Special Issue

Novel Fiber-Based Scaffolds for Tissue Engineering and Regenerative Medicine

Message from the Guest Editors

Tissue-engineered scaffolds aim to recapitulate the physiological environment of the extracellular matrix in vivo. This enables biomimetic mechanical and structural properties; proper transport of oxygen, nutrients, and metabolic waste; and, therefore, improved cellular behavior when exposed to the scaffold. Fiber-based scaffolds fabricated through spinning, extrusion-based printing, and molding have attracted increasing attention in the last decade to address the above-mentioned requirements for bottom-up tissue reconstruction. The current Special Issue is focused on the recent advancements in the development of strategies for the fabrication of fiber-based scaffolds and their application for tissue engineering and regenerative medicine. Specifically, we aim to cover novel approaches enabling a controlled scaffold microstructure, multimaterial spatial distribution, and in vivo fabrication processes. Furthermore, the application of engineered tissues using fiber-based scaffolds for in vitro tissue modeling, regenerative medicine, and emerging fields such as cellular agriculture will be covered.

Guest Editors

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Editor-in-Chief

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