Special Issue

Artificial Intelligence and Machine Learning in Design Advanced Materials and Structures in Energy Systems

Message from the Guest Editor

The rapid development in the energy systems of energy storage devices, intelligent wearables, aerospace and automotive manufacturing industries has demonstrated an urgent need for advanced materials and structures with improved properties, advanced high-strength, ultra-lightweight, thermodynamic stability, and safety. Traditional experimental and computational methodologies face diverse challenges, including significant investment of time and money, low success probabilities, and high computational costs. The latest advancements in artificial intelligence and machine learning have increased the expectation that data-driven techniques would revolutionize scientific discoveries towards providing new paradigms for the development of advanced materials and structures in energy systems. This Special Issue aims to collect contributions regarding the applications of artificial intelligence and machine learning techniques in the design and development of advanced materials and structures in energy systems in order to build and consolidate the knowledge in this subject area.

Guest Editor

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Deadline for manuscript submissions

closed (10 April 2025)

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/185232

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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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