

A partially serendipitous discovery of thermo-switchable ruthenium olefin metathesis initiator that seem to be well suited for ROMP of monomers bearing vinyl pendant groups.

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Streszczenie

A latent Ru olefin metathesis catalyst bearing a chelating ligand with an azoxybenzene fragment was obtained and characterized. The complex was inactive in the ring closing metathesis (RCM) reaction of a standard test diene: diethyl diallylmalonate at room temperature but can be subsequently activated by elevated temperature (up to 100 °C). The lack of activity of this azoxy catalyst in RCM of dienes containing terminal C-C double bonds at room temperature and high activity in ring opening metathesis polymerization (ROMP) of bicyclo [2.2.1]hept-2-ene (norbornene, NBE) permitted the ROMP of the challenging monomer: 5-vinyl-2-norbornene yielding soluble polymers with cyclopentenylenevinylene chains with vinyl pendant groups.

Słowa kluczowe

olefin metathesis, ring opening metathesis polymerization,
ruthenium

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