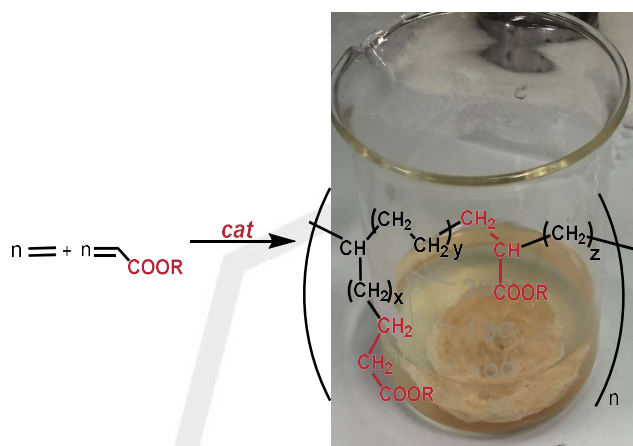




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Technology Transfer

CATALYSTS AND PROCESS FOR OLEFINS AND POLAR VINYL MONOMERS COPOLYMERIZATION AND OLEFINS HOMOPOLYMERIZATION



Category:

Chemistry

Patent Ownership:

UNIVERSITA' DI TRIESTE,

UNIVERSITAT ROVIRA I VIRGILI TARRAGONA (SPAIN)

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Pending

Licensing Availability:

Available

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Brief description

The present invention deals with the development of new, efficient, homogeneous catalysts for the synthesis of functionalized polyolefins featuring the polar vinyl monomer either in the main chain or both in the main chain and at the end of the branches. The content of inserted polar monomer is in the range 0.2 - 4.0 mol %; the molecular weight of the synthesized macromolecules covers the range 800 Da - 360 kDa. These catalysts perfectly fits in pursuing the objectives of sustainable resources exploitation, cost and atom-efficient technologies.

Innovative aspects and main advantages

The main innovative aspects deal with the proper combination between the peculiar ligand present in the catalyst and the reaction conditions.

With respect to the current industrially applied technologies, these new catalysts:

- ✓ are active under very mild reaction conditions;

- ✓ do not require the addition of any cocatalyst and/or additive;
- ✓ allow a high control of the macromolecule architecture.

Applications

Synthesis of functionalized polyolefins.

Potential market

Industries involved to plastic material production.

Development status

Research level, ready to pilot plant.

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