Special Issue

Applications of Permanent Magnet Motors for Electric Vehicles

Message from the Guest Editor

This Special Issue of *Energies*, entitled "**Applications of Permanent Magnet Motors for Electric Vehicles**", aims to present a comprehensive collection of recent advances in motor design, drive control, magnetic structures, and integrated multiphysics modeling. This Special Issue aims to showcase innovative research from both academia and industry, with a particular emphasis on the following topics:

- High power-density design and thermal management strategies for EV traction motors;
- Integration and reliability assessment of compact motor systems for automotive auxiliary applications;
- Magnetic gear-based systems that enable contactless, high-precision torque transmission;
- Design methodologies for rare-earth-free magnet motors that address sustainability and supply chain risks;
- Innovative motor topologies, including axial flux, dual-rotor, and segmented stator configurations;
- AI-driven motor control optimization and data-based condition monitoring techniques;
- Multiphysics optimization approaches (electromagnetic–thermal–structural coupling);
- Co-design frameworks that integrate motor control algorithms with structural and electromagnetic optimization.

Guest Editor

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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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