

Special Issue

Theory and Simulation of Polyelectrolyte Solutions and Gels

Message from the Guest Editor

Polyelectrolyte solutions and gels are of broad scientific and technological interest due to their crucial role in the functionality of many biological processes and they are essential for the development of many modern materials. The main attribute of systems of charged macromolecules is that all molecules are cooperatively correlated both topologically and electrostatically in a medium of highly polarizable solvent/environment and small mobile ions.

The aim of this Special Issue is to highlight the progress on the theoretical and computational modeling of polyelectrolyte solutions and gels in understanding the conformations of isolated macromolecules or nanogels and their charge regularization, polarizability of the medium, specific ion effects, multivalency, mobility of macromolecules of different chemical architectures, intrinsically disordered proteins, crowded solutions, adsorption to charged brushes, dendrimers and membranes, self-assembly of proteins and coacervates, morphology of charged block copolymers, kinetic pathways of complexation among macromolecules, critical phenomena, and flow effects.

Guest Editor

Dr. Alexandros Chremos

Section on Quantitative Imaging and Tissue Sciences, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD 20892, USA

Deadline for manuscript submissions

closed (31 December 2021)



Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



mdpi.com/si/79234

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

[mdpi.com/journal/
polymers](https://mdpi.com/journal/polymers)





Polymers

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed



[mdpi.com/journal/
polymers](https://mdpi.com/journal/polymers)



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

Fraunhofer-Institut für Angewandte Polymerforschung, Lehrstuhl für Polymermaterialien und Polymertechnologie, Universität Potsdam, Geiselbergstraße 69, 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, CAPIus / SciFinder, Inspec, and other databases.

Journal Rank:

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