

Special Issue

Micro- and Nanofluidics for Bionanoparticle Analysis

Message from the Guest Editors

Bionanoparticles such as microorganisms and exosomes are recognized as important targets for clinical applications, food safety, and environmental monitoring. Other nanoscale biological particles, including liposomes, micelles, and functionalized polymeric particles are widely used in nanomedicines. The recent development of microfluidic and nanofluidic technologies has enabled the separation and analysis of these species in a lab-on-a-chip platform, while there are still many challenges to address before these analytical tools can be adopted in practice. For example, the complex matrices within which these species reside in create a high background for their detection. Their small dimension and often low concentration demand creative strategies to amplify the sensing signal and enhance the detection speed. This Special Issue aims to recruit recent discoveries and developments of micro- and nanofluidic strategies for the processing and analysis of biological nanoparticles. The collection of papers will hopefully bring out more innovative ideas and fundamental insights to overcome the hurdles faced in the separation and detection of bionanoparticles.

Guest Editors

Dr. Xuanhong Cheng

Materials Science and Engineering/Bioengineering, Lehigh University, 5 E. Packer Ave, Bethlehem, PA 18015, USA

Dr. Yong Zeng

Department of Chemistry, University of Kansas, 1251 Wescoe Hall Drive, Lawrence, KS 66045, USA

Deadline for manuscript submissions

closed (30 April 2019)



Micromachines

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed



mdpi.com/si/14899

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.

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).