Special Issue

Polymers in Tissue Regeneration and Antimicrobial Strategies: Innovations and Applications

Message from the Guest Editors

Polymers have become indispensable cornerstones in tissue regeneration and antimicrobial medicines. Their tailor-made architectures, excellent biocompatibility, and intrinsic capacity for multifunctional synergy now provide a transformative platform that can simultaneously reconstruct complex tissue defects and thwart microbial threats. This Special Issue spotlights convergent innovations where polymer science meets regenerative medicine and antimicrobial strategies. Topics span biodegradable scaffolds that orchestrate the cellular microenvironment, smart stimuli-responsive systems for the on-demand delivery of bioactive cues, surface-functionalized polymers that erect antimicrobial barriers, and green polymer platforms derived from natural or sustainable feedstocks. We invite contributions that advance polymer synthesis and micro-/nano-structural characterization, elucidate cell–material–microbe interfacial mechanisms, and co-design antimicrobial and pro-regenerative functions, showcasing cutting-edge progress from fundamental discovery to clinical translation. Collectively, these works will highlight the fertile frontier created by the fusion of polymer science and biomedicine.

Guest Editors

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Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.9.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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