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(54) Title: DIKETOPYRROLO[3,4-c]PYRROLE THIOL/DISULFIDE DYE, COMPOSITION COMPRISING THIS DYE, PROCESS FOR LIGHTENING KERATIN MATERIALS USING THIS DYE

(57) Abstract: The invention relates to the dyeing of keratin materials using diketopyrrolo [3, 4-c] pyrrole thiol and disulfide dyes. The invention relates to a dye composition comprising a diketopyrrolo [3, 4-c] pyrrole chromophore thiol or disulfide dye and to a dyeing process with a lightening effect on keratin materials, in particular keratin fibers, especially human keratin fibers, such as the hair, using said composition. It similarly relates to novel diketopyrrolo [3, 4-c] pyrrole chromophore thiol dyes and to the uses thereof in lightening keratin materials. This composition makes it possible to obtain a coloring with a lightening effect which is particularly resistant and visible on dark keratin fibers.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER:
INV. C09B57/00 A61K8/49

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 647 580 A (OREAL [FR]) 19 April 2006 (2006-04-19) cited in the application examples	1-15
Y	WO 01/62759 A (WELLA AG [DE]; PASQUIER CECILE [CH]; WYSS PATRICK IMPEX [CH]; BRAUN HA) 30 August 2001 (2001-08-30) cited in the application examples	1-15
A	WO 2005/039515 A (CIBA SC HOLDING AG [CH]; WALLQUIST OLOF [CH]) 6 May 2005 (2005-05-06) claim 15 examples 26,28	1,8,14

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2005/039514 A (CIBA SC HOLDING AG [CH]; WALLQUIST OLOF [CH]) 6 May 2005 (2005-05-06) examples -----	1,8,14
A	WO 2005/039513 A (CIBA SC HOLDING AG [CH]; WALLQUIST OLOF [CH]) 6 May 2005 (2005-05-06) example 48 -----	1,8,14
A	WO 2005/097051 A (CIBA SC HOLDING AG [CH]; ELIU VICTOR PAUL [DE]; FROEHLING BEATE [DE];) 20 October 2005 (2005-10-20) cited in the application examples -----	1,8,10, 14
A	DE 10 2004 039954 A1 (CLARIANT GMBH [DE]) 23 February 2006 (2006-02-23) example 8 -----	1
A	WO 2004/007604 A (CIBA SC HOLDING AG [CH]; LENZ ROMAN [CH]; DE KEYZER GERARDUS [CH]; WAL) 22 January 2004 (2004-01-22) examples -----	1
A	GB 2 180 215 A (OREAL OREAL [FR]) 25 March 1987 (1987-03-25) cited in the application the whole document -----	13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2008/062574

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 1647580	A	19-04-2006	BR CN FR JP KR KR MX	PI0506095 A 1853605 A 2876576 A1 2006111626 A 20060054024 A 20080099219 A PA05010969 A		05-09-2006 01-11-2006 21-04-2006 27-04-2006 22-05-2006 12-11-2008 20-04-2006
WO 0162759	A	30-08-2001	AT AU EP ES JP US	253065 T 7207801 A 1185531 A1 2210181 T3 2003524036 T 2003055268 A1		15-11-2003 03-09-2001 13-03-2002 01-07-2004 12-08-2003 20-03-2003
WO 2005039515	A	06-05-2005	CN US	1867313 A 2007031358 A1		22-11-2006 08-02-2007
WO 2005039514	A	06-05-2005	CN US	1867314 A 2007089248 A1		22-11-2006 26-04-2007
WO 2005039513	A	06-05-2005	CN US	1867315 A 2007031353 A1		22-11-2006 08-02-2007
WO 2005097051	A	20-10-2005	AR BR EP EP GB JP KR US	048595 A1 PI0508391 A 1750663 A2 2075036 A1 2412916 A 2007532513 T 20070006859 A 2008295260 A1		10-05-2006 25-09-2007 14-02-2007 01-07-2009 12-10-2005 15-11-2007 11-01-2007 04-12-2008
DE 102004039954 A1		23-02-2006	CN EP WO JP KR	1989195 A 1784450 A1 2006018271 A1 2008510049 T 20070051859 A		27-06-2007 16-05-2007 23-02-2006 03-04-2008 18-05-2007
WO 2004007604	A	22-01-2004	AU CN EP JP KR MX US	2003250910 A1 1668686 A 1521802 A1 2005533143 T 20050026958 A PA05000691 A 2005261402 A1		02-02-2004 14-09-2005 13-04-2005 04-11-2005 16-03-2005 08-04-2005 24-11-2005
GB 2180215	A	25-03-1987	BE CH DE ES FR IT NL US	905402 A1 669110 A5 3630849 A1 2001946 A6 2586913 A1 1195156 B 8602284 A 4823985 A		09-03-1987 28-02-1989 19-03-1987 01-07-1988 13-03-1987 12-10-1988 01-04-1987 25-04-1989