Special Issue

Magnetic Microrobots for Biomedical Applications

Message from the Guest Editors

With the rapid development of micro/nanofabrication technology, various multifunctional microrobots have recently emerged and hold great potential in the biomedical field. They can access complex and narrow regions of the human body in a minimally invasive manner. However, owing to their small size, actuators that can be used for the in vivo propelling of microrobots at the micro scale are still lacking. Currently, a viable option for steering such a microrobot is through external energy transfer. Using magnetic fields for microrobot actuation is the most versatile option for biomedical applications. In biomedical fields, magnetic microrobots have the potential to perform various tasks, such as minimally invasive surgery, targeted drug/cell delivery, cell manipulation, biopsy, imaging-guided surgery, intracellular measurement, and antibacterial applications. The aim of this Special Issue of Micromachines, is to present recent advances in magnetic microrobots for biomedical applications, including, but not limited to, microrobot design and development, control theories for microrobots, magnetic actuation system design and in vivo imaging of microrobots.

Guest Editors

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Deadline for manuscript submissions closed (10 July 2023)



Micromachines

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