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Smart Charging and Grid Integration for Sustainable Electric Transportation

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Message from the Guest Editors

By exploring diverse topics, this Special Issue aspires to provide a comprehensive understanding of the evolving landscape of EV charging infrastructure and contribute valuable insights to facilitate the transition toward sustainable and grid-integrated transportation. Topics of interest include, but are not limited to, the following:

- Optimal charging station power supply and energy management;
- Advance bidirectional electric vehicle energy management strategies (V2G, V2B, V2H, V2V);
- Utilization of EVs as flexible assets for enhanced grid ancillary services;
- Strategies for integrating renewable energy sources into eV charging infrastructure;
- Development of EV charging pricing models and their effect on grid operation;
- Solutions for mitigating congestion and optimizing grid utilization;
- Implementation of mathematical programming in smart charging;
- Machine learning applications in EV charging—operation optimization and forecasting;
- Future prospects and policy implications.



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Special Issue



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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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