Special Issue

Functional Chitosan-Based Nanocomposites: Synthesis, Characterization and Applications

Message from the Guest Editors

Chitosan is a biopolymer derived from the deacetylation of chitin, found in crustacean shells, insect exoskeletons, and the cell walls of certain fungi. Its properties include biocompatibility, biodegradability, and antimicrobial activity, making it suitable for various applications, including in healthcare, food, feed, and environmental protection. However, its native physicochemical properties often limit its use, presenting an attractive opportunity for nanotechnology to drive research into the development of new chitosan-based nanocomposites. Additionally, physical and chemical modifications to these chitosan-based nanocomposites can enhance their functional capabilities. Here, despite advancements, challenges remain in scaling up and commercializing these materials. Research in molecular design and nanotechnology has led to the development of high-performance chitosan-based nanocomposites. Moving forward, efforts will focus on overcoming technical limitations and expanding their adoption in emerging industrial applications.

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Deadline for manuscript submissions

31 October 2025

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/234945

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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 4.7.

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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