Special Issue

Recent Advances in Magnetic Micro/Nano-Manipulation

Message from the Guest Editors

The ability to manipulate micro/nano objects is of paramount importance for a wide range of applications. Over the past decades, researchers have made significant progress in developing various manipulation methods using different types of external fields. Among these methods, magnetic manipulation has garnered considerable attention due to its wireless nature, high controllability, and versatile forms of magnetic fields, making it a highly explored technology with promising applications in separation, mixing, assembly, and robotics. Despite the substantial advancements made in this field, there remains substantial scope for further development in terms of high-performance magnetic tools, multifunctional actuation strategies, and a deeper understanding of the manipulation process. As a result, we are delighted to announce this Special Issue, soliciting original research papers and review papers that delve into the applications, fundamentals, design, and underlying mechanisms of the magnetic manipulation of micro/nano objects. Submissions exploring analytical, numerical, and experimental analyses are all welcome. We look forward to receiving your submissions.

Guest Editors

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