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(54) Title: BIS(ARYL PHENOLATE) LEWIS BASE CATALYSTS AND METHODS THEREOF

(57) Abstract: 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.



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