

Special Issue

Perspective Solutions for Sustainable Electric Propulsion: Novel Motors and Drive Technologies with Reduced or No Rare-Earth Materials

Message from the Guest Editor

We welcome contributions focused on **stator permanent magnet (stator-PM) motors, rotor-PM motors, and hybrid-excitation topologies**. Advances in drive systems and control strategies are also of interest, including new power converters, fault-tolerant control, and the use of wide-bandgap semiconductors. By bridging machine design with power electronics and intelligent control, this Special Issue aims to provide a comprehensive outlook on rare-earth-conscious electric propulsion systems, supporting the next generation of sustainable technologies for various applications. **Areas of interest for publication include, but are not limited to, the following topics:**

- Rare-earth-free or reduced rare-earth electric machine designs;
- Stator-PM, rotor-PM, and hybrid excitation motor topologies;
- Demagnetization modelling, mitigation, and testing;
- Thermal robustness and thermal management;
- Advanced drive circuits and converter topologies;
- Control strategies for rare-earth-conscious motors;
- Integrated motor–drive systems;
- Multi-physics optimization and co-design;
- Applications in EVs, aerospace, and renewable energy systems.

Guest Editor

Dr. Ehsan Farmahini Farahani

Electrical Power Research Group, School of Engineering, Newcastle University, Newcastle Upon Tyne NE1 7RU, UK

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

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