

Special Issue

Mineralization of Metals through Bio Activities

Message from the Guest Editor

Living organisms transport or accumulate inorganic elements that are used for metabolic processes, as minerals and hard tissue components, or for detoxification. Magnetotactic bacteria contain magnetite nanoparticles in the magnetosome. Many bacteria have a strong potential to accumulate metal ions inside or outside the cells and synthesize metal nanoparticles. Microalgae surround their cell body with silicate or calcium carbonate for protection and buoyancy. Invertebrates such as corals, bivalves, gastropods, and crustaceans use calcium carbonate for their exoskeleton. These synthesized minerals, having bioactivity, are called biominerals. Biominerals contain fine repeated microstructures with special optical properties and extraordinary toughness and stiffness. Such biominerals are considered functional materials for the industry. Studies on the molecular mechanisms of bioactivity will be fundamental for material science.

Guest Editor

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Deadline for manuscript submissions

closed (31 October 2021)



Materials

an Open Access Journal
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Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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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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