RECENT PROGRESS IN THE RING-OPENING POLYMERIZATION OF LACTONES

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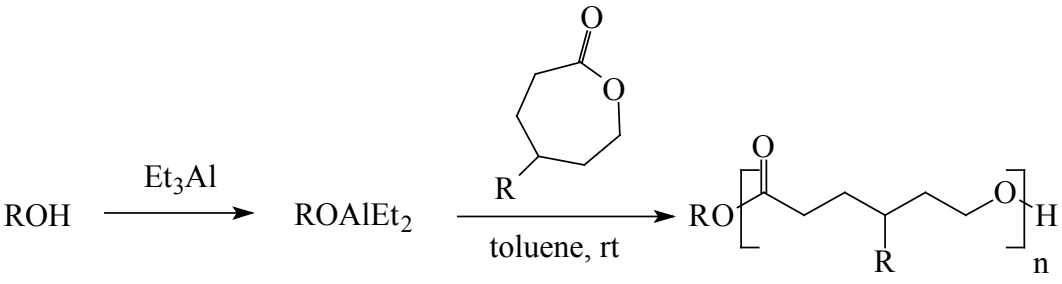
Over the past 20 years, increasing attention has been paid to the Ring Opening Polymerization of lactones and lactides in order to prepare the corresponding polyesters. The discovery that aluminum alkoxides promoted living polymerization paved the way to the synthesis of well-tailored polyesters. The first part of the lecture will be devoted to recall this results.



R = H, functional pendant group

A large range of materials have been prepared in our Center of Research as, e. g. hybrid organic / inorganic materials, porous supports for cell culture, dispersing agents

The combination of ROP with other living processes is a tool to extend further the design of new materials.

The availability of functional pendant groups is highly desirable for the fine tuning of properties, in view of e.g., attachment of drugs, improvement of biocompatibility. The synthesis of ε-caprolactones substituted by functional groups and the « livingness » of their polymerization promoted by aluminum alkoxides will be discussed.