

Title (en)

BIS(ARYL PHENOLATE) LEWIS BASE CATALYSTS AND METHODS THEREOF

Title (de)

BIS(ARYLPHENOLAT)-LEWIS-BASEN-KATALYSATOREN UND VERFAHREN DAFÜR

Title (fr)

CATALYSEURS CONSTITUÉS D'UNE BASE DE LEWIS DU TYPE BIS(ARYL-PHÉNOLATE) ET PROCÉDÉS ASSOCIÉS

Publication

EP 3924395 A4 20220622 (EN)

Application

EP 20756711 A 20200211

Priority

- US 201962804372 P 20190212
- EP 19179811 A 20190612
- US 2020017740 W 20200211

Abstract (en)

[origin: WO2020167824A1] The present disclosure relates to bis(aryl phenol ate) Lewis base catalysts. Catalysts, catalyst systems, and processes of the present disclosure can provide high temperature ethylene polymerization, propylene polymerization, or copolymerization as the bis(aryl phenolate) Lewis base catalysts are 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 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 KR)

C08F 4/022 (2013.01 - KR); **C08F 4/64124** (2013.01 - KR); **C08F 4/65908** (2013.01 - KR); **C08F 4/65912** (2013.01 - KR);
C08F 4/65916 (2013.01 - KR); **C08F 10/00** (2013.01 - EP KR); **C08F 110/02** (2013.01 - EP); **C08F 110/06** (2013.01 - EP);
C08F 110/14 (2013.01 - EP); **C08F 210/16** (2013.01 - EP); **C08F 4/659** (2013.01 - EP); **C08F 4/65908** (2013.01 - EP);
C08F 4/65912 (2013.01 - EP)

C-Set (source: EP)

1. **C08F 10/00 + C08F 4/64158**
2. C08F 210/16 + C08F 210/14 + C08F 2500/02 + C08F 2500/03 + C08F 2500/34
3. C08F 110/02 + C08F 2500/03 + C08F 2500/34
4. C08F 110/02 + C08F 2500/01 + C08F 2500/03 + C08F 2500/34
5. C08F 110/02 + C08F 2500/01 + C08F 2500/04 + C08F 2500/34
6. C08F 110/02 + C08F 2500/02 + C08F 2500/03 + C08F 2500/34
7. C08F 110/06 + C08F 2500/03 + C08F 2500/34
8. C08F 210/16 + C08F 210/14 + C08F 2500/01 + C08F 2500/03 + C08F 2500/34
9. C08F 210/16 + C08F 210/14 + C08F 2500/01 + C08F 2500/04 + C08F 2500/34
10. C08F 110/14 + C08F 2500/02
11. C08F 110/06 + C08F 2500/01 + C08F 2500/03 + C08F 2500/34

Citation (search report)

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- [A] US 2008177020 A1 20080724 - AGAPIE THEODOR [US], et al
- [A] US 2016289351 A1 20161006 - HLAVINKA MARK L [US]
- [A] MATTHIAS LEIN ET AL: "Identification of non-classical C-H...M interactions in early and late transition metal complexes containing the CH(ArO)₃ ligand", DALTON TRANSACTIONS, vol. 42, no. 30, 1 January 2013 (2013-01-01), pages 10939, XP055654332, ISSN: 1477-9226, DOI: 10.1039/c3dt51028j
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- [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 2020167824A1

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

DOCDB simple family (publication)

WO 2020167824 A1 20200820; CN 113423742 A 20210921; CN 113423742 B 20230505; CN 113614123 A 20211105;
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JP 2022520575 A 20220331; JP 7242879 B2 20230320; KR 20210118204 A 20210929; SG 11202107809T A 20210830;
SG 11202108252U A 20210830; WO 2020167799 A1 20200820; WO 2020167821 A1 20200820

DOCDB simple family (application)

US 2020017740 W 20200211; CN 202080013654 A 20200211; CN 202080023077 A 20200211; EP 20755182 A 20200211;
EP 20756711 A 20200211; JP 2021547085 A 20200211; KR 2021702929 A 20200211; SG 11202107809T A 20200211;
SG 11202108252U A 20200211; US 2020017711 W 20200211; US 2020017736 W 20200211