



Novel Nanomaterials for Thermochemical Storage: Development and Characterization

Guest Editor:

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Message from the Guest Editor

Dear Colleagues.

Scope of this Special Issue is to present the latest advances in the development of ThermoChemical heat storage Materials (TCM), which represent a key factor for boosting the use of renewable energy in heating and cooling systems effectively, as they decouple the availability of renewable energy from the time when it is needed. Moreover, the use of TCM contributes to improving the energy efficiency of global energy systems by storing waste heat.

The key parameters of TCM are energy density (depends on the storage process), power (how fast the energy stored in the system can be discharged and charged), efficiency (losses over time and with charge/discharge), and cost. Environment-friendliness is also important to consider.

The development of thermochemical materials and technologies is still at an early stage. The study of novel TCM should result in a better understanding of its structure, composition, and performance characteristics. Knowledge of how to synthesize, characterize, and compare materials and their performances must be gained.

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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