



Medical Microdevices and Micromachines

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Message from the Guest Editors

Patients, physicians, and surgeons are expecting more dedicated devices for diagnosis and treatment of many medical conditions. For instance, recent efforts by researchers involve creating nanostructured materials (<100 nm in size), structures for medical devices. Recent advances in the use of nanostructured materials for medical applications have occurred due to two forces. First, novel modeling, processing and characterization methods enable the development of nanostructured materials, structures or devices. Second, nanostructured materials and small scale structures may provide unique medical and biological capabilities for interactions with small-scale bioelements; furthermore they could allow the integration of multiple functions and a reduction in cost.

In this issue, the use of nanostructured materials and small scale structures in implants and devices for medical applications will be considered. Topics that are appropriate for this issue include (but are not limited to): (1) design processing, characterization and modeling; (2) biocompatibility and packaging issues; (3) applications and integration; and (4) medical implant and medical device design strategies.





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