

Special Issue

Structured Gels: Mechanics, Responsivity and Applications

Message from the Guest Editors

Gel-related research has seen tremendous growth in the past several decades. Higher demands on gel properties and measures for their control arise as gel-based materials are exposed to new interdisciplinary studies and applications. Structures at various length scales have proven to significantly impact the physical and chemical properties of gel materials both in nature and in practice. Therefore, the design of gels with specific molecular functions, network complexities, microstructures and macro-architectures could yield hydrogels with advanced properties in terms of mechanics, diffusivity, sensitivity, adhesion, biocompatibility, and recyclability. Recent developments have shown that by harnessing chemical synthesis and engineering controls, gels could exhibit a multitude of controllable structures that lead to significant enhancement of properties and dynamics that were infeasible with conventional hydrogel designs. This Special Issue is dedicated to the surging studies of structure-property relationships of novel gel materials, with a focus on molecular design, network engineering, and structural controls.

Guest Editors

Dr. Mutian Hua

Lawrence Berkeley National Laboratory, University of California, Berkeley, CA 94720, USA

Prof. Dr. Shuwang Wu

Department of Material Science and Engineering, Suzhou University, Suzhou 215003, China

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Gels
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
gels@mdpi.com

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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.

Editors-in-Chief

Prof. Dr. Esmail Jabbari

Biomimetic Materials and Tissue Engineering Laboratory, Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA

Prof. Dr. Chuanliang Feng

State Key Lab of Metal Matrix Composites, School of Materials Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, China

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