Special Issue

Electrokinetic and Electrochemical Phenomena in Microsystems

Message from the Guest Editors

Electrokinetic phenomena—such as electroosmosis, electrophoresis, and dielectrophoresis—play a fundamental role in the manipulation and transport of ions, molecules, and particles in microfluidic and nanofluidic systems. In the last few decades, the combination of electrokinetics and electrochemical sensors has enabled unprecedented opportunities to develop miniaturized systems for the analysis and detection of ions and molecules. Electrochemical sensing technology possesses the advantages of high sensitivity, easy fabrication, and low cost, which are indispensable for biochemical analysis, environmental monitoring, biotechnological processes, and the food industry. With this Special Issue, we want to highlight the recent advances in the electrokinetic and electrochemical sensing field, including but not limited to newly developed techniques, novel developments or applications of electrochemical sensing approaches, and the investigation of novel electrokinetic phenomena. Theoretical, numerical and experimental research papers, short communications, and review articles are welcome.

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Editor-in-Chief

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