Special Issue

Advances in Bio-Inspired Materials for Medical Applications

Message from the Guest Editors

From the shells of diatoms to the silks of spiders, from the wings and eyes of insects to the feathers of birds, nature has taught us its secrets and strategies to create and perfectly tailor functional materials with extraordinary physical, optical, chemical, mechanical, and biological properties. These so-called bio-inspired materials (i.e., synthetic materials mimicking natural materials) are found in many industrial and medical applications because of their unique features. This Special Issue emphasizes the entire range of bio-inspired materials used in medical applications. It includes the synthetic approaches of formulating functional systems that can be used in drug and molecule (gene) delivery, bioimaging, and biosensing, regenerative medicine, and cancer treatment. In addition, the physico-chemical characterization strategy for bio-inspired materials, as well as (mathematical) modeling structure–property relationships, will be encompassed. Finally, the principles in developing safe-by-design bio-inspired nanomaterials for medical applications will be covered.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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