Einladung zum Vortrag von

Prof. Dr. Parisa Mehrkhodavandi
University of British Columbia

„Chiral indium and zinc catalysts for the living and immortal polymerization of cyclic esters”

Poly(lactic acid) (PLA) is a widely used, biodegradable polymer which is commercially synthesized. The controlled ring opening polymerization of lactide and other cyclic esters to create a new generation of high functioning biodegradable material remains a challenge that is being addressed by many chemists. We have developed a family of indium compounds supported by chiral amino phenolate ligands and have explored their reactivity for the living and immortal ring opening polymerization of lactide. These complexes are highly active catalysts for living PLA formation and exhibit significant control of polymer macro- and microstructure. We have examined the origin of stereoselectivity during lactide polymerization and applied these catalysts to other cyclic esters. Cationic indium catalysts are capable of alternating copolymerization cyclic esters and ethers. The synthesis, reactivity, and potential applications of these indium compounds will be discussed.

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