

Polymerization of Cyclic Olefin by Catalytic System of Palladium(II) Complex and Modified Methylaluminoxane (MMAO)

이효선[†]
경북대학교

(hyosunlee@knu.ac.kr[†])

We have synthesized series of Pd(II) complexes with ligands L_A , L_B and L_C where L_A is (E)-3-methoxy-N-(quinolin-2-ylmethylene)propan-1-amine, L_B is (E)-N¹,N¹-dimethyl-N²-(pyridin-2-ylmethylene)ethane-1,2-diamine and L_C (E)-N-(pyridin-2-ylmethylene)hexan-1-amine. All complexes were characterized by ¹H-NMR, ¹³C-NMR, IR, elemental analyzer and single crystal X-ray diffraction. All complexes adopted distorted square planar geometry around palladium metal center. The catalytic properties of these complexes toward the polymerization of cyclic olefins such as norbornene (NBE) and norbornene derivatives in the presence of modified methylaluminoxane (MMAO) were also investigated. Specifically, all precatalysts showed a high polymer yield of over 90% from 1:1000 to 1:8000 ratio ([catalyst]: [monomer]) in the polymerization of NBE.