

## Special Issue

# Recent Advances in Soft Miniature Robotics: Design, Fabrication, Control, and Application

### Message from the Guest Editors

Soft robotics, inspired by the adaptability and resilience of biological systems, has emerged as a transformative field, facilitating the development of machines that safely interact with dynamic environments. These systems use compliant materials, biohybrid structures, and intelligent actuation mechanisms to attain unprecedented flexibility, enabling applications in medical devices, wearable technologies, environmental monitoring, and human–robot collaboration. By integrating advances in functional materials, additive manufacturing, and AI-driven control, soft robots bridge the gap between rigid automation and biological adaptability. They offer solutions for intricate tasks such as minimally invasive surgery, fragile object manipulation, and adaptive locomotion in unstructured terrains. This Special Issue aims to explore innovations in soft robotics, fabrication, control strategies, and real-world applications, realized experimentally or computationally. We welcome contributions addressing the following topics:

- **Bioinspired Design**
- **Different Actuation Systems**
- **Advanced Materials**
- **Fabrication Techniques**
- **Control and Intelligence**
- **Human–Robot Interaction**
- **Medical and Industrial Applications**

---

### Guest Editors

Dr. Rongjing Zhang

School of Mechanical Engineering & Automation, Beihang University, Beijing 102206, China

Prof. Dr. Patrick R. Onck

Faculty of Science and Engineering, Zernike Institute for Advanced Materials, University of Groningen, 9747 AG Groningen, The Netherlands

---

### Deadline for manuscript submissions

15 July 2026



## Micromachines

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.0  
CiteScore 6.0  
Indexed in PubMed



[mdpi.com/si/240937](https://mdpi.com/si/240937)

*Micromachines*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[micromachines@mdpi.com](mailto: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. Nam-Trung Nguyen

Queensland Quantum and Advanced Technologies Research Institute,  
Griffith University, West Creek Road, Nathan, QLD 4111, Australia

---

### 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 16.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2025).