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Micro/Nanofluidics Devices for Nucleic Acids and Cell Analysis

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Message from the Guest Editors

Micro/nanofluidics technology, having the advantages of precise fluid control and minimal reagent use, integrates with nucleic acid to develop novel analytical devices, advancing new research hotspots. This has improved the diagnosis of infectious diseases, early cancer screening and treatment assessment. Moreover, microelectrode arrays combined with microfluidics have important application prospects in exploring the mechanisms of neurological diseases and the fields of drug screening, neural computing and organ chips.

This Special Issue seeks to showcase the effective integration of micro/nanofluidic devices and nucleic acid testing methods. Particular attention will be paid to innovative applications that can improve upon existing medical devices and brain–machine interfaces. Also of interest is the development of micro/nanofluidic devices for nucleic acid analysis, which presents a great challenge as many steps, including cell or virus lysis, nucleic acid extraction and enrichment and nucleic acid amplification or detection signal amplification, must be accomplished by a sensitive, portable yet low-cost chip.

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Message from the Editor-in-Chief

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