Special Issue

Smart Microfluidic Devices with Photonic Control and Sensing

Message from the Guest Editor

A wide plethora of solutions for flow control and sensing of chemical and physical parameters have been combined with microfluidic devices, thus allowing manipulation and monitoring of small volumes of fluids. Still, there are technical challenges for the conventional microfluidic approaches that could be overcome by realizing “smart microfluidic devices.” Photonics techniques to remotely induce and control flow in channels as well as to perform non-contact, non-invasive sensing on the filling fluids can provide significant contributions for a faster transition toward a smart microfluidic world. This Special Issue is particularly focused on the specific application to microfluidic channels of photonic-based non-invasive sensors of temperature, pressure or other physical parameters as well as of non-contact sensors of pH, oxygen, or other analytes. Contributions are also welcomed on the development of microdevices where flow is activated and modulated in real-time, by exploiting optical, non-contact strategies.

Guest Editor

Prof. Dr. Sabina Merlo

Department of Electrical, Computer and Biomedical Engineering, University of Pavia, 27100 Pavia, Italy

Deadline for manuscript submissions

closed (15 July 2022)

Micromachines

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed

mdpi.com/si/48468

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

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

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 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).

MDPI