



gels



an Open Access Journal by MDPI

Stimuli-Responsive Gels

Guest Editor:

Prof. Dr. Dirk Kuckling

Organic and Macromolecular
Chemistry, Department of
Chemistry, Paderborn University,
D-33098 Paderborn, Germany

Deadline for manuscript
submissions:

closed (31 July 2017)

Message from the Guest Editor

Stimuli-responsive polymer gels are of particular interest due to their abilities to respond to internal and/or external chemico-physical stimuli; such responses are often large and macroscopic. Aside from the scientific challenges of designing stimuli-responsive polymer gels, the main technological interests concern numerous applications, ranging from catalysis in microsystem technology and chemomechanical actuators to sensors. Since the phase transition phenomenon of hydrogels is theoretically well understood, advanced materials based on predictions can be prepared. Since the volume phase transition of hydrogels is a diffusion-limited process, the size of the synthesized hydrogels is an important factor. Consistent downscaling of the gel size will result in fast smart gels with sufficient response times. To apply smart gels in microsystems and sensors, new preparation techniques for hydrogels have to be developed. For upcoming nanotechnology, nano-sized gels as actuating materials would be of great interest. Finally, new design concepts for tough polymer gels are of interest for overcoming the mechanical shortcomings of conventional gels.

Prof. Dirk Kuckling



mdpi.com/si/4633

Special Issue



gels



an Open Access Journal by MDPI

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

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.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High visibility: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [PMC](#), [CAPlus / SciFinder](#), and [other databases](#).

Journal Rank: JCR - Q1 (Polymer Science) / CiteScore - Q1 (Organic Chemistry)

Contact Us

Gels Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/gels
gels@mdpi.com
[X@Gels_MDPI](#)