



Synthesis, Characterization and Biomedical Applications of Hydrogels

Guest Editor:

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Message from the Guest Editor

Hydrogels—three-dimensional crosslinked networks of hydrophilic polymers—have become a popular choice for many biomedical applications due to their ability to hold large amounts of water or biological fluids, therapeutic agents, and other biomolecules. Furthermore, many of their properties (porosity, swellability, viscoelasticity, etc.) can be tuned for different applications by either altering their chemical composition and crosslinking, or by external stimuli such as pH and temperature. Hydrogels have thus been used as prime candidates for the development of biosensors, drug delivery platforms, extracellular matrix scaffolds for tissue engineering, and bioinks for 3D bioprinting. This Special Issue will highlight original articles and reviews that describe the synthesis and characterization of hydrogels for various biomedical applications, including the delivery of therapeutics, self-healing, scaffold design, biofabrication, and regenerative medicine. Submissions describing the development of multifunctional hydrogels and reinforced hydrogel composites are also highly encouraged, as are perspectives on future trends and challenges in this field.





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Message from the Editor-in-Chief

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