Special Issue

Smart Polymeric Systems for Bioengineering: AI-Driven Design, Characterization and Manufacturing

Message from the Guest Editors

This Special Issue aims to highlight the innovative integration of artificial intelligence (AI) and bioengineering in the development and processing of smart polymeric systems. The convergence of AI-driven methodologies with bioengineering is opening up new avenues for designing, characterizing, and manufacturing advanced polymer-based materials tailored for biomedical applications. We invite contributions that showcase how AI can enhance the design of polymeric biomaterials, optimize additive manufacturing processes, and predict the performance of biofunctional structures. Topics of interest include, but are not limited to, AI-based modeling and simulation, smart polymer synthesis, data-driven approaches for property prediction, and the use of machine learning to improve the precision and reproducibility of biofabrication techniques. We welcome the submission of papers that present both innovative theoretical approaches and practical implementations, showcasing the significant impact of AI-powered smart polymeric systems. We look forward to receiving your valuable contributions.

Guest Editors

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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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