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Preparation and Thermal Properties of Phase Change Materials

Guest Editor:

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Deadline for manuscript
submissions:

closed (20 April 2024)

Message from the Guest Editor

Dear Colleagues,

Phase change materials (PCMs), which can absorb and release large amounts of latent heat at phase transition, are garnering considerable attention due to their potential for wide range of applications such as thermal storage material for renewable energies, high-performance thermal management materials for electronics, and materials for smart textile, thermotherapy and intelligent building, to name a few. The commonly used PCMs include paraffin waxes, fatty acids and their binary mixtures (i.e., capric and palmitic acids), hydrate salts such as Glauber's salt ($\text{Na}_2\text{SO}_4 \cdot \text{H}_2\text{O}$), and aromatics. The ideal properties of PCMs include high latent and specific heat, high thermal conductivity, high density, small volume changes, suitable phase change temperature, low supercooling, good thermal and chemical stability, and good cycling stability.

This Special Issue aims to focus on the preparation and characterization of the novel thermal and material properties of PCMs including, but not limited to, new organic and inorganic PCMs, composite PCMs, encapsulated PCMs, and smart PCMs for a variety of applications.



mdpi.com/si/186377

Special Issue



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Message from the Editor-in-Chief

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