

Special Issue

Optofluidic Microlasers

Message from the Guest Editors

Optofluidic technology has quickly grown in the past two decades leading to the realization of several micro-fabricated devices developed to provide new tools for high-sensitivity optical sensing to be exploited in applications related to biomedicine, security, and environment control. A key element of many of these devices is the optofluidic microlaser. A lot of work is currently being developed by researchers to improve the performances of these devices such as low pump threshold, narrow emission band, single-mode operation, and tunability. Moreover, besides optical cavities realized within microfluidic channels, other solutions have been proposed, such as lasing in a droplet, lasing in a cell, lasing with beads, ring lasing, etc. This Special Issue will collect the most recent results on this subject and topics related to it including fabrication technologies, integration of complex optofluidic circuits, and the demonstration of new applications. **Keywords**

- Optofluidics
- lab-on-a-chip
- microfluidics
- microlasers
- micro-optical cavity
- micro-optics
- microfabrication
- fs-micromachine
- photonics devices
- optical sensing
- biosensing

Guest Editors

Prof. Dr. Francesco Simoni

Institute of Applied Sciences and Intelligent Systems, Consiglio Nazionale delle Ricerche (CNR), 80072 Pozzuoli, Italy

Dr. Luigino Criante

Center for Nano Science and Technology @PoliMi, Istituto Italiano di Tecnologia, Via G. Pascoli 70/3, 20133 Milano, Italy

Deadline for manuscript submissions

closed (31 March 2021)



Micromachines

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed



mdpi.com/si/43770

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 3.0
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.

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).