

Abstract Preview of 'Binuclear Ni-based catalysts' (MH31LV)

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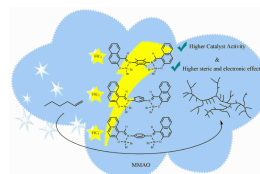
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Invited Speaker -
Learning Outcomes More information to understanding the behaviour of multinuclear catalysts for olefin polymerization

Preview of your abstract

Novel binuclear Ni-based FI catalysts for polymerization of 1-hexene **M. Khoshsefat**

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Three naphthoxy-imine ligands (FIL_n, n=1-3) were synthesized, characterized and used for the synthesis of the corresponding binuclear Ni-based catalysts (Graphic). The structures were different in the bridge between the metallic centers. One of the important reasons to motivate us for synthesis these compounds was that the dinuclear late transition metals with an interesting behavior in polymerization can be a potentially applicable for olefin polymerization if two metal centers operate to show cooperative electronic and steric effects on catalytic reaction. The effect of ortho-substituent and position of the linkage in center ring on the catalyst productivity were investigated. To reach this goal, the experiments were performed under similar condition in presence of modified methylaluminoxane (MMAO) as cocatalyst. FIC₃ showed the highest activity and produced Poly(1-hexene) with a moderate molecular weight among the catalysts, while for FIC₂ and FIC₁ observed insignificant activities. The high performance of the FIC₃ was attributed to the electronic and steric effects due to the presence of four methyl groups on the ortho-position of the center ring.



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