Special Issue

Chitosan, Chitin, and Cellulose Nanofiber Biomaterials II

Message from the Guest Editor

There is increasing interest in using natural polymers and fiber-filled composites to achieve the development of functional biomaterials for varied applications. Commonly used biopolymers include the polysaccharides chitosan, chitin, and cellulose, and their derivatives. Chitosan is a copolymer of \(\mathbb{Q}(1\)\(\mathbb{Q}4)-linked \(\mathbb{D}-\) glucosamine and N-acetyl D-glucosamine, mainly produced by the deacetylation of chitin—the second most abundant polysaccharide worldwide, most commonly found in crustacean cuticle. The degree of acetylation and molecular weight are the most important parameters of a copolymer, defining the physicochemistry and properties of the chitinous compound. Chitosan structurally belongs to the glycosaminoglycan family, for which bioactivity has been revealed in tissue engineering studies centered on skin, bone, cartilage, and, more recently, intervertebral disc. The biocompatibility of chitinous biomaterial, together with its bioactivity, suggests its great potential for biomedical applications. Fundamental research relating chitosan/chitin physico-chemistry with biological properties is only addressed by a relatively minor number of studies.

Guest Editor

Prof. Dr. Anayancy Osorio-Madrazo

- 1. Institute of Microsystems Engineering IMTEK, University of Freiburg, 79110 Freiburg im Breisgau, Germany
- 2. Freiburg Materials Research Center FMF, University of Freiburg, 79104 Freiburg im Breisgau, Germany
- 3. Freiburg Center for Interactive Materials and Bioinspired Technologies FIT, University of Freiburg, 79110 Freiburg im Breisgau, Germany

Deadline for manuscript submissions

closed (31 May 2023)



Polymers

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.7 Indexed in PubMed



mdpi.com/si/128202

Polymers
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
polymers@mdpi.com

mdpi.com/journal/polymers





Polymers

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.7 Indexed in PubMed



About the Journal

Message from the Editor-in-Chief

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

Lehrstuhl für Polymermaterialien und Polymertechnologie, University of Potsdam, 14476 Potsdam-Golm, Germany

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, PubMed, PMC, FSTA, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (General Chemistry)

