

Special Issue

Biomaterial Innovations for Tissue Engineering and Regeneration

Message from the Guest Editor

Innovative biofunctional and biomimetic biomaterials present efficient platforms that support specific biological responses towards tissue repair and regeneration. The field of instructive, smart, responsive, and intelligent biomaterials is evolving as an emerging research area. The field aims to navigate complex, multifaceted physicochemical, mechanical, and biological cues in vitro and in vivo, frequently under mechanical, electrical, and magnetic stimulation. Biomaterials of natural and synthetic origin, as well as hybrids and composites, are developed and processed via cutting-edge technologies including 3D printing, bioprinting, electrospinning, and electrowriting to biofabricate favorable structures for regeneration-competent cells and biomolecules as tissue analogs or implantable grafts, eventually enabling tissue and organ regeneration. In this view, this Special Issue aims to offer deep insights into the significance of biomaterials as essential components driving progress in tissue engineering and regenerative medicine. We invite your valuable contributions to this multidisciplinary communication platform to enrich this exciting field.

Guest Editor

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Message from the Editorial Board

Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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