Special Issue

Nanogenerators: Design, Fabrication and Applications

Message from the Guest Editors

Over the past decade, nanogenerators have emerged as a transformative technology, leveraging mechanisms such as triboelectric, piezoelectric, electromagnetic, and hybrid effects to efficiently harvest ambient mechanical energy. With advancements in materials science, design strategies, and fabrication techniques, nanogenerators have shown significant potential in diverse applications, including self-powered sensors, wearable electronics, medical implants, and environmental monitoring systems. Of course, there are many challenges that researchers and engineers must overcome in order to fully utilize nanogenerators; for example, the efficiency of energy conversion must be enhanced, its scalability for mass production must be addressed, and the long-term durability of nanogenerators under varied applications must be improved. Accordingly, this Special Issue seeks to present research papers, short communications, and review articles that focus on novel materials and device architectures, innovative manufacturing technology, and the novel application of nanogenerators, providing a comprehensive overview of the current state of the field and future trends in nanogenerator technology.

Guest Editors

Dr. Junqing Zhao

Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, Beijing 100083, China

Prof. Dr. Xiaojing Mu

College of Optoelectronic Engineering, Chongqing University, Chongqing 400044, China

Deadline for manuscript submissions

31 December 2025

Micromachines

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed

mdpi.com/si/231354

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

mdpi.com/journal/micromachines

Micromachines

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed

mdpi.com/journal/micromachines

MDPI

About the Journal

Message from the Editor-in-Chief

You are invited to contribute research articles or comprehensive reviews for consideration and publication in *Micromachines* (ISSN 2072-666X). *Micromachines* is published in the open access format. Research articles, reviews and other contents are released on the internet immediately after acceptance. The scientific community and the general public have unlimited free access to the content as soon as it is published. As an open access journal, *Micromachines* is supported by the authors or their institutes by payment of article processing charges (APC) for accepted papers. We are pleased to welcome you as our authors.

Editor-in-Chief

Prof. Dr. Ai-Qun Liu
Department of Electrical and Electronic Engineering, The Hong Kong Polytechnic University, Hong Kong, China

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, dblp, and other databases.

Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Mechanical Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.2 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).