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(74) Agent: DELINE, Douglas, N.; The Dow Chemical Company, Patent Dept., P.O. Box 1967, Midland, MI 48641-1967 (US).			(88) Date of publication of the international search report: 13 June 1996 (13.06.96)
(54) Title: SILYLIUM CATIONIC POLYMERIZATION ACTIVATORS FOR METALLOCENE COMPLEXES			
(57) Abstract Catalyst systems useful in addition polymerisation reactions comprising a Group 4 metal complex and a silylium salt activating cocatalyst are prepared by contacting the metal complex with a silylium salt of a compatible, non-coordinating anion, optionally the silylium salt is prepared by electrochemical oxidation and splitting of the corresponding disilane compound.			

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 95/08467

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C08F10/00 C08F4/643 C07F7/08 C25B3/02

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)

IPC 6 C08F C07F C25B C07D

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP,A,0 427 696 (FINA TECHNOLOGY) 15 May 1991 see page 9, line 47 - line 51 ---	1-9
Y	ORGANOMETALLICS, vol. 13, no. 6, June 1994 J. B. LAMBERT 'Silyl Cations in the Solid and in Solution' cited in the application	1-9
A	see page 2430 - page 2443 ---	10-12
A	JOURNAL OF THE CHEMICAL SOCIETY, CHEMICAL COMMUNICATIONS, 1993 see page 383 - page 384 ---	10-12
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

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- * "P" document published prior to the international filing date but later than the priority date claimed

- * "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- * "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- * "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * "&" document member of the same patent family

Date of the actual completion of the international search

28 March 1996

Date of mailing of the international search report

26.04.96

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 95/08467

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB,A,2 234 511 (DOW CORNING) 6 February 1991 see claims -----	10-12

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 95/08467

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

- 1.- Claims 1-9: Polymerisation catalyst, its preparation and use.
- 2.- Claims 10-12: Process for the preparation of silylium salts.

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 95/08467

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-0427696	15-05-91	US-A- 5155080 CA-A- 2027144 CN-A- 1053797 JP-A- 3179006 US-A- 5225500	13-10-92 11-04-91 14-08-91 05-08-91 06-07-93
GB-A-2234511	06-02-91	DE-A- 4024600 FR-A,B 2650599 JP-A- 3150382	07-03-91 08-02-91 26-06-91