

The Renaissance of Polyolefins

Polyolefins, long aliphatic hydrocarbons, are some of the simplest synthetic polymers, and they have a long and illustrious history of usage in all sorts of applications, from packaging to insulation to furniture, to textiles all the way to banknotes, automotive, and many more.

Although there is today a large research effort on bio-derived polymers (see, e.g., our special issues on [renewably sourced polymers](#)¹ and [polysaccharides](#)²), synthetic polymers and in particular polyolefins which are the most basic polymers of synthesis, still compose the bulk of polymer production and usage.

Given the natural gas boom in recent years, the [cost of synthetic polymers based on this feedstock has actually gone down in recent years](#),³ particularly in the United States.⁴ In addition, polyolefins can be obtained from biobased feedstocks, such as the polyethylene (and soon polypropylene) from sugarcane produced by Braskem.

All this points to the continuing importance of polyolefins, which are going to remain the polymers of choice for many applications for the foreseeable future, and to the worldwide sustained academic and industrial research interest on their synthesis, properties, and applications. At the *Journal of Applied Polymer Science*, we are proud to feature daily on our pages the unfolding of this story, presenting [new catalysts](#)⁵ for polyolefin synthesis, [composites with biomaterials](#)⁶ and [inorganic fillers such as clay](#),⁷ [polyolefin-based flame-retardants](#),⁸ and [novel extrusion techniques](#).⁹

Amidst all this, the main drawback of these materials remains their long-term stability in

the environment. In this respect, this special issue features research on [oxo-degradants](#)¹⁰ to accelerate polyolefin dissolution and usage of [recycled polyolefins in post-consumer applications](#).¹¹

We hope you will enjoy this thematic issue and the broad spectrum of research it presents, both in themes as well as countries of origin. It reflects the high interest of the *Journal of Applied Polymer Science* and its readers in this subject.

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 Editor-in-Chief

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