
Original Polymer Synthesis through an Organometallic Approach

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Abstract

The first polymerization exploiting the carbenic reactivity of homogeneous gold catalysis has been devised. In the presence of a gold catalyst, monomers incorporating both a propargylic ester and an alkene moiety polymerized through a metallocarbene generation/cyclopropanation sequence to afford the corresponding macromolecules. This approach constitutes an unprecedented example of cyclopropanation-based polymerization and allows access to original macromolecule skeletons. The latter were then analyzed from the viewpoint of conductivity and showed some promising properties.

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