Special Issue

Advanced Electrostatic Sensors and Actuators

Message from the Guest Editor

Electrostatics has challenged well-established ideas and substituted them for new concepts for 30 years. Electrostatic phenomena were too often quoted as "poorly understood", but many recent works have established a much more solid foundation. Now, many important electrostatics-based sensor and actuator devices have been appearing as important solutions for low-power off-grid or stand-alone renewable energy technologies. In fact, mechanical-to-electrical transducers based on piezo-, flexo-, hygro-, or triboelectricity are playing a central role in low-energy power consumption devices, such as Internet of Things (IoT), wearable electronics, and other low power systems. Therefore, this Special Issue aims to showcase research papers and review articles that focus on electrostatic phenomena for the development of sensor and actuator devices, including the modeling for mechanical-to-electrical coupling mechanisms and/or hygroelectricity.

- triboelectric devices
- flexoelectricity
- electromechanical coupling
- hygroelectricity
- sensors and actuators

Guest Editor

Dr. Thiago Augusto Lima Burgo

Coulomb Electrostatics and Mechanochemistry Laboratory, Universidade Federal de Santa Maria, Av. Roraima 1000, Camobi, Santa Maria 97105-900, RS, Brazil

Deadline for manuscript submissions

closed (10 February 2023)



Micromachines

an Open Access Journal by MDPI

Impact Factor 3.0 CiteScore 6.0 Indexed in PubMed



mdpi.com/si/135138

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

mdpi.com/journal/ micromachines





an Open Access Journal by MDPI

Impact Factor 3.0 CiteScore 6.0 Indexed in PubMed



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

- 1. Department of Electrical and Electronic Engineering, The Hong Kong Polytechnic University, Hong Kong, China
- 2. School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore 639798, Singapore

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).

