Special Issue

Advances in Hydrogels for 3D Printing

Message from the Guest Editors

Hydrogels are soft polymeric solids with high water content, known for their porous structure and high tuneability. Typically, they are built-up of long chains of synthetic or natural polymers which are then crosslinked to each other. This forms an inseparable network capable of high diffusion and high capacity. The possibility to incorporate natural or synthetic molecules, nano- and microparticles, to functionalize and tailor their properties makes them excellent platforms for applications in medicine or energy-related questions. Additive manufacturing as a 3D-shaping method provides a suitable process to capitalize on the advantages of hydrogels. There are numerous methods for additive manufacturing such as extrusion-based techniques or inkjet printing. For instance, larger channels can be incorporated within the hydrogels to use them as capacitor electrolytes, cell templates or filters. This Special Issue aims to collate research papers that highlight the remarkable capabilities of 3D-printed hydrogels and the advantages that additively manufactured hydrogels possess, particularly focusing on their applications in the fields of medicine and energy.

Guest Editors

Dr. Leonard Siebert

Functional Nanomaterials, Department of Material Science, Faculty of Engineering, Kiel University, 24143 Kiel, Germany

Prof. Dr. Zeynep Altintas

Institute of Materials Science, Faculty of Engineering, Kiel University, 24143 Kiel, Germany

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

mdpi.com/journal/gels

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Esmaiel Jabbari
Biomimetic Materials and Tissue Engineering Laboratory, Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA

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