

JOURNAL OF POLYMER SCIENCE | PART A

Polymer Chemistry

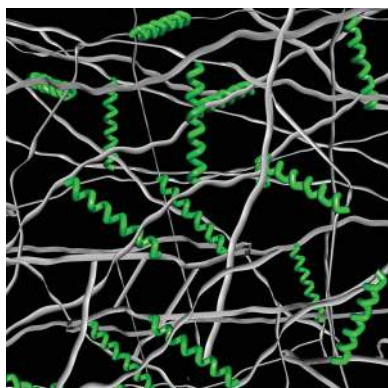


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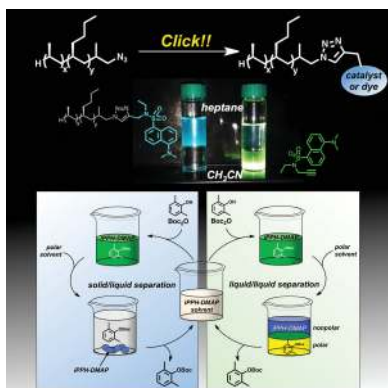
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Polymer Chemistry



HYDROGEL NETWORKS

On page 596, Sanghun Han and Yong-beom Lim report on the development of polyacrylamide gel stabilization electrophoresis (PASE) technology to covalently capture, physically constrain, and stabilize biologically active α -helical peptides (green) into a polyacrylamide hydrogel network (white). They synthesized a bioactive RNA-binding helical peptide with acryloyl groups at both ends of the peptide, covalently captured in its bioactive helical conformation into the polyacrylamide network via radical polymerization, and investigated whether the peptide can specifically recognize its target RNA molecule. This newly developed technology has the potential to be applied in many applications in which specific biomacromolecular recognition is necessary within a polymer hydrogel network.



POLYMER-SUPPORTED CATALYSIS

Various functionalities could be installed on the terminus of commercially-available isotactic-poly(propylene-co-hexene) (iPPH) using standard organic transformations, as presented by Abbey Hicks, Binhong Lin, Philip L. Osburn, and Christopher E. Hobbs on page 600. An atom-economical, copper-catalyzed click reaction could also be utilized to prepare useful iPPH-supported species that exhibited high phase-selective solubility (>98%) for nonpolar solvents over their polar counterparts. This feature allowed for the liquid/liquid recovery and reuse of an iPPH-supported DMAP organocatalyst. Furthermore, the semi-crystalline nature of this support permitted its recovery as a solid upon precipitation into a polar solvent. The ability to easily use more than one recovery technique makes iPPH an attractive, versatile support.

Coming soon Look for these important papers in upcoming issues of JPS: Polymer Chemistry

Andrew J. Guenther, Vandana Vij, Timothy S. Haddad, Josiah T. Reams, Kevin R. Lamison, Christopher M. Sahagun, Sean M. Ramirez, Gregory R. Yandek, Suresh C. Suri, and Joseph M. Mabry

Silicon-Containing Trifunctional and Tetrafunctional Cyanate Esters: Synthesis, Cure Kinetics, and Network Properties

DOI: 10.1002/pola.27052

Tine Hardeman, Pieter Willot, Julien De Winter, Thomas Josse, Pascal Gerbaux, Pavletta Shestakova, Erik Nies, and Guy Koeckelberghs

Study on the Formation of a Supramolecular Conjugated Graft Copolymer in Solution

DOI: 10.1002/pola.27060

Mariya V. Edeleva, Dmitriy A. Parkhomenko, Denis A. Morozov, Sergey A. Dobrynin, Dmitry G. Trofimov, Beket Kanagatov, Igor A. Kirilyuk, and Elena G. Bagryanskaya

Controlled/Living Polymerization of Methyl Methacrylate Using New Sterically Hindered Imidazoline Nitroxides Prepared via Intramolecular 1,3-Dipolar Cycloaddition Reaction

DOI: 10.1002/pola.27071

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