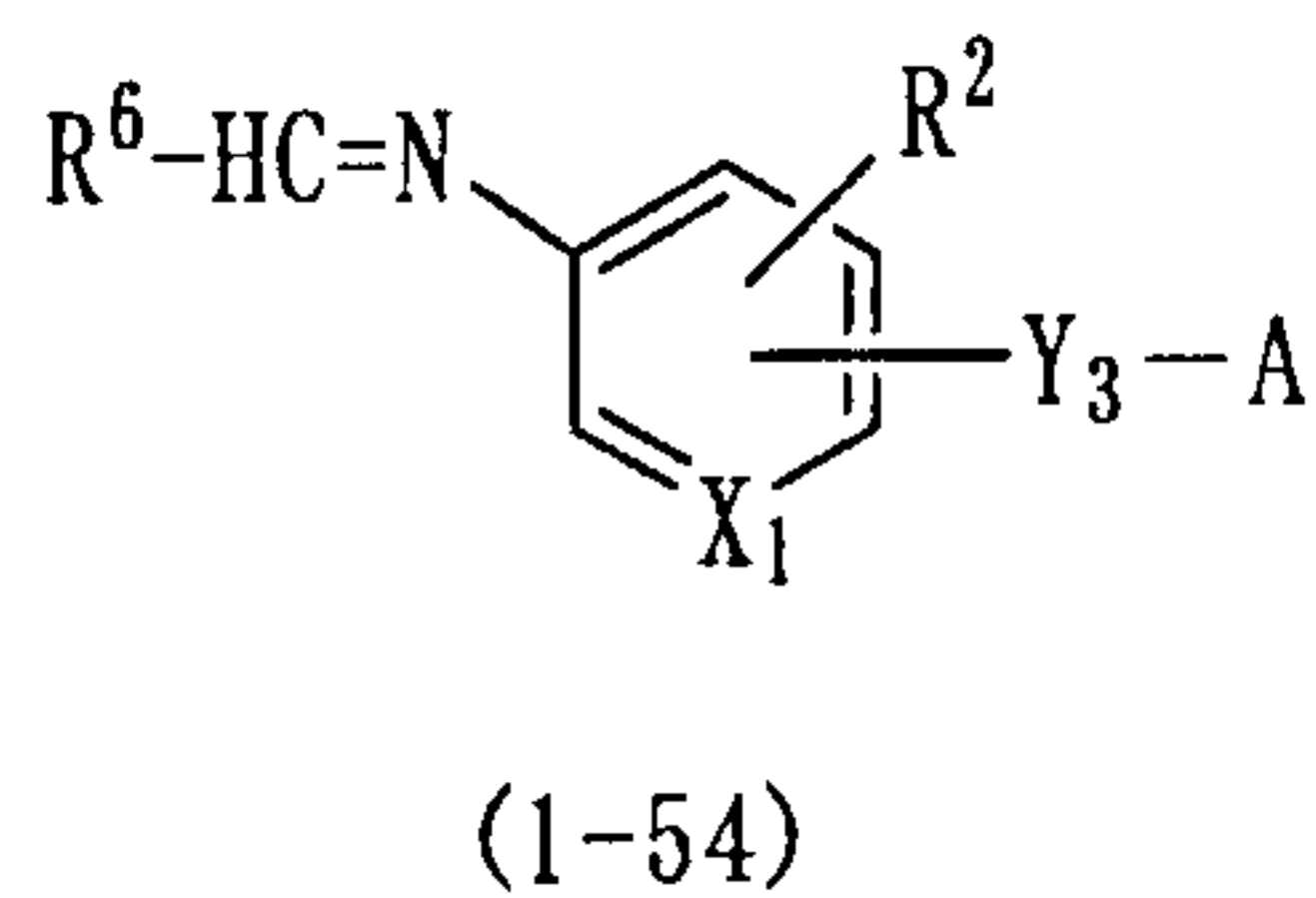
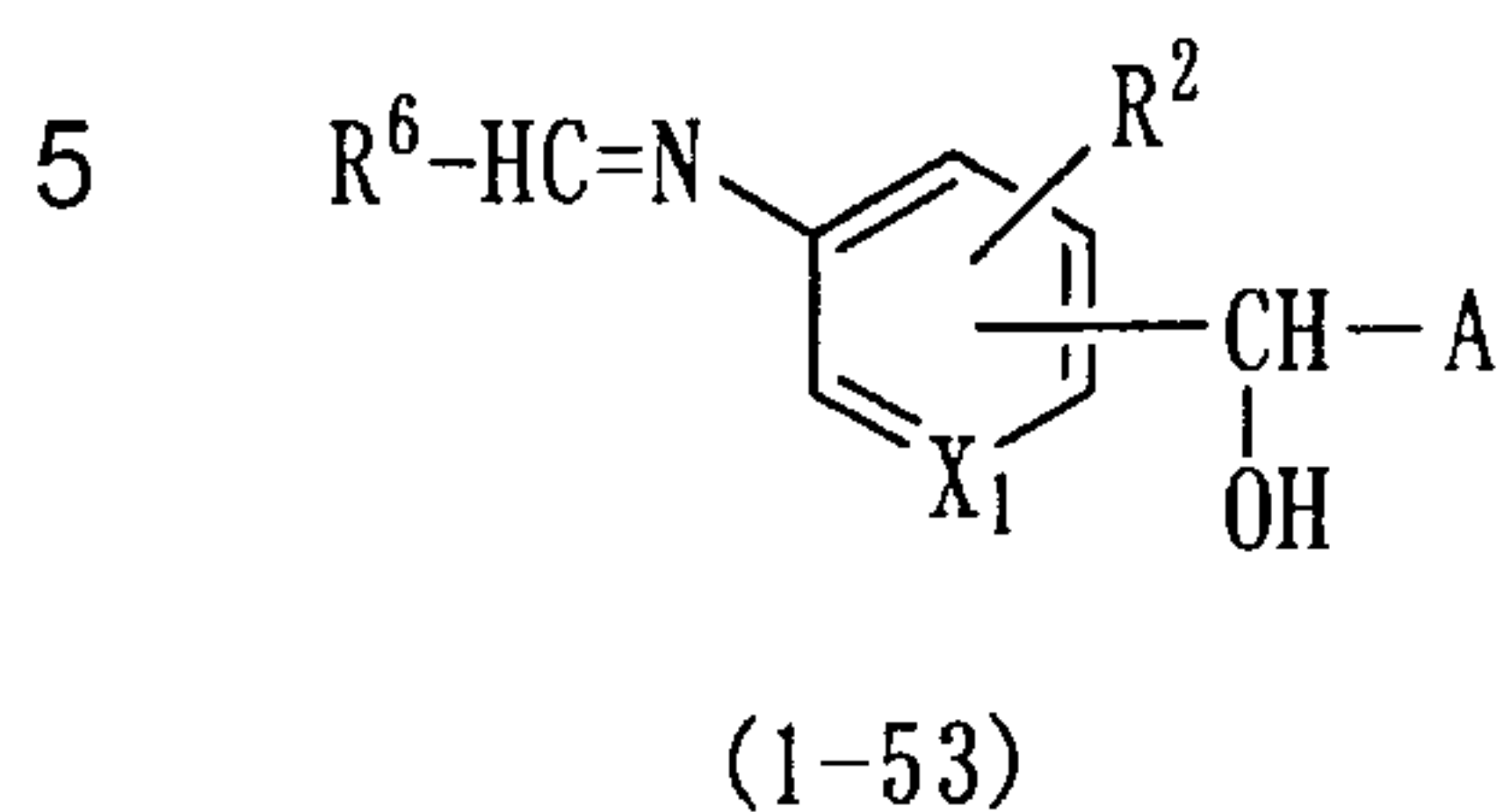
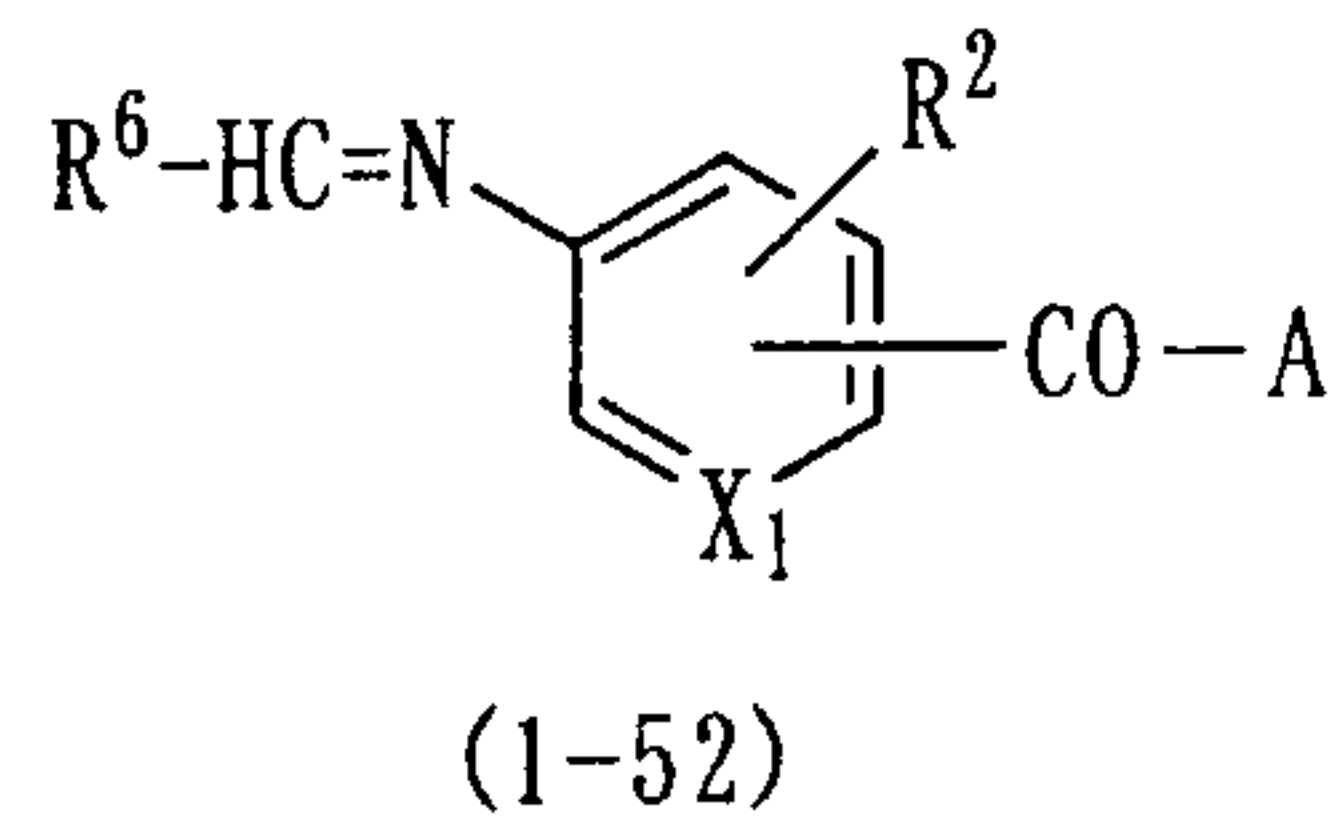
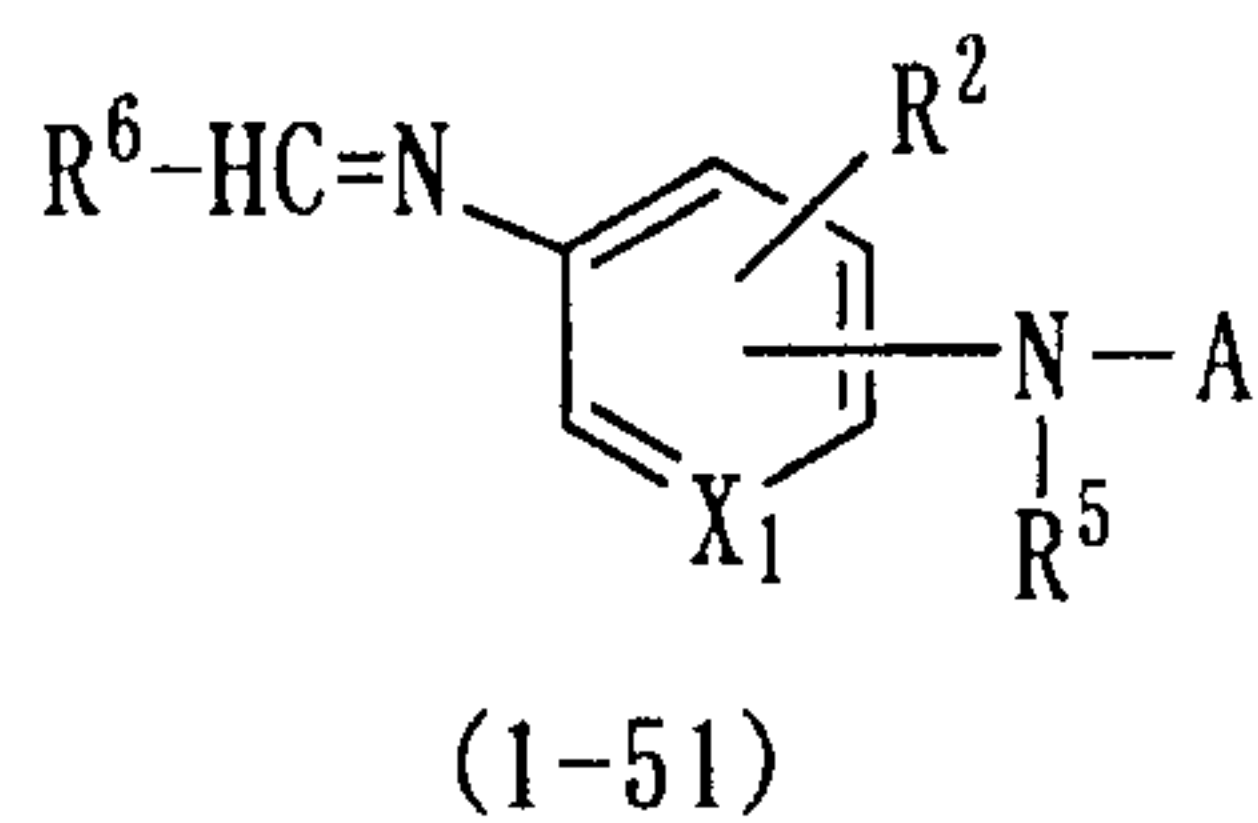
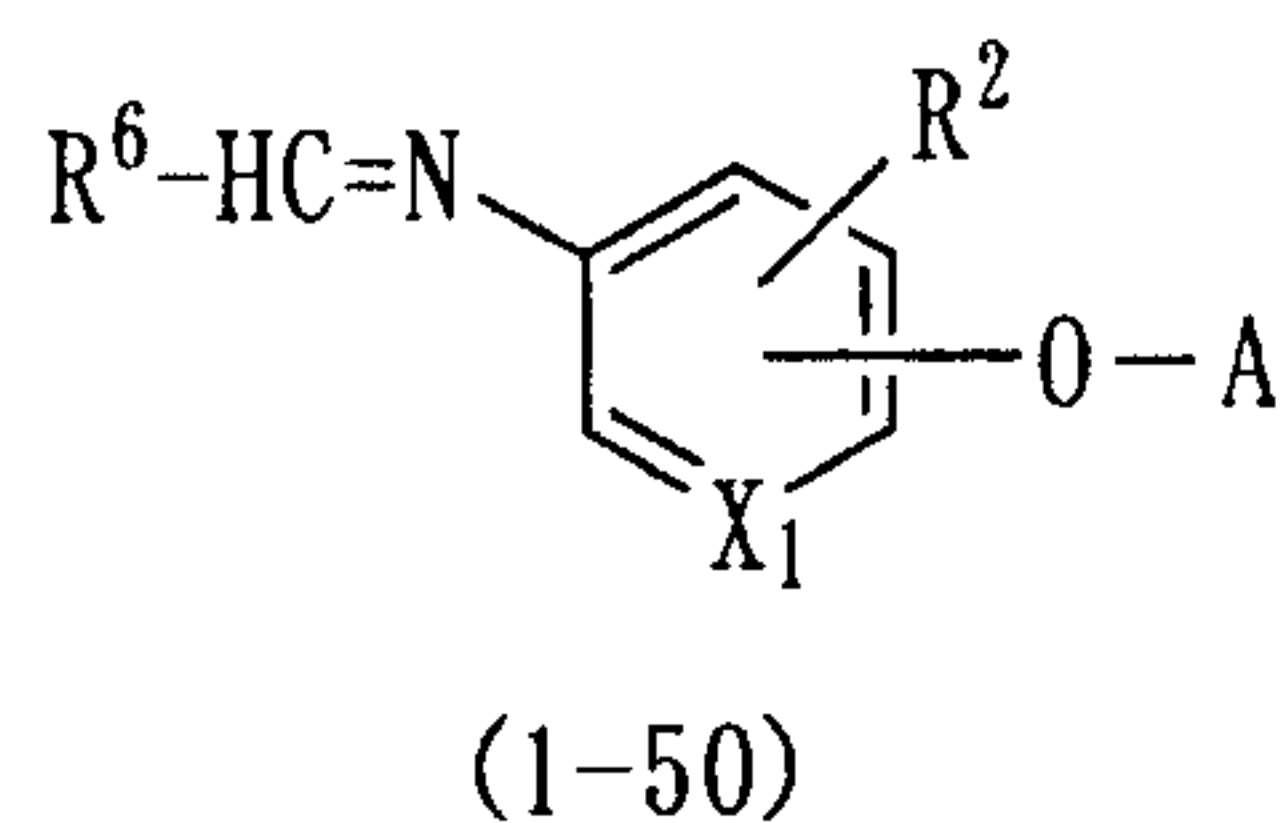


wherein, in said general formulas (1-43) to (1-49), R^6 , R^2 , R^5 , n , X_1 , A , R^{9a} , and R^{9b} have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

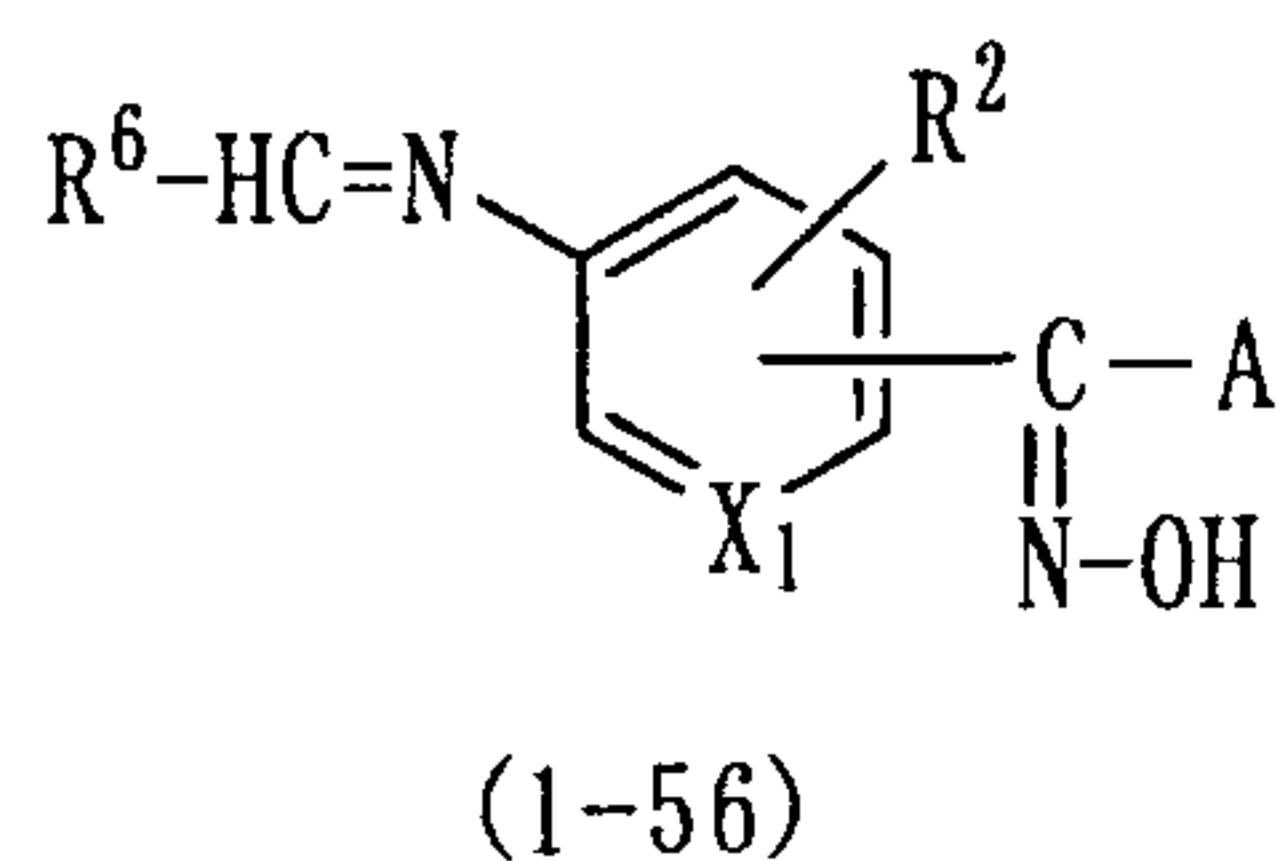
9. The aromatic compound or a salt thereof according to
 15 claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-50) to (1-56):

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and



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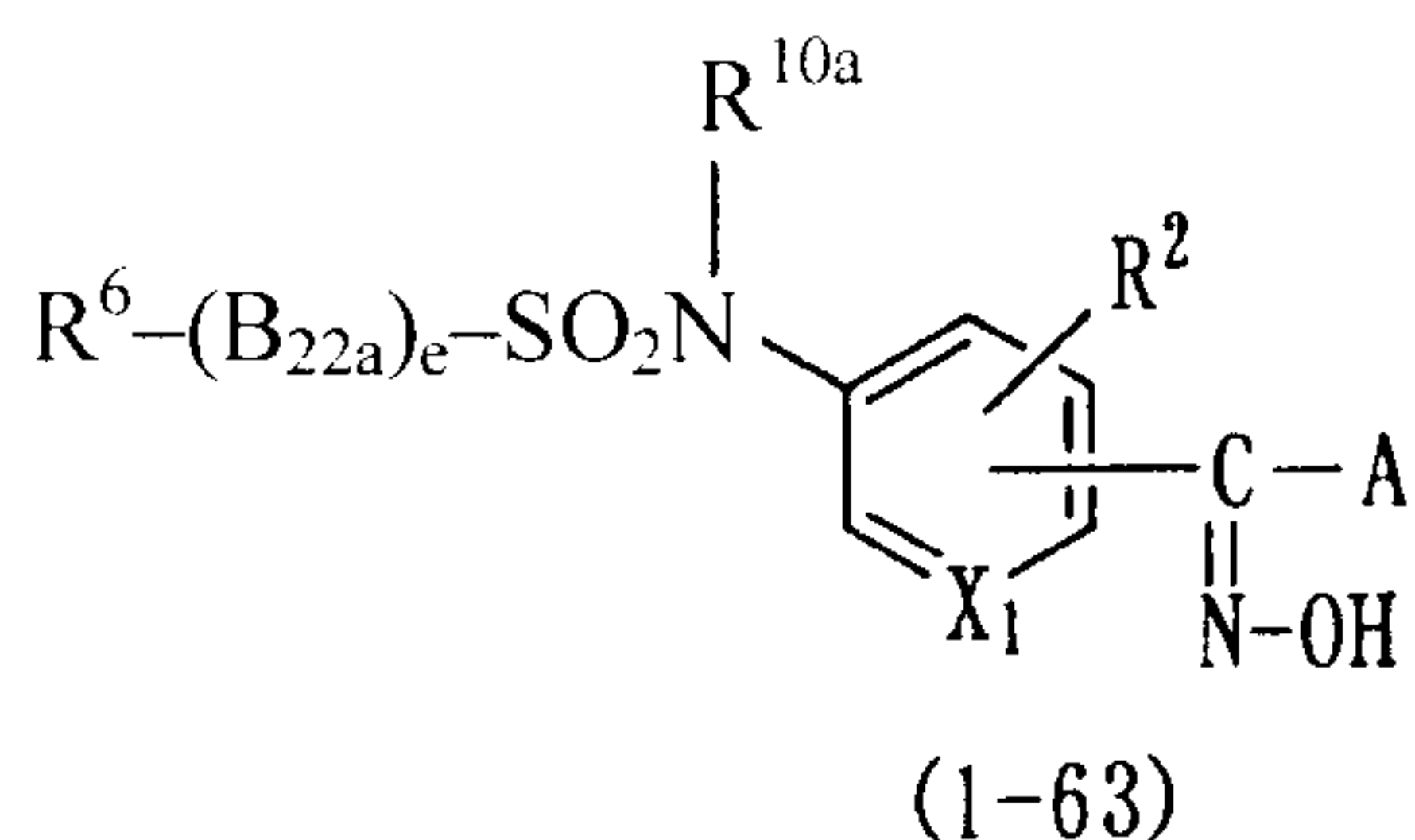
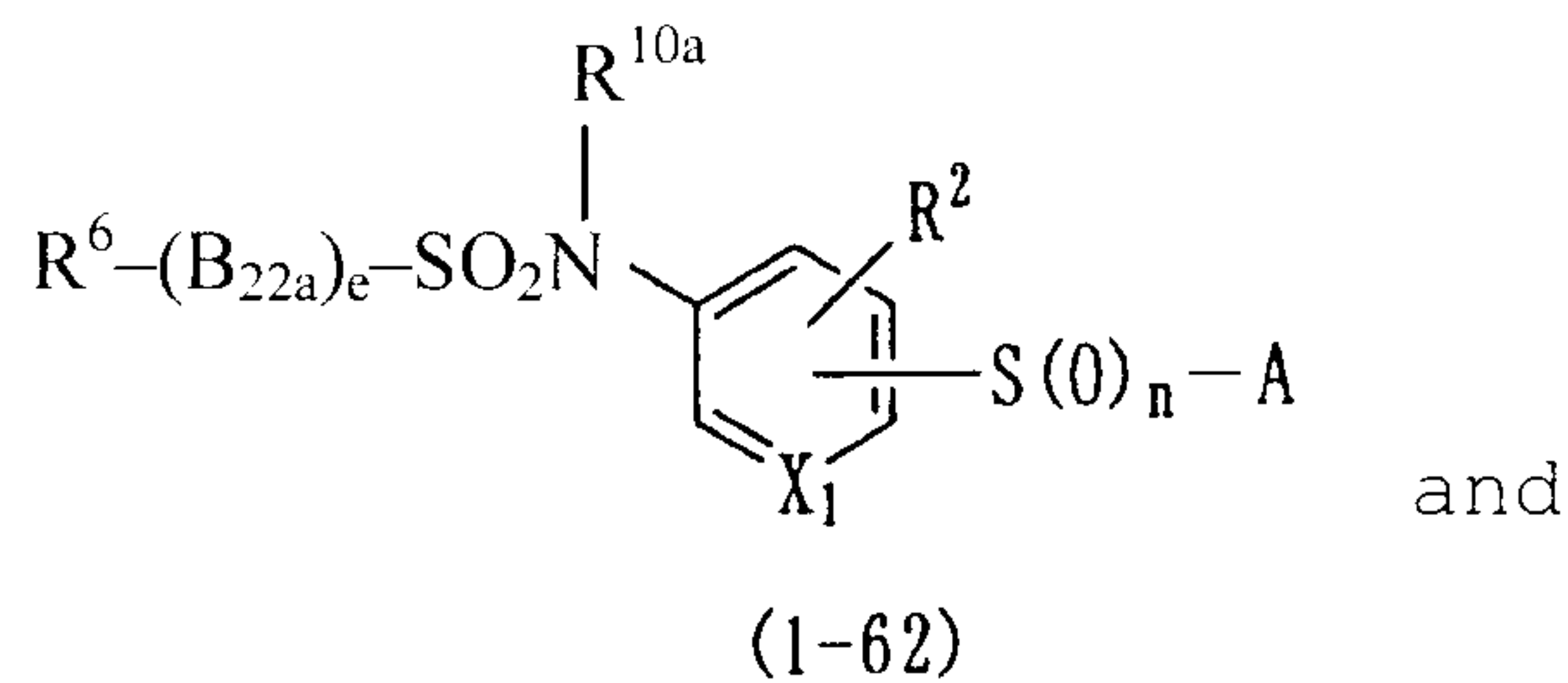
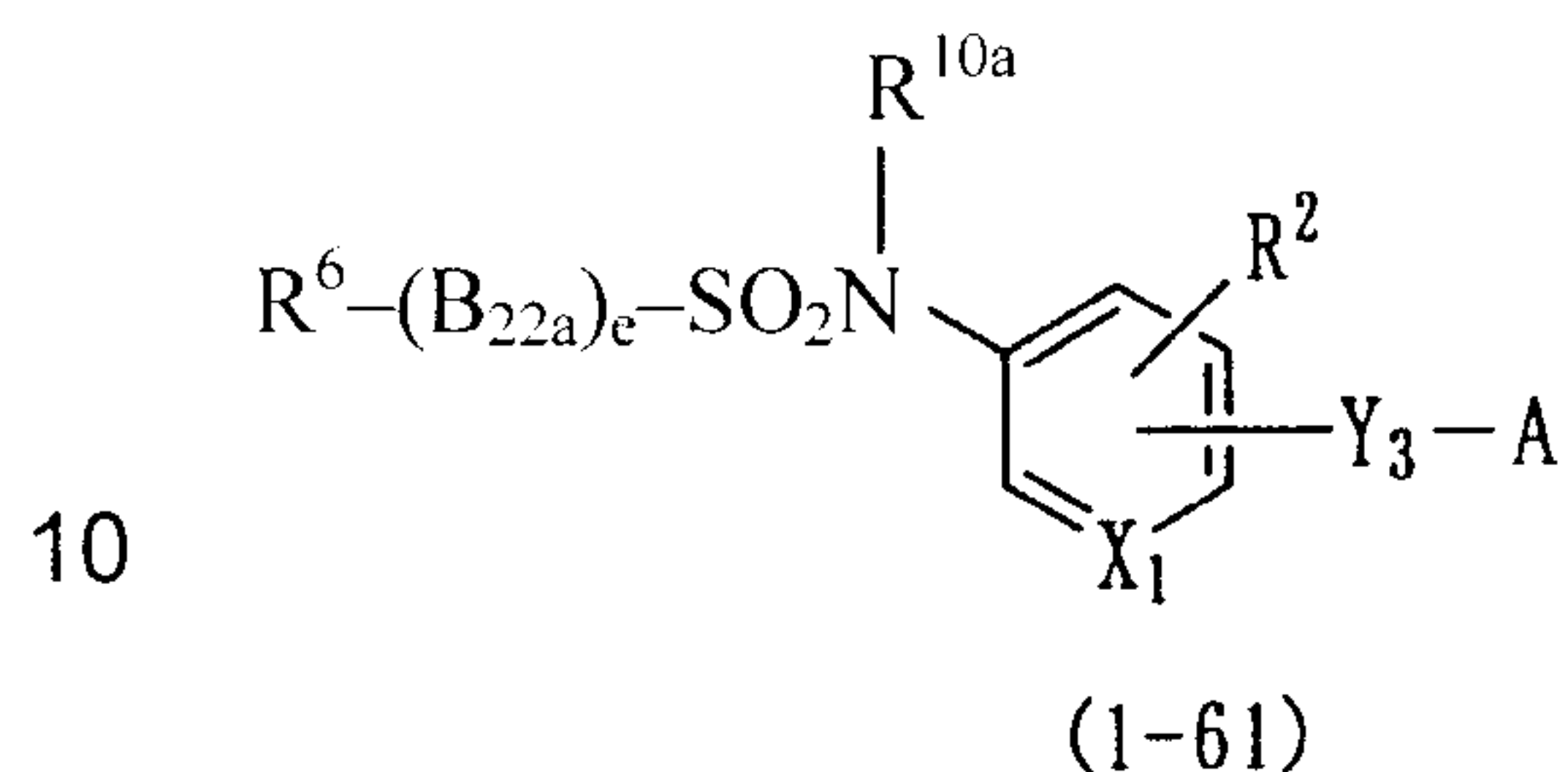
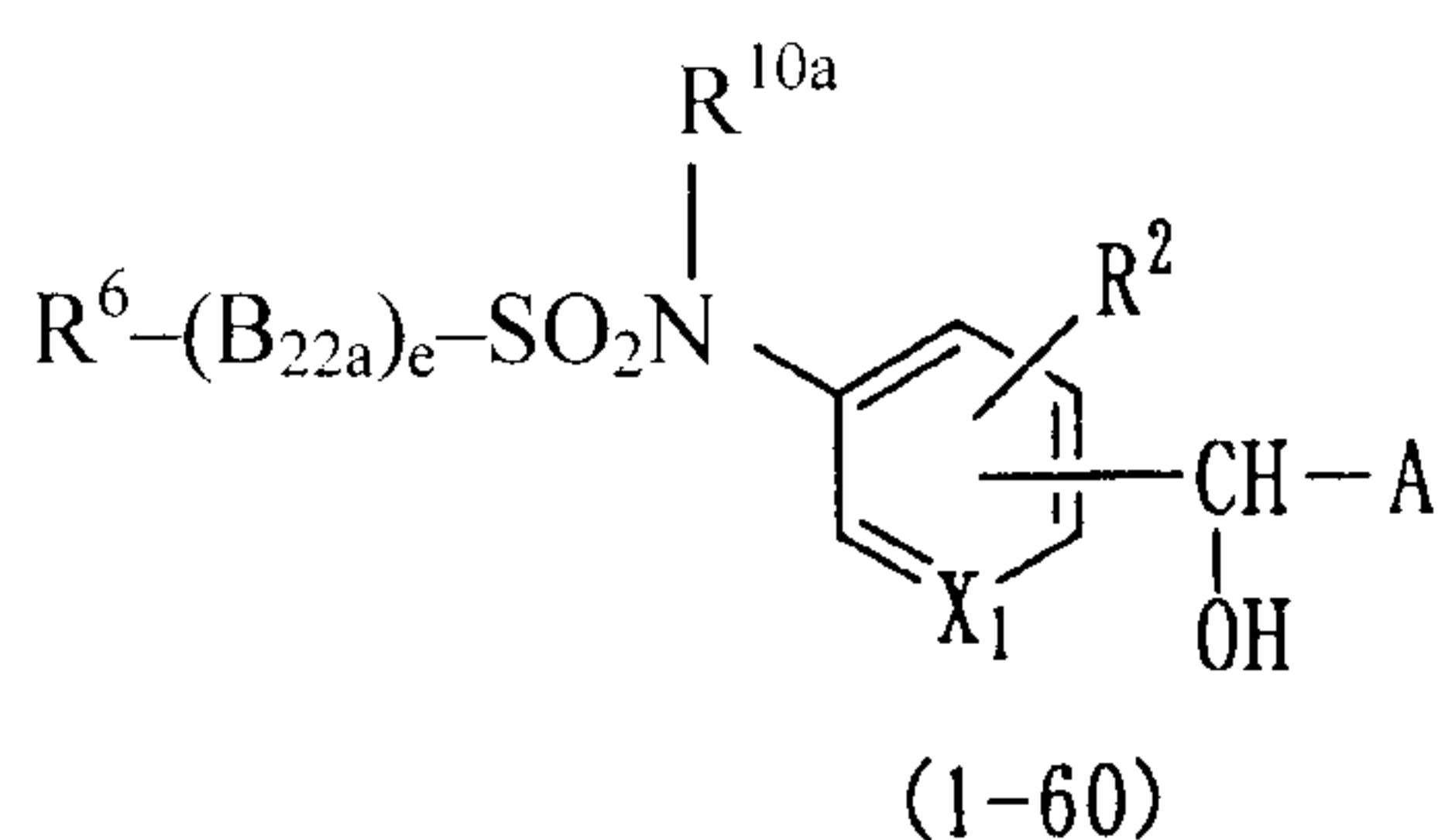
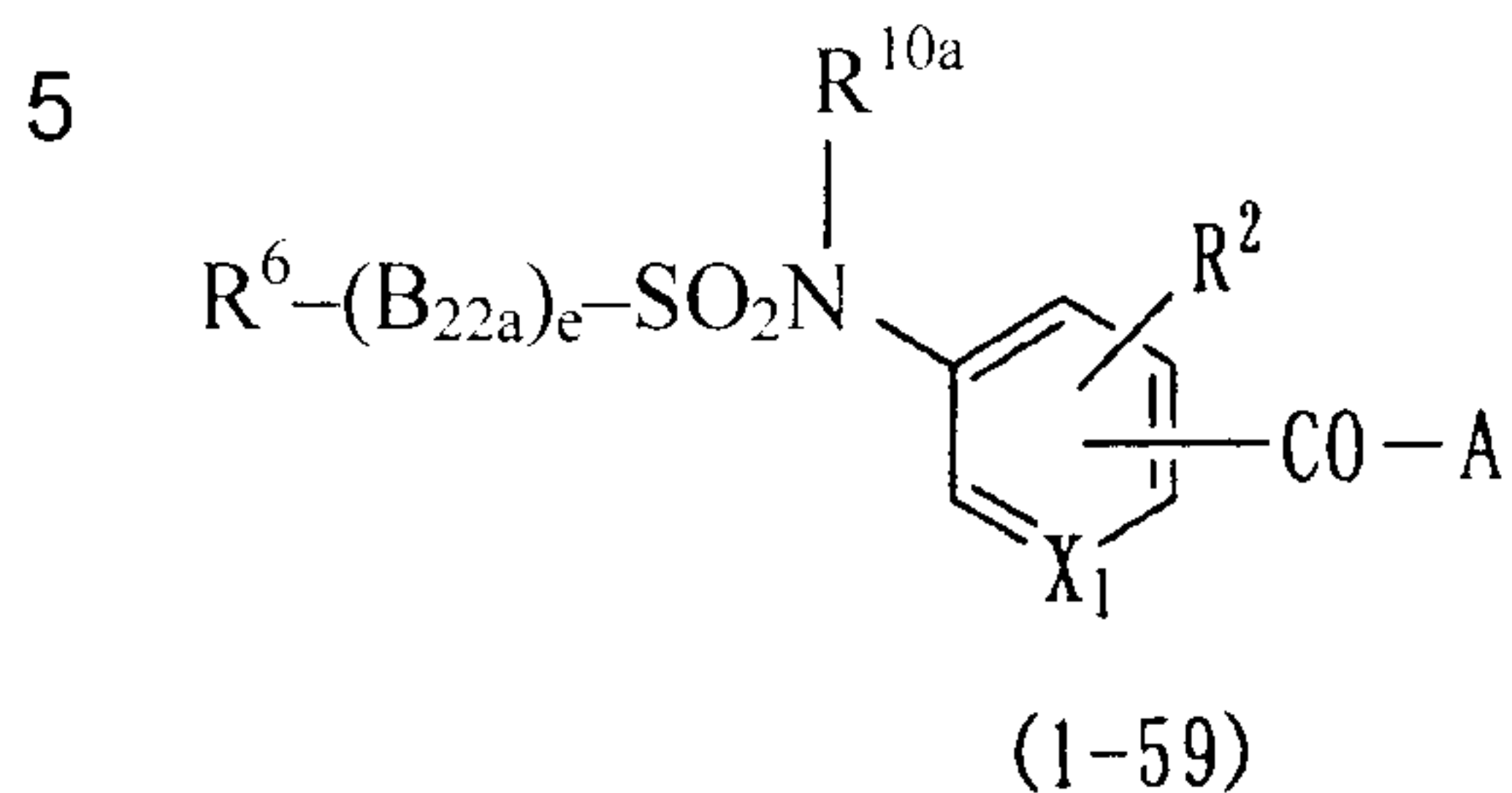
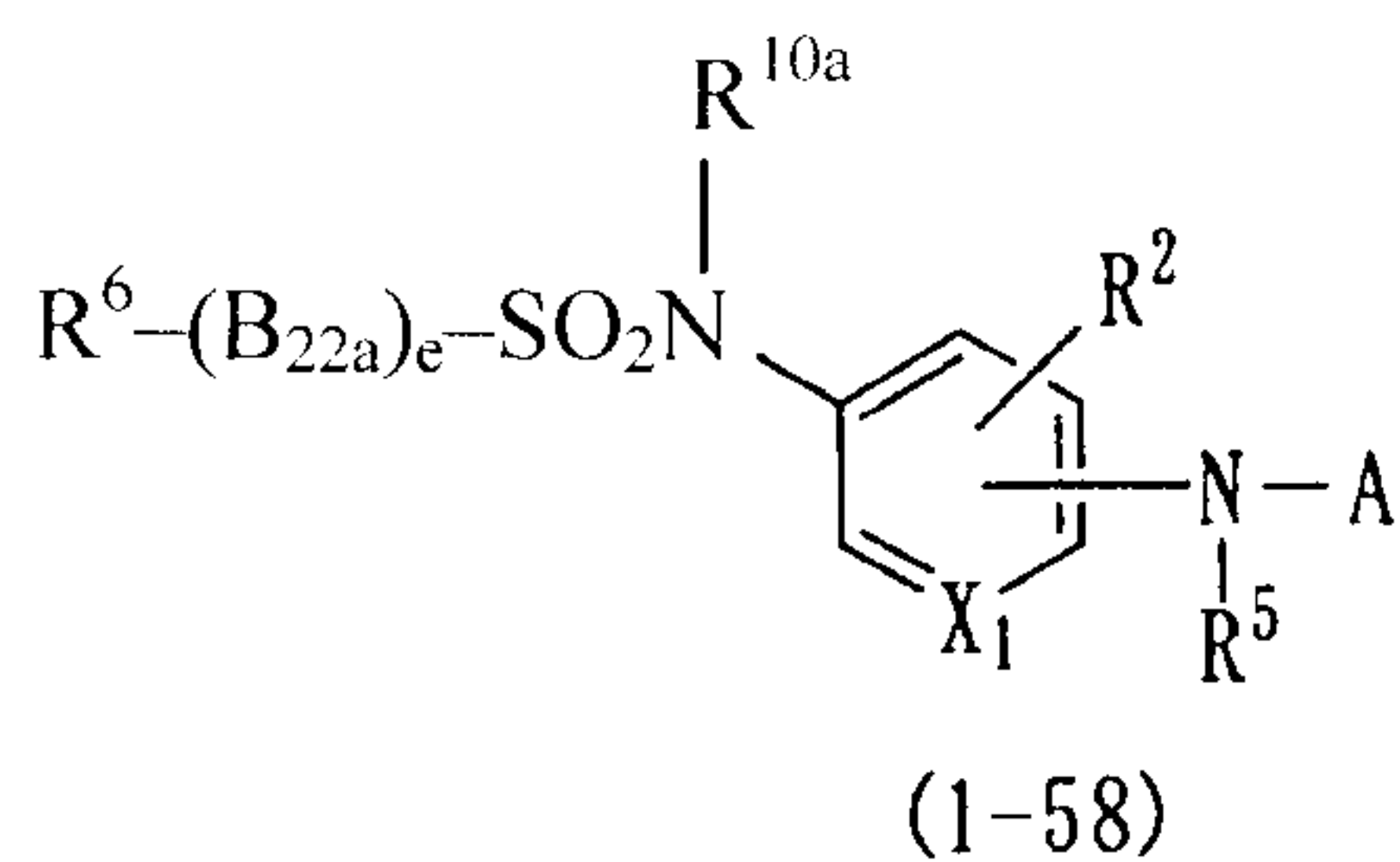
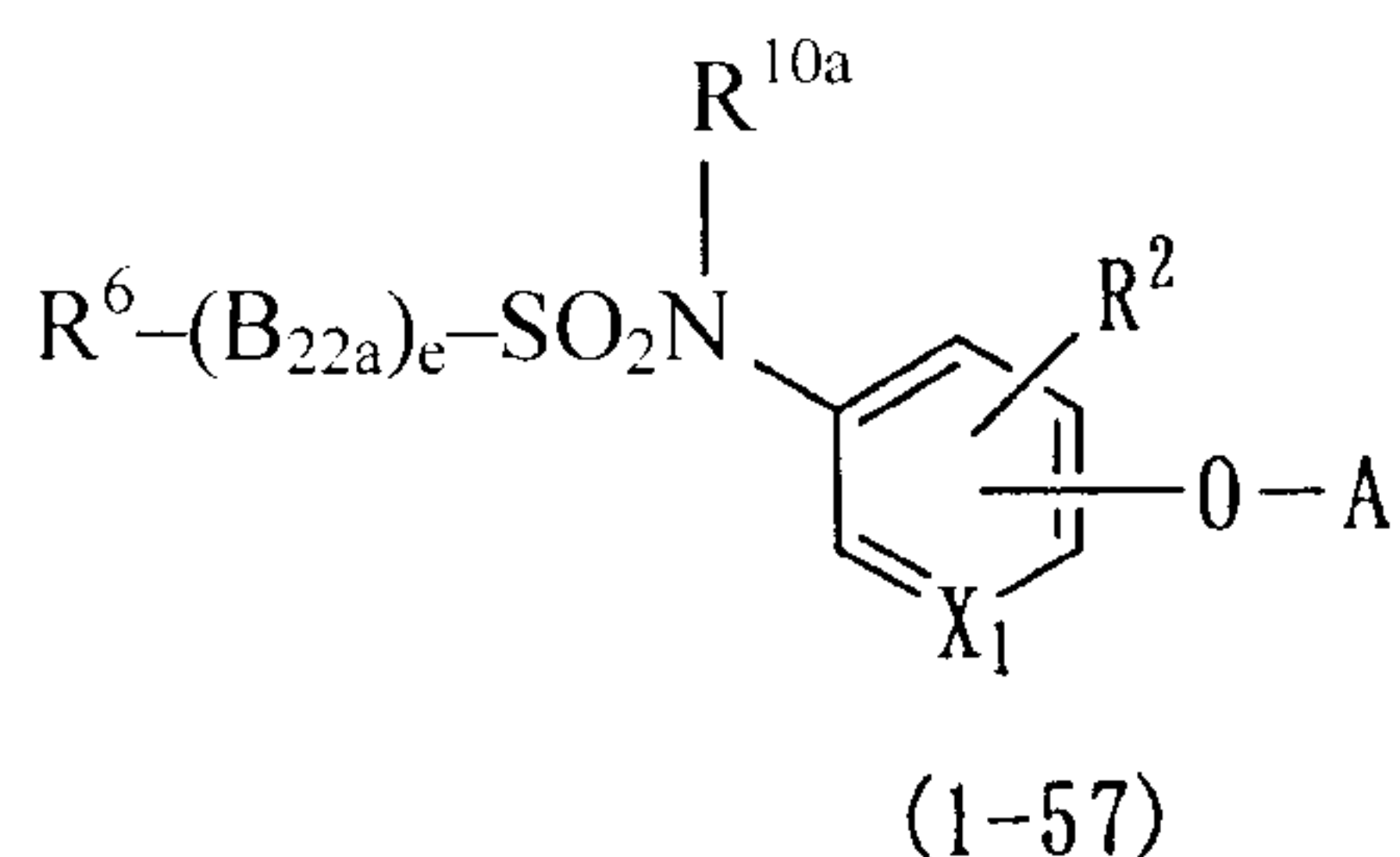
wherein, in said general formulas (1-50) to (1-56), R^6 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

10. The aromatic compound or a salt thereof according

15 to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-57) to (1-63):

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1002



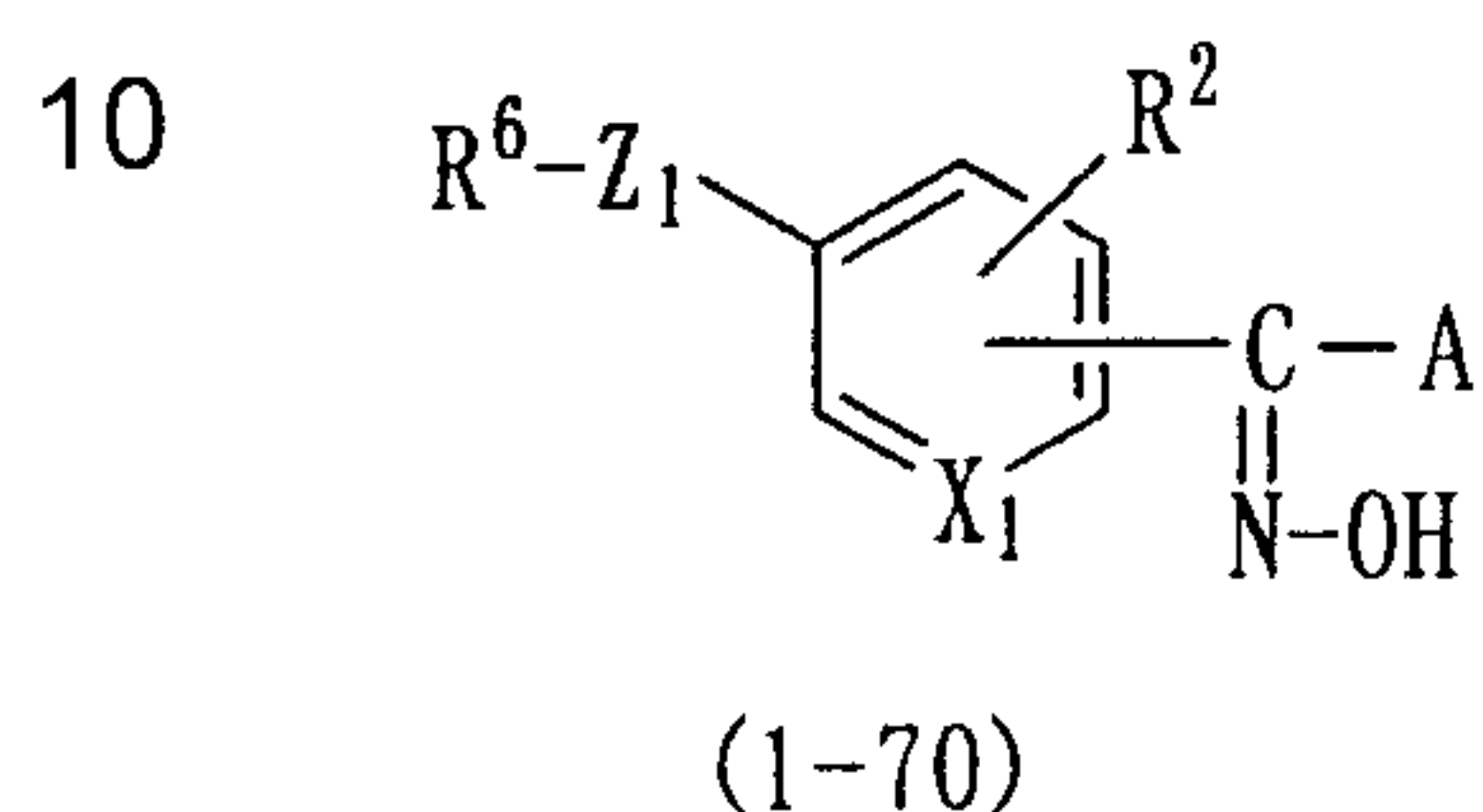
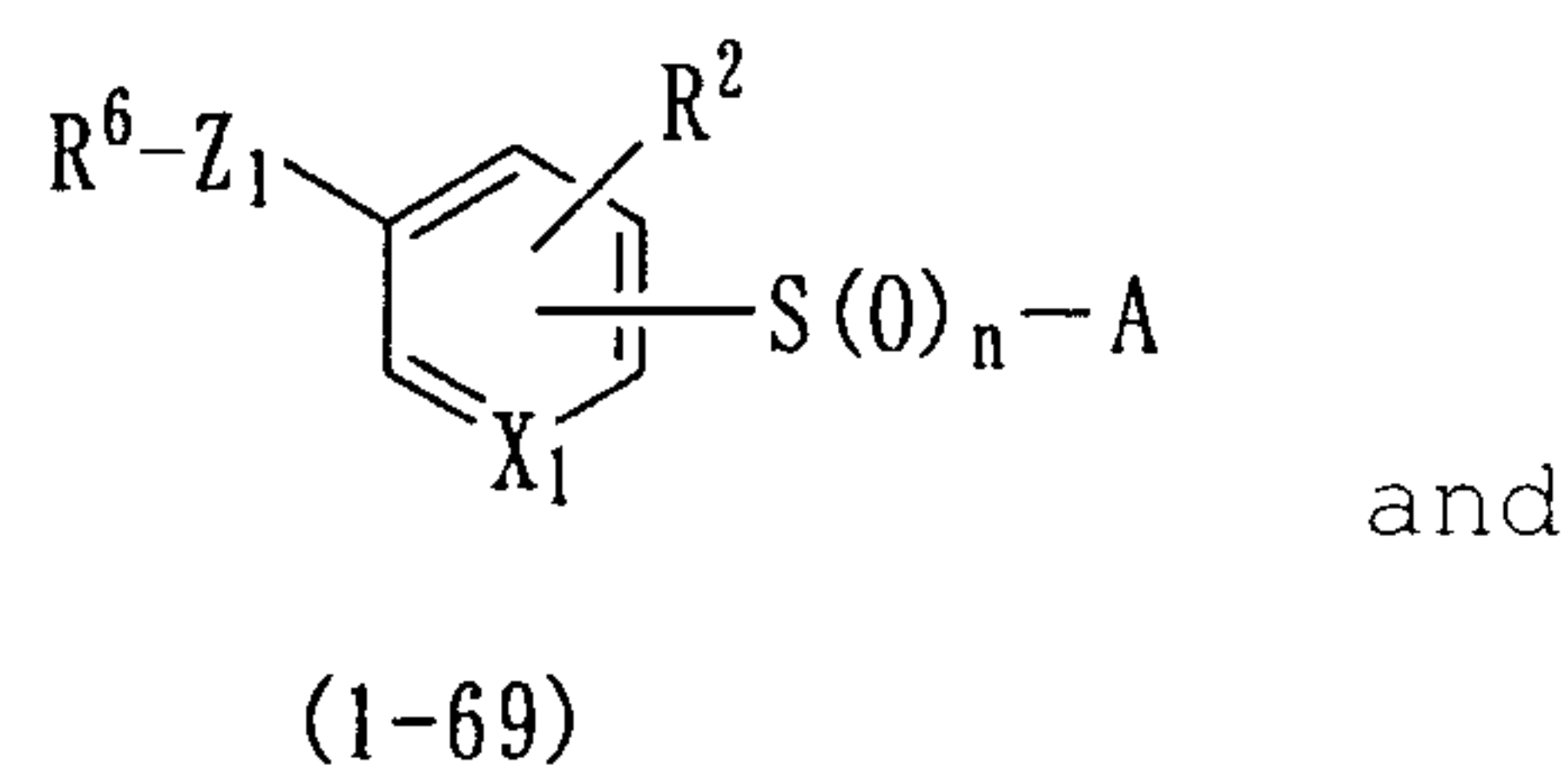
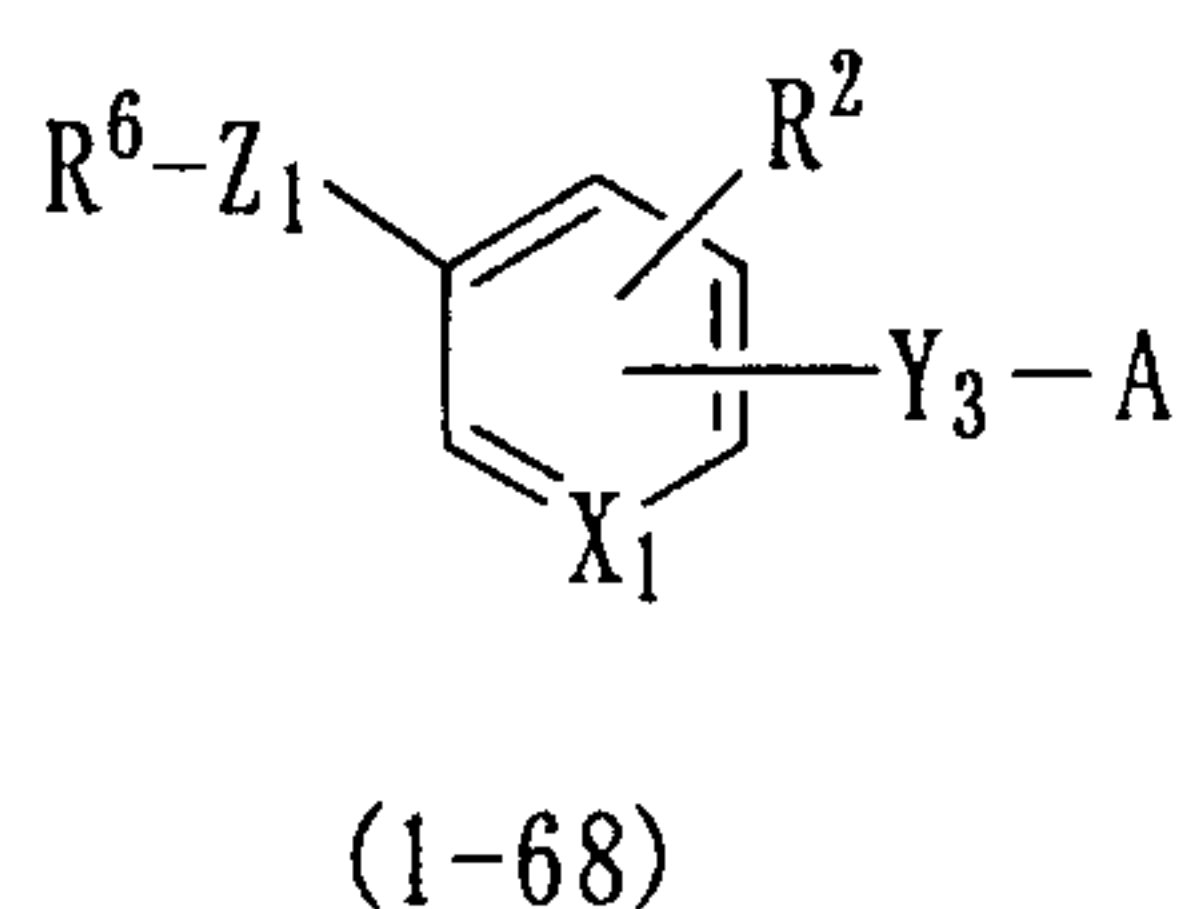
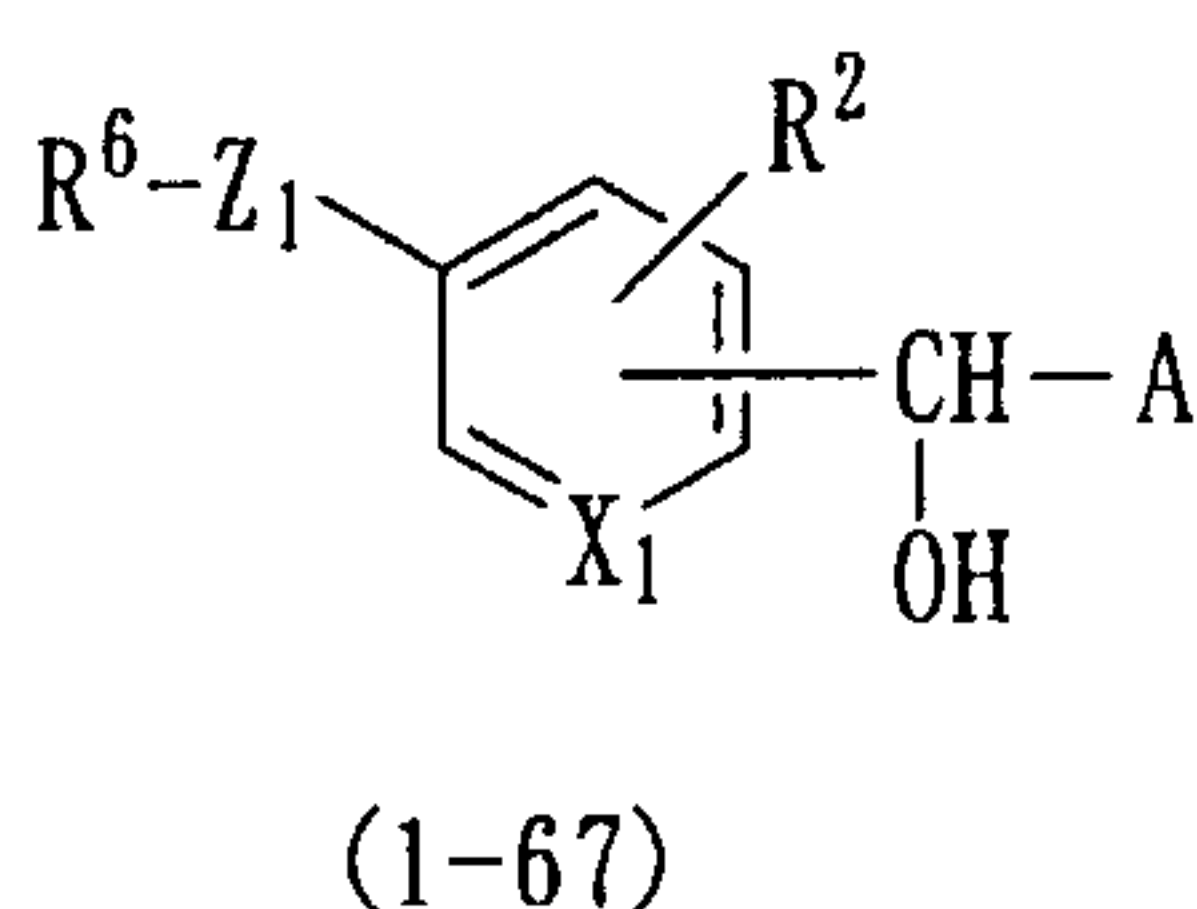
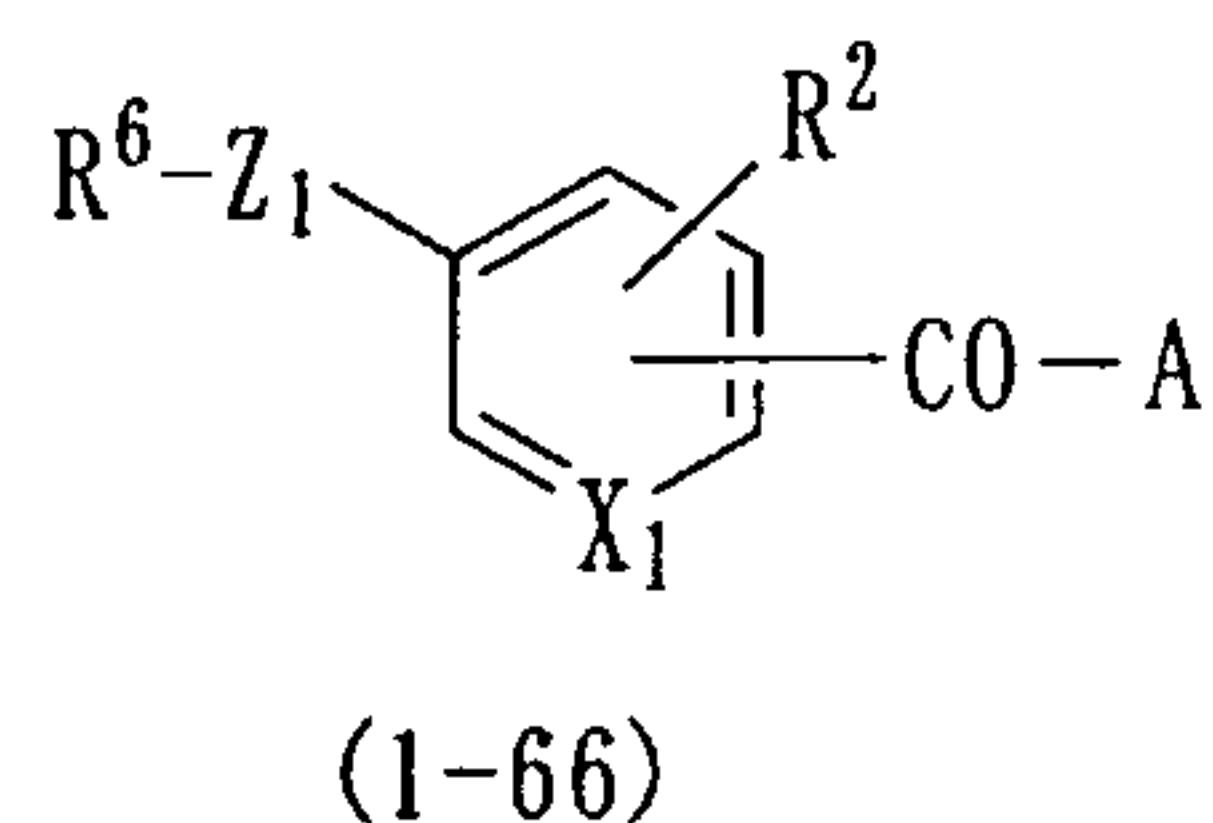
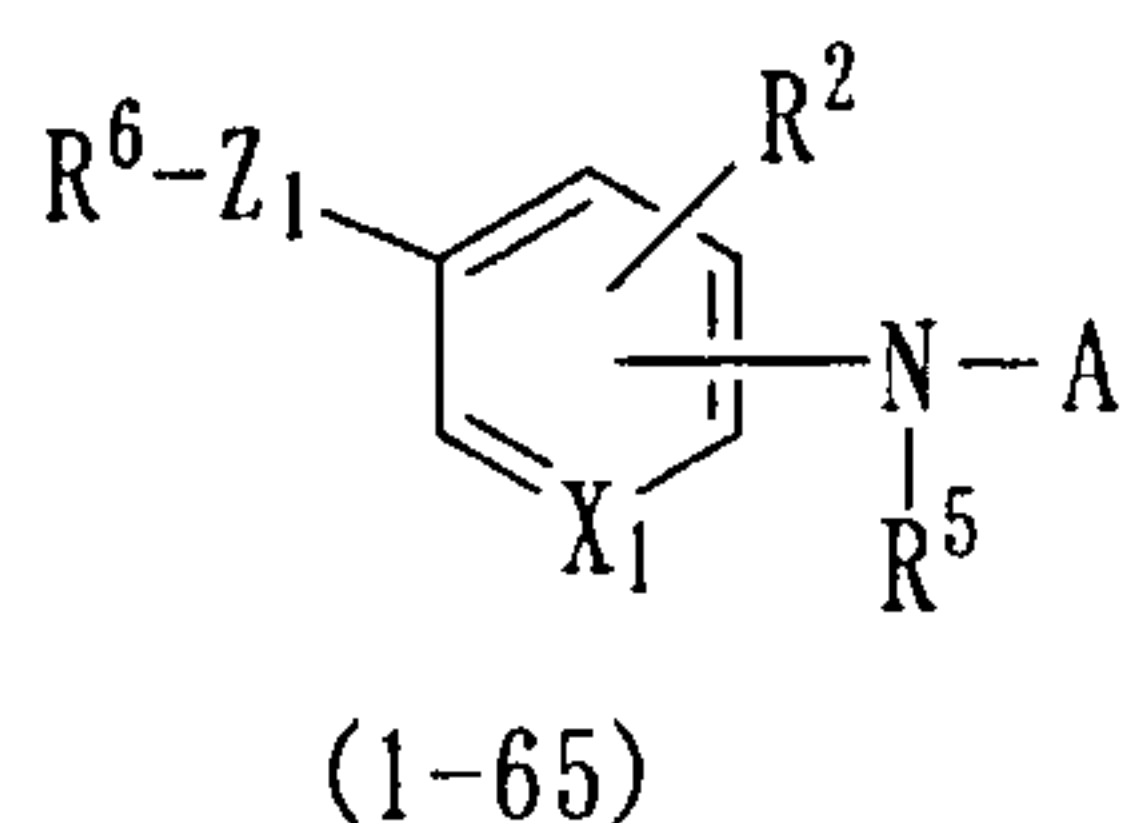
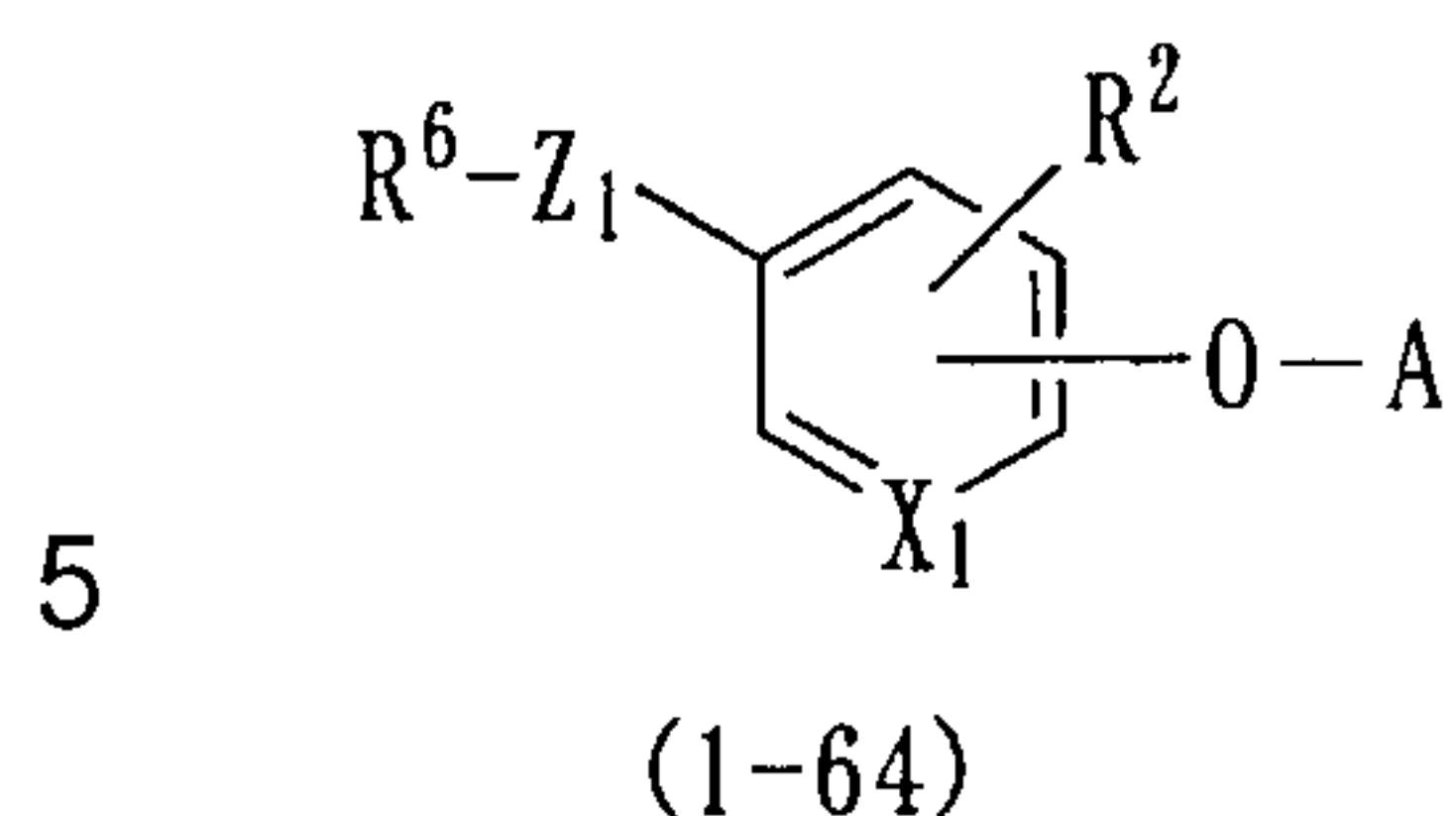
15 wherein, in said general formulas (1-57) to (1-63), R^6 , R^2 , R^5 , n , X_1 , A , R^{10a} , B_{22a} , and e have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

11. The aromatic compound or a salt thereof according to
 20 claim 1, wherein the compound represented by general formula

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1003

(1) is any one selected from the group consisting of the following general formulas (1-64) to (1-70):



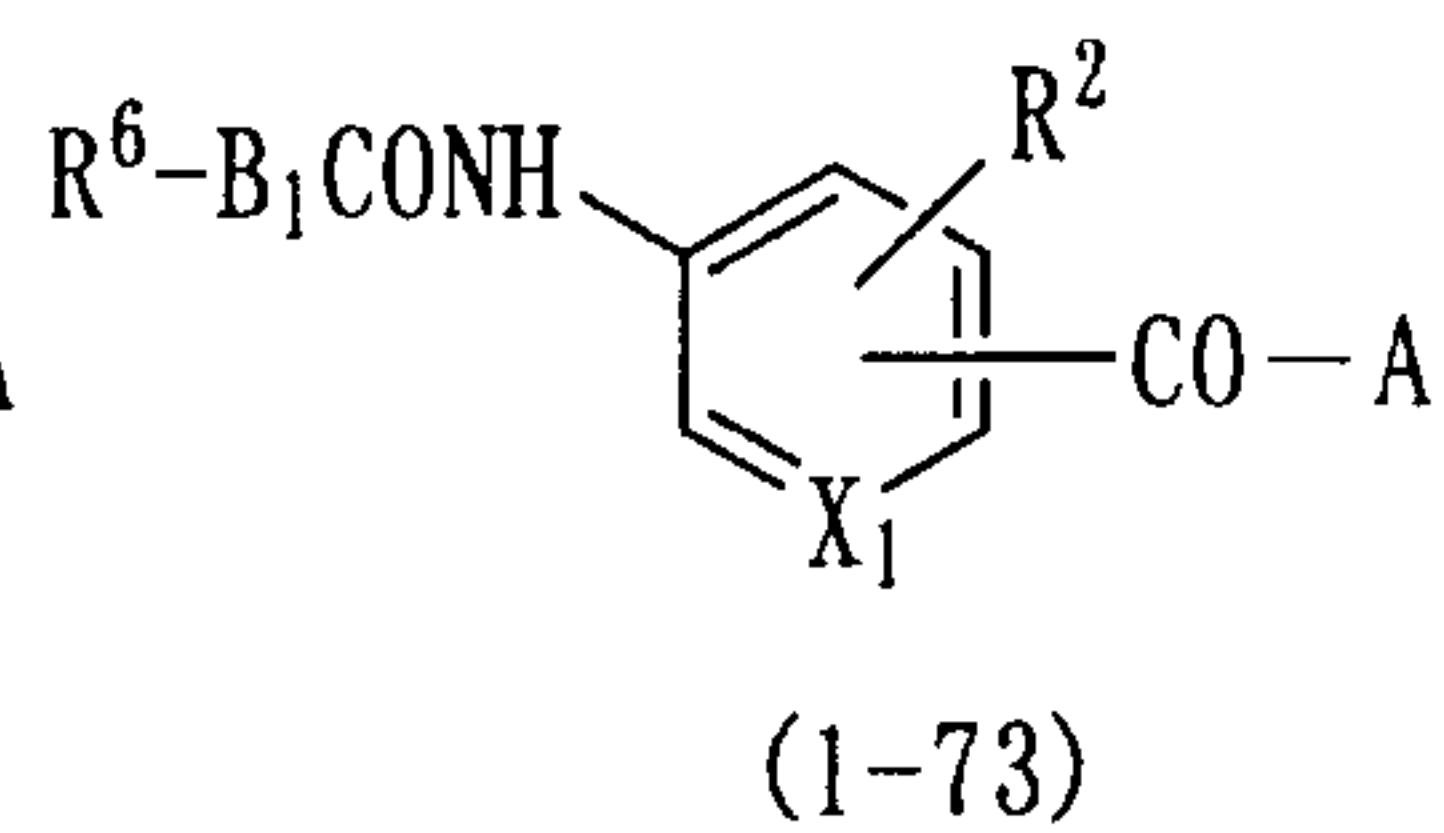
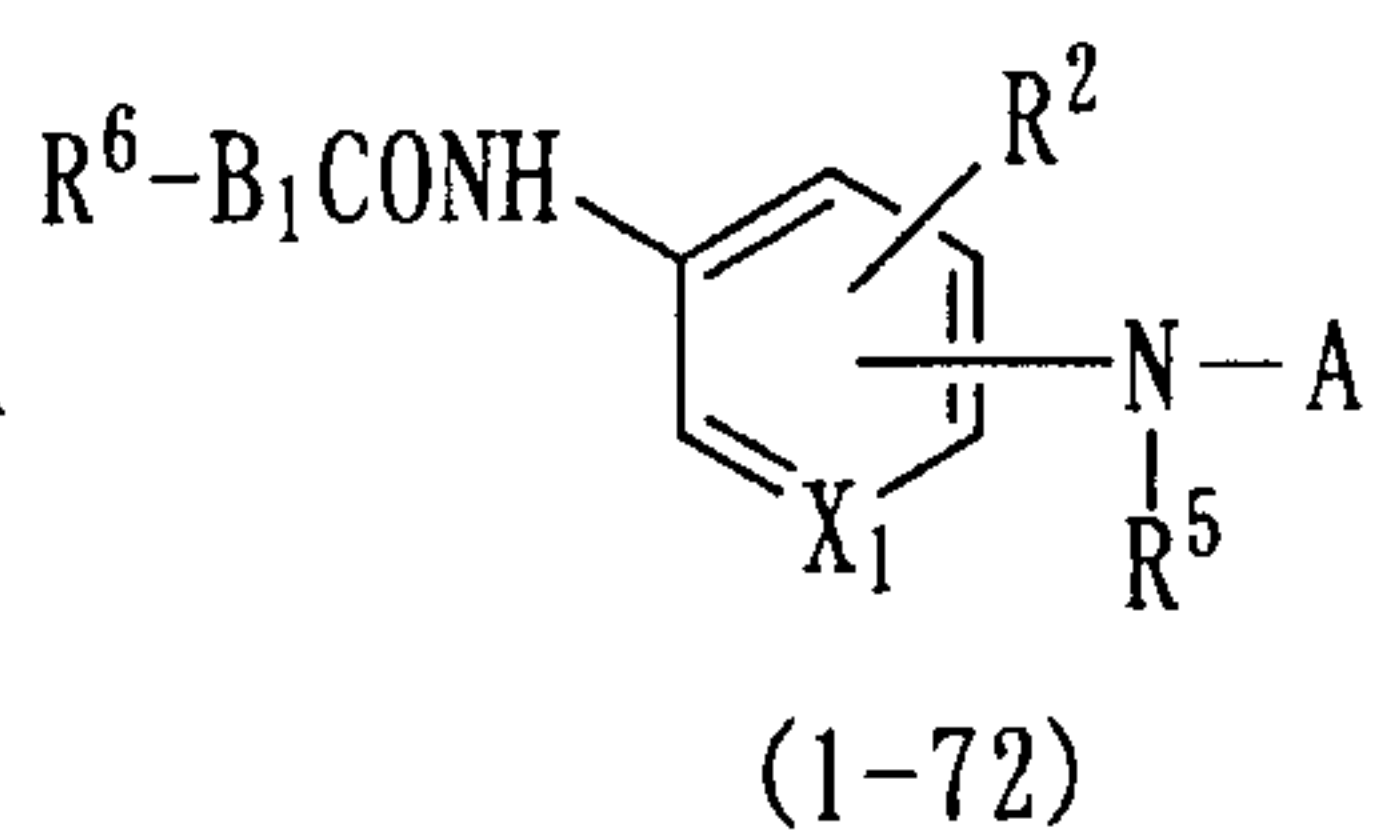
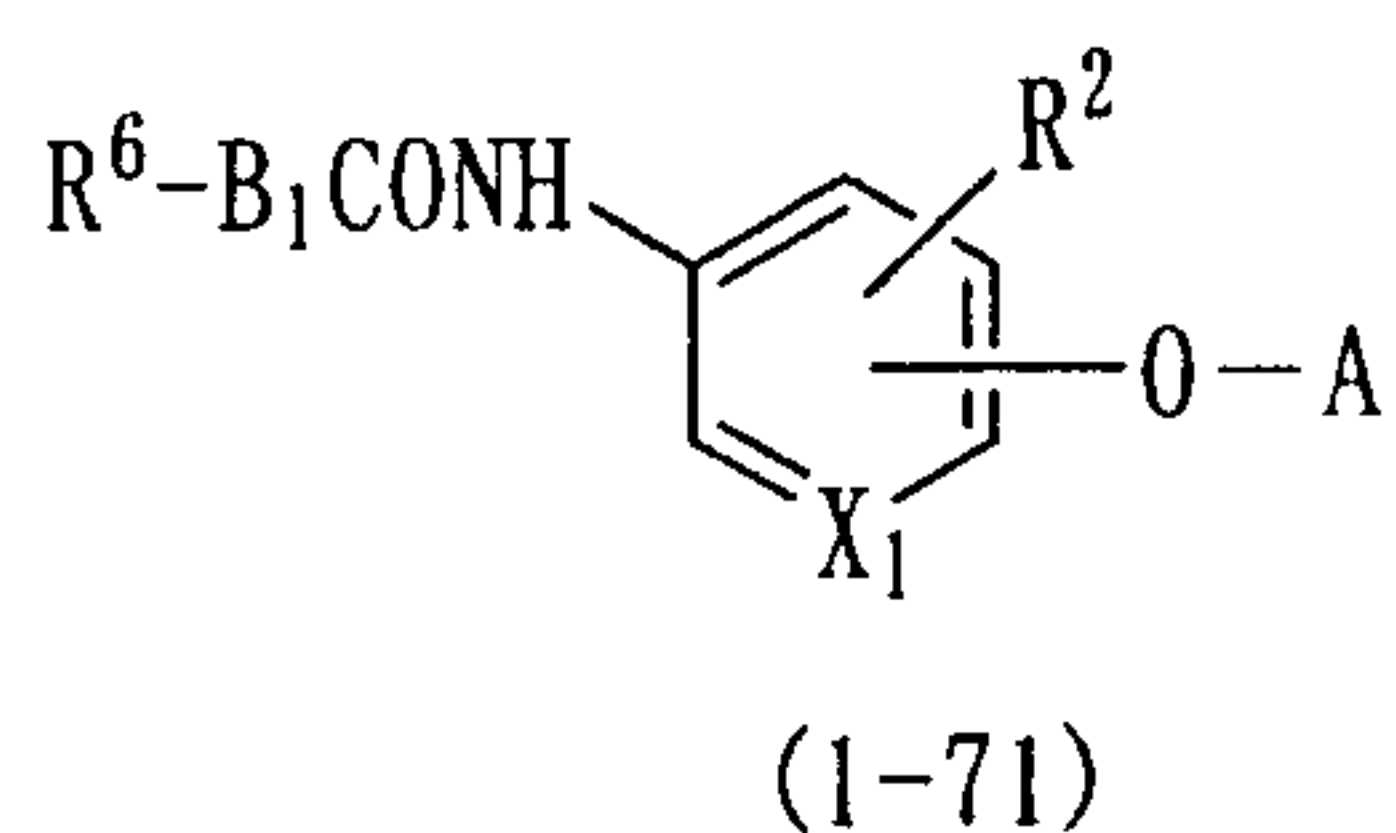
wherein, in said general formulas (1-64) to (1-70), R^6 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, Y_3 has the same meanings as described in claim 2, and Z_1 represents a C_2 - C_6 alkenylene group.

12. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-71) to (1-77):

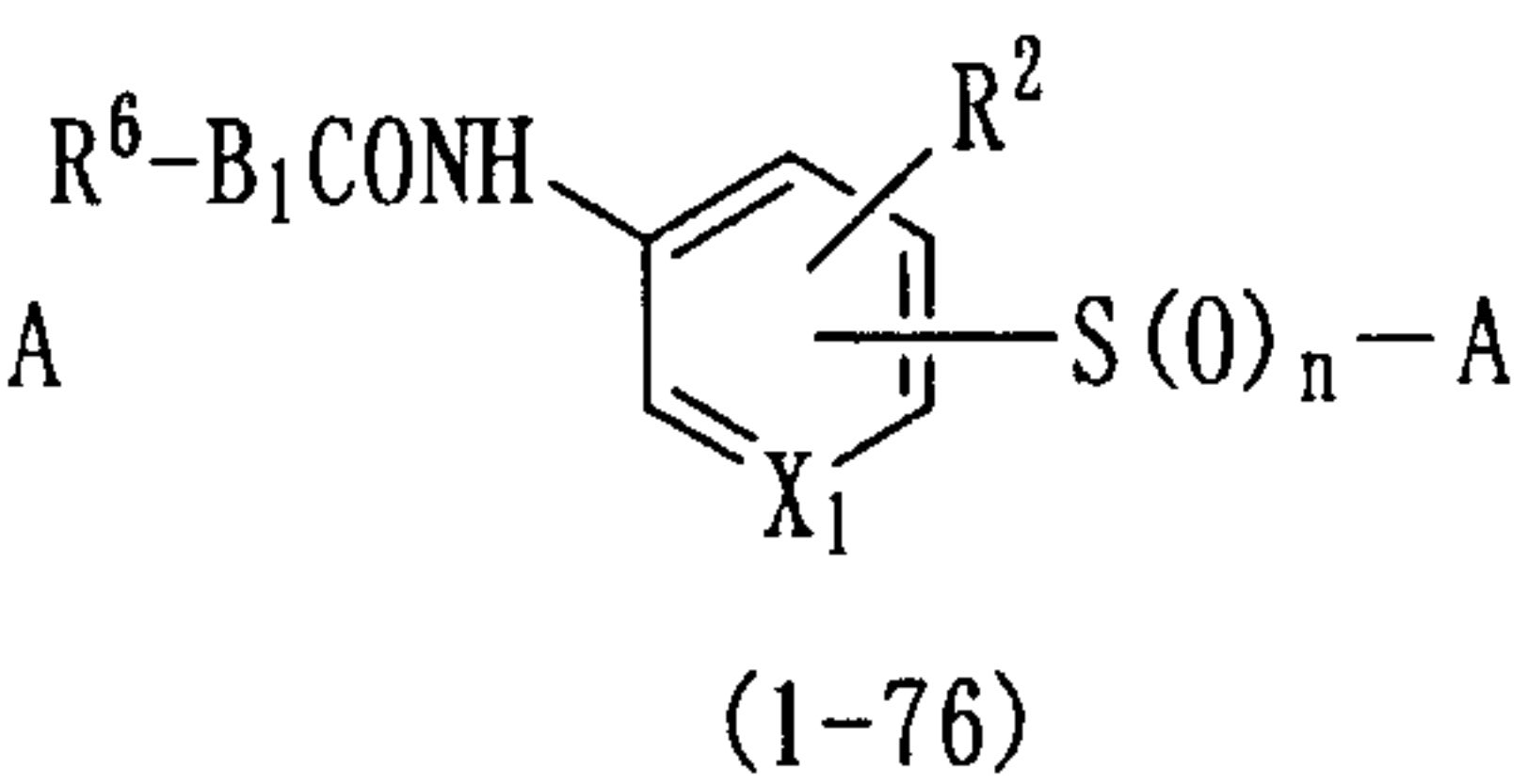
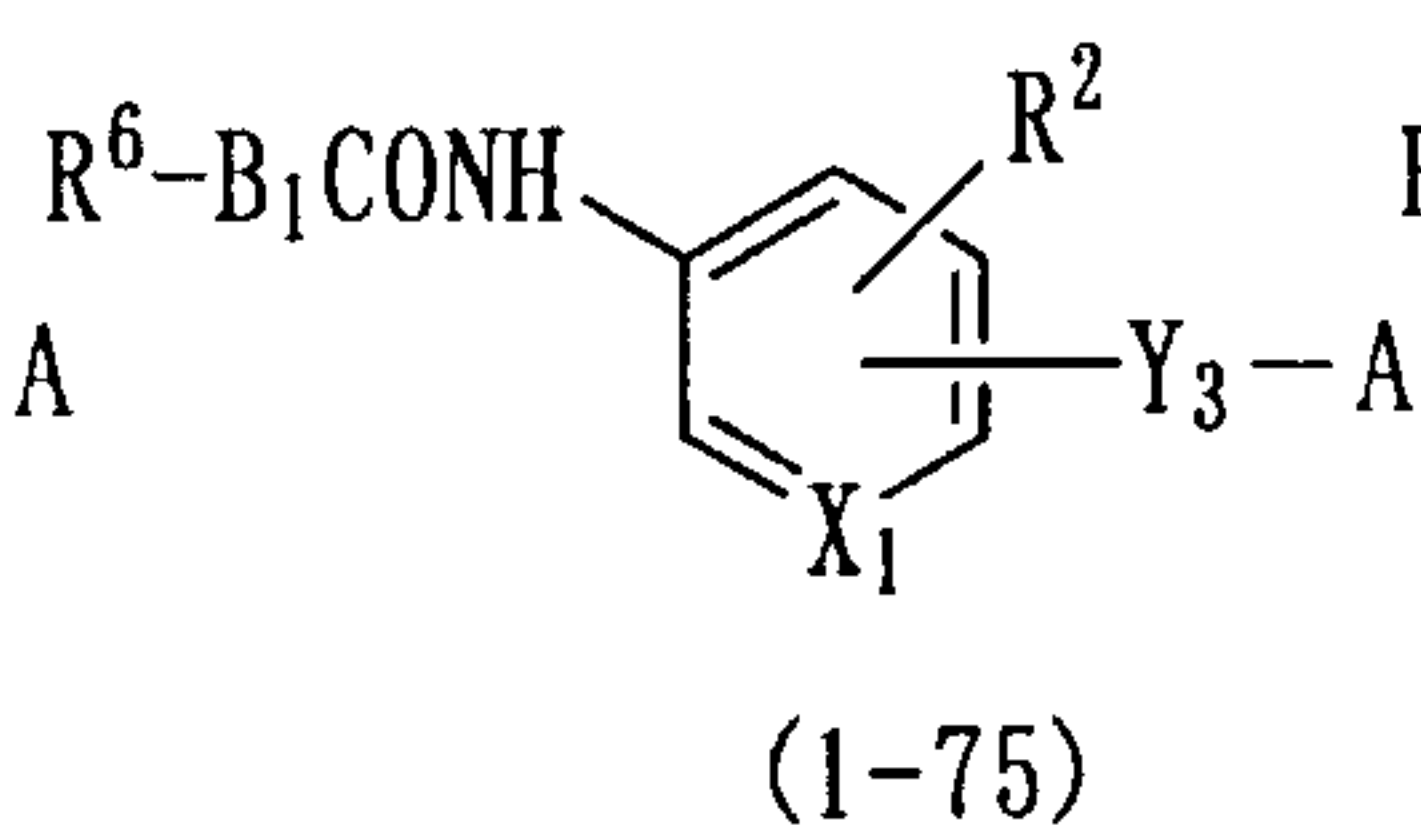
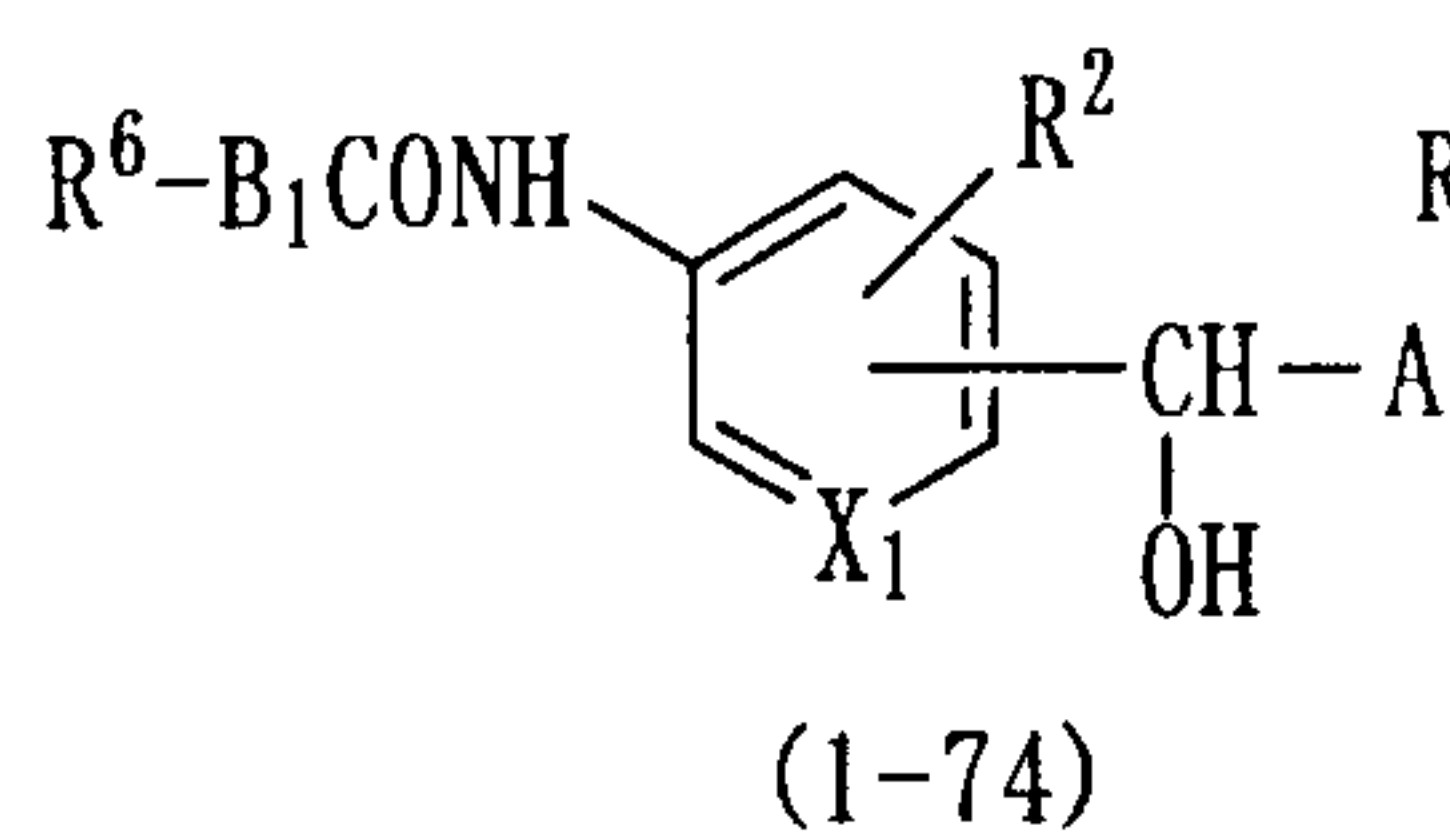
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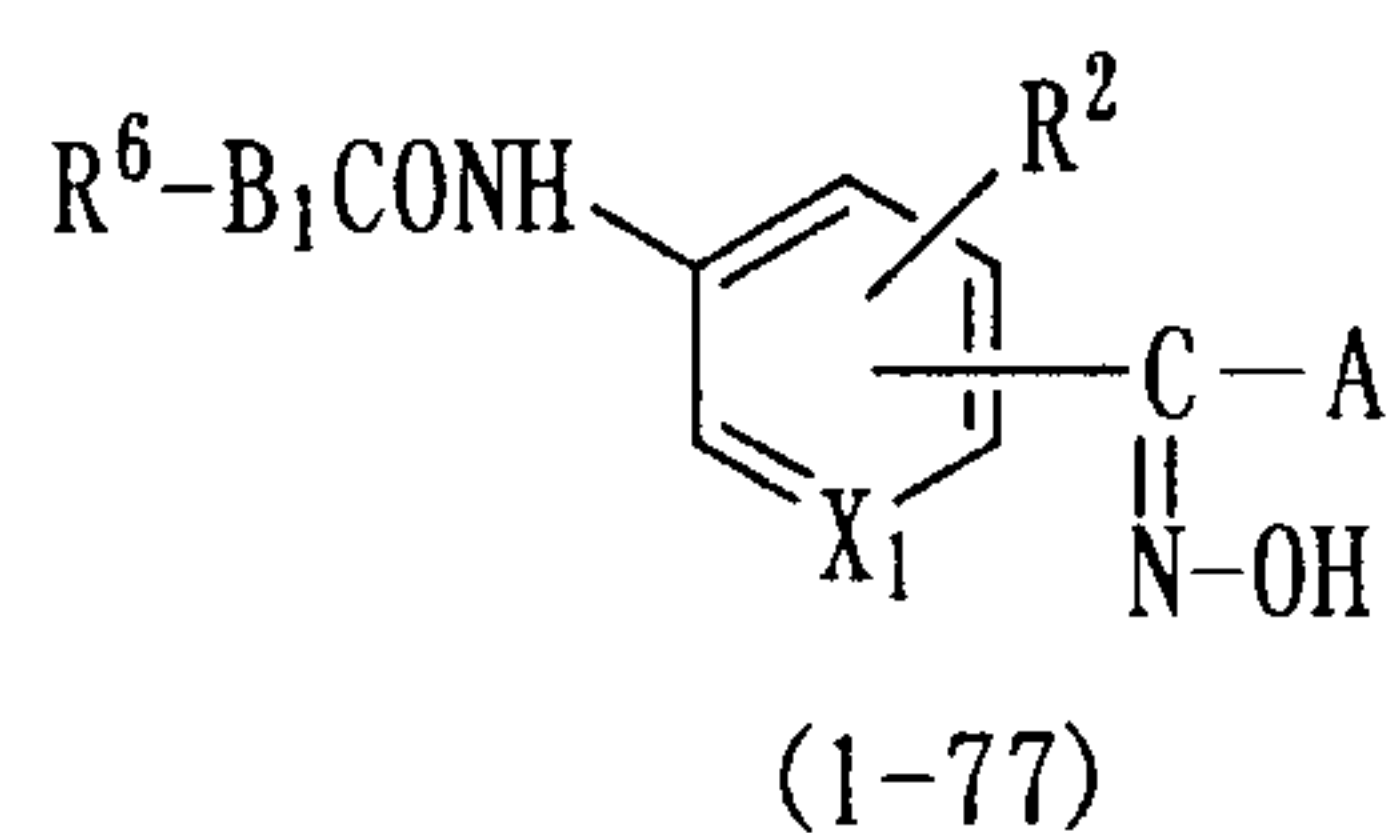
1004



5



and



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wherein, in said general formulas (1-71) to (1-77), R^6 , R^2 , B_1 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

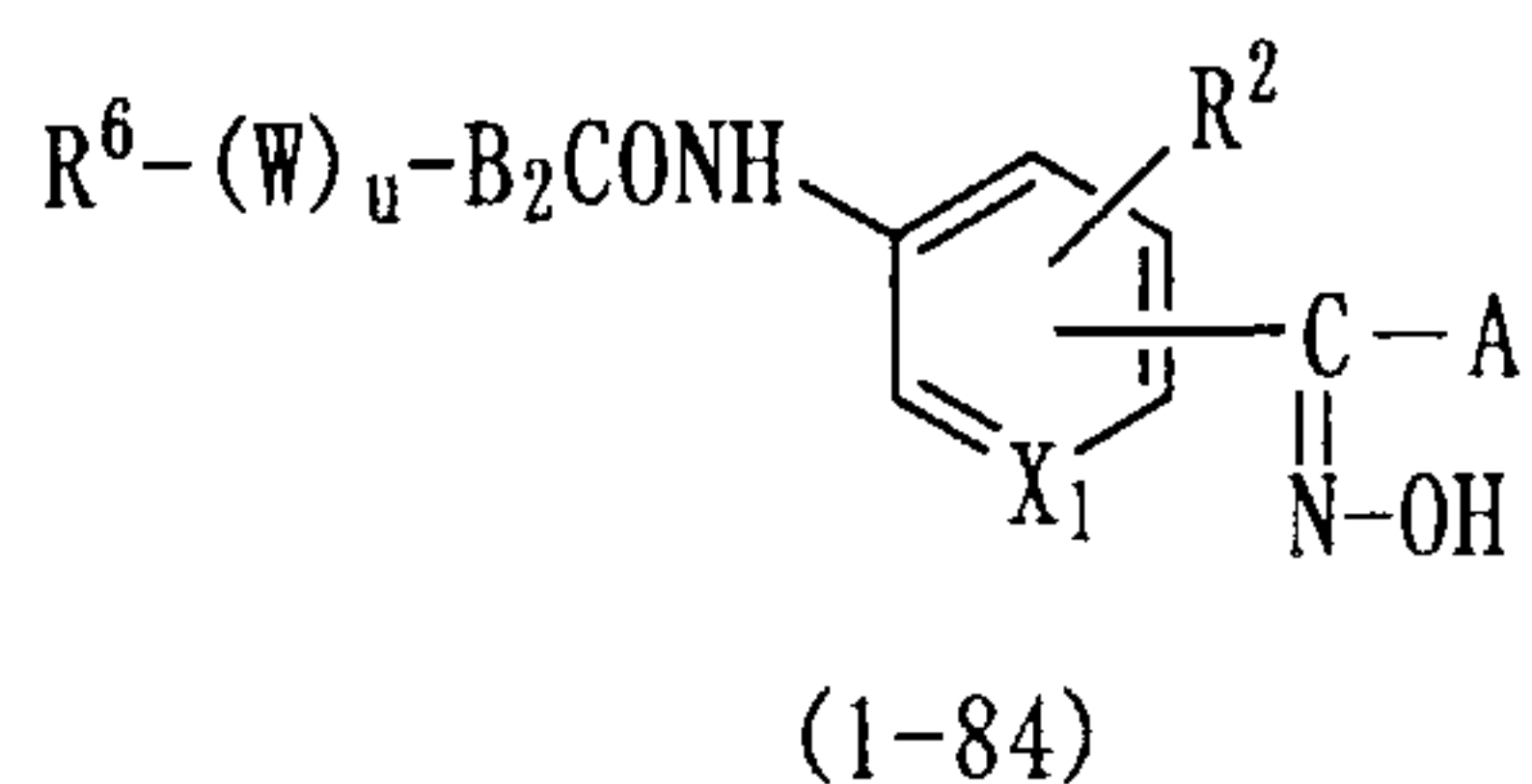
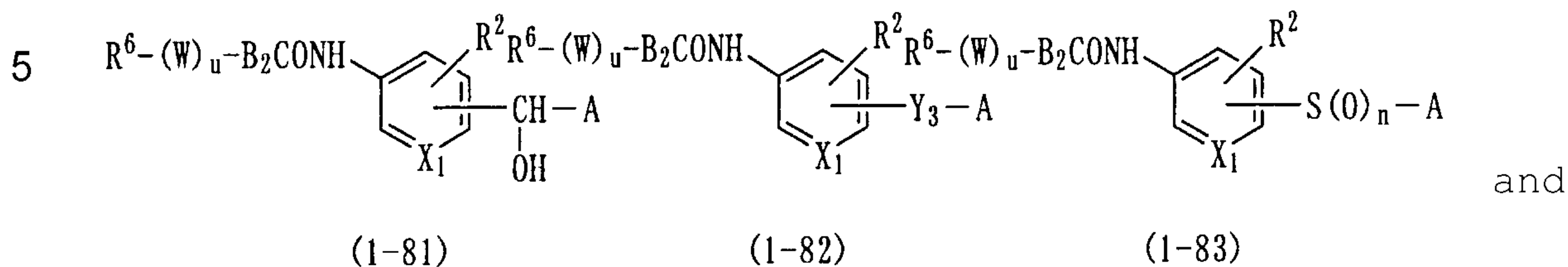
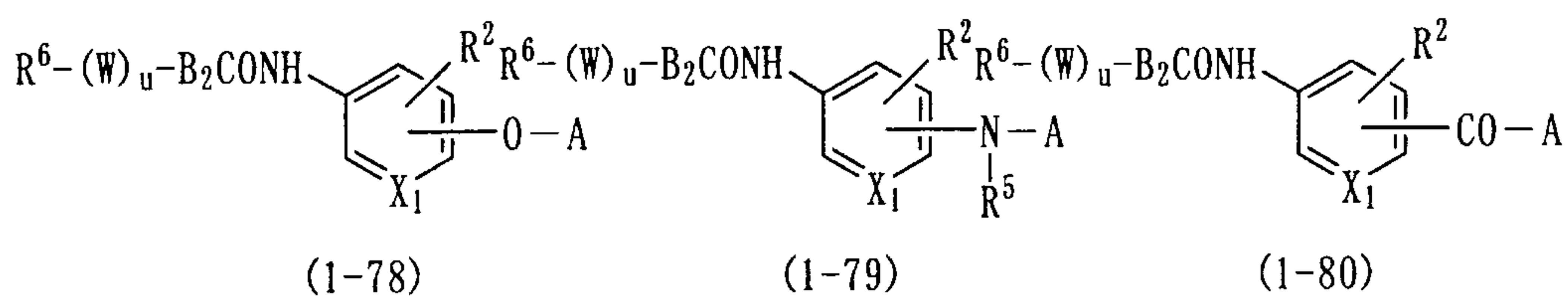
13. The aromatic compound or a salt thereof according to

15 claim 1, wherein the compound represented by general formula

(1) is any one selected from the group consisting of the following general formulas (1-78) to (1-84):

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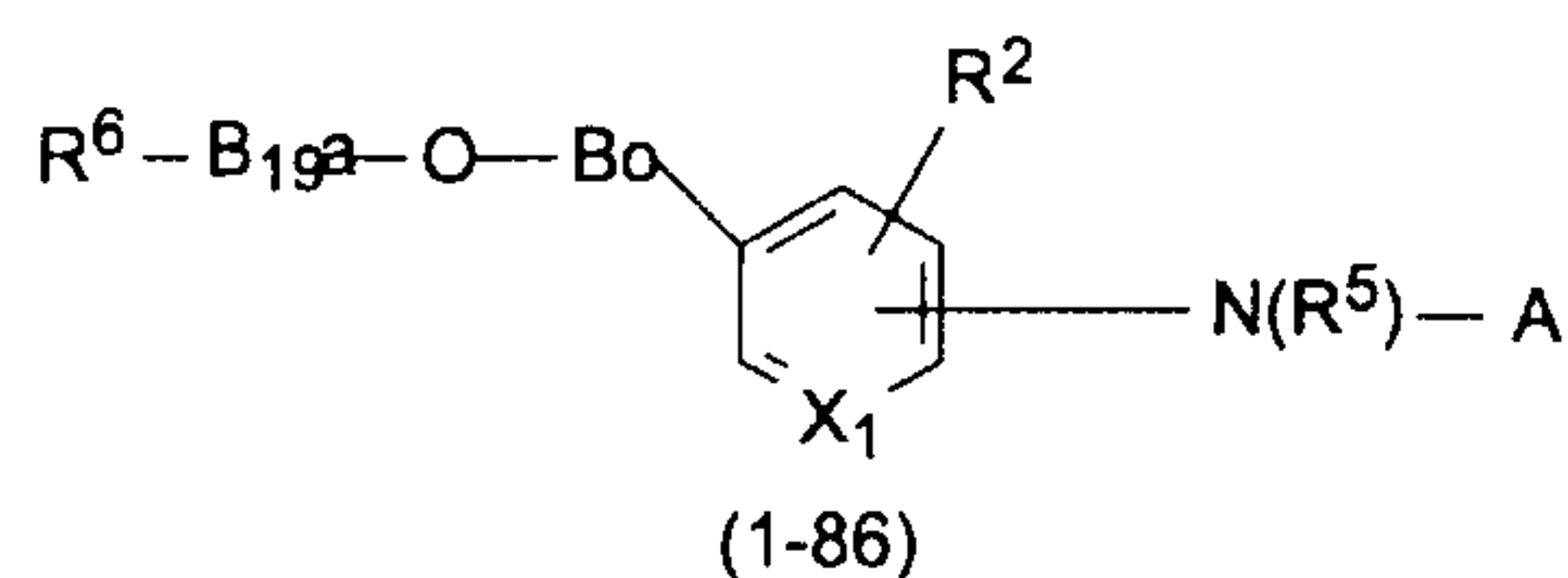
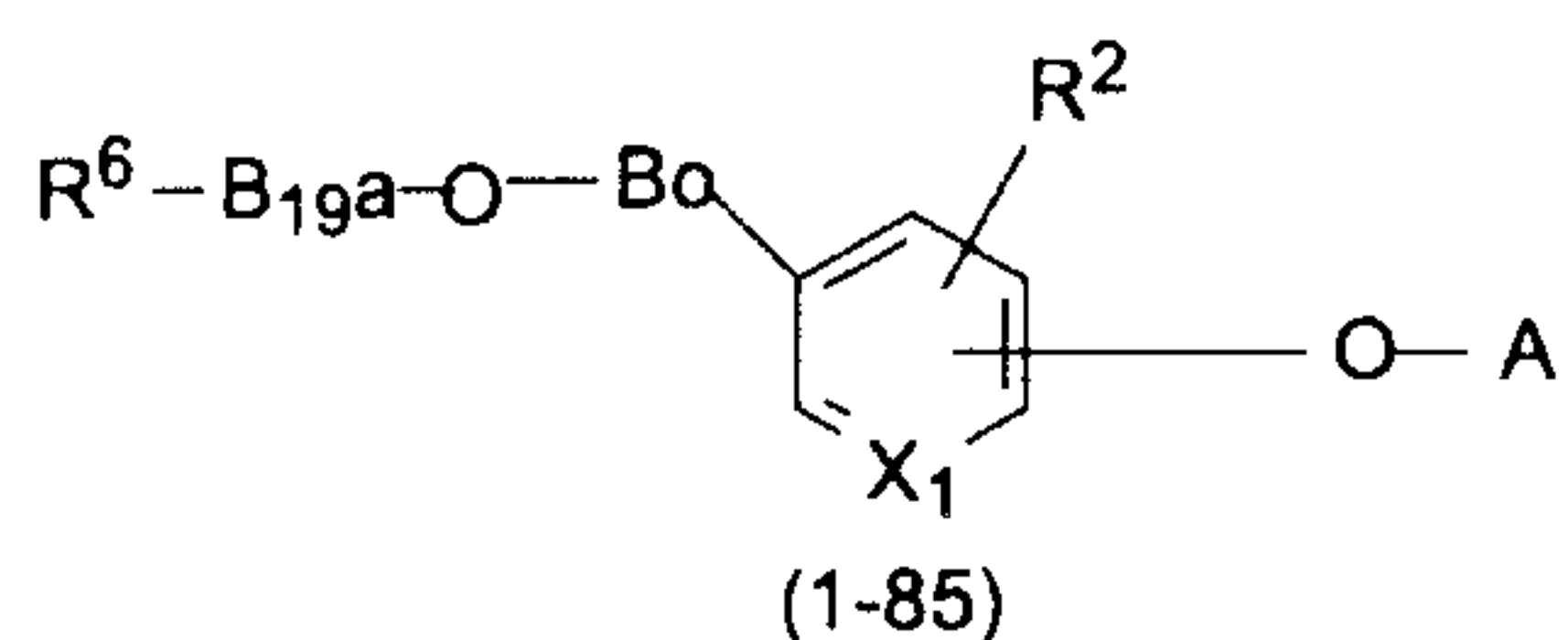


wherein, in said general formulas (1-78) to (1-84), R^6 , W , u , B_2 , R^2 , R^5 , n , X_1 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

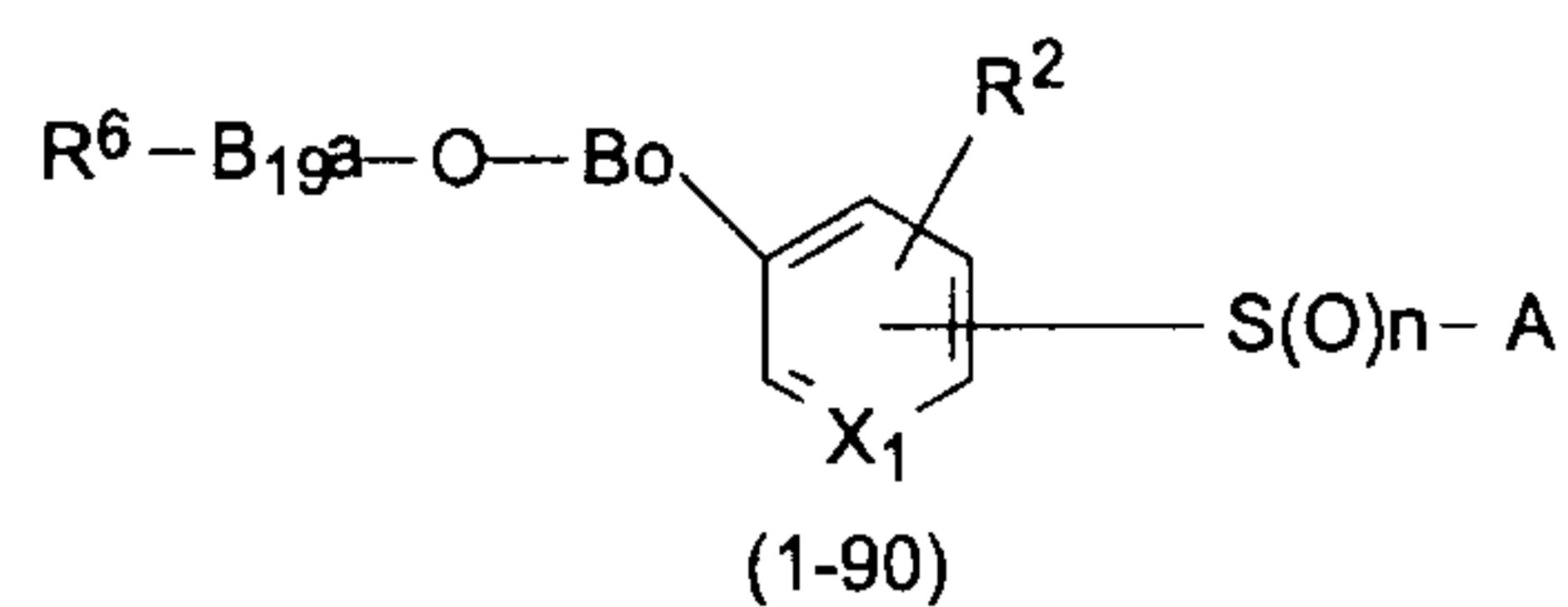
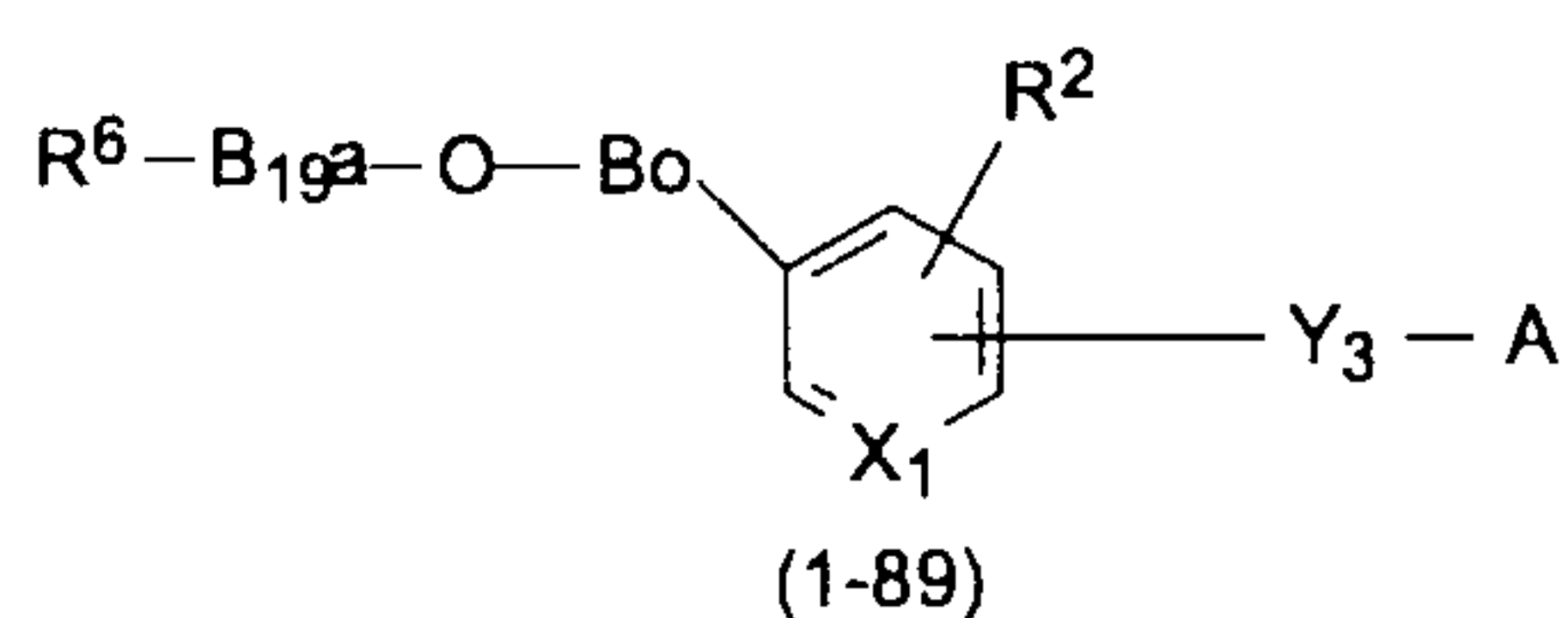
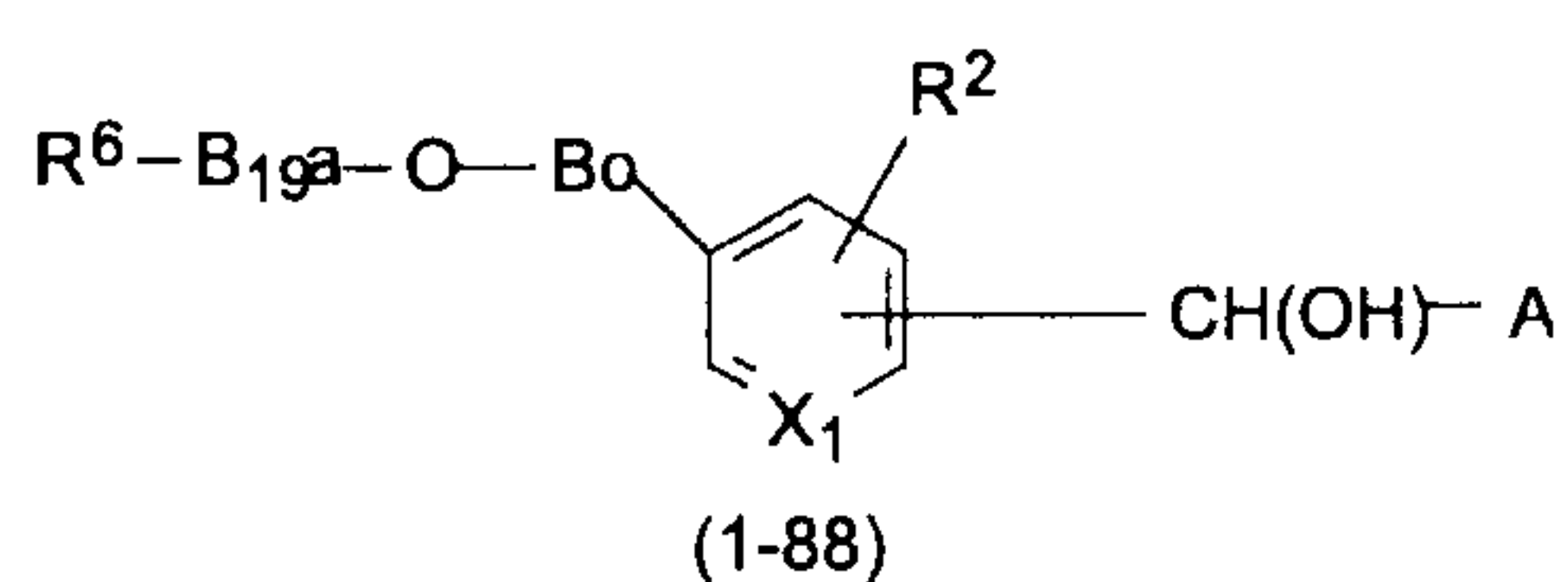
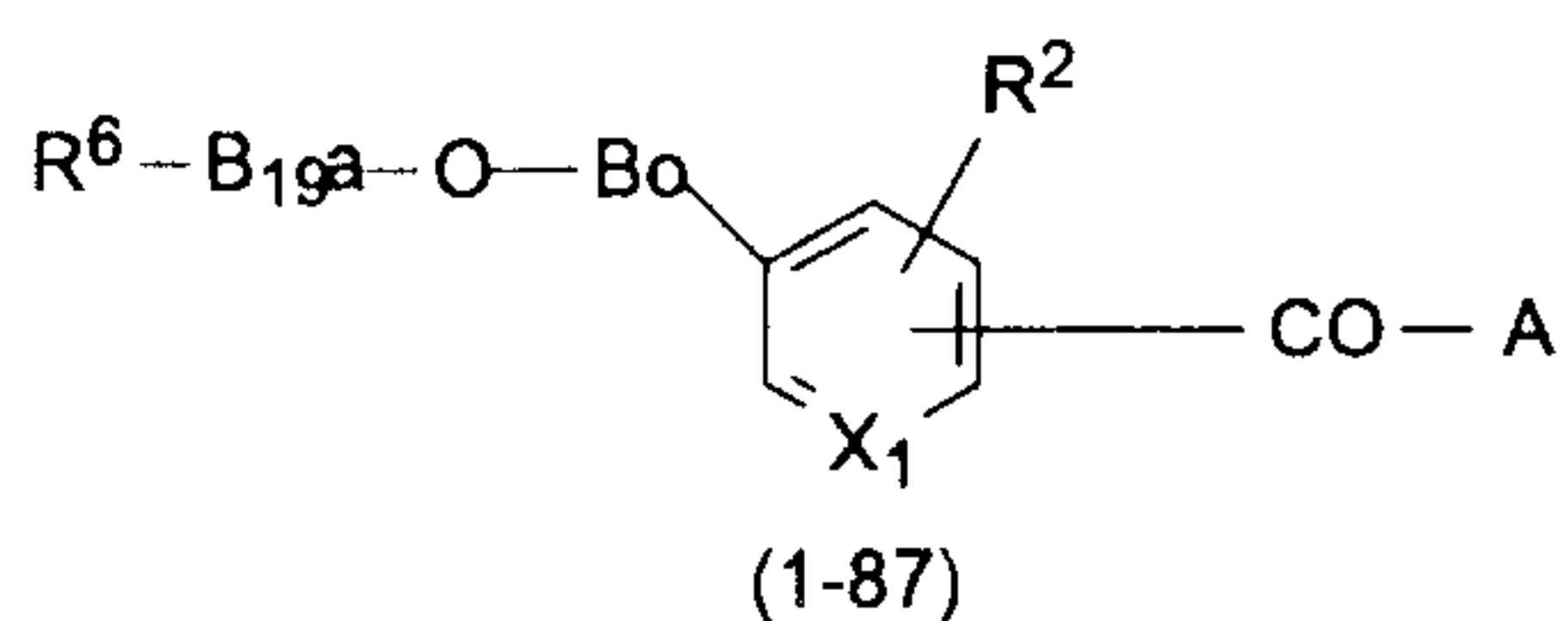
14. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-85) to (1-91):

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1006

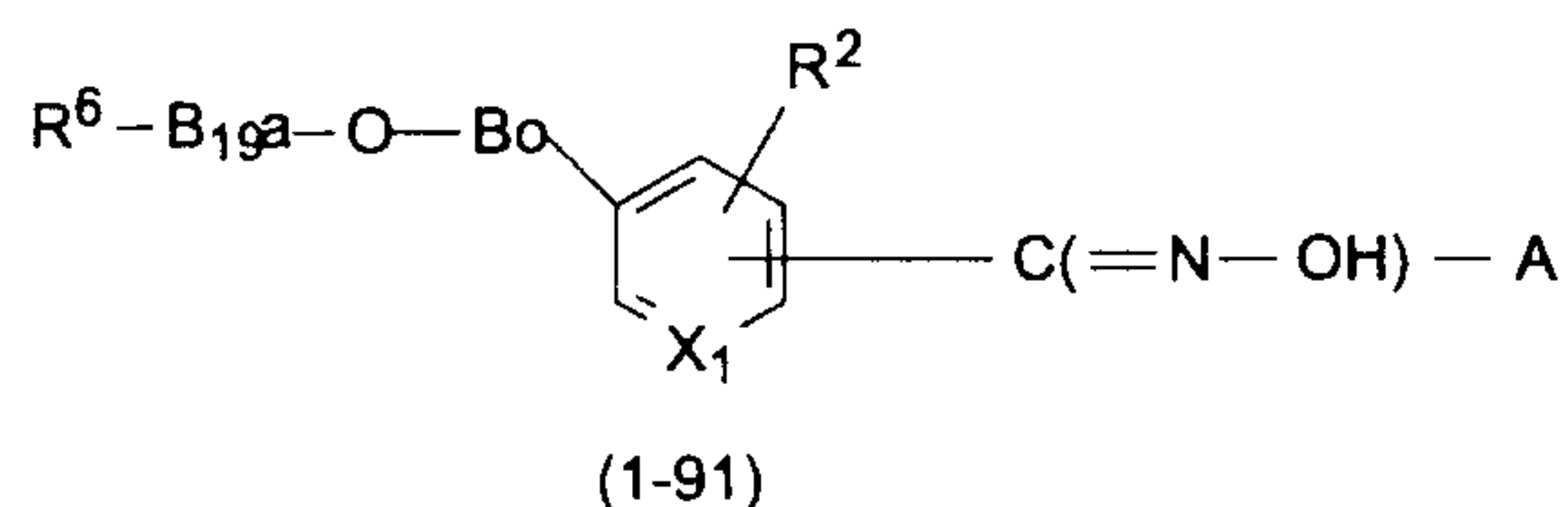


5



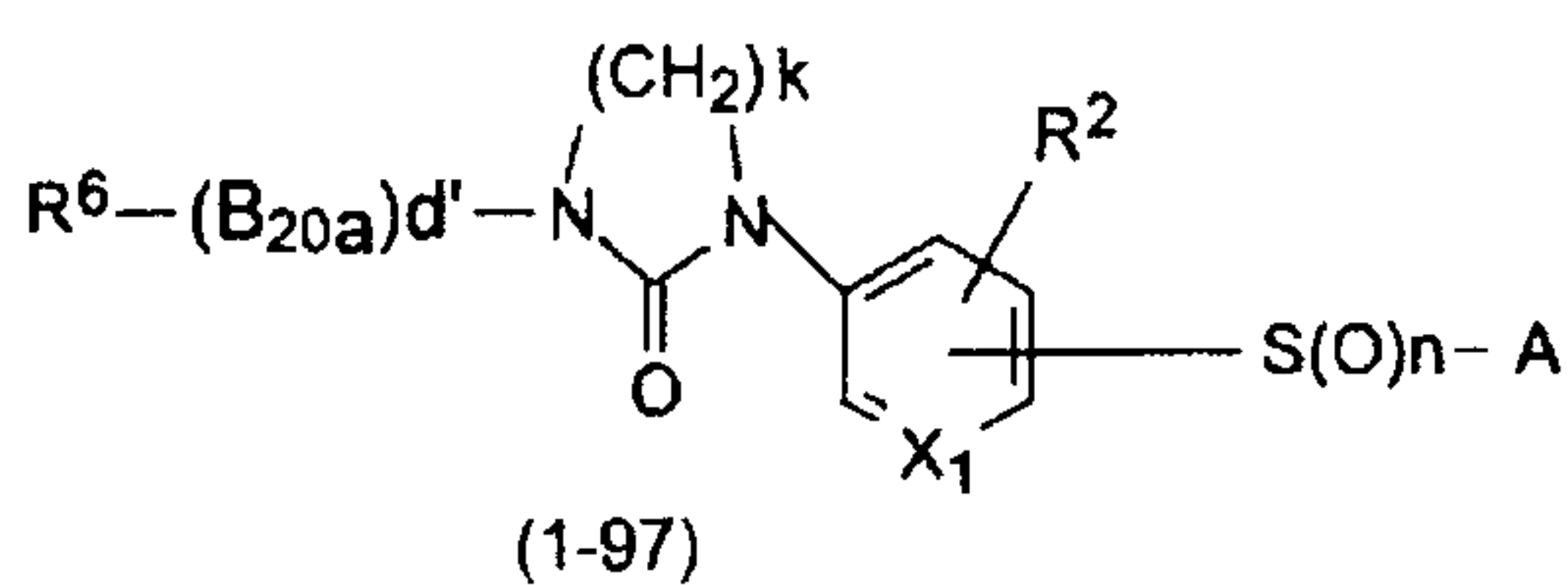
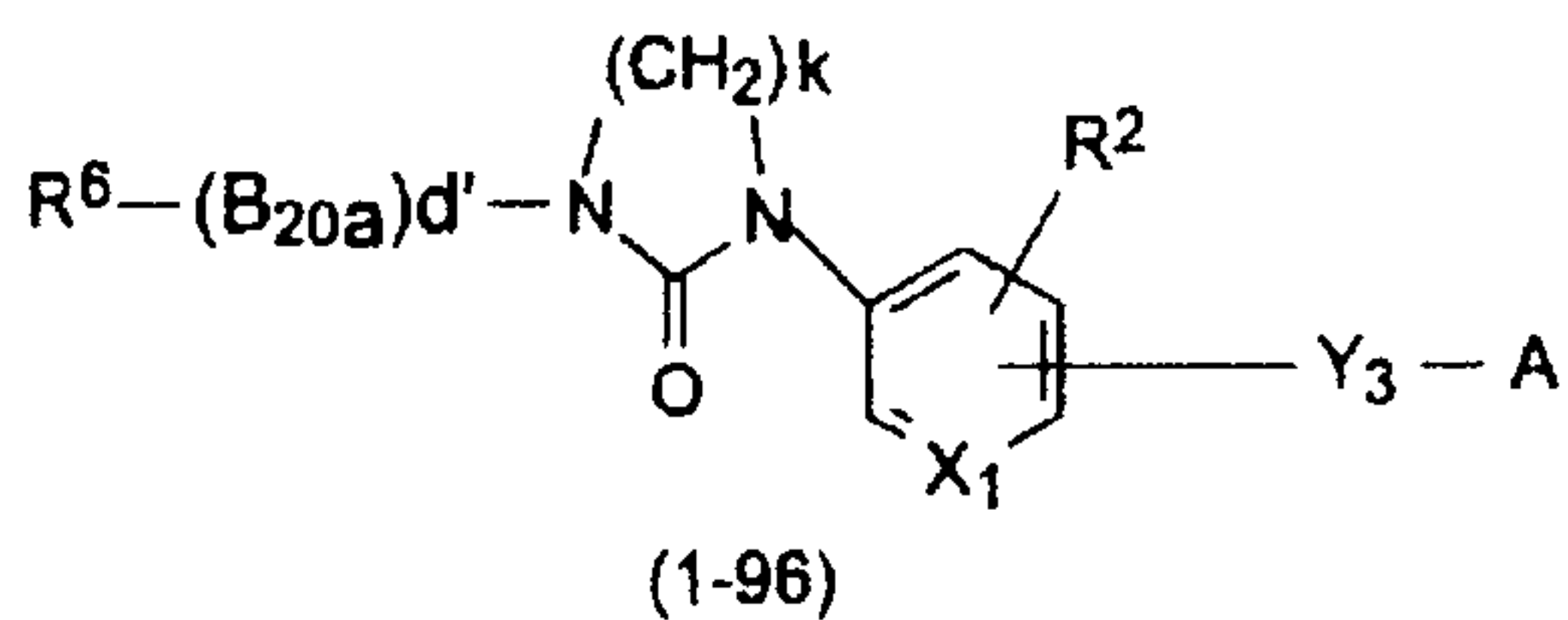
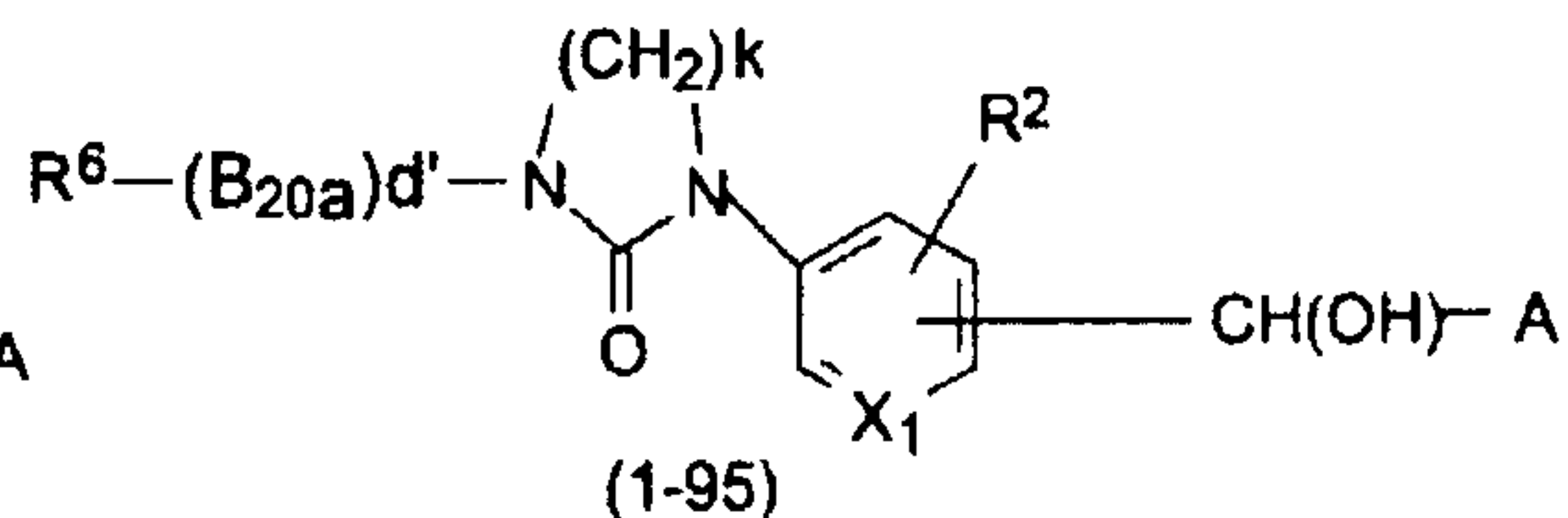
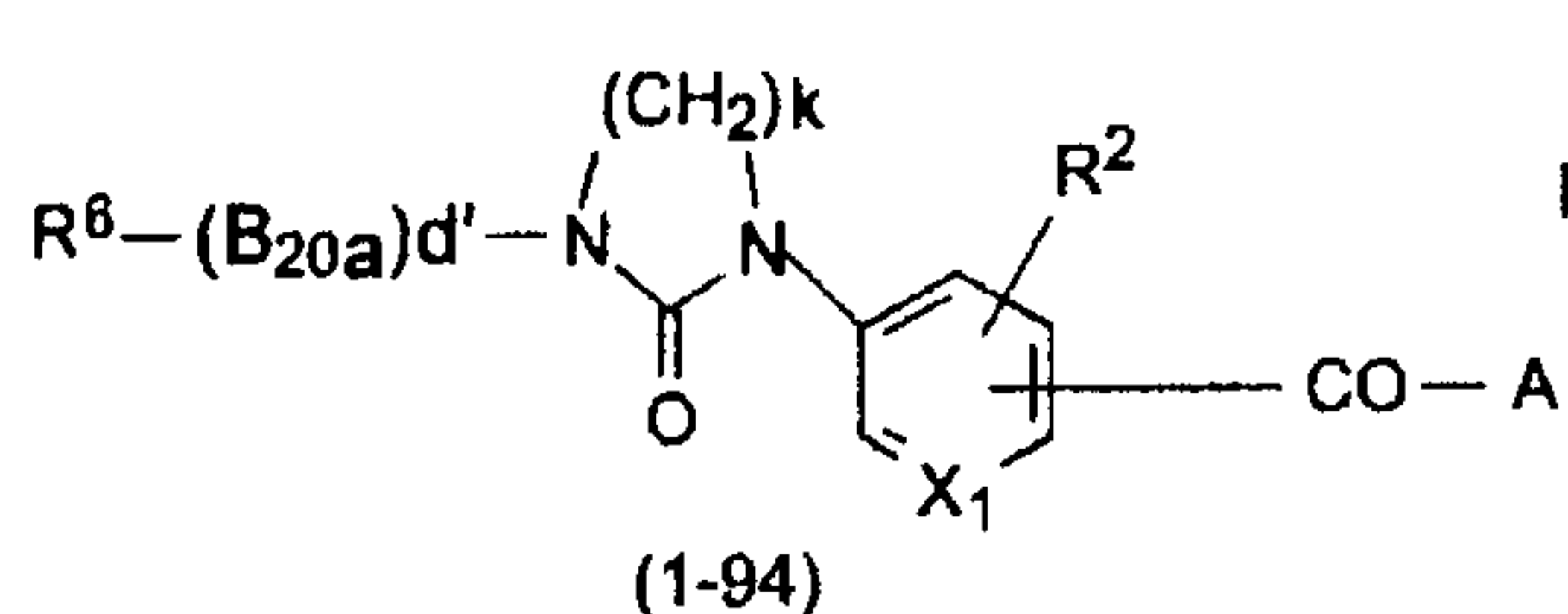
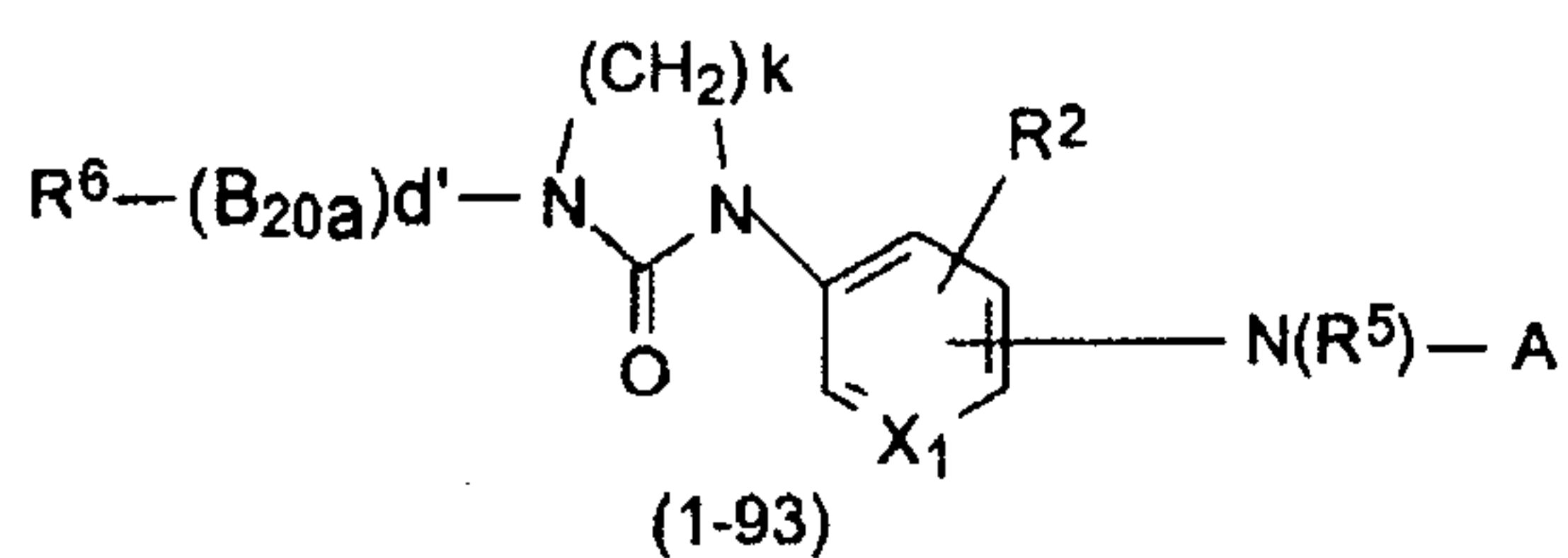
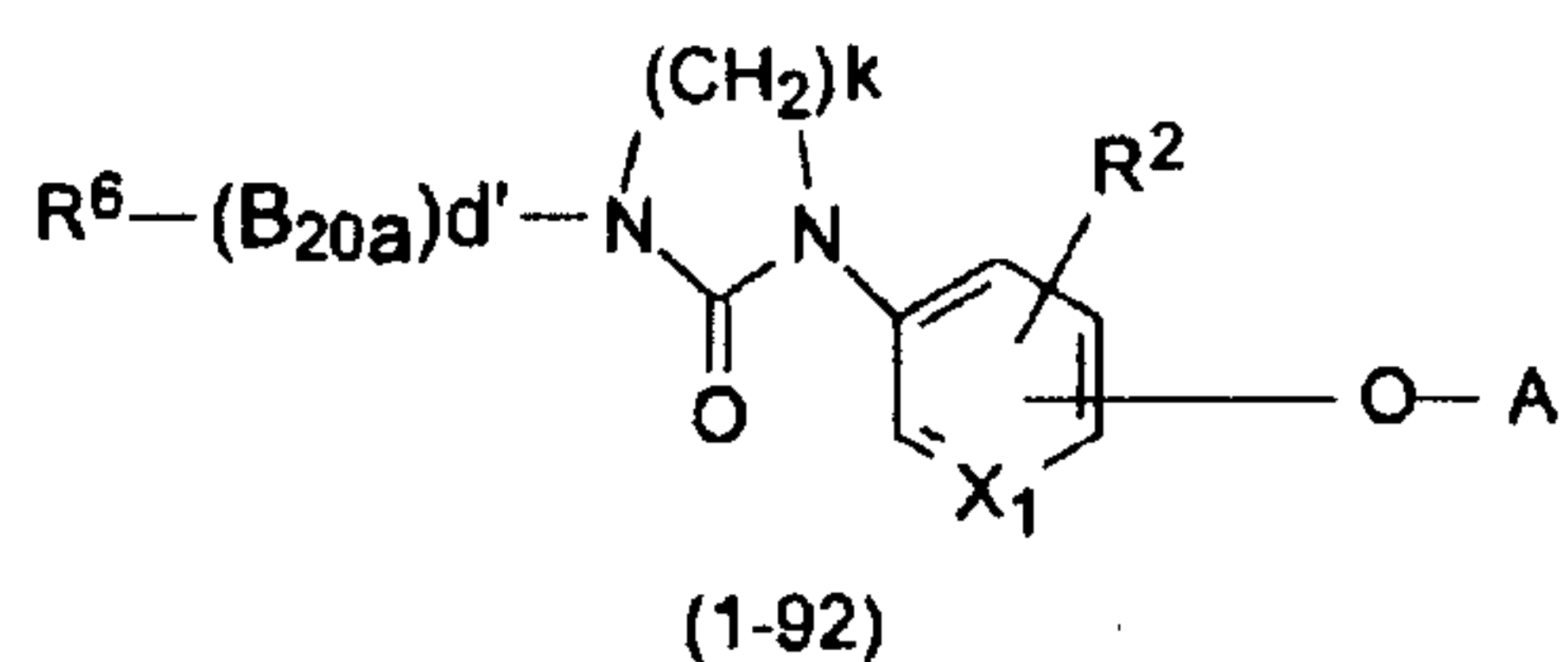
and

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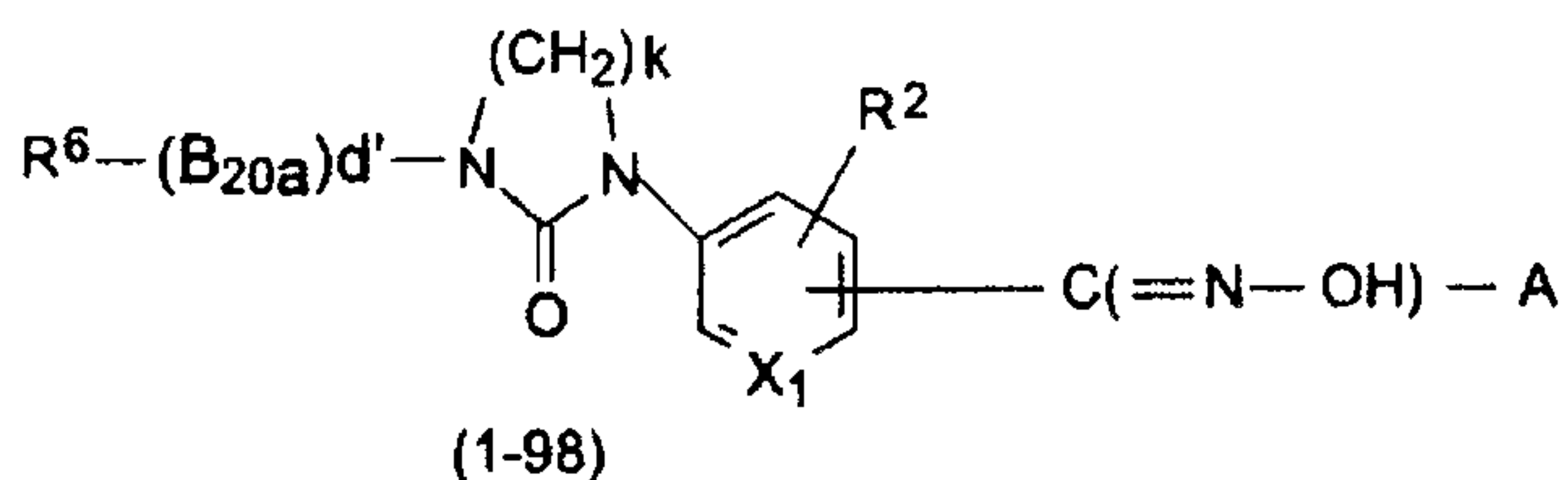


wherein, in said general formulas (1-85) to (1-91), R^5 , R^6 , B_{19a} , Bo , R^2 , X_1 , n and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

15. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-92) to (1-98):

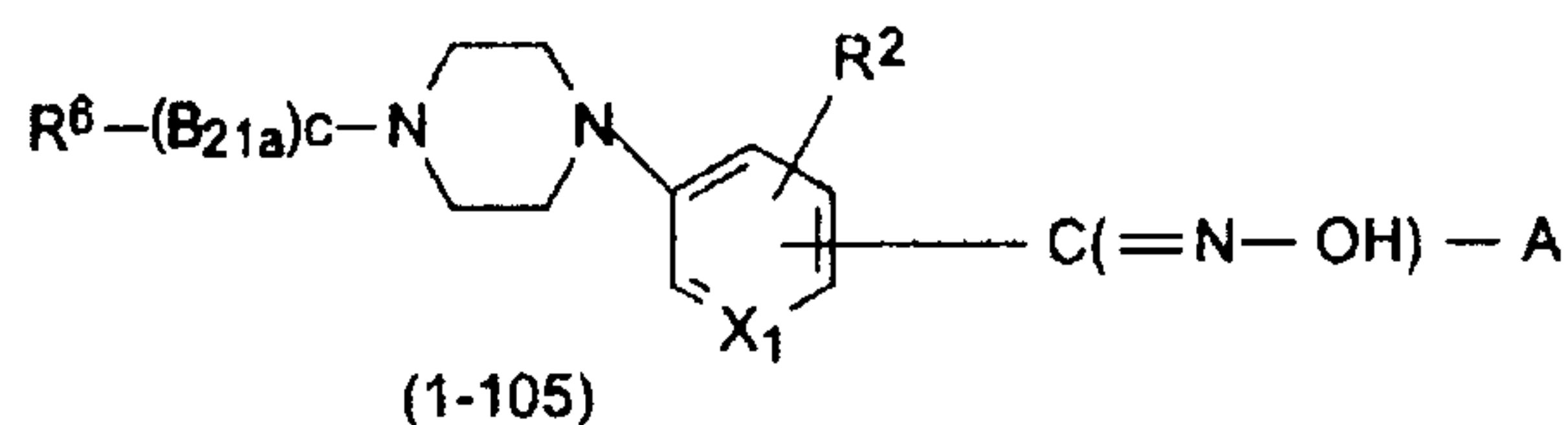
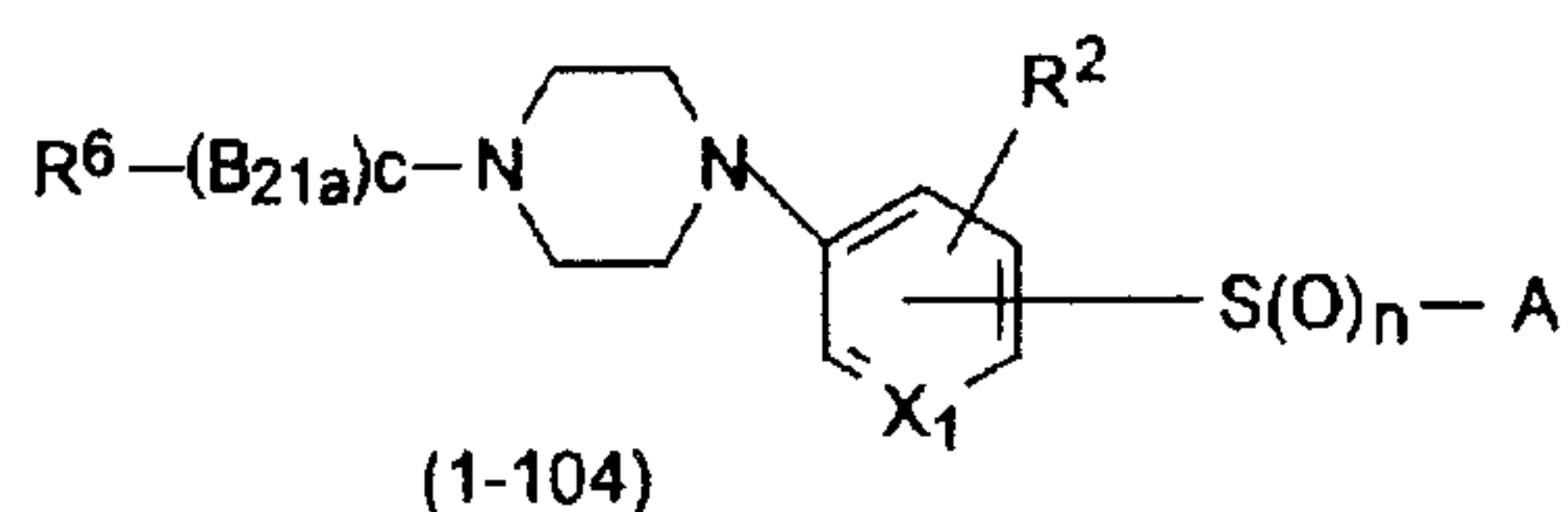
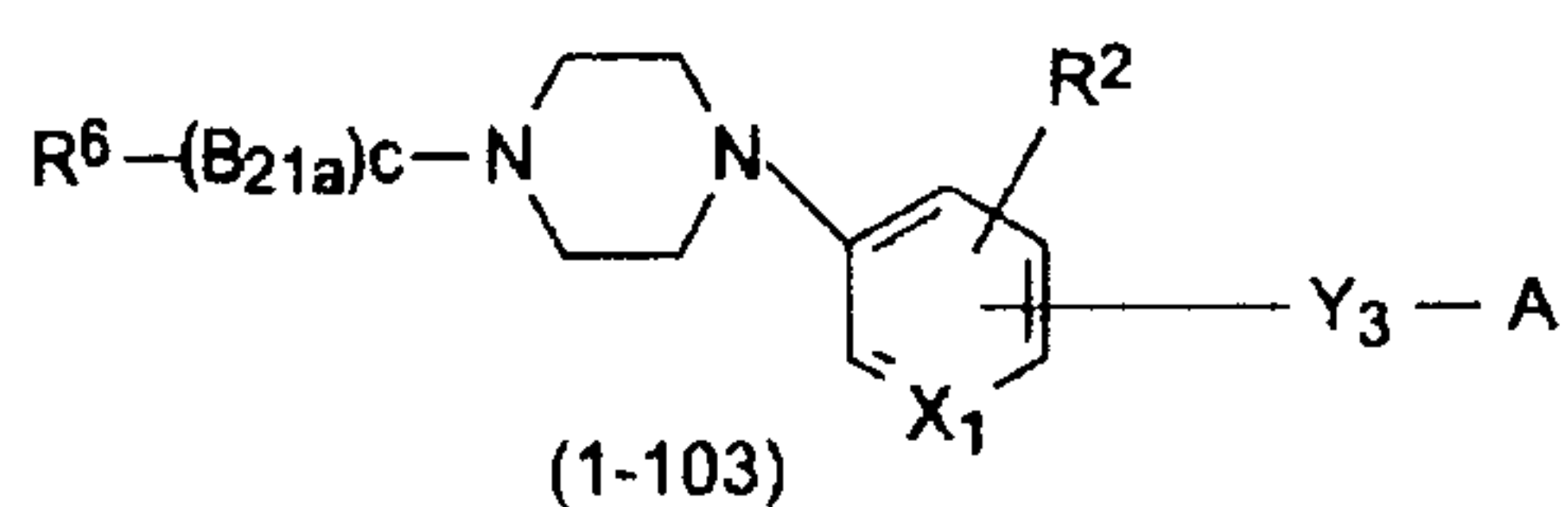
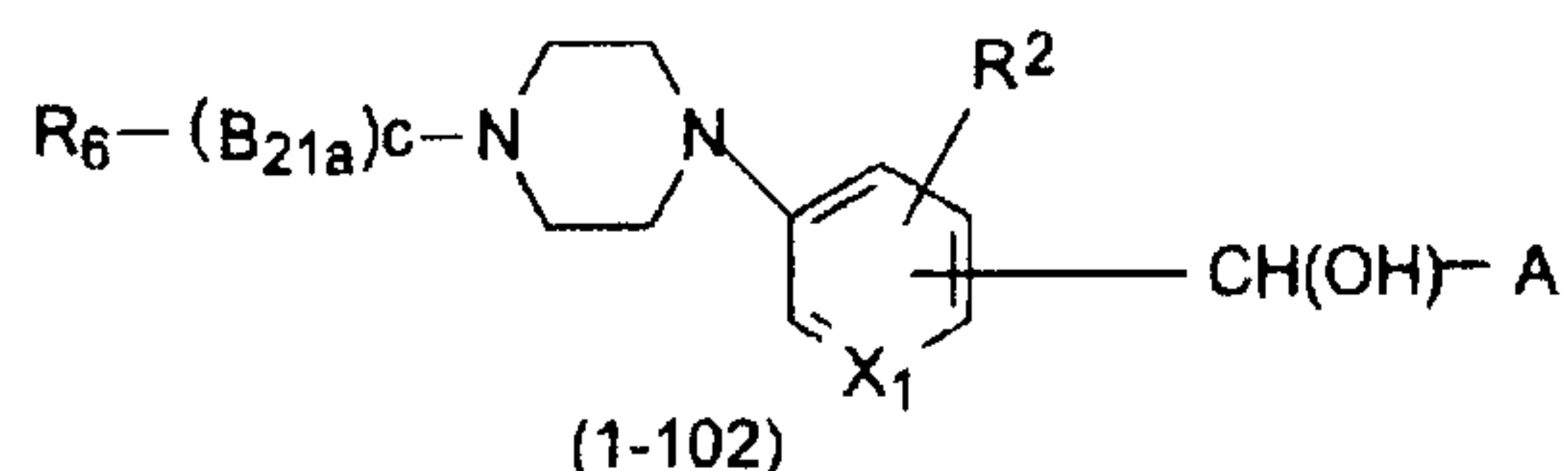
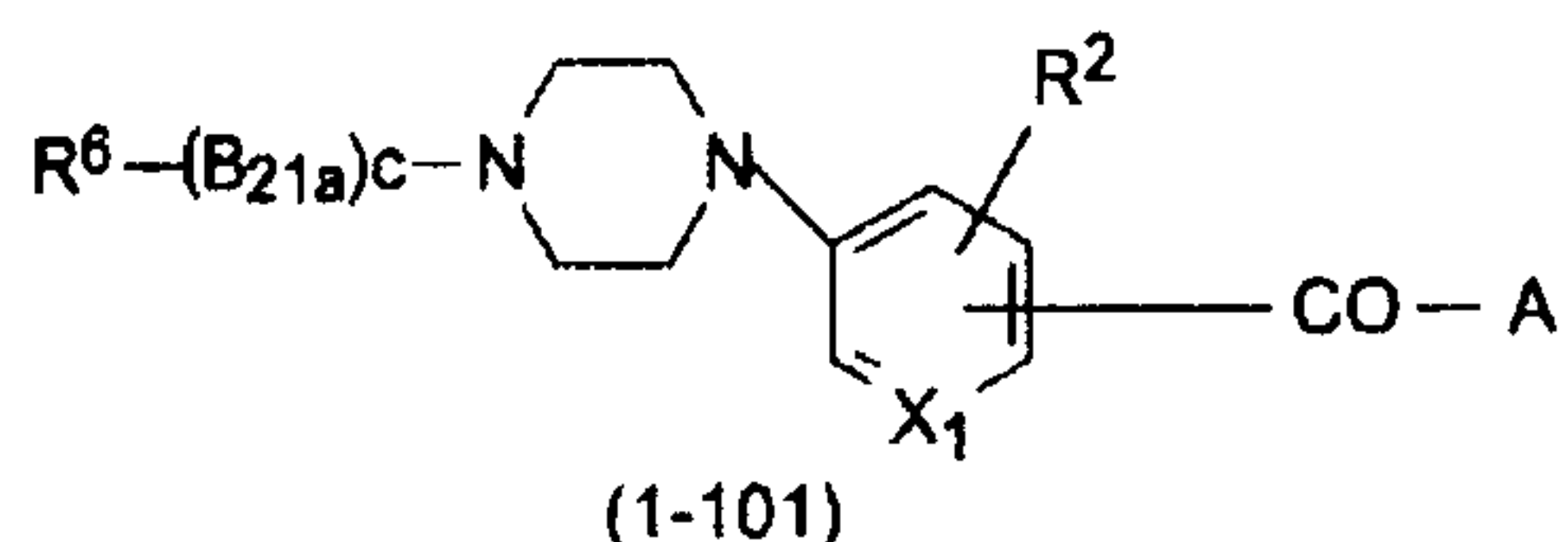
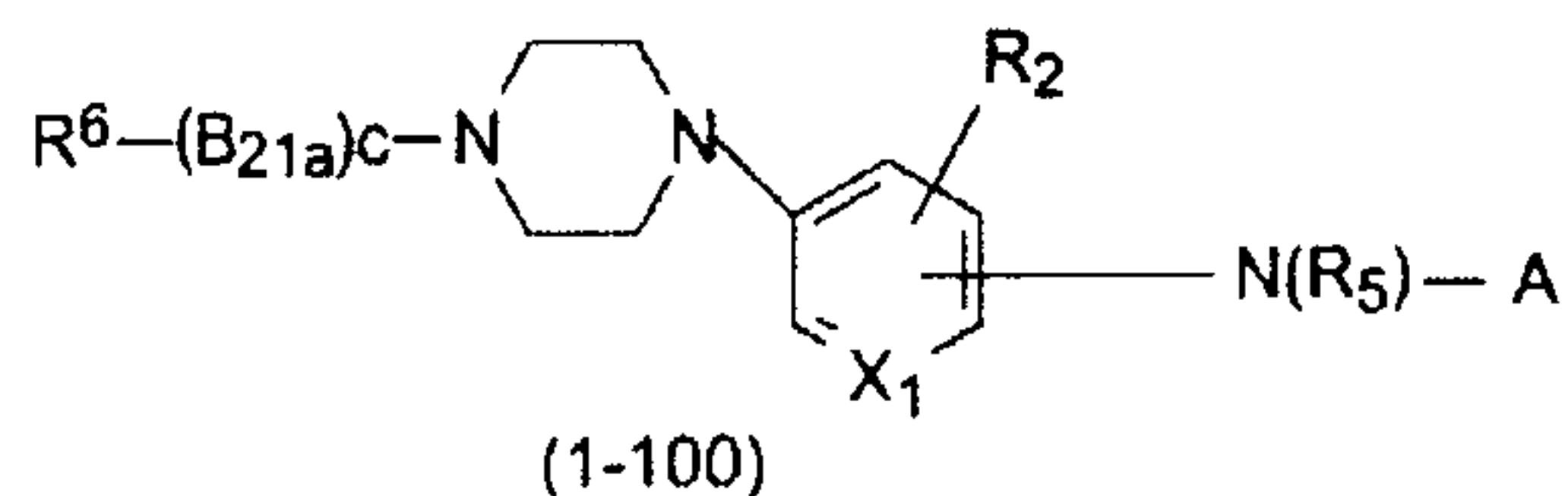
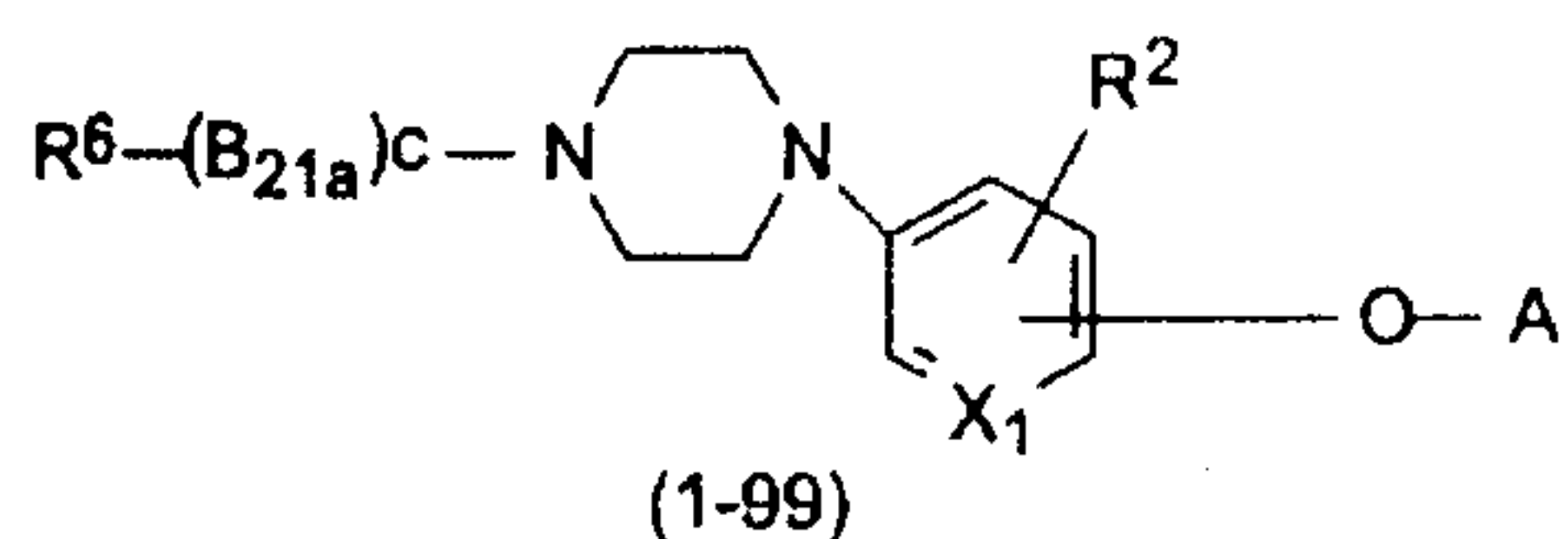


and



wherein, in said general formulas (1-92) to (1-98), R^5 , R^6 , B_{20a} , R^2 , X_1 , A , n , d' and k have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

16. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-99) to (1 105):



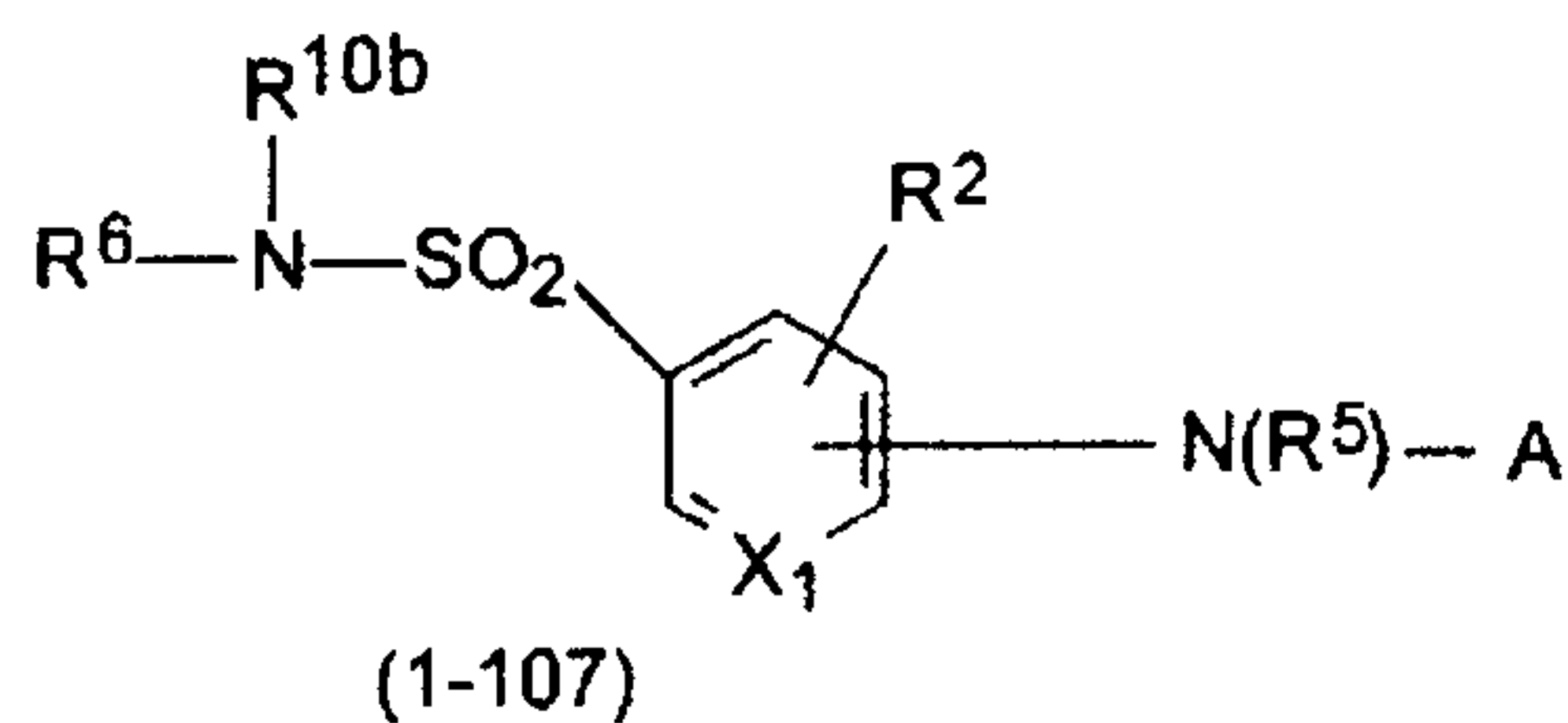
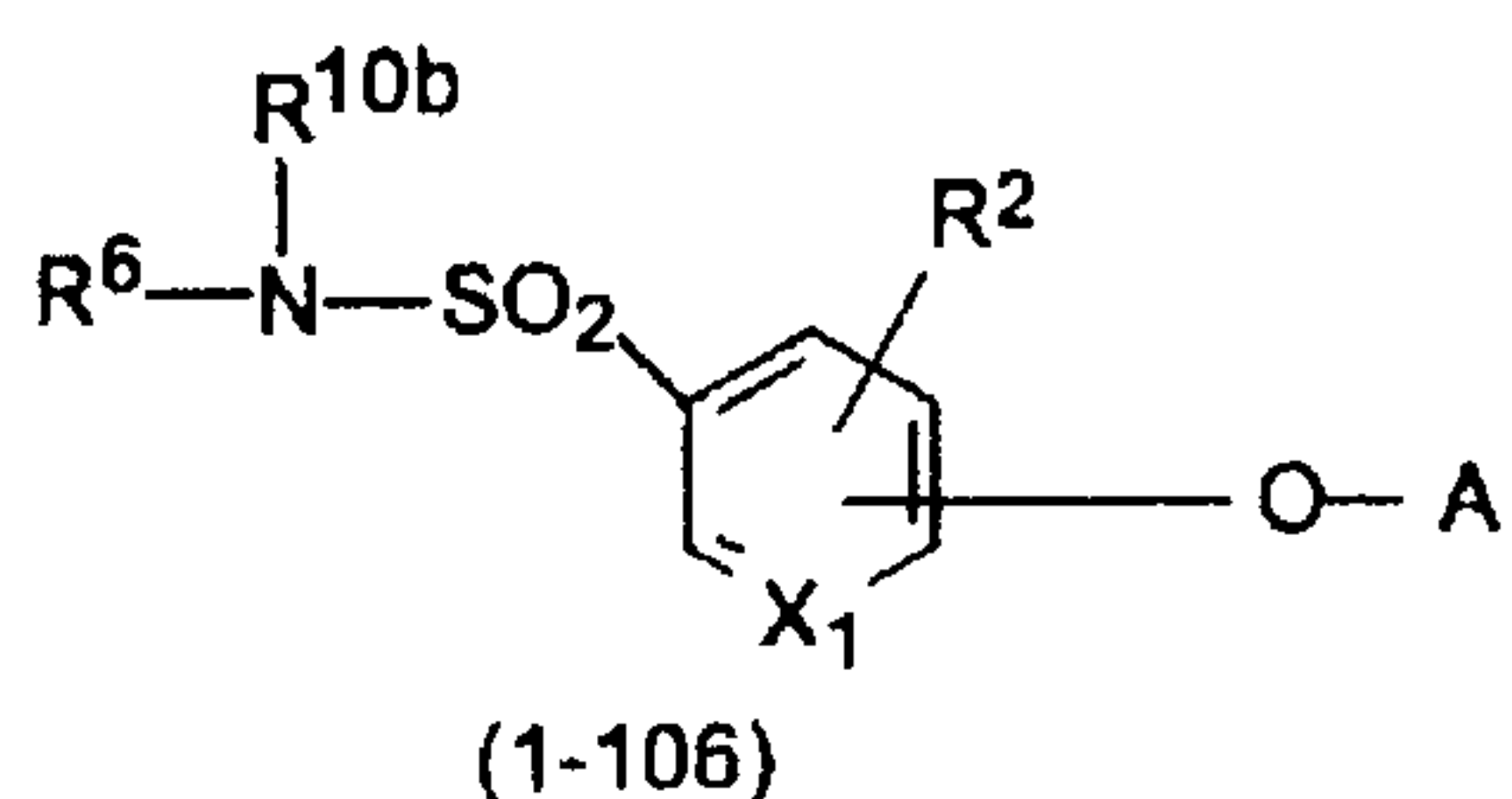
and

wherein, in said general formulas (1-99) to (1-105), R^6 , R^5 , B_{21a} , R^2 , X_1 , A , n and c have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

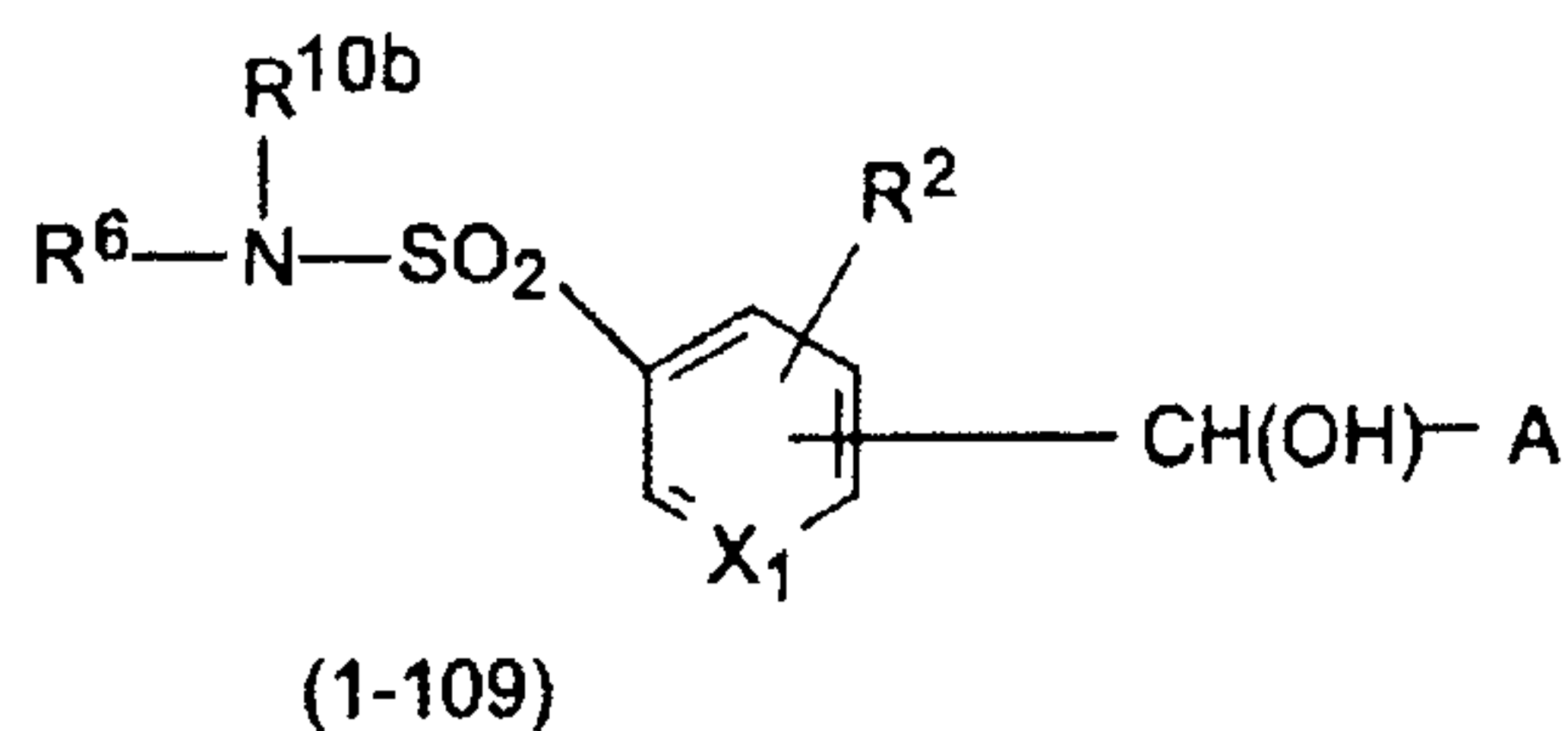
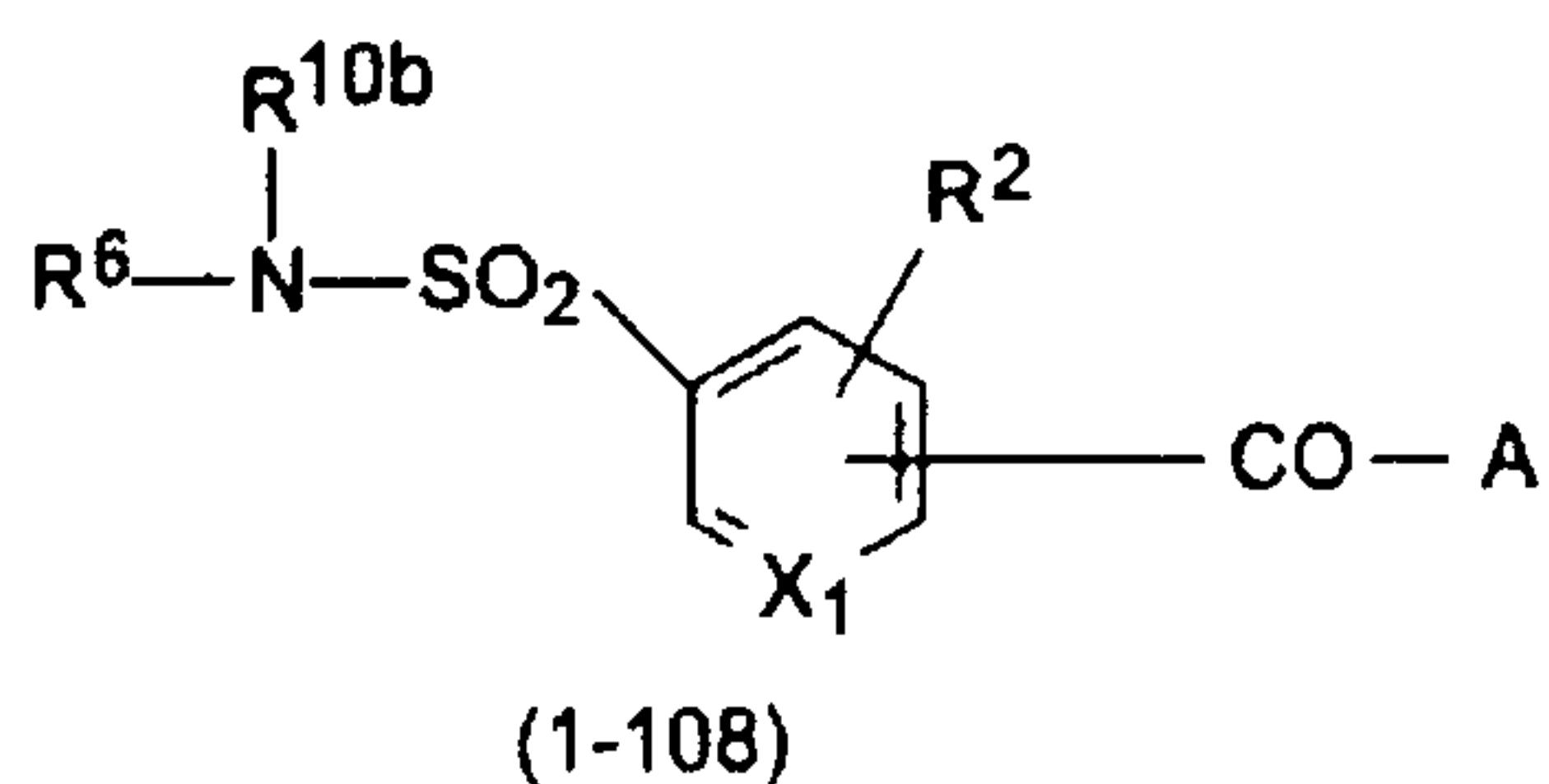
17. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-106) to (1-112):

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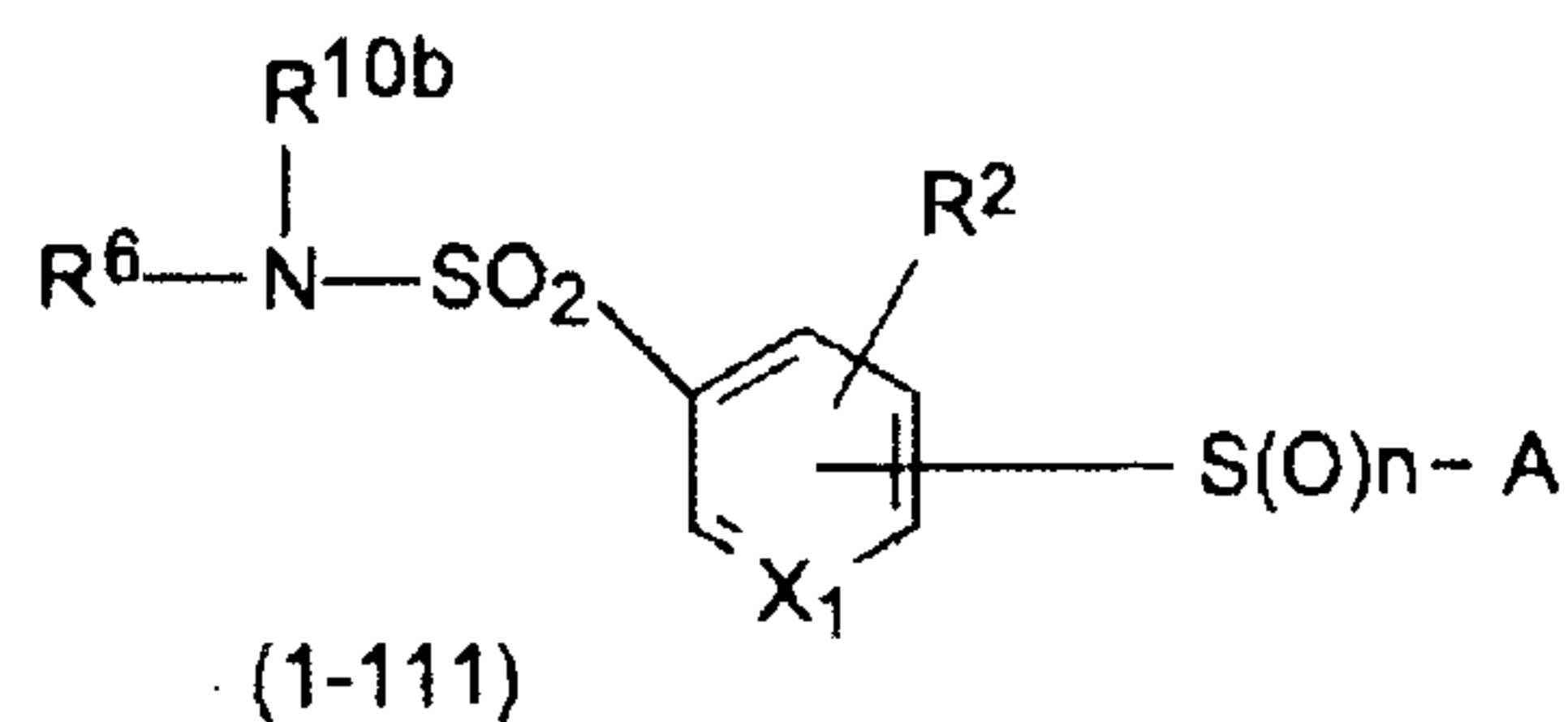
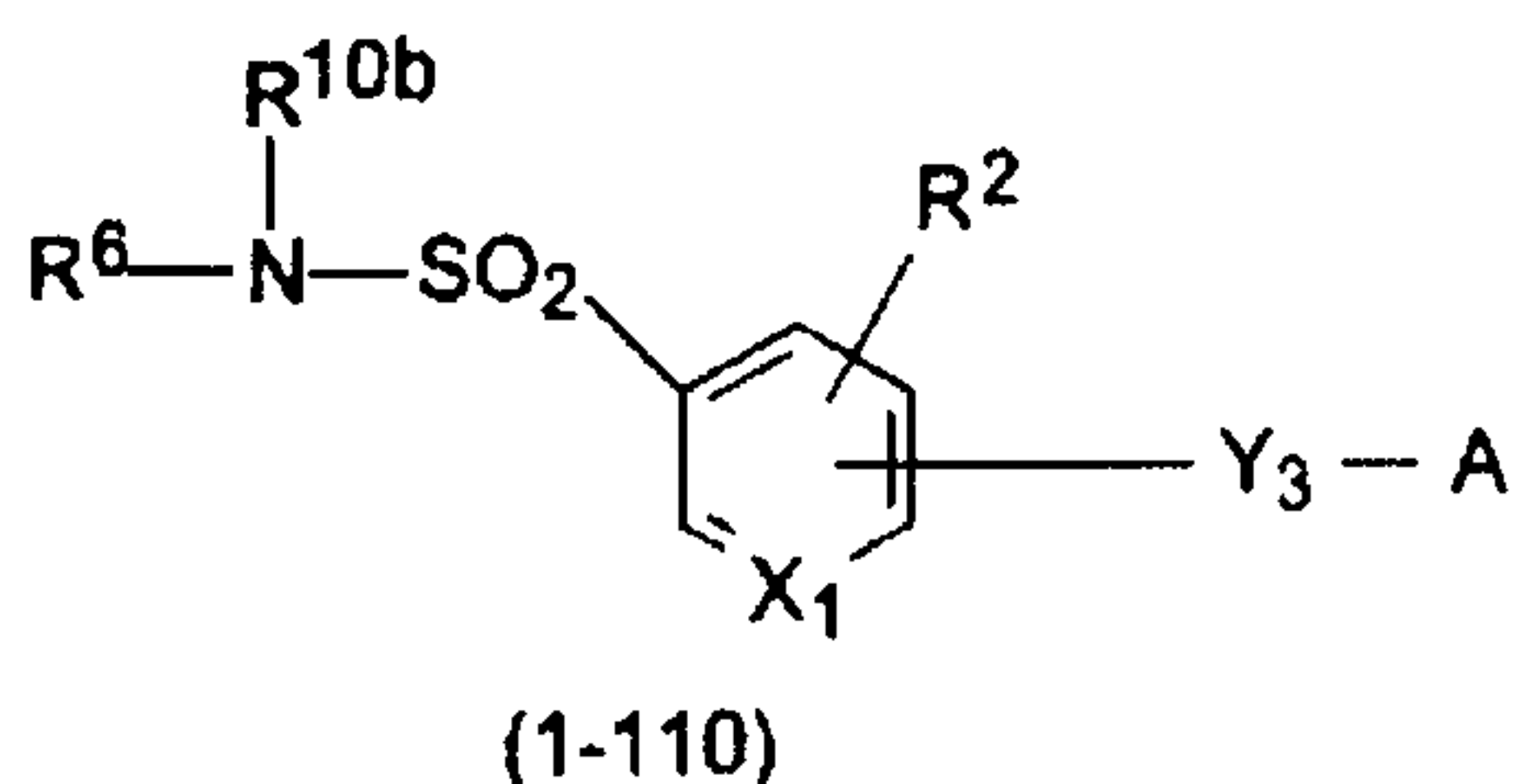
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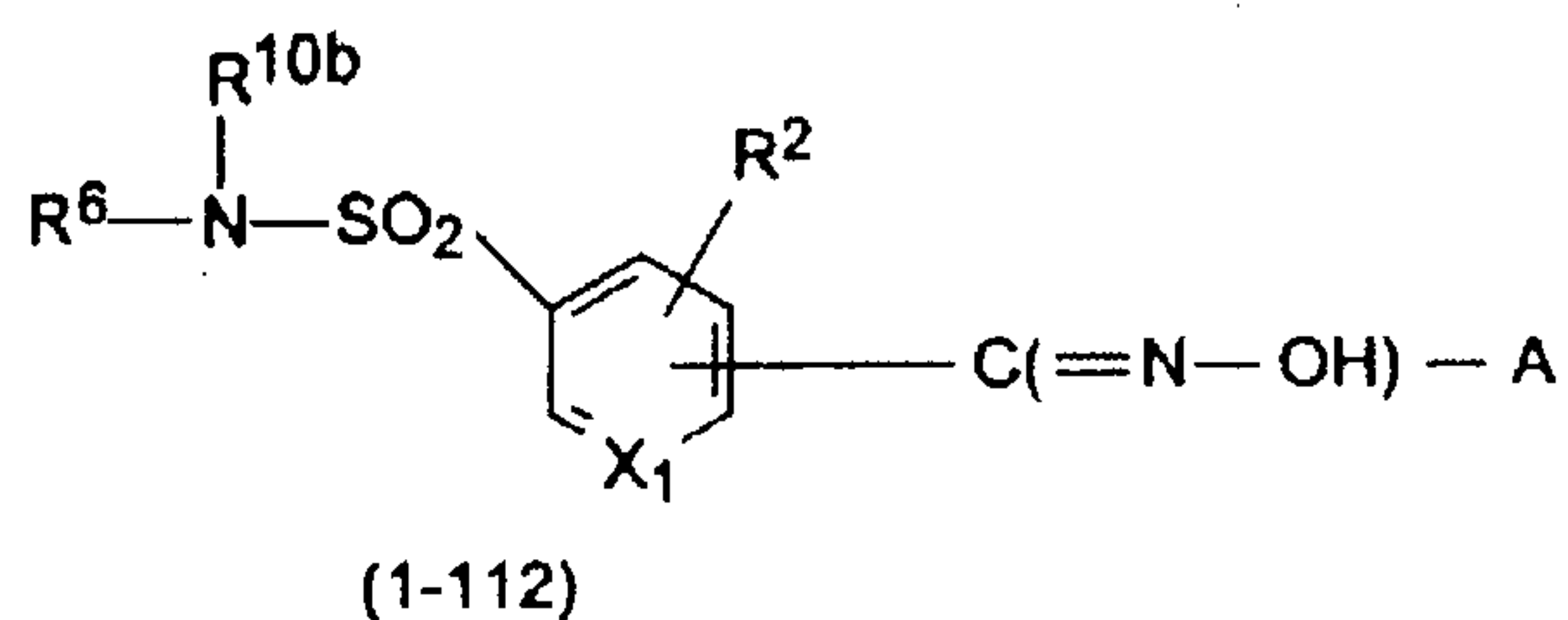
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and

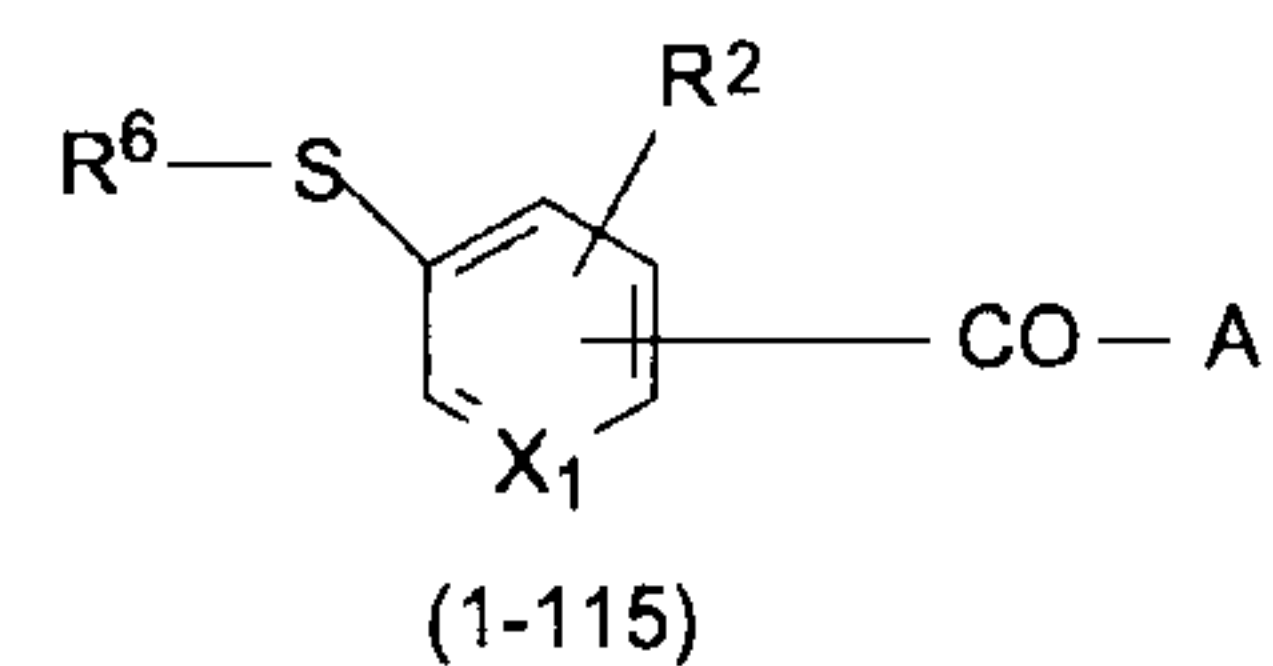
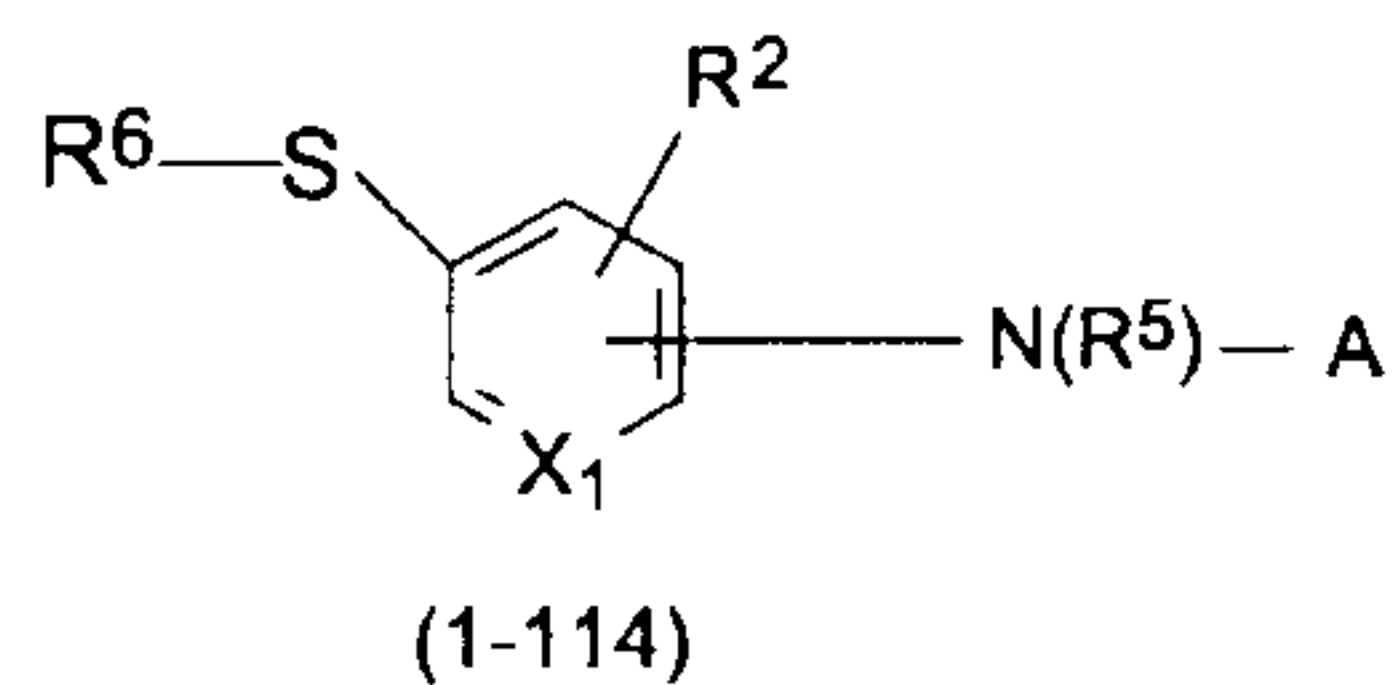
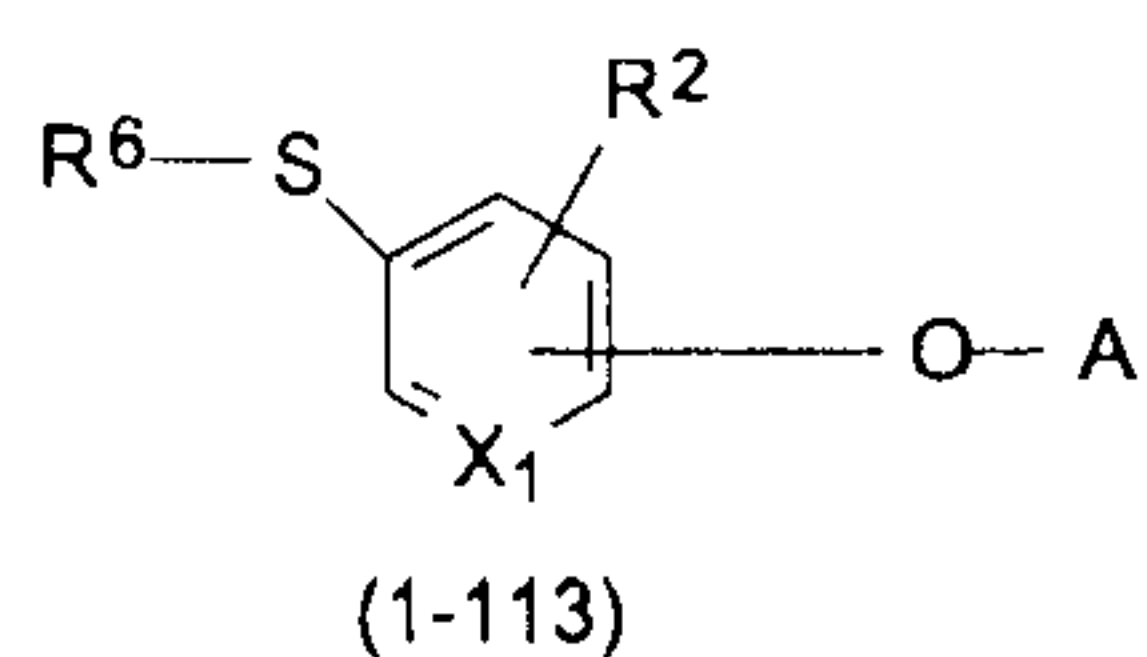


15 wherein, in said general formulas (1-106) to (1-112), R^5 , n , R^6 , $\text{R}^{10\text{b}}$, X_1 , R^2 , and A have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

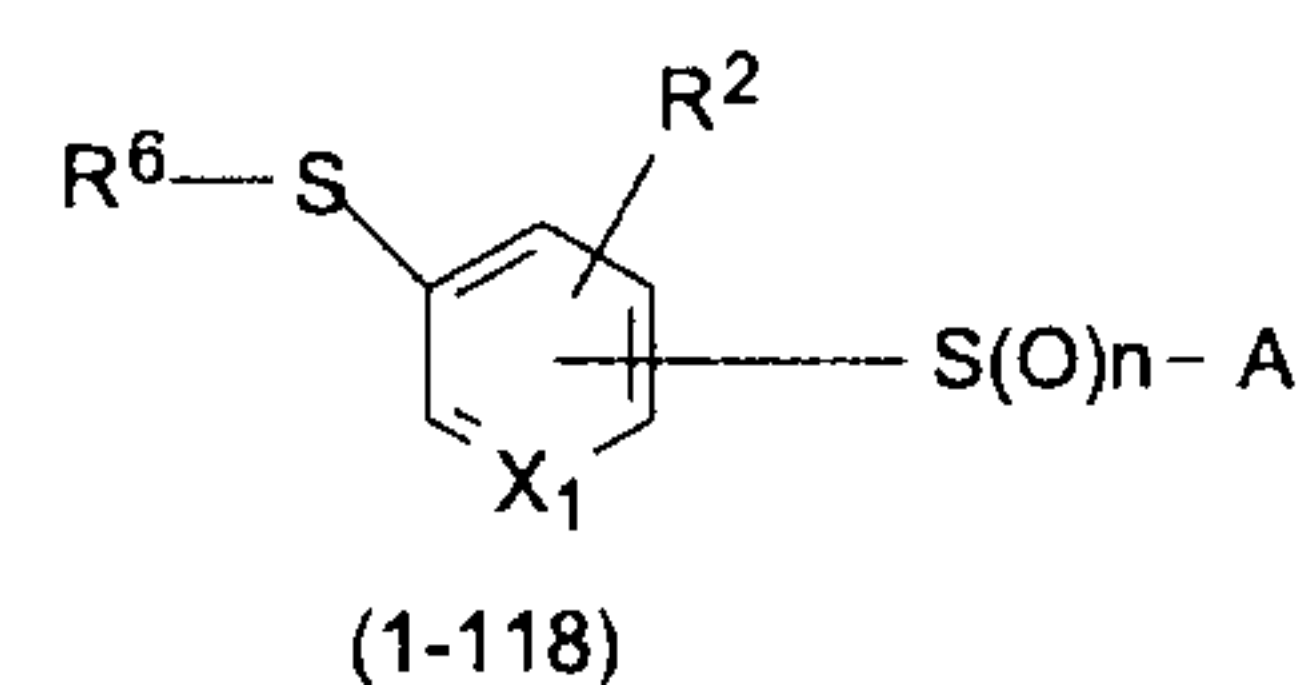
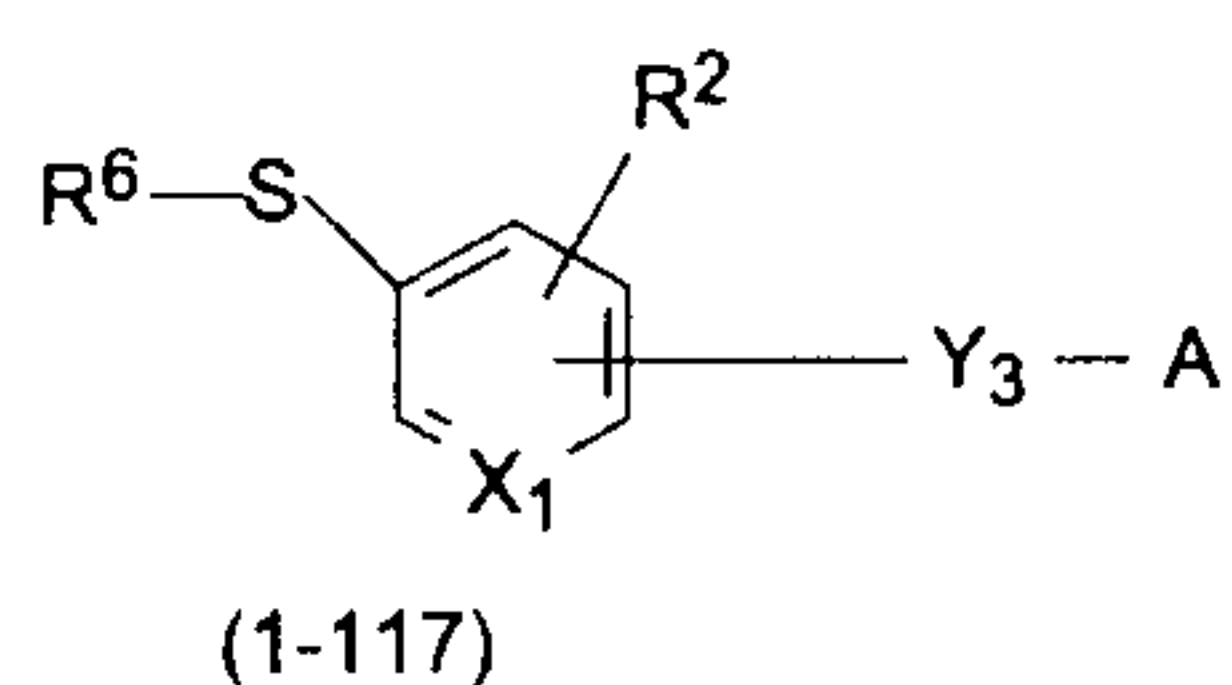
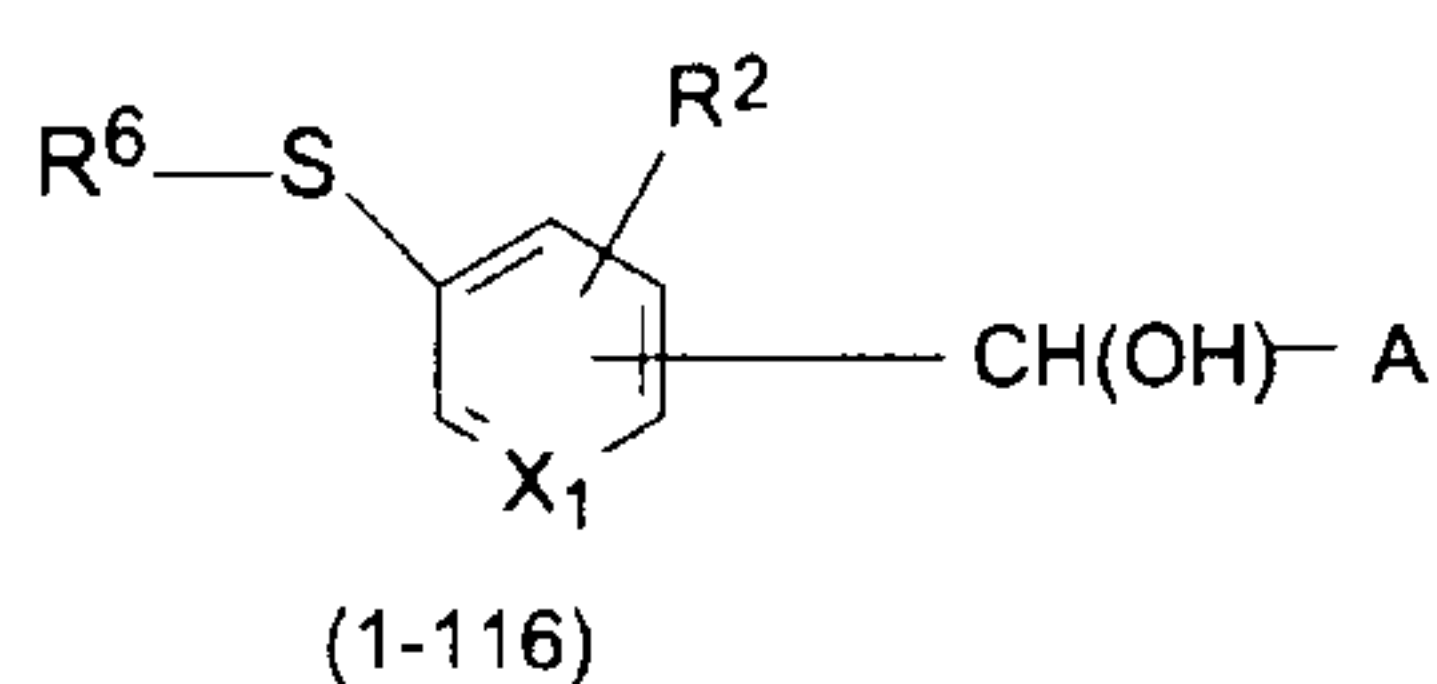
18. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula
 20 (1) is any one selected from the group consisting of the following general formulas (1-113) to (1-119):

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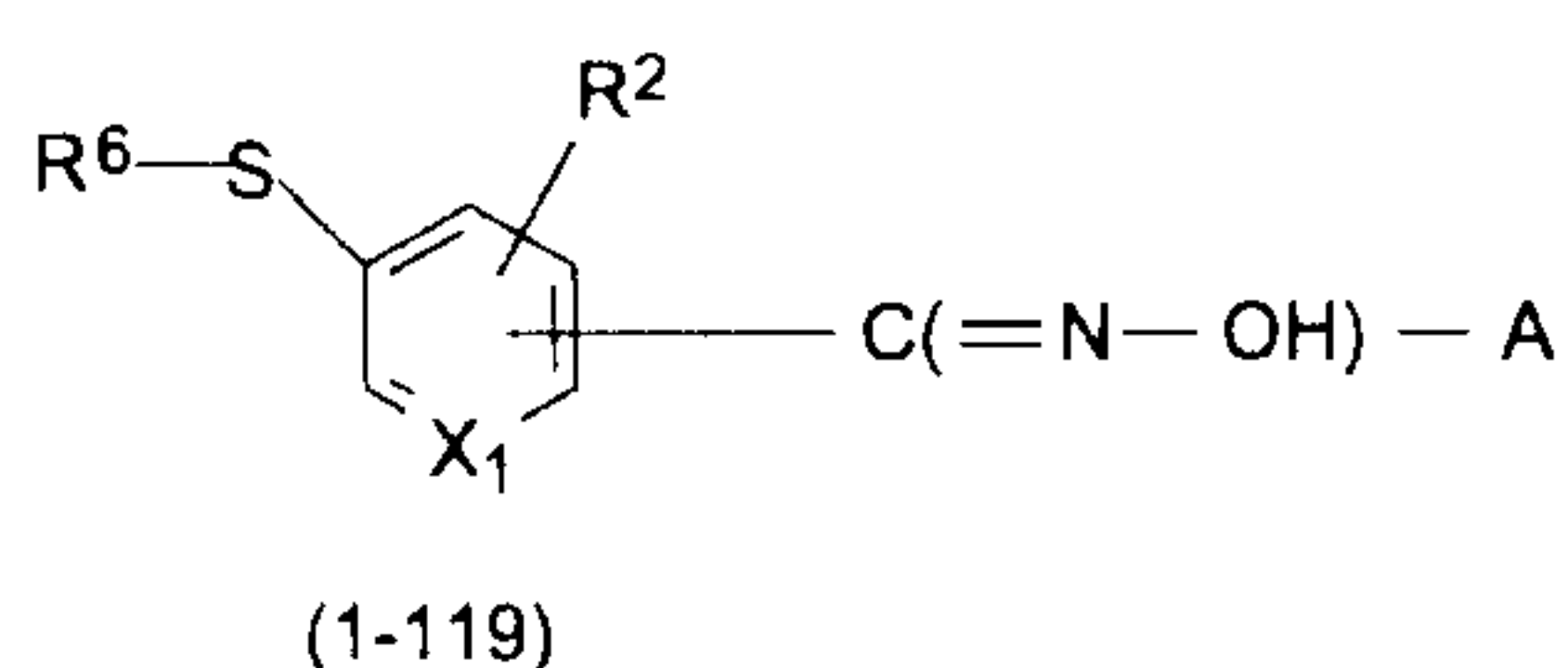
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and

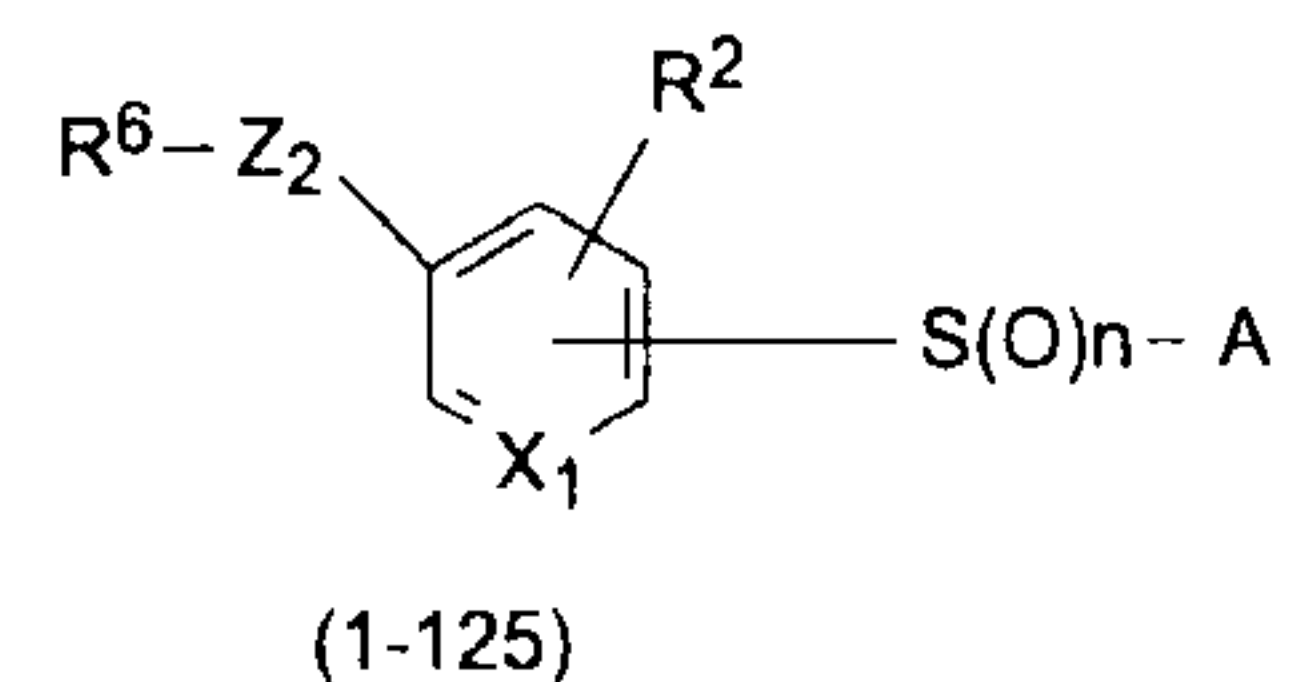
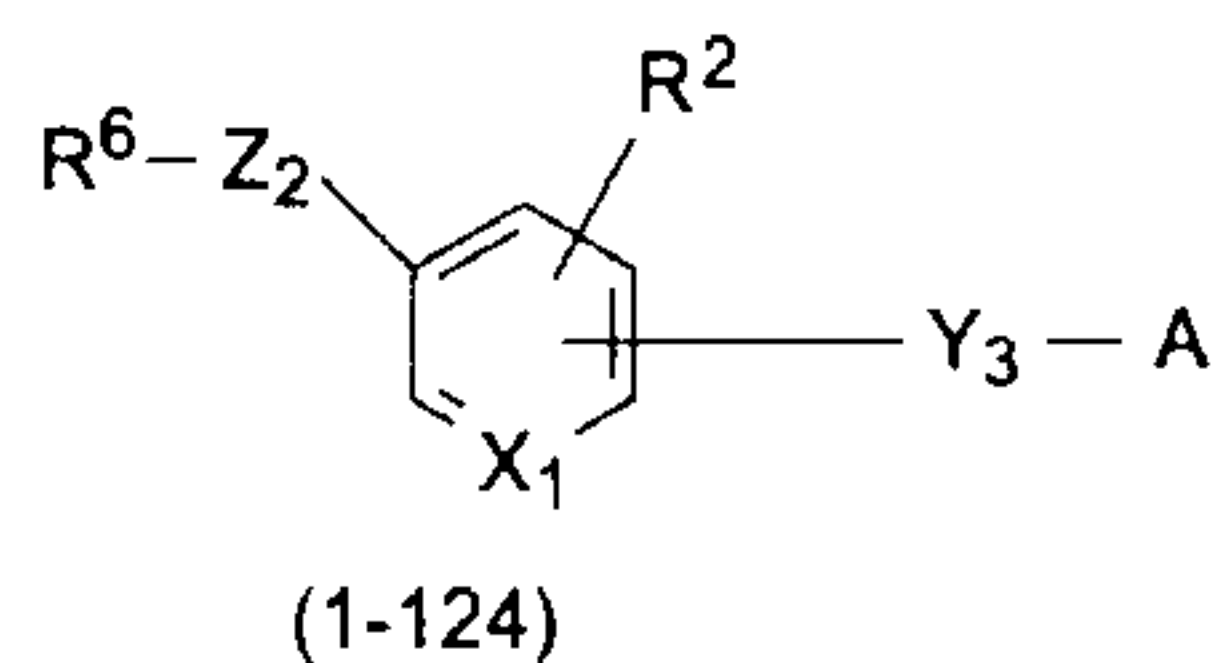
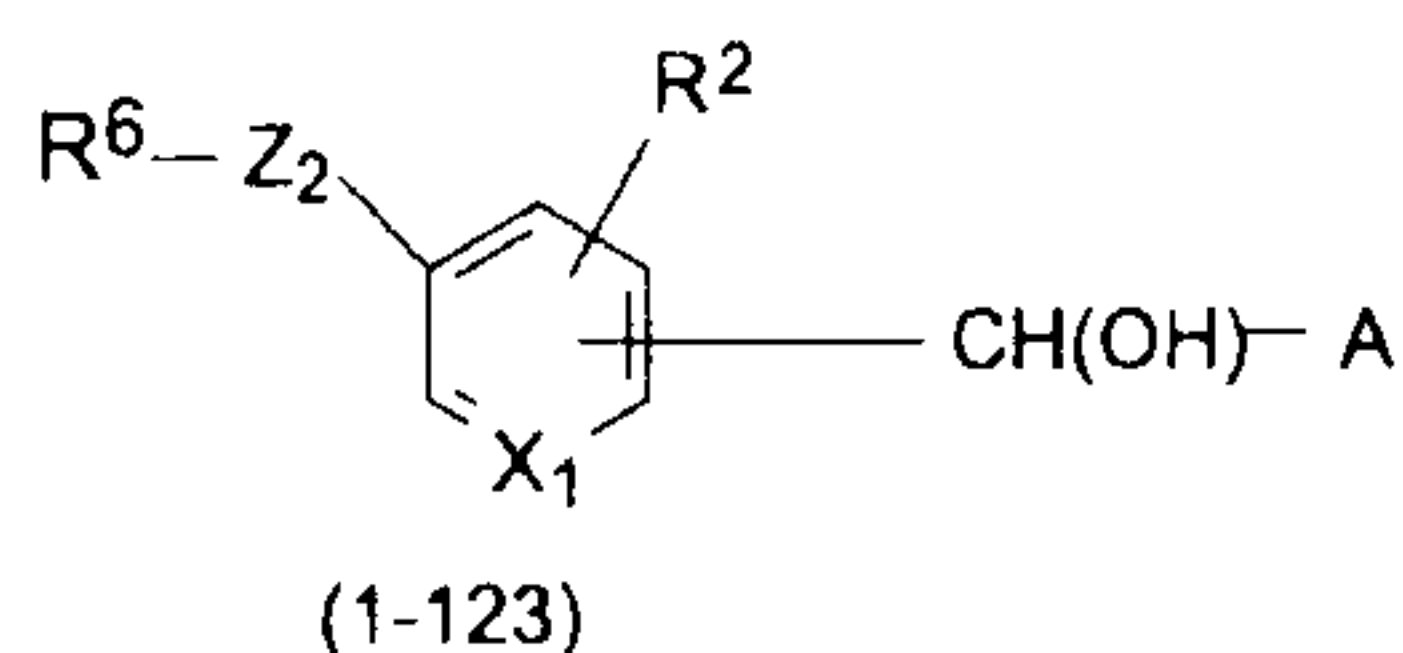
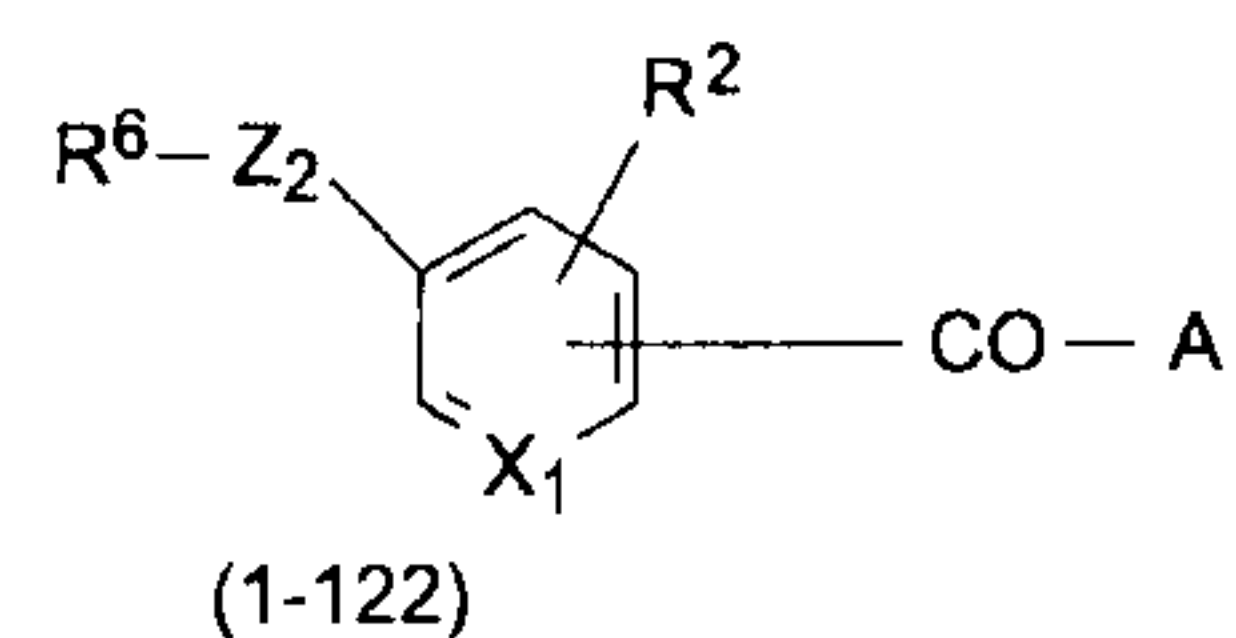
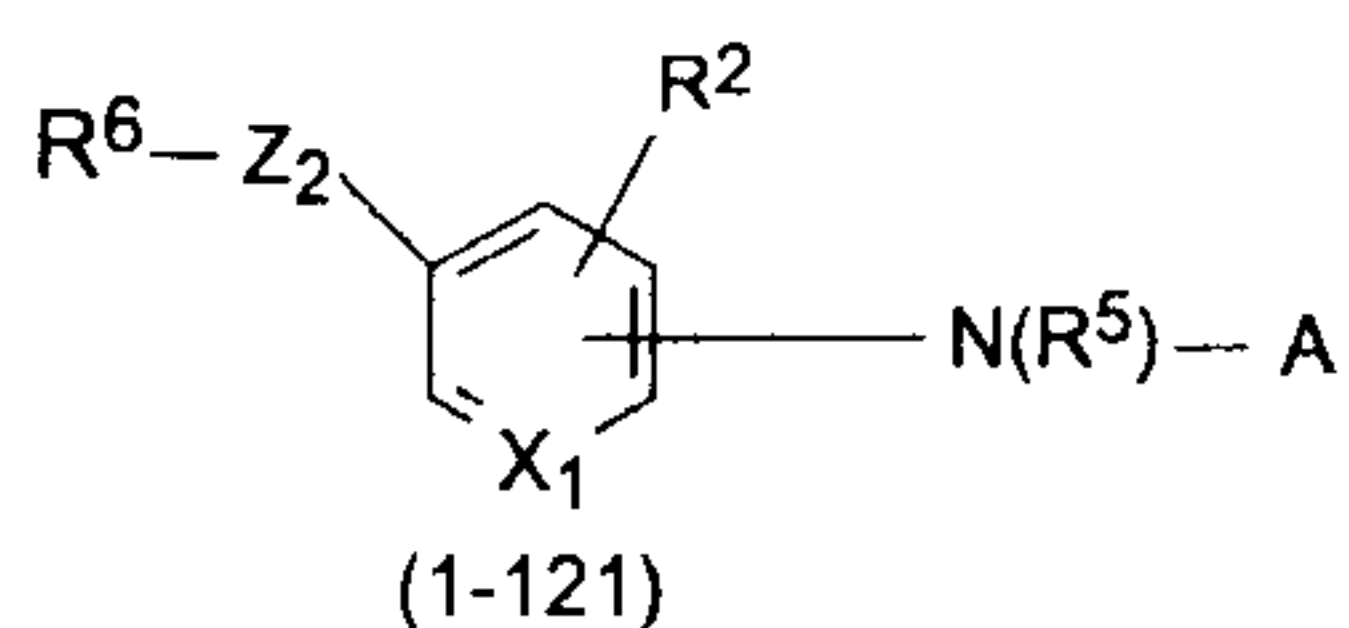
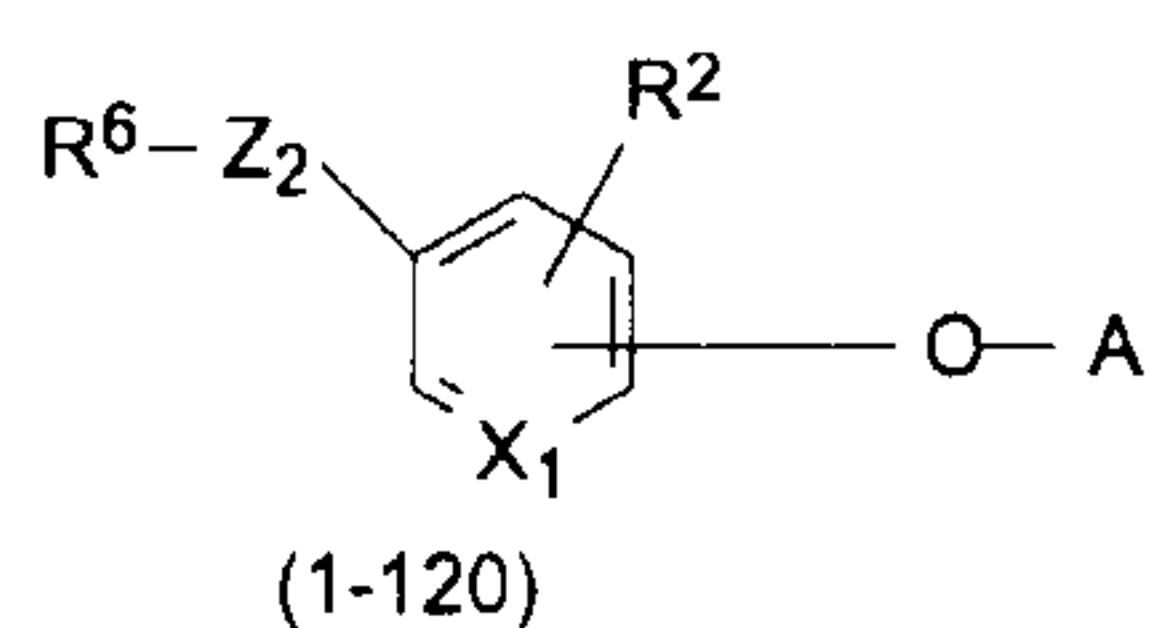


wherein, in said general formulas (1-113) to (1-119), R^6 , R^2 ,
 10 X_1 , R^5 , n and A have the same meanings as described in claim 1,
 and Y_3 has the same meanings as described in claim 2.

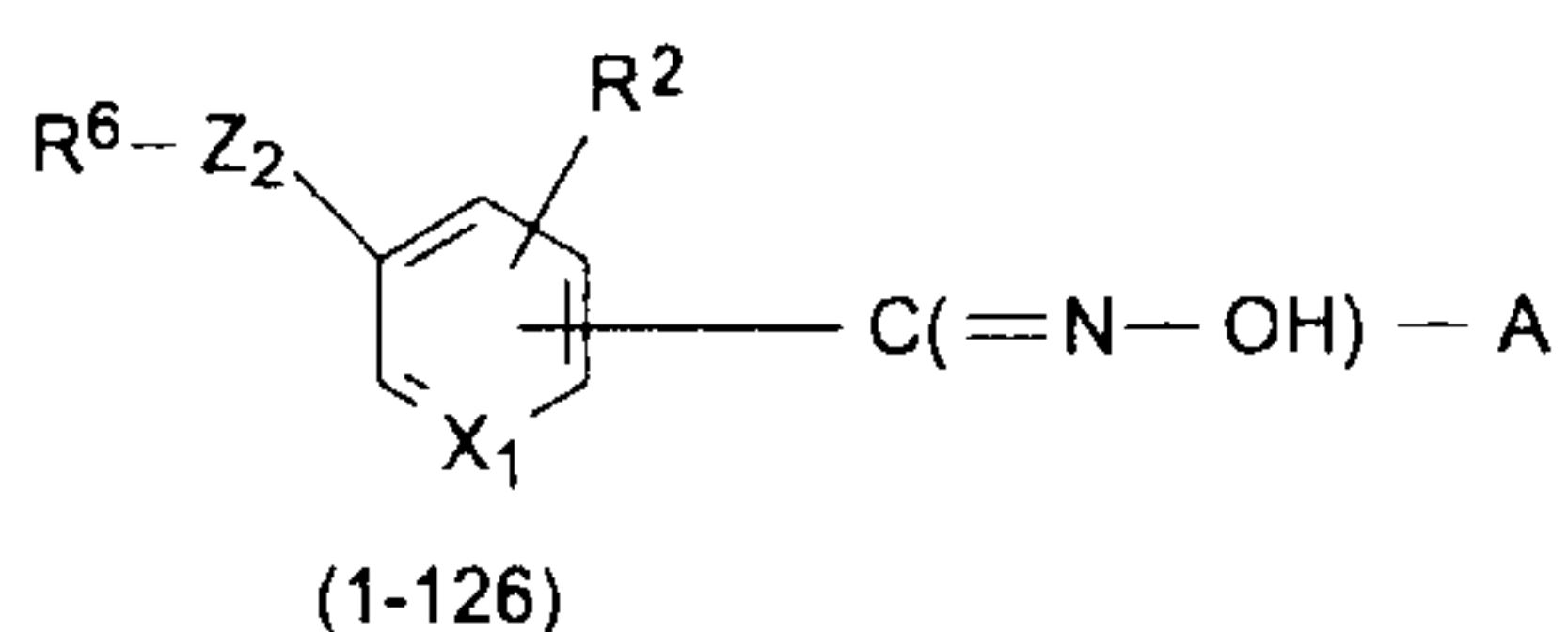
19. The aromatic compound or a salt thereof according to
 claim 1, wherein the compound represented by general formula
 (1) is any one selected from the group consisting of the
 15 following general formulas (1-120) to (1-126):

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and

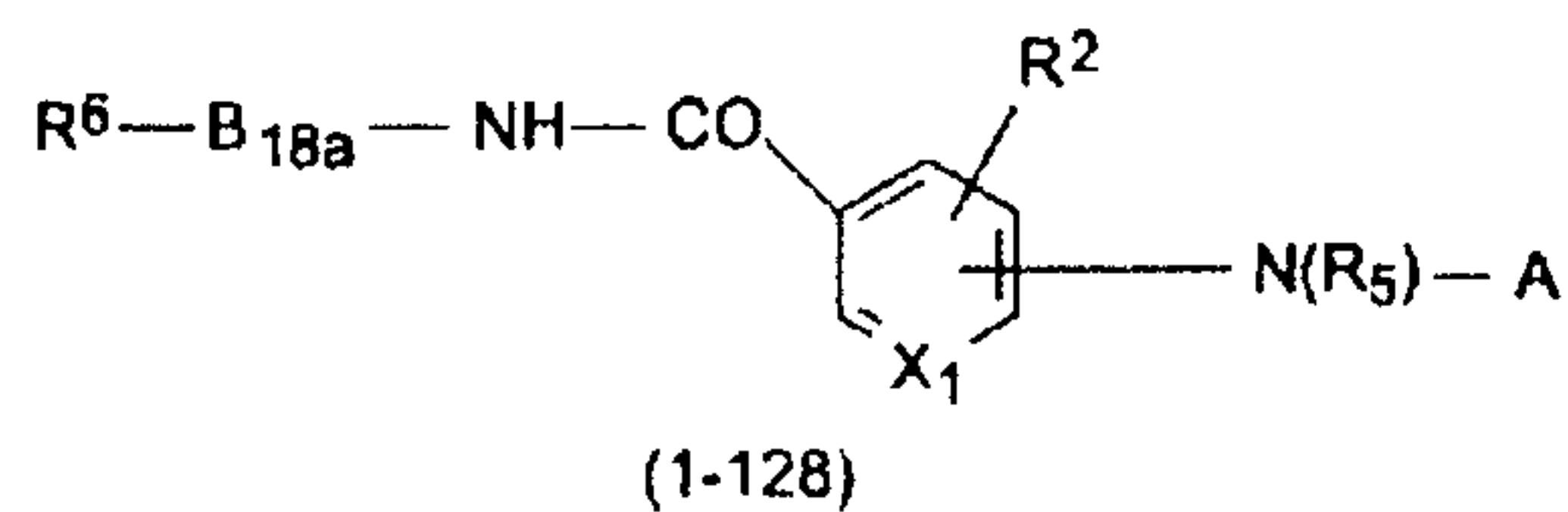
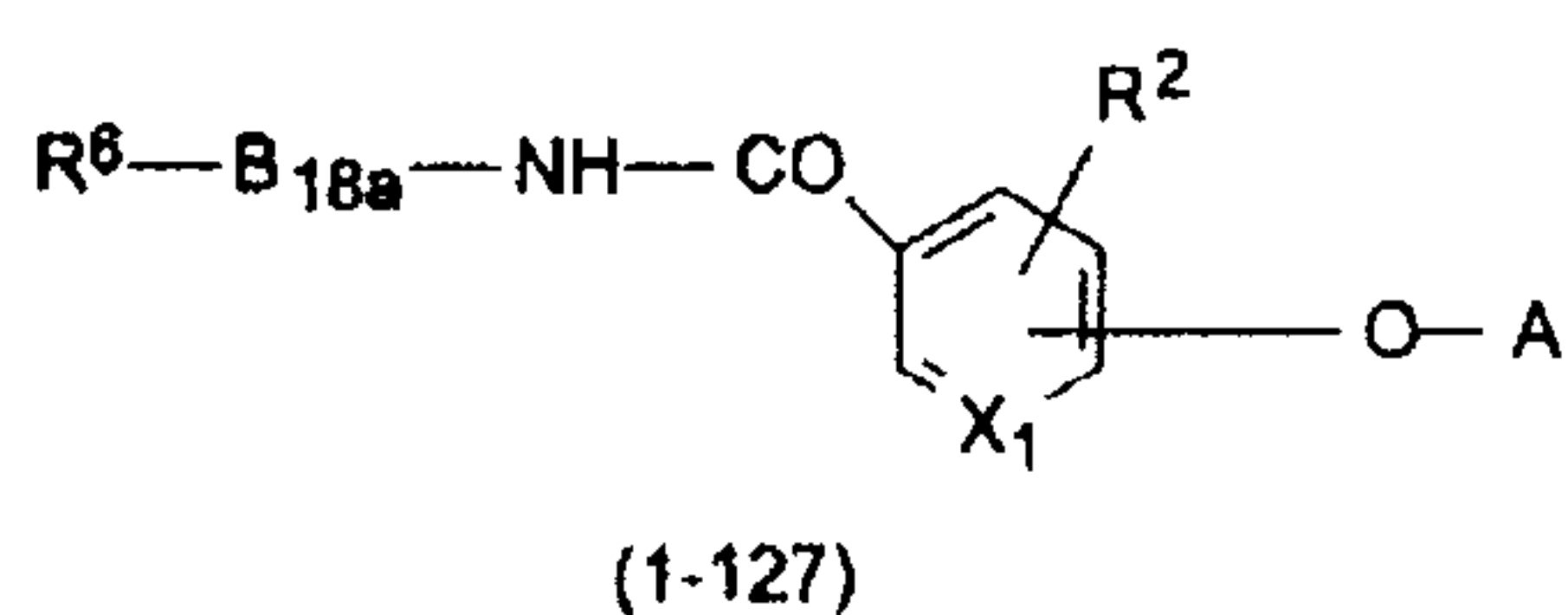


wherein, in said general formulas (1-120) to (1-126), R^6 , R^2 ,
 10 X_1 , A , R^5 , and n have the same meanings as described in
 claim 1, Y_3 has the same meanings as described in claim 2,
 and Z_2 represents a C_2 - C_6 alkynylene group.

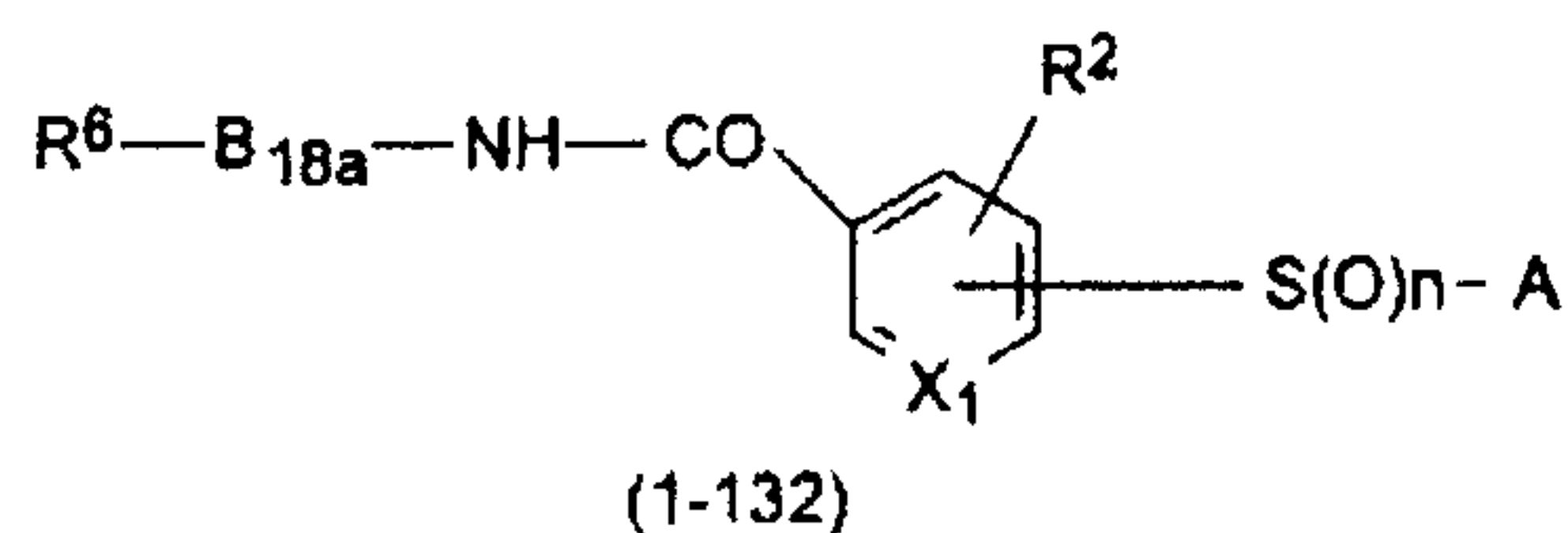
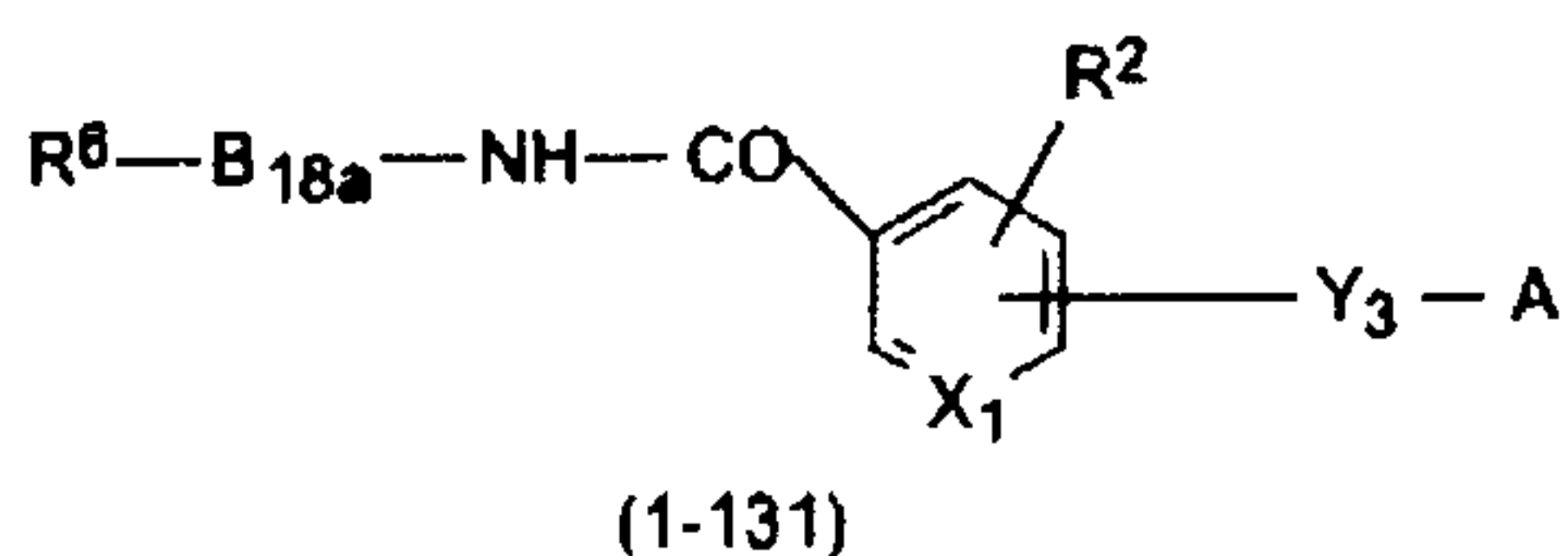
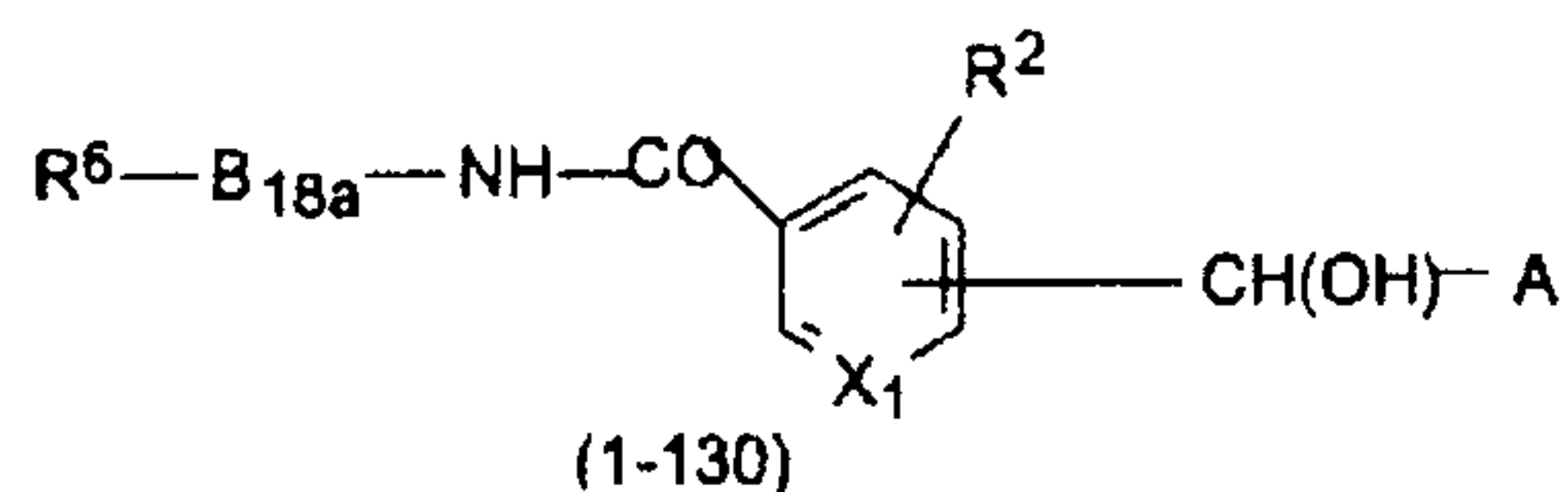
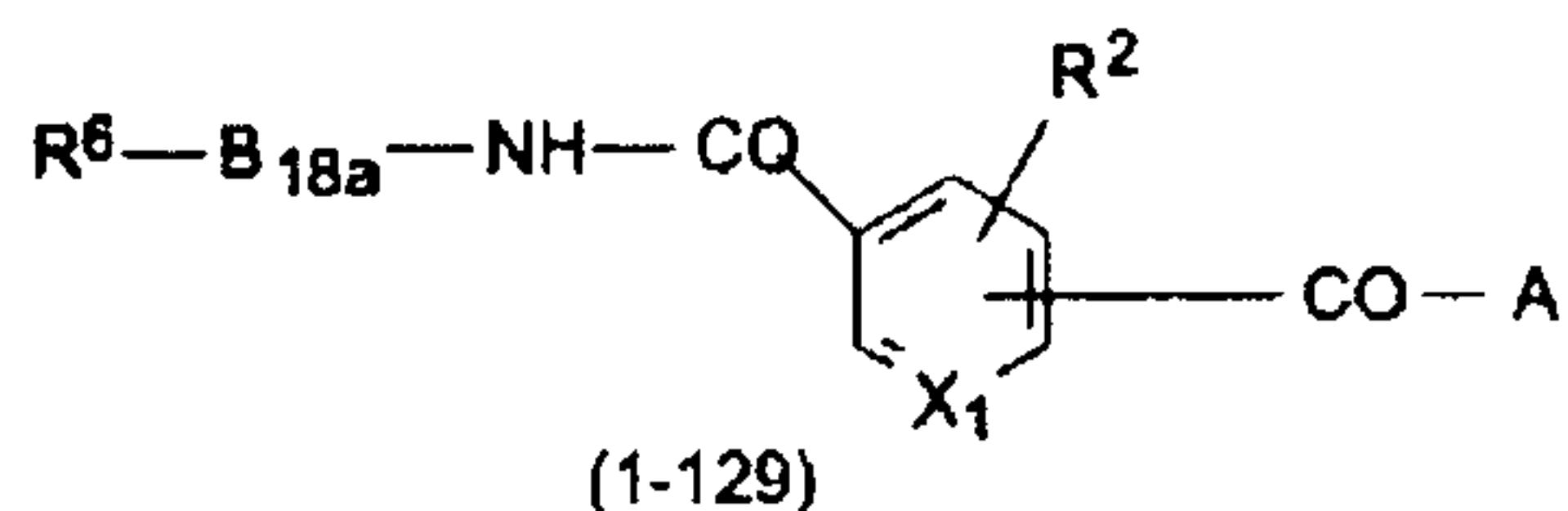
20. The aromatic compound or a salt thereof according to
 claim 1, wherein the compound represented by general formula
 15 (1) is any one selected from the group consisting of the
 following general formulas (1-127) to (1-133):

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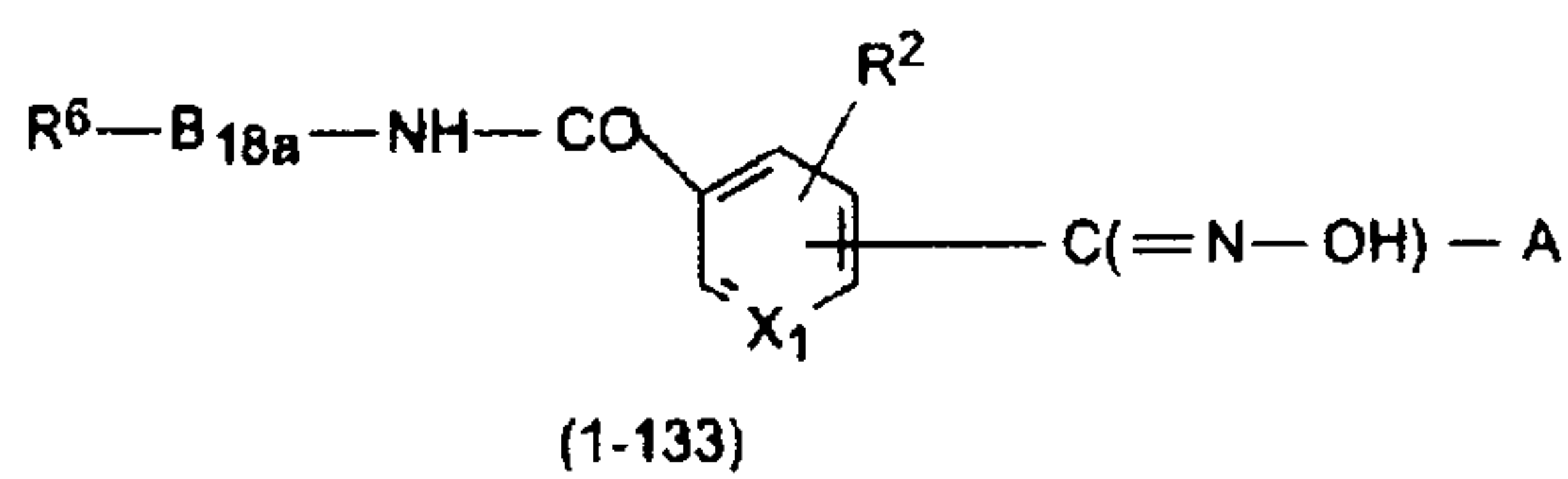


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and

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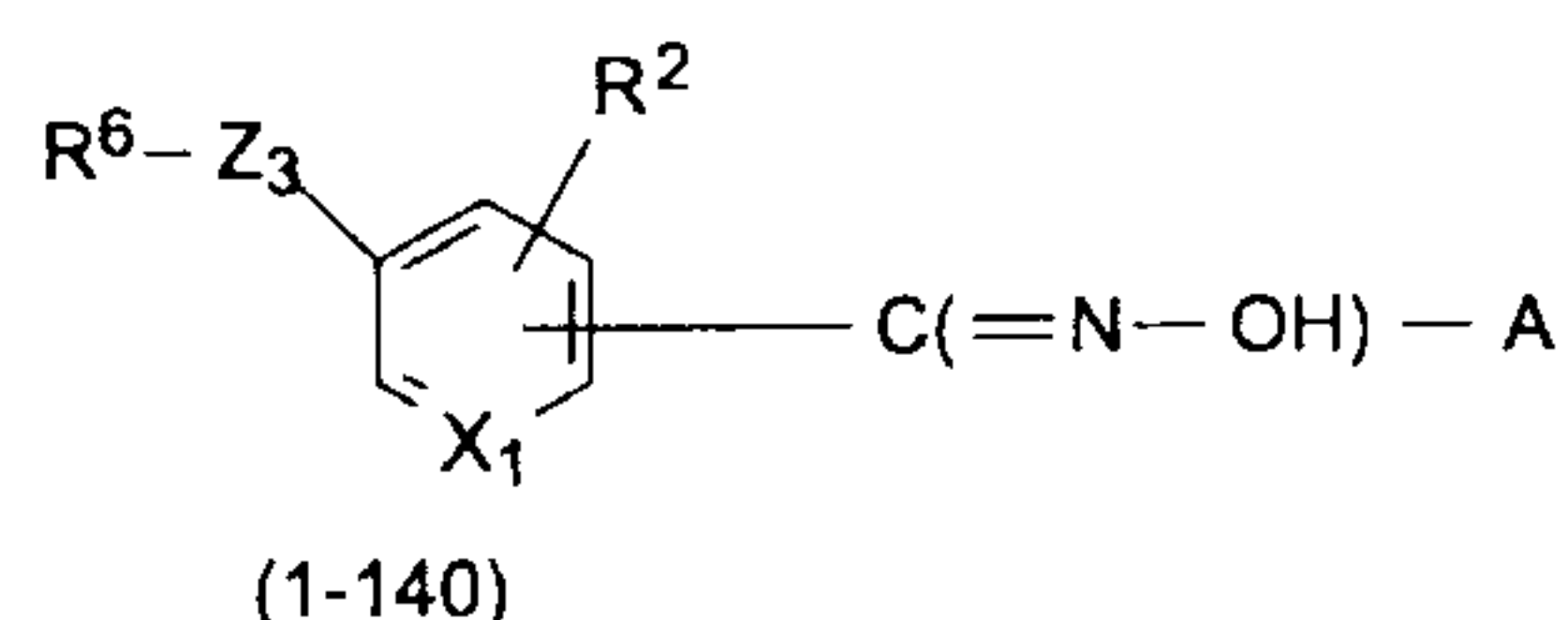
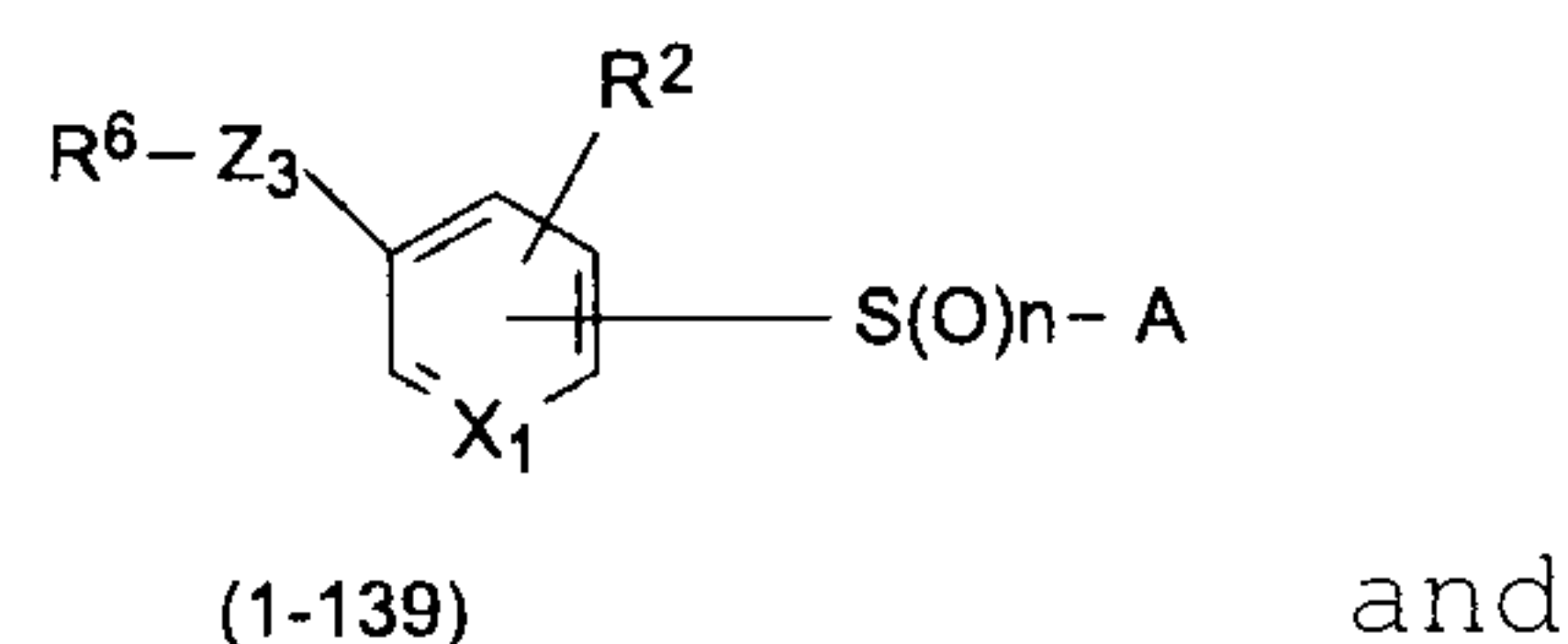
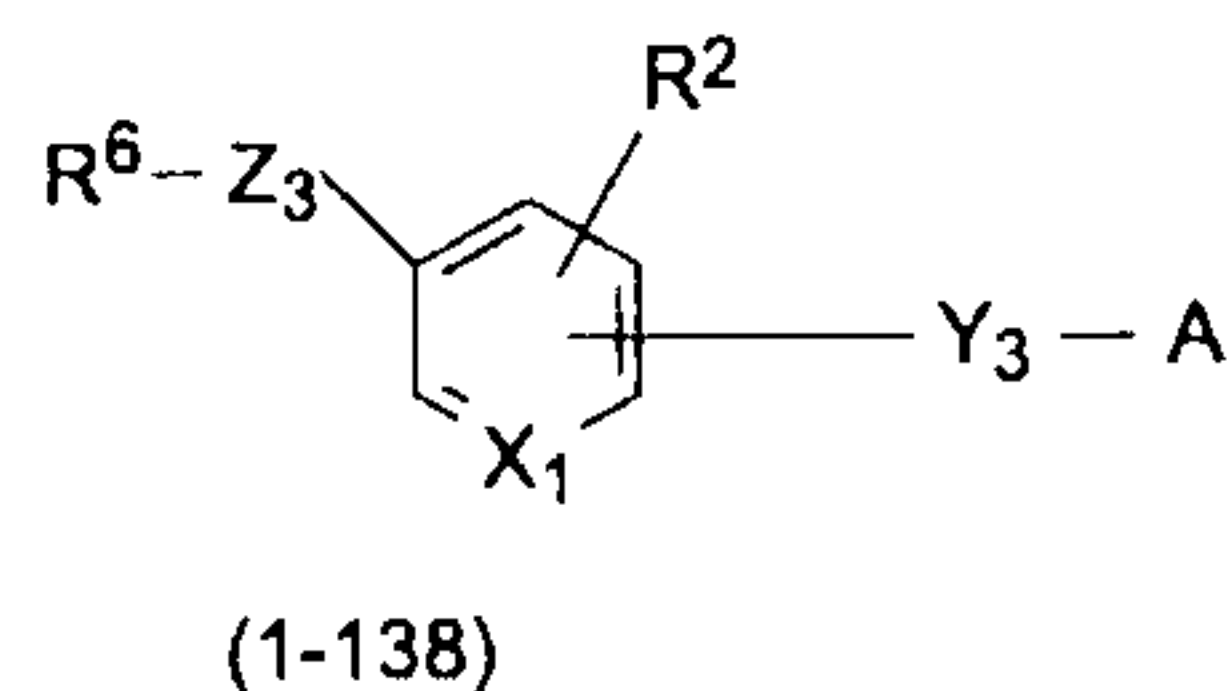
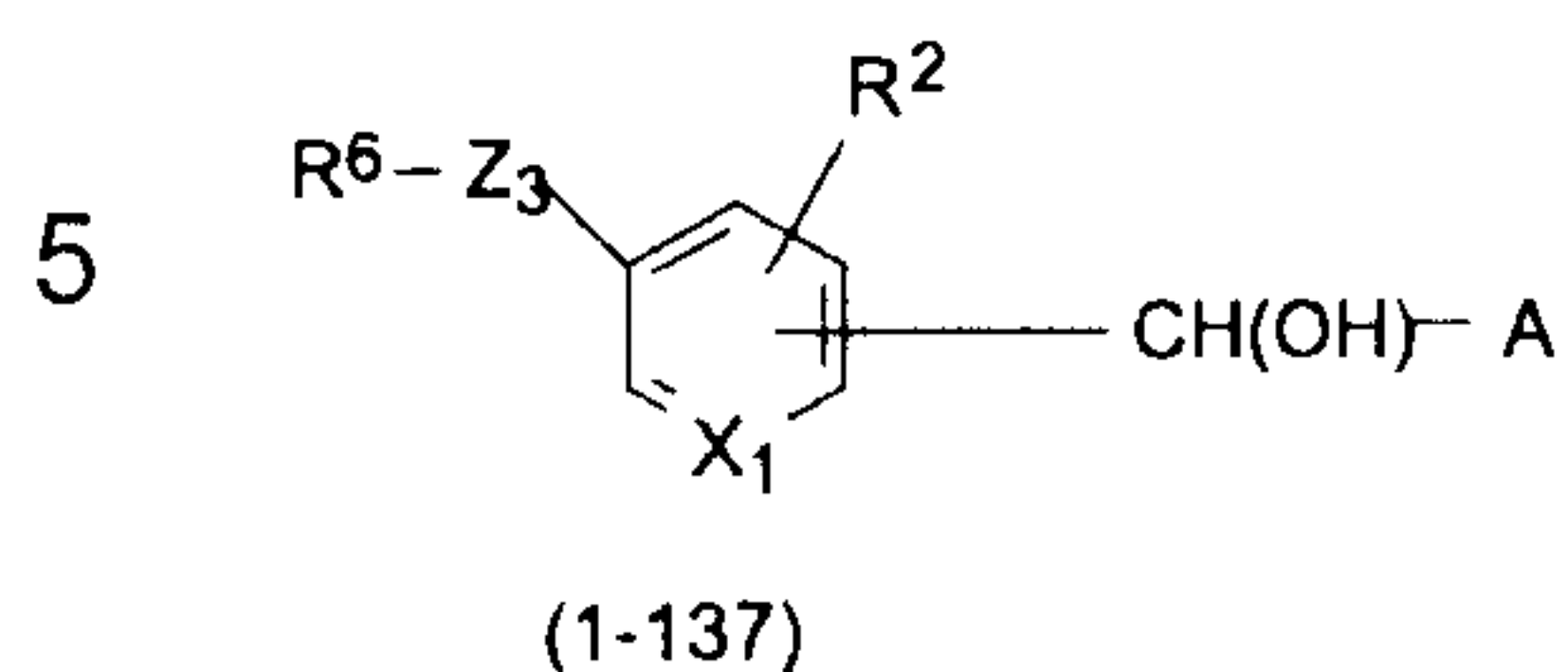
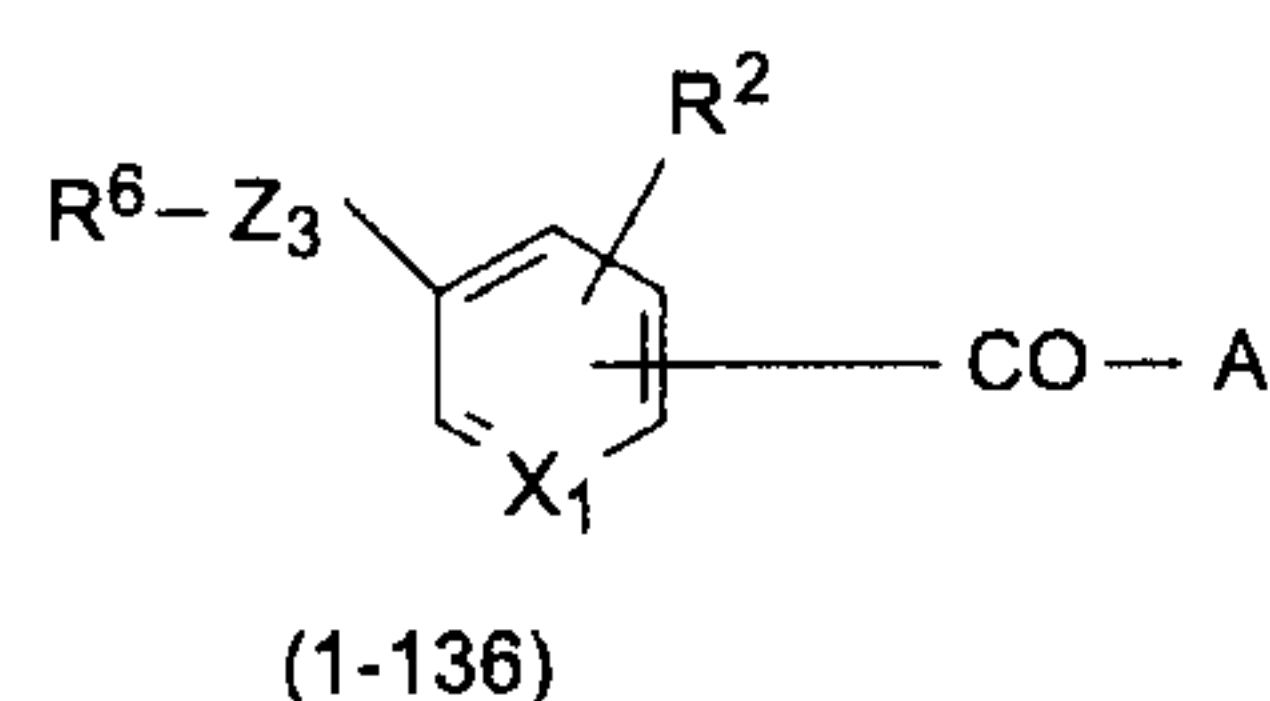
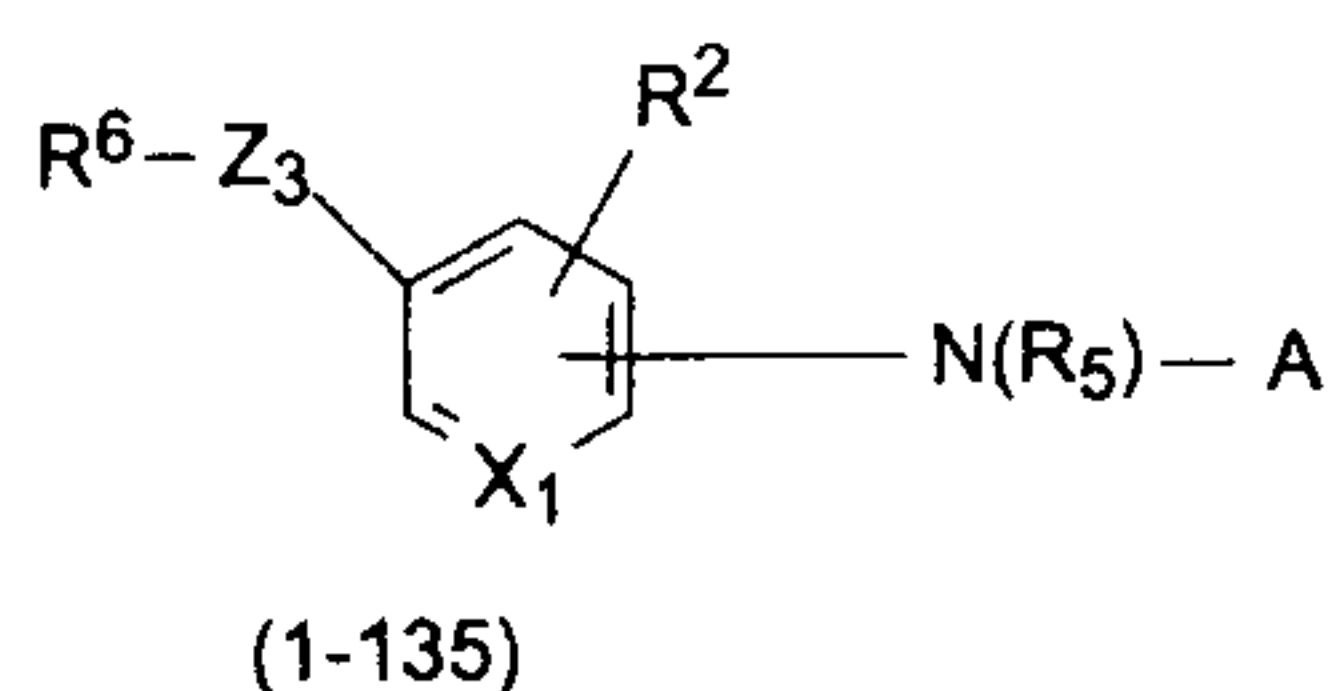
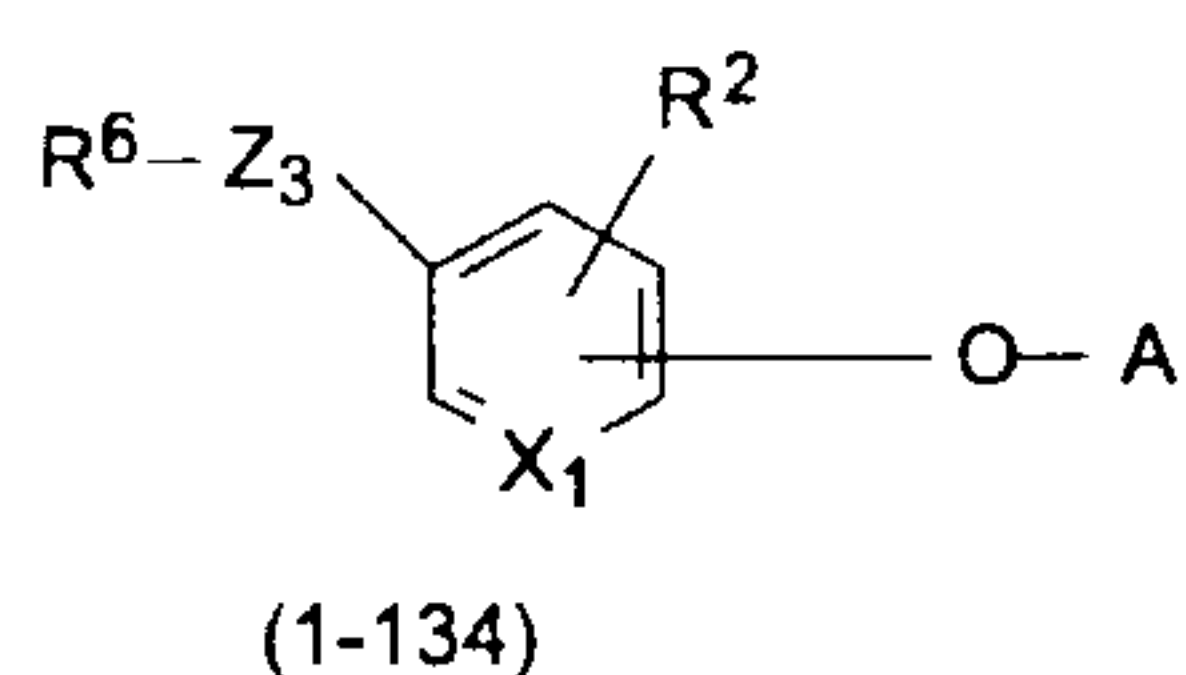


wherein, in said general formulas (1-127) to (1-133), R^6 , B_{18a} , R^2 , X_1 , A , R^5 , and n have the same meanings as described in claim 1, and Y_3 has the same meanings as described in claim 2.

- 15 21. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula (1) is any one selected from the group consisting of the following general formulas (1-134) to (1-140):

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10 wherein, in said general formulas (1-134) to (1-140), R^6 , R^2 , X_1 , A , R^5 , and n have the same meanings as described in claim 1, Y_3 has the same meanings as described in claim 2, and Z_3 represents a C_1 - C_6 alkylene

group or a group $\begin{array}{c} \text{---N---} \\ | \\ R^{8d} \end{array}$ where R^{8d} is the same meanings as

15 described in claim 1.

22. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein Y is a group $-O-$.

23. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein Y is a group $-N(R^5)-$ where
20 R^5 has the same meanings as described in claim 1.

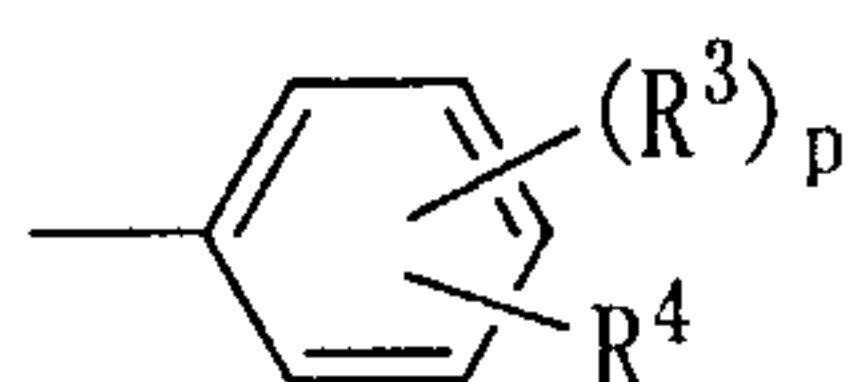
24. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein Y is a group $-CO-$, a group

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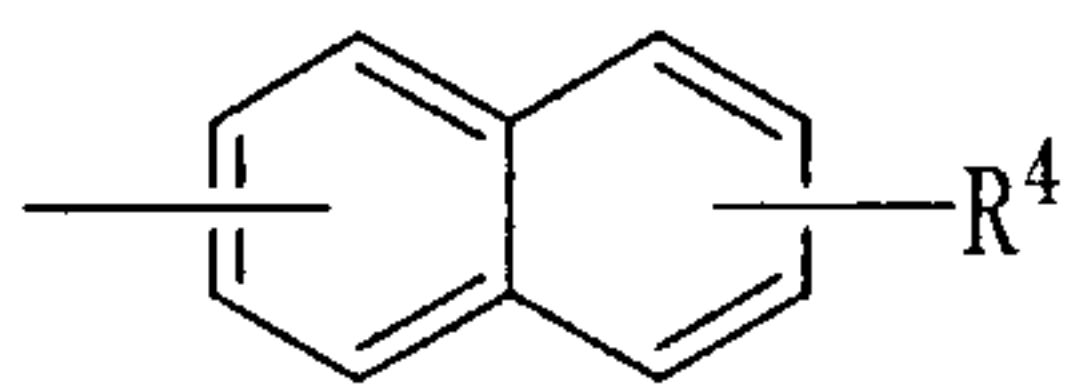
-CH(OH)-, a C₁-C₆ alkylene group, a group -S(O)_n- where n has the same meanings as described in claim 1, or a group -C(=N-OH)-.

25. The aromatic compound or a salt thereof according to
5 any one of claims 1 to 21, wherein A is a group



wherein R^3 , R^4 and p have the same meanings as described in claim 1.

- 10 26. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein A is a group



wherein R^4 has the same meanings as described in claim 1.

- 15 27. The aromatic compound or a salt thereof according to any one of Claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$ where T , R^{14} and R^{15} have the same meanings as described in claim 1, and l is 0.

- 20 28. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$ where T , R^{14} and R^{15} have the same meanings as described in claim 1, and l is 1.

29. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

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1 is 1, and T is a group $-N(R^{17})-B_3-CO-$ where R^{14} , R^{15} , R^{17} and B_3 have the same meanings as described in claim 1.

30. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

5 1 is 1, and T is a group $-B_{19}-N(R^{18})-CO-$ where R^{14} , R^{15} , B_{19} and R^{18} have the same meanings as described in claim 1.

31. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

10 1 is 1, and T is a group $-B_4-CO-$ where R^{14} , R^{15} , and B_4 have the same meanings as described in claim 1.

32. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

1 is 1, and T is a group $-Q-B_5-CO-$ where R^{14} , R^{15} , Q and B_5 have the same meanings as described in claim 1.

15 33. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

1 is 1, and T is a group $-B_6-N(R^{19})-B_7-$ where R^{14} , R^{15} , B_6 , R^{19} and B_7 have the same meanings as described in claim 1.

34. The aromatic compound or a salt thereof according to

20 any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

1 is 1, and T is a group $-CO-B_8-$ where R^{14} , R^{15} , and B_8 have the same meanings as described in claim 1.

35. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$,

25 1 is 1, and T is a group $-CH(OH)-B_9-$ where R^{14} , R^{15} , and B_9 have the same meanings as described in claim 1.

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36. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-CO-B_{10}-CO-$ where R^{14} , R^{15} , and B_{10} have the same meanings as described in claim 1.

5 37. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-CH(OH)-B_{11}-CO-$ where R^{14} , R^{15} , and B_{11} have the same meanings as described in claim 1.

10 38. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-CO-$ where R^{14} and R^{15} have the same meanings as described in claim 1.

15 39. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-SO_2-$ where R^{14} and R^{15} have the same meanings as described in claim 1.

20 40. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a group $-B_{23a}-CO-CO-$ where R^{14} , R^{15} and B_{23a} have the same meanings as described in claim 1.

41. The aromatic compound or a salt thereof according to any one of claims 1 to 21, wherein R^4 is a group $-(T)_1-N(R^{14})R^{15}$, l is 1, and T is a C_1-C_6 alkylene group where R^{14} and R^{15} have the same meanings as described in claim 1.

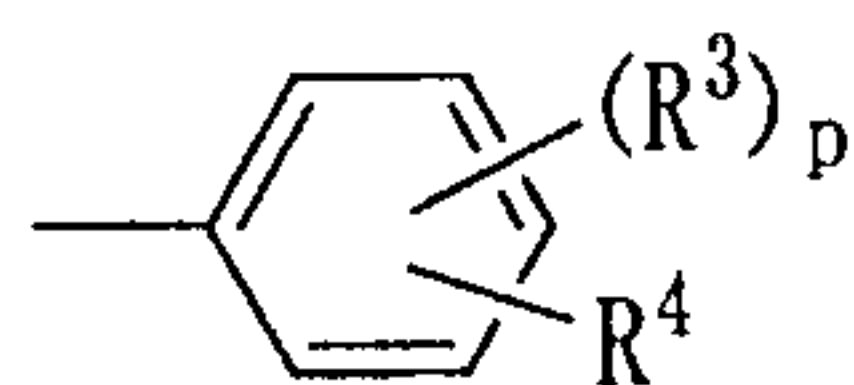
25 42. The aromatic compound or a salt thereof according to claim 1, wherein the compound represented by general formula

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(1) is any one selected from the group consisting of the general formulas (1-1), (1-2), (1-8), (1-9), (1-15), (1-16), (1-29), (1-30), (1-43), (1-44), (1-57), (1-58), (1-64), and (1-65) as defined in claims 2, 3, 4, 6, 8, 10, and 11, wherein

5 Y is a group -O- or a group -N(R⁵)-, A is a group



R³, R⁴ and p have the same meanings as described in claim 1, and R⁴ is a group -(T)₁-N(R¹⁴)R¹⁵ wherein R¹⁴ and R¹⁵ have the
10 same meanings as described in claim 1.

43. The aromatic compound or a salt thereof according to claim 42, wherein l is 1, and T is a group -N(R¹⁷)-B₃-CO- where R¹⁷ and B₃ have the same meanings as described in claim 1.

44. The aromatic compound or a salt thereof according to
15 claim 42, wherein l is 1, and T is a group -B₄-CO- where B₄ have the same meanings as described in claim 1.

45. The aromatic compound or a salt thereof according to claim 42, wherein l is 1, and T is a group -CO-.

46. The aromatic compound or a salt thereof according to
20 claim 42, wherein l is 0.

47. The aromatic compound:

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methoxyphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

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N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

5 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-fluorophenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-fluorophenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

10 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

15

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-methylphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

20

N-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-3,4-dichlorobenzenesulfonamide,

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N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperazin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

5 N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-{6-[(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenyl)methylamino]pyridin-3-yl}-4-trifluoromethylbenzamide,

10 N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

15

N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methylphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-{6-[4-(4-benzylpiperazine-1-carbonyl)-phenoxy]pyridin-3-yl}-4-trifluoromethylbenzamide,

20

N-{6-[4-(4-benzylpiperazine-1-carbonyl)phenoxy]pyridin-3-yl}-3,4-dichlorobenzamide,

N-[6-({4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenyl)methylamino}pyridin-3-yl]-4-trifluoromethylbenzamide,

25

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N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]ethylamino}-2-fluorophenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

5 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-fluorophenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methoxyphenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

10 N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}phenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

15 1-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-3-(3,4-dichlorophenyl)-1-ethylurea,

N-(6-{4-[3-(4-piperonylpiperazin-1-yl)-3-oxopropyl]phenoxy}pyridin-3-yl)-4-trifluoromethylbenzamide,

20 N-[6-(4-{[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-3,4-dichlorobenzamide,

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N-(6-{4-[3-(4-piperonylpiperazine-1-carbonyl)piperidin-1-yl]phenoxy}pyridin-3-yl)-3,4-dichlorobenzamide,

5 N-[6-(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide,

N-{6-[(4-{4-[2-(4-benzylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}phenyl)methylamino]pyridin-3-yl}-4-trifluoromethylbenzamide,

10 N-(6-{4-[(2-{4-[4-(4-fluorobenzoyl)phenyl]piperazin-1-yl}-2-oxoethyl)methylamino]-2-methoxyphenoxy}pyridin-3-yl)-4-trifluoromethylbenzamide,

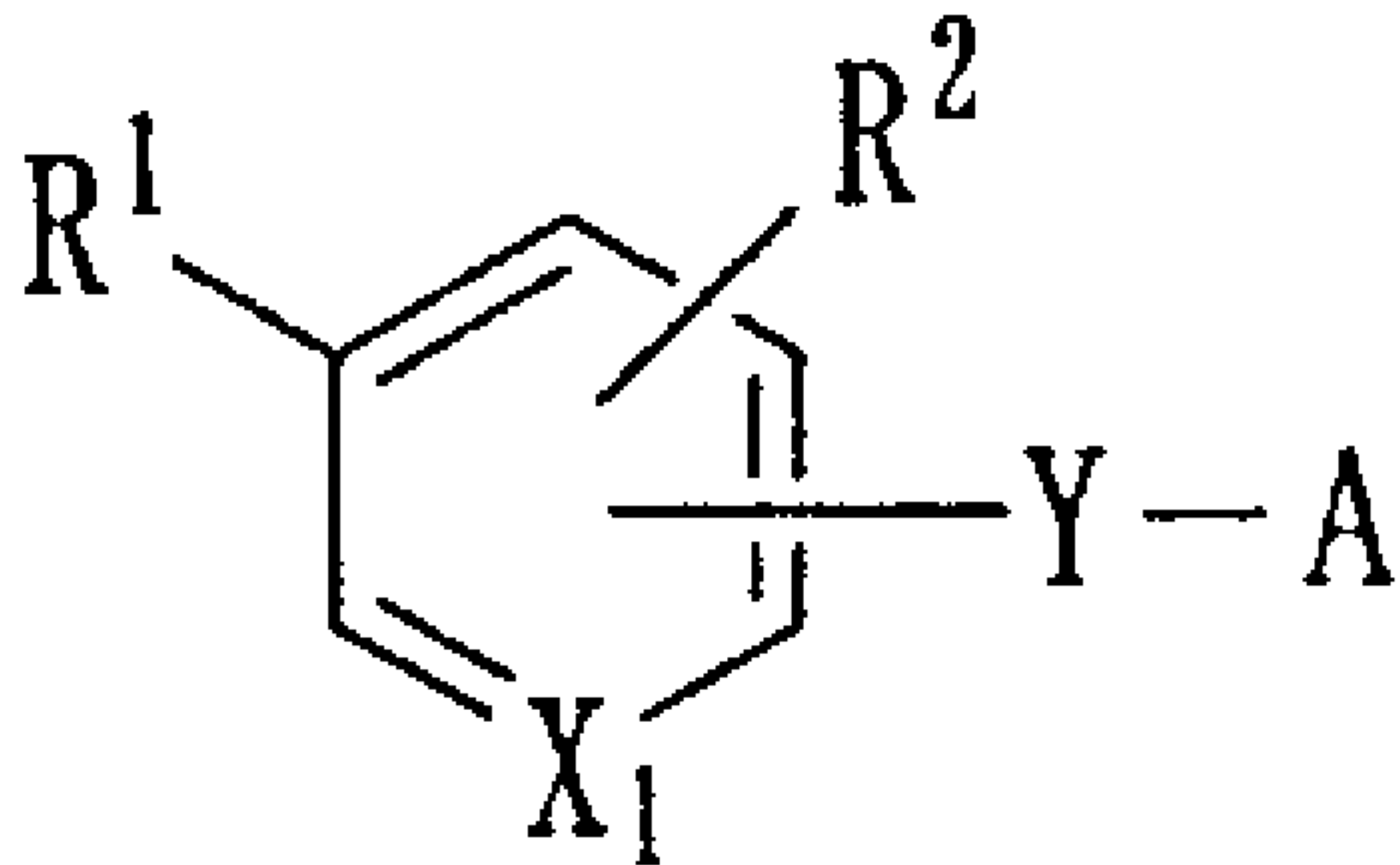
15 2-(4-piperonylpiperazin-1-yl)-N-{3-methyl-4-[5-(4-trifluoromethylphenoxy)methyl]pyridin-2-yloxy]phenyl}-2-oxoacetamide,

N-[6-(4-{[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]methylamino}-2-methylphenoxy)pyridin-3-yl]-2-fluoro-4-trifluoromethylbenzamide,

20 N-[6-(4-{4-[2-(4-piperonylpiperazin-1-yl)-2-oxoethyl]piperidin-1-yl}-2-methoxyphenoxy)pyridin-3-yl]-4-trifluoromethylbenzamide, or

4-(3-{3-methyl-4-[5-(4-trifluoromethylbenzoylamino)pyridin-2-yloxy]phenyl}-2-oxohexahydropyrimidin-1-yl)benzoic acid ethyl ester,

25 or a salt thereof.



(1)