Special Issue

Microfluidics and Lab-on-a-Chip Applications for Biosensing

Message from the Guest Editors

Microfluidics and the lab-on-a-chip concept have been found to be crucial for the integration, parallelization, and miniaturization of various tests with widespread application in pharmaceutical and life science research and environmental, industrial, and food safety areas. Introducing miniaturization will favor versatility, ease-of-use, time-to-result, and cost per test, hence benefitting both society and the business sector. As an example, the coverage of this concept is well reflected in the point-of-care molecular diagnostic market due to their small dimensions, accuracy, low cost, low power consumption, and portability. Therefore, this Special Issue seeks to showcase research papers and review articles focusing on lab-on-a-chip devices, namely by: (1) The development of novel designs for miniaturization, microfluidic devices and biosensors, using technological advances in nanomaterials and microthecnologies; (2) The integration in targeting applications, including, but not exclusively to nucleic acid analysis, drug delivery, point-of-care diagnostics, cellular and molecular detection, biotechnology, and engineering.

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Deadline for manuscript submissions

closed (31 December 2021)

Micromachines

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Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed

mdpi.com/si/64289

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