



Microfluidic Chips for Life Science and Health Care Applications

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Message from the Guest Editors

Silicon-chip-based technologies have been widely adopted in life science and healthcare applications for the detection and characterization of biological substances. The advanced fabrication technologies and unique chemical characteristics of silicon make it a versatile material for bio-sensing structures. Complex structures can be created on silicon chips using etching, doping, film deposition, and surface chemistry. Silicon technology is used for detecting, sensing, and manipulating biological substances at various levels. Silicon-based sensors can detect chemical, electrical, and photonic signals in vitro and in vivo. Surface chemistry allows tethering of various molecules to the silicon surface for bio-sensing. However, silicon is expensive compared to polymers, and its mechanical stiffness limits direct implantation in organisms. This Special Issue welcomes original papers, reviews, and perspectives on recent advances in structural design, silicon fabrication, surface modification, and novel applications in life science and healthcare. Researchers are invited to submit contributions and contact the editors with any questions.





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Message from the Editor-in-Chief

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