Special Issue

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

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.

Guest Editors

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Deadline for manuscript submissions

20 January 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/201061

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mdpi.com/journal/applsci

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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