

Special Issue

Neural Microelectrodes for Brain–Computer Interfaces

Message from the Guest Editors

Neural microelectrodes are indispensable core components for brain–computer interfaces (BCIs) and fundamental neuroscience, acting as the critical bridge between neural tissues and external devices to enable high-fidelity signal acquisition and precise neural modulation. Traditional lithography-based technologies lay the foundation for microelectrode fabrication, while recent decades have seen the emergence of innovative precision platforms (e.g., flexible electronics, 3D self-deployable structures, interventional devices) that are increasingly integrated to leverage complementary strengths. These innovations unlock promising applications in motor function restoration, brain disease diagnosis/treatment, and neural circuit decoding. This Special Issue invites original research, short communications, and reviews focusing on novel methodological developments in neural microelectrode materials, micro/nanofabrication, neural signal detection and modulation, neural encoding/decoding algorithms, and preclinical/clinical translational applications.

Guest Editors

Dr. Jinping Luo
Dr. Yilin Song
Prof. Dr. Xinxia Cai

Deadline for manuscript submissions

31 August 2026



Micromachines

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 7.1
Indexed in PubMed



mdpi.com/si/266484

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 3.5
CiteScore 7.1
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Micromachines (ISSN 2072-666X) is a forum for cutting-edge interdisciplinary research on micro and nanoscale science and technology. We emphasise the practical, real-world value of micro and nanotechnologies that will place *Micromachines* in a leading position among engineering and technology journals.

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 16.6 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2026).