Special Issue

Advances in Micro-Encapsulated Phase Change Materials for Passive and Active Thermal Energy Storage Applications

Message from the Guest Editors

The aim of this Special Issue is to address the current possibilities of PCM materials that are being under investigation in some of the leading research groups of the world, paying special attention to several approaches such as micro and nano encapsulation of PCMs with polymeric shells, improvement of thermal properties in encapsulated PCMs circumventing the high supercooling and reduced thermal conductivity problems of these materials, manufacturing of shape-stabilized PCMs limiting encapsulation issues and novel possibilities towards more effective and environmentally friendly synthesis procedures for the obtention of encapsulated PCMs. Moreover, the production of encapsulated PCM slurries (PCS) where the final product is a pumpable liquid with thermal storage capacity will be specially attended in the current SI. Finally, different applications of those materials, both for passive and active thermal energy storage (TES) will be particularly considered in this issue, focusing on sustainable alternatives for renewable energy.

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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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