Special Issue

Collagen-Based Polymeric Materials for Emerging Applications

Message from the Guest Editor

This Special Issue highlights the rapidly evolving field of collagen-based polymeric materials and their transformative potential across a range of emerging applications. As a naturally abundant, biodegradable, and biocompatible protein, collagen offers unique advantages for designing advanced functional materials. Recent innovations in processing techniques -such as electrospinning, 3D bioprinting, solvent casting, and cross-linking methods—have enabled the development of collagen-based polymers with tailored mechanical, structural, and biological properties. These materials are increasingly being utilized in areas such as tissue engineering, regenerative medicine, drug delivery systems, smart wound dressings, edible packaging, and bio-integrated electronics. This Special Issue brings together research focusing on the synthesis, modification, and functionalization of collagen-derived polymers, as well as their integration with synthetic or natural additives to enhance performance. This Special Issue aims to accelerate the development and realworld deployment of collagen-based polymeric materials in innovative and socially impactful applications.

Guest Editor

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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

Prof. Dr. Alexander Böker

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