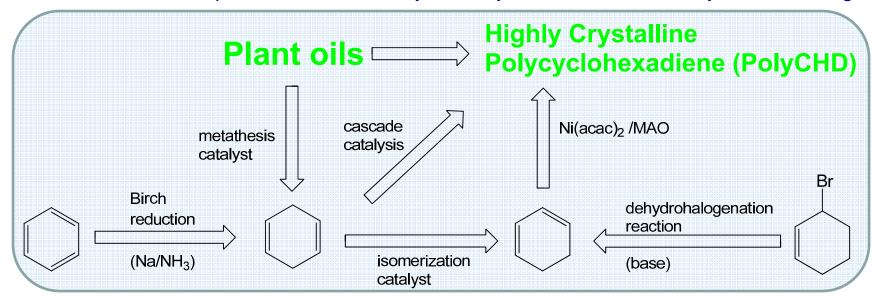


Polymerization Alternatives to Birch Reduction and Dehydrohalogenation Reactions

Robert T. Mathers, Department of Chemistry, Pennsylvania State University, New Kensington



Benefits of Isomerization Reactions

- Low catalyst loading required for Grubbs metathesis catalyst and ruthenium hydride isomerization catalyst
- Synthesis of 1,3-CHD from plant oils is nearly an order of magnitude less expensive

Benefits of Cascade Reactions

- Less synthetic steps for polymerization
- Solvent-free polymerizations
- No halogenated waste

Mathers, R. T. et al. *Macromol. Rapid Commun.*, 2011, 32, 1338-1342