Special Issue

Self-Healing Hydrogels for Applications in Regenerative Medicine

Message from the Guest Editors

Organisms in nature have shown fascinating abilities with respect to self-healing and regenerating their structural and functional properties after damages caused by trauma or diseases. Self-healing hydrogels have been developed, which are hydrophilic polymer networks that, after damage, can revert to their original state with full or partial recovery of mechanical strength. Due to the resemblance with extracellular matrices of tissue/organs, hydrogels capable of self-recovery are expected to be candidate materials for applications in regenerative medicine. Indeed, the past decade has witnessed the development of self-healing gels for applications in tissue engineering, controlled drug/cell delivery, injectable defect filler materials, and 3D bioprinting, which can be attributed to their special viscoelastic properties and mechanical durability. In this Special Issue, we will focus on recent progress in the design of self-healing hydrogels for biomedical applications. We will discuss the potential use of self-healing gels for different fields of tissue regenerations.

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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

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