Special Issue

Magnetic Manipulation in Micromachines

Message from the Guest Editor

There have been many types of locomotion and manipulation mechanisms in micromachines, such as the use of piezoelectric actuators, ultrasonic vibration, etc. Among them, magnetic manipulation, including the use of electromagnets or permanent magnets, has received less attention. Magnetic manipulation holds great potential for applications in micromachines due to its contactless and direct drive force, eliminating the need for transmission and linkage mechanisms. It is particularly suitable for small-scale systems and micro/nanorobotics. In this Special Issue, we welcome manuscripts that introduce magnetic manipulation for micromachines. We anticipate that submissions will include analytical calculations and/or simulations for manipulator design, with experimental verification of the reported system. We invite contributions in the fields of microsystems, microdevices, micromanipulation, and microrobots. This includes, but is not limited to, swimming microrobots, biomedical micro/nanorobots, MEMS robots, micro-scale energy harvesters, microfluidics, and micromirror devices.

Guest Editor

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