



Advanced and Multifunctional Phase Change Materials

Guest Editor:

Dr. Kunjie Yuan

School of Materials Science and
Technology, University of Science
and Technology Beijing, Beijing
100083, China

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Message from the Guest Editor

Thermal energy is indispensable to the sustainable development of modern societies. Being a key component in various domestic and industrial processes as well as in power generation systems, the storage of thermal energy ensures system reliability, power dispatchability, and economic profitability. Thermal energy storage technologies based on phase-change materials (PCMs) have received tremendous attention in recent years owing to their high thermal storage capacity, operational simplicity, and transformative industrial potential. These materials are capable of reversibly storing large amounts of thermal energy during the isothermal phase transition and have enormous potential for the development of state-of-the-art renewable energy infrastructure.

This Special Issue aims to cover the latest developments in advanced and multifunctional PCMs. All aspects related to functional PCMs' composites preparation, structural characterization, molecular dynamics simulation, thermal management, thermal rectification, thermal stealth, and machine learning based on PCMs are considered. Review articles describing the current state of the art are also welcome.





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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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