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Bio-Binding Materials: Reactivity and Toxicity

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Message from the Guest Editors

The present Special Issue is aimed at various types of bio-interaction with an emphasis on binding as a necessary precursor step of different manifestations of toxic action. This includes toxicity both as an undesired hazard and an intended action (targeted therapies). Toxicity is also regarded, among others, as:

- A descriptor of biocompatibility in healthcare industries for medical applications (immobilization of proteins, antigens/antibodies and vaccine preparation, tumor treatment, gene and drug delivery, wound dressing, bone and skin regeneration, tissue engineering, cardiovascular engineering, traumatology and dentistry, implantology);
- A tool that predicts the possible antibacterial action of packaging materials in food industry;
- A key feature for the development of self-cleaning fabrics with stain-resistant and antimicrobial properties;
- A means for the estimation of materials impact on the environment.

Binding materials may include metals and alloys, simple and mixed oxides, minerals, ceramics, polymers, hybrids, composites, nanoparticles and nanostructured materials, etc. Binding receptors envisaged are DNA, peptides, proteins, polysaccharides, biomembranes, etc.

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Message from the Editor-in-Chief

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