Special Issue

Multiscale Modeling and Simulation of Polymer-Based Composites

Message from the Guest Editors

The structure of polymers and their composites is hierarchical and rich. It is a complex multiscale system with characteristic sizes, from nanometers to millimeters, and characteristic times, from femtoseconds to seconds. Thus, multiscale modeling and simulation methods, including density functional theory, molecular dynamics, Brownian dynamics, dissipative particle dynamics, the lattice Boltzmann method, Monte Carlo, computational fluid dynamics, and the finite element method, are the key to understand the complex behavior and various phy-chemical properties of polymers and their composites. The aim of this Special Issue is to highlight progress in the multiscale modeling and simulation methods of polymers and their composites. Any reports and reviews covering the aspects of multiscale modeling and simulations are welcome, using methods including, but not limited to, those mentioned above. **Keywords:**

- polymer
- polymer-based composite
- computational modeling
- molecular dynamics
- computational fluid dynamics
- finite element method

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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

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