Special Issue

Phase Transition and Behavior of Gels

Message from the Guest Editors

A phase transition occurs in polymeric gels when a polymer sol reaches a critical concentration or temperature. In the specific case of the sol-gel process, where a condensation reaction occurs, phase separation is induced through the polymerization process of precursor materials. The most relevant phenomenon is the moment the structure “freezes” during the phase separation. Many parameters, like the polarity of the surrounding solvent, precursor composition, temperature, and pH, influence the phase separation and, consequentially, the final characteristics of the desired materials. Despite multiple works on gels and their derived materials, the connection of the final properties to phase separation and transition remains sparse in the literature. This Special Issue on “Phase Transition and Behavior of Gels” is dedicated to studying and understanding phase transition on the final properties of gels and its derived materials in all research fields. Topics of interest include, but are not limited to, gel preparation methods, material characterization, and potential applications of these materials.

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About the Journal

Message from the Editorial Board

Gels (ISSN 2310-2861) is recently established international, open access journal on physical and chemical gel-based materials. The journal aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. General topics include but not limited to synthesis, characterization and applications of new organogels, hydrogels and ionic gels made either from low molecular weight compounds or polymers, composite and hybrid materials where a metal is by some means incorporated into the gel network, and computational studies of these materials in order to provide a better understanding of gelation mechanism. We cordially invite you to consider publishing with us and contribute with your own grain of sand to the advance in this fascinating field.

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