

Special Issue

Next-Generation Fission and Fusion Reactors—Designs, Deployment, Regulation and Impacts

Message from the Guest Editor

Ongoing debates and advocacy regarding the relevance of existing plants and new plant deployment worldwide are at geopolitical levels and are important within the context of climate change and sustainability. The current human development index cannot be maintained or improved without scaled global use of nuclear power. Yet, regulatory constraints and challenges associated with the social acceptance of nuclear power persist. Here, we seek papers as part of a worthy collection addressing numerous aspects of the “next-generation small (fission and fusion-based) reactor challenge”. This Special Issue assumes that timely and successful deployment is ultimately the goal. We are particularly interested in papers that are “data-driven” and consider both “hard and soft” topics in relation to small fission- and fusion-based reactor systems.

- nuclear energy
- nuclear fission
- nuclear fusion
- nuclear reactors
- new nuclear
- new fission reactors
- new fusion reactors
- small modular reactors
- climate change
- carbon net zero

Guest Editor

Prof. Dr. Akira Tokuhiro
Faculty of Energy and Nuclear Engineering, Ontario Tech University,
Oshawa, ON L1G 0C5, Canada

Deadline for manuscript submissions

closed (25 July 2025)



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Energies
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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