

Special Issue

Lignin-Based Materials: Synthesis, Characterization and Applications

Message from the Guest Editor

This Special Issue highlights the latest advances in lignin-based materials, focusing on innovative synthesis strategies, advanced characterization techniques, and emerging applications. As one of the most abundant renewable biopolymers, lignin offers immense potential for developing sustainable alternatives to petroleum-derived materials. Contributions in this issue explore the heterogeneity, chemical modification, nanostructuring, and functionalization of lignin to enhance its physicochemical properties. Cutting-edge analytical approaches for structural elucidation and performance assessment will also be featured. The applications explored will span diverse fields, including bio-composites, adhesives, energy storage, catalysis, and biomedical systems. By integrating fundamental science with practical implementation, this Special Issue aims to accelerate lignin valorization and foster circular bioeconomy innovations in materials research.

Guest Editor

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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 4.9.

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

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