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Advanced Nanomaterials for Thermal Energy Storage Applications

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Message from the Guest Editors

In recent years, Phase Change Materials (PCMs) have received wide attention, as they have the potential for various industrial and engineering applications such as thermal energy storage, building heating and cooling, renewable energy and the thermal management of electronic devices, etc., due to their advantages such as high latent heat of fusion and small-volume change during phase transition. However, due to their low thermal conductivity, the charging and discharging rate is slow, and this affects the performance of the engineering systems. To overcome this issue, higher thermal conductive nanoparticles have been dispersed in PCMs to improve their thermal conductivity, which were widely acknowledged by the researchers as Nano-Enhanced Phase Change Materials (NEPCMs). Studies show that the use of NEPCMs improves the performance of engineering systems, motivating researchers to work in this field.

In this context, the present Special Issue will be dedicated to the latest advances in all aspects related to the use of NEPCMs, which will further increase the research and use of NEPCMs for engineering applications.



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Special Issue



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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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