Special Issue

Preparation, Characterization and Application of Hydroxyapatite

Message from the Guest Editors

In recent decades, significant progress in the science of biomaterials has been made. Hydroxyapatite deserves special attention, as it is an analogue of biogenic apatite, the main inorganic component of bone tissue. Synthetic hydroxyapatite is widely applied in medicine as a filler for bone defects, a material for implants, a carrier for drug delivery and an anticancer/imaging agent, and a base of cements or various composites. Hydroxyapatite is also used as a bioactive component of toothpastes and cleaning products. In addition to being an indispensable material for medicine, hydroxyapatite has many other applications, as it is a catalyst or catalyst support for various organic reactions and an effective sorbent for protein, water, soil, and air purification. It is used in the form of gels, pastes, powders, and ceramics. A wide range of useful properties of hydroxyapatite indicate the great potential of this material and stimulate further research activity. This list of properties can be extended by implementing substitution in the hydroxyapatite structure, as the insertion of foreign ions with useful properties transfers them to the material.

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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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