Special Issue

Magnetocaloric and Caloric Materials for Solid-State Cooling

Message from the Guest Editors

The demand for energy is growing continuously, and more than 20% of energy consumption is due to refrigeration and air conditioning. The scientific community has devoted huge efforts toward developing possible alternative cooling techniques that are ecological, demonstrate good performance, and are characterized by low energy consumption. Among these alternatives is caloric cooling. Caloric refrigeration embraces four other main cooling techniques linked to a group of materials that show magnetocaloric, electrocaloric, elastocaloric, and barocaloric effects—phenomena where variation in the temperature of caloric material is registered when an applied external field adiabatically changes its intensity. This Special Issue is focused on caloric materials and welcomes papers on the analysis—either experimental or numerical—of their properties and on their testing in energy systems for cooling.

Guest Editors

Dr. Adriana Greco

Department of Industrial Engineering (DII), University of Naples Federico II, 80138 Naples, Italy

Dr. Claudia Masselli

Department of Industrial Engineering (DII), University of Naples Federico II, 80138 Naples, Italy

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Magnetochemistry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
magnetochemistry@mdpi.com

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Message from the Editor-in-Chief

Magnetochemistry constitutes a multidisciplinary field where chemists and physicists not only study magnetic properties but also design and synthesize chemical compounds with desired magnetic properties. *Magnetochemistry* is inviting contributions in any field related with this area, such as theoretical models, crystal engineering, molecular magnetism, SMM, SIM, SCM, SCO, magnetic nanostructures, magnetic MOFs, magnetic recording, qubits, magneto-caloric materials, etc. Our goal is to share your contribution in a timely fashion and in a manner that will be valued by the scientific community.

Editor-in-Chief

Prof. Dr. Carlos J. Gómez García
Department of Inorganic Chemistry, Faculty of Chemistry, University of Valencia, C/Dr. Moliner 50, 46100 Burjasot, Spain

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