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Study of Low Catalytic Activity Systems (Biscyclopentadienyl Complexes–Aluminoxane) on Olefin Polymerization

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ABSTRACT

Olefin polymerization using low activity catalyst systems: Cp_2WCl_2-methylaluminoxane, $[Cp_2Mo(CH3)_2][PF_6]$-methylaluminoxane and $Cp_2Mo(CH3)_2$-methylaluminoxane, is described. All these catalyst systems were studied in ethylene and propylene polymerization; however, they only showed catalytic activity for ethylene. Only one type of methylaluminoxane (MAO) was used, prepared in an Al/H_2O ratio of 2. The kinetics of polymerization were examined and the experimental data (either presented here or in previous papers) were fitted to the kinetic models developed previously and now extended to account for the methylaluminoxane effect.

Key words: olefin polymerization, kinetic profiles, metallocene, Ziegler-Natta catalysis

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