



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

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### 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.





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