Special Issue

Lab-on-a-Chip and Microfluidic Sensors

Message from the Guest Editor

Lab-on-a-chip technology is the cornerstone of low-cost and robust testing at the point-of-care. It is widely applied for the semiquantitative detection of a broad range of target molecules in bodily fluids and water and food samples. However, it suffers from a major shortcoming that limits its usefulness, which is that it is mostly suitable for the analysis of simple analyte samples. For example, testing of blood biomarkers requires ex situ sample preprocessing (to obtain plasma), which negates the benefit of the point-of-care format. There is therefore a significant need to develop a next-generation point-of-care technology compatible with complex samples such as blood, tissue, stool, and food with greater limit-of-detection. This Special Issue is devoted to covering microfluidic and lab-on-a-chip research that focuses on integrated sample preparation and detection on a single chip to provide low-cost and equipment-free detection. Some reviews constitute the backbone of the Special Issue, and there is room for many regular research papers, as well as mini reports.

Guest Editor

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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