

Special Issue

Small-Scale Mechanical Behaviors in Advanced Engineering Materials

Message from the Guest Editors

Mechanical failures of high-tech devices, such as nanoelectronics and microelectromechanical systems, are often caused by factors like process-induced residual stresses, adhesion, mechanical wear, or mechanical deformation during fabrication. Therefore, understanding the small-scale mechanical properties of materials is essential for the commercial success of future technologies. Advanced mechanical characterization techniques, including nanoindentation and atomic force microscope-based methods, have proven to be crucial in understanding these complex material behaviors. This Special Issue, titled 'Small-Scale Mechanical Behaviors in Advanced Engineering Materials', invites researchers from both industry and academia to present their recent work in areas such as nanoindentation, micro- and nano-tribology (friction, wear, and lubrication), interfacial adhesion, chemical mechanical polish (CMP), and fracture mechanics, as such studies are crucial for enhancing the performance and reliability of advanced technological devices. These devices include, but are not limited to, nanoelectronics, microelectromechanical, biomaterials, medical implants, energy storage devices.

Guest Editors

Dr. Ting Tsui

Department of Chemical Engineering, University of Waterloo, 200 University Avenue West, Waterloo, ON N2L 3G1, Canada

Dr. Nitya Nand Gosvami

Department of Materials Science and Engineering, Indian Institute of Technology, Hauz Khas, New Delhi 110016, India

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/231183

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

[mdpi.com/journal/
micromachines](https://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](https://mdpi.com/journal/micromachines)



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).