



## Mixing in Microchannels

Guest Editors:

**Prof. Dr. Xueye Chen**

**Prof. Dr. Dalei Jing**

**Prof. Dr. Joaquín Ortega-Casanova**

**Dr. Francisco-J. Granados-Ortiz**

Deadline for manuscript  
submissions:  
**closed (20 June 2022)**

### Message from the Guest Editors

Dear Colleagues,

As a significant part of a microfluidic system, microchannel mixers have a wide range of applications in fields such as Lab-on-a-Chip, biochemical analysis, and micro-reactors. The mixing efficiency of the micromixer is important for the performance of microfluidic devices. However, due to the small size of the mixing channel in the micromixer, the fluid flow is restricted by a low-Reynolds-number laminar flow, and mixing occurs primarily through molecular diffusion, resulting in low mixing efficiency. Furthermore, the small characteristic dimension of the microchannel results in large hydraulic resistance and large energy consumption. Thus, improving the hydraulic and mixing performances of the microchannel mixer has inspired comprehensive scientific attentions. To answer this, the present Special Issue welcomes original research papers and review papers on the theoretical, numerical, and experimental studies of the mixing in microchannels, as well as the optimization design, fabrication, and application of both passive and active micromixers.

- Microchannel
- Micromixer
- Mixing
- Hydraulic performance
- Optimization design
- Fabrication
- Application





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](http://www.mdpi.com)

[mdpi.com/journal/micromachines](http://mdpi.com/journal/micromachines)  
[micromachines@mdpi.com](mailto:micromachines@mdpi.com)  
[X@micromach\\_mdpi](https://twitter.com/micromach_mdpi)