Special Issue

Advances in Hydrothermal Sintering and Crystal Growth

Message from the Guest Editors

Hydrothermal processes are an integral part of the High-Pressure (HP) domain. Fluid under the combination of temperature and pressure is involved in applications in several existing fields, such as obtaining single crystals of a-quartz SiO2 by hydrothermal crystal growth. In materials science, hydrothermal pressure, in addition to temperature, allows obtaining solid material by sintering, consolidation, or densification. The solid materials obtained by sintering phenomena are generally in ceramic form, while consolidation phenomena result in monoliths with dense (by densification) or porous (by interparticle bridging) forms. Innovative hydrothermal/solvothermal processes were designed for growth of single crystals at low temperature and also for the fabrication of hybrid materials by sintering. Recently, innovative hydrothermal/solvothermal processes have emerged from the combination of technologies, opening new possibilities for obtaining these advanced functional materials. To this end, it is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are welcome.

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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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