

Title (en)
LEWIS BASE CATALYSTS AND METHODS THEREOF

Title (de)
LEWIS-BASENKATALYSATOREN UND VERFAHREN DAFÜR

Title (fr)
CATALYSEURS À BASE DE LEWIS ET PROCÉDÉS ASSOCIÉS

Publication
EP 3924397 A4 20220622 (EN)

Application
EP 20755183 A 20200211

Priority
• US 201962804389 P 20190212
• EP 19179810 A 20190612
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Abstract (en)
[origin: WO2020167838A1] The present disclosure relates to Lewis base catalysts. Catalysts, catalyst systems, and processes of the present disclosure can provide high temperature ethylene polymerization, propylene polymerization, or copolymerization as the Lewis base catalysts (e.g., bis(arylphenol ate) five-membered ring catalysts), can be stable at high polymerization temperatures and have good activity at the high polymerization temperatures. The stable catalysts with good activity can provide formation of polymers having high molecular weights or polymers having low to very molecular weights, and the ability to make an increased amount of polymer in a given reactor, as compared to conventional catalysts. Hence, the present disclosure demonstrates highly active catalysts capable of operating at high reactor temperatures while producing polymers with controlled molecular weights and or robust isotacticity.

IPC 8 full level
C08F 4/64 (2006.01); **C08F 10/00** (2006.01)

CPC (source: EP)
C08F 110/02 (2013.01); **C08F 110/06** (2013.01); **C08F 210/16** (2013.01); **C08F 4/659** (2013.01); **C08F 4/65908** (2013.01); **C08F 4/65912** (2013.01)

Citation (search report)
• [I] KR 20180022137 A 20180306 - LG CHEMICAL LTD [KR]
• [A] US 2008177020 A1 20080724 - AGAPIE THEODOR [US], et al
• [A] US 2016289351 A1 20161006 - HLAVINKA MARK L [US]
• [A] THEODOR AGAPIE ET AL: "Zirconium and Titanium Complexes Supported by Tridentate LX2 Ligands Having Two Phenolates Linked to Furan, Thiophene, and Pyridine Donors: Precatalysts for Propylene Polymerization and Oligomerization", ORGANOMETALLICS, AMERICAN CHEMICAL SOCIETY, US, vol. 27, no. 23, 8 December 2008 (2008-12-08), pages 6245 - 6256, XP002743333, ISSN: 0276-7333, [retrieved on 20081106], DOI: 10.1021/OM800136Y
• [A] GOLISZ S R ET AL: "Synthesis of Early Transition Metal Bisphenolate Complexes and Their Use as Olefin Polymerization Catalysts", MACROMOLECULES, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, UNITED STATES, vol. 42, no. 22, 24 November 2009 (2009-11-24), pages 8751 - 8762, XP001552523, ISSN: 0024-9297, [retrieved on 20091029], DOI: 10.1021/MA901659Q
• See references of WO 2020167838A1

Cited by
EP4103629A4; EP4103628A4; EP4103630A4

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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DOCDB simple family (application)
US 2020017757 W 20200211; CN 202080013689 A 20200211; EP 20755183 A 20200211; SG 11202108010R A 20200211