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Modeling and Optimization of Thermal Energy Storage Systems

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Deadline for manuscript submissions:
closed (30 November 2018)

Message from the Guest Editors

The exploitation of renewable energy sources, waste heat and high efficiency plants is significantly pushed by concerns about climate change and the affordability and security of the energy supply. In this framework, thermal storage is of extreme interest in various applications. Some examples are industrial processes requiring heating and/or cooling, district heating systems and renewable power plants, such as concentrated solar plants. Various issues related to design and operation still have to be solved in order to increase the energy density and the technical compatibility of thermal storage systems, as well as to reduce costs. Modeling and optimizations can be applied at various levels to help overcoming these issues and boost the development and integration of these technologies.

This Special Issue will look for contributions in the following directions:

- Modeling and optimization of thermochemical and latent heat storage
- Plant level design and optimization of storage systems
- CFD modeling of thermal storage systems
- Applications of thermal storage
- Thermo-economic analysis and optimization of thermal storage systems

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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