Special Issue

Small-Scale Medical Robots: Trends and Challenges

Message from the Guest Editor

Innovative new research on small-scale medical robotics, including micro- and nano-robots, has emerged with a promise to enable minimally invasive medical therapy in hard-to-access areas of the body. Researchers have already shown exciting applications of micro/nanorobots in targeted cargo/drug delivery, microsurgery, and thrombus ablation, among many others. Nevertheless, to facilitate the transition of the prototypes and innovations in clinical settings, this field needs to integrate interdisciplinary research efforts from engineering and the physical sciences to biomedicine. Currently, the pressing challenges that hinder the development of true medical micro/nanorobots include but are not limited to: (1) efficient locomotion at a small scale in biological media, (2) real-time imaging and control, (3) adaptable design and scalable fabrication methods, and (4) application-specific medical functions. Therefore, this Special Issue aims to present research papers, communications, and review articles that demonstrate recent advancements and solutions in any aspects of the above-mentioned research challenges. We look forward to receiving your submissions.

Guest Editor

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Editor-in-Chief

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