Special Issue

Micro- and Nano-Fabrication by Metal Assisted Chemical Etching

Message from the Guest Editor

Metal assisted chemical etching (MacEtch) has recently emerged as a new etching technique capable of fabricating high aspect ratio nano- and micro-structures in a few semiconductors substrates—Si, Ge, poly-Si, GaAs, and SiC—and using different catalysts—Ag, Au, Pt, Pd, Cu, Ni, and Rh. Several shapes have been demonstrated with a high anisotropy and feature size in the nanoscale-nanoporous films, nanowires, 3D objects, and trenches, which are useful components of photonic devices, microfluidic devices, bio-medical devices, batteries, Vias, MEMS, X-ray optics, and so on. With no limitations of large-areas and low-cost processing, MacEtch can open up new opportunities for several applications where high precision nano- and micro-fabrication is required. This can make semiconductor manufacturing more accessible to researchers in various fields, and accelerates innovation in electronics, bio-medical engineering, energy, and photonics. Accordingly, this Special Issue seeks to showcase research papers, short communications, and review articles that focus on novel methodological developments in MacEtch, and its use for various applications.

Guest Editor

Dr. Lucia Romano

- 1. Institute for Biomedical Engineering, University and ETH Zürich, 8092 Zurich, Switzerland
- 2. Paul Scherrer Institute, Forschungsstrasse 111, CH-5232 Villigen, Switzerland

Deadline for manuscript submissions

closed (1 March 2020)



Micromachines

an Open Access Journal by MDPI

Impact Factor 3.0 CiteScore 6.0 Indexed in PubMed



mdpi.com/si/29691

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

mdpi.com/journal/micromachines





an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed



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

Department of Electrical and Electronic Engineering, The Hong Kong Polytechnic University, Hong Kong, China

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).

