Special Issue

Transparent Wood: Current Achievements and Ongoing Challenges

Message from the Guest Editors

In the 1990s, it was proven for the first time that wood could be made transparent. AI-Transpwood (1 January 2024--31 December 2026) is a European project, its primary goal is to develop an AI-driven, multiscale methodology for creating new, safe, and sustainable wood-based material systems. It will also demonstrate the concept of transparent wood (TW), a promising new material with potential applications in several industrial fields, including construction, automotive, electronics, and furniture. TW is a very recent material, which is obtained from native wood through the removal of lignin, one of the main components of wood, together with cellulose and hemicellulose, from the wood channels, the infiltration of a monomer, and the subsequent polymerization/curing. This way, it is possible to obtain a light material, tough and mechanically robust, with high transparency and low thermal conductivity, among other peculiarities. The material can be further functionalized to become flame retardant, luminescent, or electrically conductive. We hope to receive numerous submissions to the Special Issue 'Transparent Wood: Current Achievements and Ongoing Challenges'.

Guest Editors

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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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