Special Issue

Polymer Applications in Cell Cultures, Cell Behavior, and Tissue Engineering

Message from the Guest Editor

Polymer surface properties, which affect the adhesion, proliferation, migration, differentiation, and functional activity of mammalian cells (mature specialized cells, embryonic and mesenchymal stem cells, cancer cells) and bacteria (probiotic and pathogenic), have promising applications in cell biology and bioengineering. The nano- and microstructure of natural substances (first of all, biopolymers) that form various surfaces of mammalian organs, in combination with their physicochemical properties, play a significant role in the regulation of cell behavior. In biomedical applications, the polymer surface is more than a “passive” substrate for cell attachment and proliferation. Various nano- and microtopographical features of films, membranes, scaffolds, implants, and devices, as well as the presence of functional groups, energy, charges, hydrophobicity/hydrophilicity, surface rigidity, etc., can impact cell functionality through, for example, altering the cell proliferation rate or stimulating their differentiation. This Special Issue aims to highlight the relationship between surface properties and cell behavior and its potential for biomedical applications.

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 4.7.

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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