



Electrokinetic Phenomena in Microfluidics and Nanofluidics and Their Lab-on-a-Chip Applications

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Message from the Guest Editors

Over the past two decades, research in microfluidics and nanofluidics has led to diverse applications in analyzing chemical and biological samples. Due to their flexibility, integrability, voltage-based control, and dominance over other forces at small scales, electrokinetics and electrohydrodynamics have become preferred methods in lab-on-a-chip devices. These methods facilitate delivery, manipulation, concentration, separation, and sensing of various soft-matter samples such as ion species, biomolecules, particles, cells, fluids, and interfaces. Phenomena include electroosmosis, electrophoresis, dielectrophoresis, electrohydrodynamics, and others, arising from electrostatic forces induced by electric fields applied across confined mediums. In this Special Issue of Applied Sciences, we invite original research or review articles on the fundamentals and applications of electrokinetic and electrohydrodynamic phenomena in modern micro- and nanofluidic chips.





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Message from the Editor-in-Chief

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