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Electrical Manipulation of Bioparticles in Microfluidics

Guest Editor:

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Message from the Guest Editor

This Special Issue aims to focus on applications in the field of disease diagnostics that utilize electrokinetics to manipulate and characterize infected bioparticles ranging from cells to proteins. Submissions integrating modeling and experimentation are preferred.

Contributions may be (i) research articles with original results or (ii) critical reviews, which may also contain original results focusing on novel methodological developments and applications pertaining to the electrical manipulation of bioparticles at micro and sub-micro scales. The subjects of the upcoming issue could include, but are not limited to:

- Electrokinetics in microchannels and nanochannels;
- Dielectric spectroscopy;
- Traveling wave dielectrophoresis;
- Dielectrophoretic enrichment, separation, and manipulation;
- Organ-on-a-chip with electrical stimulations;
- Biosensors integrated with microchips utilizing an electric field to manipulate bioparticles;
- AI/ML applications with microchips utilizing an electric field to manipulate bioparticles.