

Special Issue

Mixing in Microchannels

Message from the Guest Editors

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

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Deadline for manuscript submissions

closed (20 June 2022)



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Message from the Editor-in-Chief

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