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ning of each regular issue of the PCT Gazette.*

(54) Title: LEWIS ACID IONIC LIQUIDS

(57) Abstract: The present inventions relate to novel ionic liquids comprising a Lewis acid anion such as Al_yR_{3y+1} wherein y is greater than 0 and R is independently selected from the group consisting of an alkyl group and halogen group. The cation of the ionic liquids can be selected from ammonium, sulfonium, and phosphonium cations wherein said cation generally has less than 14 total carbon atoms. The anion may contain an organic bridge to bond neighboring aluminum atoms that would otherwise be susceptible to leaching aluminum trichloride. The ionic liquids are useful in many applications and particularly as catalysts.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07F 5/06

US CL : 556/174, 178, 180, 186

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)

U.S. : 556/174, 178, 180, 186

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 practicable, search terms used)
REGISTRY and CAPLUS Databases

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WESTMORELAND, Jr. et al., Journal Organometallic Chemistry, December 1970, Vol. 25, No. 2, pages 329-335, especially Table 1 at page 331.	1-3, 11-13
X	SYMMES, Jr. et al., Journal of Organic Chemistry, 1978, Vol. 43, No. 6, pages 1250-1253, especially compound 2 at page 1251.	1, 3, 17
X	GB 1,031,839 (FARBENFABRIKEN BAYER AKTIENGESELLSCHAFT) 2 June 1966, pages 2 and 3.	1, 3, 17
X	US 4,857,238 A (TSUCHIYA et al.) 15 August 1989, column 7, lines 1-17.	1, 3, 11, 12
X	US 3,418,216 A (DOTZER RICHARD) 24 December 1968, see Tables I-III at columns 3 and 5.	1, 2, 11

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☐ See patent family annex.

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