

Special Issue

Advanced Hydrogels for Regenerative Medicine and Tissue Engineering

Message from the Guest Editors

Tissue engineering and regenerative medicine (TERM) is a rapidly developing field aiming to fully repair or regenerate damaged tissues/organs and restore their functions by combining advancements and experiences from both engineering and medicine. Hydrogels, three-dimensional water-swollen materials, have exhibited versatile features for TERM applications. In addition to common hydrogels being employed as biocompatible and minimally invasive scaffolds for loading drugs or cells, more advanced hydrogels presenting multifunctional properties play more important roles in improving treatment outcomes in TERM. These advanced hydrogel properties include, but are not limited to, self-healing, environmental stimuli responsiveness, antibacterial, anti-inflammatory, conductivity, etc. On the other hand, hydrogels are also an essential component of bioinks in 3D bioprinting due to being structurally similar to the extracellular matrix of human tissues. The purpose of this Special Issue is to summarize the progress achieved regarding advanced hydrogels within the TERM area, and encourage the discovery of new advanced hydrogels for better tissue/organ regeneration.

Guest Editors

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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. Esmail Jabbari

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