



Biocompatible Polymer-Based Materials: Synthesis, Properties and Applications

Guest Editor:

Dr. Catalina Natalia Cheaburu-Yilmaz

Physical Chemistry of Polymers
Department, "Petru Poni"
Institute of Macromolecular
Chemistry, 41A Gr. Ghica Voda
Alley, 700487 Iasi, Romania

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Message from the Guest Editor

A biocompatible material refers to a substance possessing the property of being compatible with living tissue. Biocompatible materials do not produce a toxic or immunological response when exposed to the body or bodily fluids. A more colloquial definition for biocompatible materials would be that they are the ones used in medical devices within or touching the human body. The purpose of this Special Issue is to gather as many examples as possible regarding the large variety of materials, preparation methods, synthesis, and applications where biomaterials are used and applied.

In particular, the topic of interest includes but is not limited to

- Synthetic, semi-synthetic, and natural polymers;
- Interactions between polymers;
- Biocoatings/nanocoatings;
- Degradation and biodegradation;
- Biocompatibility;
- Industrial applications;
- Composites;
- Pharmaceutical formulation and drug delivery systems;
- Physical chemical characterization;
- Toxicity studies;
- Synthesis methods;
- Strategies to increase biocompatibility.





Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New
Ceramics and Fine Processing,
School of Materials Science &
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Dr. Emerson Coy

NanoBioMedical Centre, Adam
Mickiewicz University in Poznań,
ul. Wszechnicy Piastowskiej 3, 61-
614 Poznań, Poland

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

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Coatings Editorial Office
MDPI, St. Alban-Anlage 66
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