Special Issue

Advancements in Vehicle-to-Grid Technology for Smart Energy Systems

Message from the Guest Editors

This Special Issue aims to showcase the latest research, technological developments, and practical implementations shaping the future of V2G systems within smart energy ecosystems. We welcome the submission of original research articles, comprehensive reviews, and case studies that address the challenges and opportunities in this rapidly evolving field. The Special Issue includes but is not limited to the following topics:

- V2G architecture, protocols, and communication standards;
- Power electronics and converter design for V2G systems;
- Control strategies for bidirectional energy flow;
- Integration of V2G with renewable energy sources;
- Grid stability and ancillary services through V2G;
- Battery degradation and lifecycle analysis in V2G applications;
- V2G-enabled energy management systems;
- Vehicle-to-home (V2H) and vehicle-to-building (V2B) technologies;
- Economic models and policy frameworks for V2G adoption;
- Pilot projects and real-world implementations of V2G systems.

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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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