(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 September 2010 (23.09.2010)

PCT

(10) International Publication Number
WO 2010/106324 A1

(51) International Patent Classification:
C07F 5/06 (2006.01) *B01J 31/00* (2006.01)
C07D 317/12 (2006.01)

(21) International Application Number:
PCT/GB2010/000488

(22) International Filing Date:
17 March 2010 (17.03.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0904654.1 18 March 2009 (18.03.2009) GB

(71) Applicant *(for all designated States except US)*: **UNIVERSITY OF NEWCASTLE UPON TYNE** [GB/GB]; 6 Kensington Terrace, Newcastle Upon Tyne NE1 7RU (GB).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **NORTH, Michael** [GB/GB]; School of Natural Sciences, Bedson Building, University of Newcaslte Upon Tyne, Newcastle Upon Tyne, Tyne and Wear NE1 7RU (GB).

(74) Agents: **WATSON, Robert, J.** et al.; Mewburn Ellis LLP, 33 Gutter Lane, London EC2V 8AS (GB).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

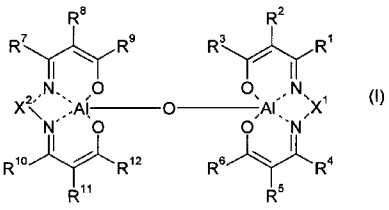
Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

(54) Title: ALUMINUM COMPLEXES AND THEIR USE IN THE SYNTHESIS OF CYCLIC CARBONATES



(I)

(57) Abstract: Dimeric aluminium catalysts of formula I: and their use in catalysing the synthesis of cyclic carbonates from epoxides and carbon dioxide.

WO 2010/106324 A1