Special Issue

Battery System Design

Message from the Guest Editor

As a new clean energy, batteries have developed rapidly under the current requirements of environmental protection. In recent years, researchers have worked hard to improve the energy density (charge-to-volume ratio), value, safety, environmental impact, and service life of lithium-ion batteries, and are designing entirely new types of batteries. However, the traditional lithium battery technology is close to the bottleneck and the space for further optimization is limited. In order to break through the bottleneck problem of low-energy density of batteries, domestic and foreign scholars have carried out a lot of research from various aspects, from battery materials to preparation technology, from experiments to simulations. This Special Issue focuses on all the ways and means to improve battery performance. Topics of particular interest include (but are not limited to):

- Advanced battery materials;
- Circular battery technologies;
- Battery life cycle assessment;
- State-of-health (SOH) estimation;
- Battery structural reliability and management system;
- Physics-driven and data-driven prognostics and diagnostics;
- Fault-tolerant architectures and fault management strategies.

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Message from the Editor-in-Chief

Designs (ISSN 2411-9660) is a peer-reviewed and open access journal which provides a unifying research framework for a wide range of engineering designs of disciplines and industrial applications, including mechanical engineering, electrical engineering, civil engineering, mechatronics, aerospace engineering, bioengineering, energy engineering, industrial engineering and manufacturing systems are of interest. We would like to invite you to contribute to the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

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