



## TECHNOLOGY

# Method for Production of Multimodal Polyolefins of Tunable Composition, Molecular Weight, and Polydispersity

## OVERVIEW

This invention relates to a method of preparing multimodal polyolefins of a tunable composition by contacting a first polyolefin with at least one metallocene catalyst and then contacting the mixture with a second polyolefin and a second catalyst. The process may also be completed in a single step.

A bimodal polymer is defined as a polymer having two distinct molecular weight distribution curves as observed from gel permeation chromatography (GPC). In other words, a bimodal polymer can be thought of as a mixture containing a first polymer with a relatively higher molecular weight blended together with a second polymer with a relatively lower molecular weight.

Polyolefins having broader molecular weight densities are products of notable commercial value, since they show high workability due to the high molecular weight fractions (HMW) and, at the same time, they provide excellent mechanical properties due to the low molecular weight (LMW) fractions.

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## Additional Information

### INSTITUTION

University of Maryland, College Park

### PATENT STATUS

Patent(s) pending

### LICENSE STATUS

Contact OTC for licensing information

### CATEGORIES

- Chemical

## EXTERNAL RESOURCES

- [US Patent 7,053,157](#)

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