



Micro- and Nanofluidics for Bionanoparticle Analysis

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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 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.





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