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Hydrogels for Bone Regeneration

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Message from the Guest Editor

Any anatomical description of bone outlines its superior strength, as well as the unique macro- and microstructures that contribute to its characteristic properties. Traditional bone regeneration applications focus on using hard, dense material scaffolds to replicate bone structure and function; however, these have had mixed successes. Despite the original initiative to replace bone with materials comprising similar properties, there is growing interest in the use of hydrogels, typically orders of magnitude weaker than bone, as potential materials for bone regeneration.

In this Special Issue entitled “Hydrogels for Bone Regeneration”, we aim to highlight recent developments and technologies for the enhancement of bone regeneration in both in vivo and in vitro environments. We hope to establish a thorough collection of advances realized in natural, synthetic and hybrid hydrogels in the bone regeneration field, and to explore a wide range of both chemical and physical modification methods. Contributions based on any of the above techniques, applications and technologies are most welcomed.



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Special Issue



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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.

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