Special Issue

Crash Safety of Lithium-Ion Batteries

Message from the Guest Editors

Usage of Lithium-ion batteries in transportation, from electric vehicles to drones, airplanes and submarines subjects them to dynamic mechanical loading, specially under accident scenarios of an impact, a crash or shock. Recent studies have focused on analyzing the response of lithium-ion batteries in such conditions. This special issue focus on various aspects: from mechanical response of battery cells, modules and packs under local indentation, shock and vibration to constitutive mechanical behavior of battery components, including anodes, cathodes and separators. Additional topics for this issue include multi-physics behavior of cells under combined mechanical, electrical or thermal loading. Contributions are invited from both experimental studies and computational modeling. This special issue will be of interest of academic users, transportation industry, battery manufacturers, standard developers, rule making authorities, first responders and the public in dealing with crash safety of lithium-ion batteries.

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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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