Special Issue

Design and Control of Flywheel Energy Storage Systems

Message from the Guest Editor

Flywheel energy storage systems (FESS) break through the limitation of chemical batteries and realize energy storage through physical methods. They have the characteristics of pollution-free activity, high energy conversion efficiency and power density, long cycle life, insensitivity to temperature, etc. They are one of the most important ways to reduce carbon emissions and deal with the current global climate change and energy crisis. The design and efficient control of new flywheel energy storage systems are two key problems to be solved urgently. This Special Issue will deal with novel optimization and control techniques for flywheel energy storage systems. Topics of interest for publication include but are not limited to:

- Overview of flywheel energy storage systems;
- Structure design of flywheel energy storage systems;
- Optimization design and control of magnetic bearings for FESS;
- Optimization design and control of flywheel motors;
- Modeling of flywheel motors for FESS;
- Modeling of magnetic suspension systems for FESS;
- Optimization of operation of power systems for FESS;
- Security reliability design and control method for FESS.

Guest Editor

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

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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