Special Issue

Gelatin-Based Materials for Tissue Engineering

Message from the Guest Editors

Gelatin-based materials have emerged as versatile and promising candidates in the field of musculoskeletal tissue engineering and regeneration. Derived from natural collagen, gelatin exhibits excellent biocompatibility, biodegradability, and tunable physical properties, making it an ideal material for mimicking the extracellular matrix (ECM) in musculoskeletal applications. This Special Issue aims to gather cutting-edge research and review articles focused on the development and application of gelatin-based materials in musculoskeletal tissue engineering. Topics of interest include, but are not limited to, the following:

- Development of gelatin-based hydrogels for musculoskeletal tissue engineering;
- Bioprinting techniques for fabricating gelatin-based implants and scaffolds;
- Functionalization of gelatin to enhance osteogenic, chondrogenic, or myogenic properties;
- Applications in therapeutic molecules delivery and controlled release for musculoskeletal repair;
- In vitro modeling of bones, cartilage, and tendons using gelatin-based systems;
- In vivo studies and translational research involving gelatin-based biomaterials for tissue 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

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 12.5 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).