

Special Issue

Cellulose-Based Materials: Fabrication and Applications

Message from the Guest Editors

Cellulose is the most abundant renewable natural polymer on the Earth without competing with food reserves. It can be easily derived from various plants or bacteria and is mostly fibrous, tough, and water-insoluble on account of the complex inter- and intramolecular hydrogen bonds. Benefiting from fascinating features such as low density, fibrillar morphology, and strong mutual hydrogen bonds, cellulose could be easily manufactured into various monoliths with high mechanical ductility and flexibility, including films, gels (aerogel and hydrogel), and textiles. Normally, there are three hydroxyl groups located in the C2, C3, and C6 positions in each cellulose monomer, while other functional groups would exist in the cellulose derivatives, such as carboxyl groups (in 2,2,6,6-tetramethylpiperidine-1-oxyl radical-oxidized cellulose), ester groups (in cellulose acetate), and ether groups (in carboxymethyl cellulose). The above functional groups endow cellulose and its derivatives with good biocompatibility, biodegradability, hydrophilicity (except for ester groups), sustainability, and even functionality, rendering their popular applications in the fields of environment and energy.

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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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