



TECHNOLOGY

Living Cyclopolymerization of Nonconjugated Dienes

OVERVIEW

Researchers at the University of Maryland, College Park, have invented methods and a catalyst for the cyclopolymerization of non-conjugated dienes.

The catalyst is an amidinate-based zirconium precatalyst. Upon activation with a borate co-catalyst, it not only allows for the stereospecific living polymerization of alpha-olefins, but can provide for the cyclopolymerization of non-conjugated dienes. In living polymers, the "polymeric molecules 'live' for an indefinite period of time", and "the living ends are potentially able to grow" so long as a monomer remains available.

The catalyst and method provide access to new classes of polyolefin block co-polymers that can be separated and ordered. Given the enormous range of alpha-olefins and non-conjugated dienes that are readily available, the results suggest that a new line of polyolefin materials with tunable properties may now be at hand.

A large chemical manufacturer is reviewing the activity of the catalysts.

For additional information please contact the Office of Technology Commercialization. Phone: 301-405-3947. E-mail: otc@umd.edu

CONTACT INFO

UM Ventures
0134 Lee Building
7809 Regents Drive
College Park, MD 20742
Email: umdtechtransfer@umd.edu
Phone: (301) 405-3947 | Fax: (301) 314-9502

Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Issued

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Chemical

EXTERNAL RESOURCES

- [US Patent 6,579,998](#)

LS-2000-046