Special Issue

Intelligent Bioinspired Materials: Design and Application

Message from the Guest Editor

The multiscale designs and materials found in nature have created unique surface properties with various functions such as wetting, adhesion, friction, and optics. Some examples of such surface properties include the directional wetting of spider webs and fibers, insect ventilation, the water repellency of lotus leaves, the adhesive abilities of geckos and octopi, and the movement of microrobots. Recently, these bio-inspired functional surfaces are attributed to hierarchical and three-dimensional surface designs with modulated surface chemistry and mechanical property. These bioinspired materials are availiable for applications such as nano-/micro-scaffolds, skin-like flexible devices, bioelectronics, leafy solar power, artificial photosynthesis, and automatic stereoscopic displays. This Special Issue covers the whole range of bioinspired materials and designs for understanding multifunctional surfaces, fabrications, and thier potential applications. It includes three-dimensional and hierarchical surfaces structures, coating materials, and those interfacial phenomena. This also involves applications for water-repellency, anti-reflection, adhesive, and medical applications.

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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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