

Synthesis of Norbornene Derivation via Diels–Alder Reaction

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Bicyclo(2.2.1)hept-2-ene (Norbornene) and Tetracyclododecen(TCD) derivatives are very important starting materials for the Cyclo-olefin Polymer (COC). This has a wide application in the area of optical lens, film and fiber. In this study, we prepared Norbornene and TCD derivatives such as Metyl norbornene (MNB), Ethyl norbornene (ENB), Metyl tetracyclododecen (MTD), and Ethyl tetracyclododecen (ETD) using Diels–Alder reaction between cyclopentadien(CPD) and olefin such as propylene or butylenes. The yields and selectivities of the Diels–Alder product were significantly influenced by reaction temperature, ratio of starting material, and solvent.