



## Polymer Microgels: Synthesis and Application

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### Message from the Guest Editor

Polymer microgels have attracted great attention in fundamental studies as good model systems for understanding the intriguing behaviors of soft colloids thanks to their elastic and deformable particles that provide a very rich phenomenology. These cross-linked particles with nanometric to micrometric dimensions are characterized by many fascinating properties such as swelling, softness, and responsivity that depend on their macromolecular architecture and can be triggered during the synthesis process. Moreover, they are highly attractive systems for several technological applications due to their high sensitivity to external stimuli. Smart microgels have indeed many applications in the pharmaceuticals industries, in artificial organs, tissue engineering, agriculture, construction, and cosmetics.

This Special Issue focuses on experiments, simulation, synthesis methods, and applications of homopolymeric, interpenetrating polymer network (IPN), copolymerized, and core-shell microgels. The topics may include local structure, phase diagrams, interparticle interactions, and synthesis methods besides the manifold applications.





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