



Microfluidic Applications in Synthetic Biology

Guest Editors:

Dr. Chaitanya Kantak

Yale School of Medicine, Yale
University, USA

Dr. Cherng-Wen Darren Tan

Institute of Synthetic
Bioarchitectures, Department of
Bionanosciences, University of
Natural Resources and Life
Sciences (BOKU), 1190 Vienna,
Austria

Deadline for manuscript
submissions:

closed (30 September 2019)

Message from the Guest Editors

The rising field of synthetic biology has tremendous potential to constructively disrupt biopharmaceutical, agricultural and biofuel industries. A major aim of synthetic biology is also to produce artificial cells capable of performing diverse functions of our choosing.

Closely following the heels of synthetic biology are microfluidic technologies that give us unprecedented control and awareness over the microenvironment of cells and cell-like material. From this capability comes, not only the analysis, but also the production of organelle-like or even cell-like constructs.

In this special issue, we invite researchers to present microfluidics-based work involving both top-down approaches, using cell-derivatives, as well as bottom-up approaches, using molecular self-assembly, for constructing modular cell components. We are also interested in microfluidics-based work involving nucleic acid assembly, high throughput microdroplet screening, cell-on-a-chip analyses, as well as advances in microfabrication that would impact synthetic biology.

We welcome original research work, short communications, critical and tutorial reviews, and insights or perspectives related to this topic.





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

mdpi.com/journal/micromachines
micromachines@mdpi.com
[X@micromach_mdpi](https://twitter.com/micromach_mdpi)