

Special Issue

Polymeric Nanocarriers for Targeted Drug Delivery in Cancer and Infectious Diseases

Message from the Guest Editors

Targeted drug delivery using polymeric nanoparticles has emerged as a transformative strategy in the treatment of complex diseases such as cancer and bacterial infections. By harnessing the structural flexibility, biocompatibility, and tuneable surface properties of natural and synthetic polymers, nanodrug delivery systems can significantly enhance the selectivity, efficacy, and pharmacokinetic profiles of therapeutic agents while minimizing systemic toxicity. In oncology, polymeric nanocarriers like PLGA, PEGylated nanoparticles, dendrimers, and micelles have shown promise in delivering chemotherapeutics, siRNA, and immunomodulators directly to tumour cells via passive and active targeting. In infectious disease management, especially biofilm-associated bacterial infections, nanoparticles can disrupt protective microbial environments and deliver antimicrobial agents in a sustained and localized manner. This Special Issue invites original research and comprehensive review articles on recent advances in nanoformulated polymeric drug delivery platforms, including formulation techniques, surface functionalization, stimuli-responsive release, and translational/clinical applications.

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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 4.7.

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

Prof. Dr. Alexander Böker

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