

# Special Issue

## Implantable Neural Interfaces

### Message from the Guest Editor

Neural interfaces are connections that enable the two-way exchange of information with the nervous system. These connections can occur at multiple levels, including with the peripheral nerves, the spinal cord, or the brain; in many instances, fundamental biophysical and biological challenges are shared across these levels. There are several issues to be considered: selectivity, stability, resolution versus invasiveness, implant-induced injury, and the host-interface response. The engineered solutions to these challenges include electrode designs and geometry, stimulation waveforms, materials, and surface modifications. The emerging opportunities to improve neural interfaces include cellular-level silicon to neuron connections, optical stimulation, and approaches to control inflammation. Overcoming the biophysical and biological challenges will enable effective high-density neural interfaces for stimulation and recording. This Special Issue will promote new ideas, approaches, and paradigms toward the development of the next generation of implantable neural interfaces.

---

### Guest Editor

Prof. Dr. Sang Beom Jun

Department of Brain and Cognitive Sciences, Ewha Womans University, Seoul 03760, Korea

---

### Deadline for manuscript submissions

closed (31 October 2021)



# Micromachines

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.0  
CiteScore 6.0  
Indexed in PubMed



[mdpi.com/si/54545](https://mdpi.com/si/54545)

*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. 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 16.2 days after submission; acceptance to publication is undertaken in 1.8 days (median values for papers published in this journal in the second half of 2024).