micromachines

IMPACT FACTOR 3.0 | Indexed in: PubMed | CITESCORE 5.2

an Open Access Journal by MDPI

Progress and Challenges of Implantable Neural Interfaces

Guest Editors:

Dr. Mingde Du
Department of Electronics and Nanoengineering, Aalto University, FI-02150 Espoo, Finland

Dr. Gabriella Panuccio
Enhanced Regenerative Medicine, Istituto Italiano di Tecnologia, 16163 Genova, Italy

Dr. Erin Patrick
Department of Electrical and Computer Engineering, University of Florida, Gainesville, FL 32603, USA

Deadline for manuscript submissions:
closed (30 November 2022)

Message from the Guest Editors

Dear Colleagues,

Implantable neural interfaces have flourished in the past decades, and are playing an increasingly important role in fundamental neuroscience research and promising clinical solutions. Organic semiconductor materials, flexible low-dimensional materials, and integrated opto-electronic devices have been promising candidates for future applications. There are multiple challenges that must be met. For example, the large number of channels in probes or electrodes dedicated to deep-brain applications, excellent flexibility and stability of the neural prosthesis for function restoration (e.g., retinal prosthesis for vision restoration). Beyond the devices with wired power supply, wireless tools have significantly expanded the approaches for studies with freely moving animals. Implantable neural interfaces are the most straightforward tool for us to understand the brain and nervous system, and will guide us for the building of brain–machine interfaces (BMIs) and artificial intelligence. In this Special Issue, we invite submissions reporting the state-of-the-art development of implantable neural interfaces and their applications.

micromachines

IMPACT FACTOR 3.0 | Indexed in: PubMed | CITESCORE 5.2

an Open Access Journal by MDPI

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

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, dblp, and other databases.
Journal Rank: JCR - Q2 (*Physics, Applied*) / CiteScore - Q2 (*Mechanical Engineering*)

Contact Us

Micromachines Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/micromachines
micromachines@mdpi.com
𝕏@micromach_mdpi