Special Issue

Advances in Heat Storage and Transformation Systems

Message from the Guest Editors

The strategic transition towards a low-carbon and resilient energy mix pushes nations to set new targets. This goal can be reached, among other measures, by enhancing the utilization of under-exploited thermal energy resources, including combined heat and power facilities, industrial waste heat or biomass-fired boilers. The main barriers to their integration into buildings and heating networks are production timing, nominal power, temperature level, and even the location, which rarely match the requirements of grids driven on-demand. In this context, thermal energy storage is a promising solution to achieve a sustainable energy management and to overcome the temporal and space mismatch between heat production and its delivery. This Special Issue deals with the conception of materials, systems, and implementation issues connected to the development of efficient thermochemical heat storage systems. Topics of interest for publication include but are not limited to: thermochemical heat storage materials; solar heat storage; waste heat recovery; building applications; industrial and large scale applications; systems integration and optimization; economic analysis.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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