Special Issue

Microfluidic Technology and Its Applications in Precision Manufacturing/Biomanufacturing

Message from the Guest Editor

In recent years, there has been an emerging trend of applying microfluidics in precision manufacturing/biomanufacturing, and its precise control at the microscale has impacted these fields in many ways. Microfluidics offers a versatile platform for precision biomanufacturing, for instance, the synthesis of spheroids/organoids, long-term microtissue culture, and biomaterial fabrication. Microfluidics-enabled printing/bioprinting techniques are playing an increasingly crucial role in the fabrication of controlled soft materials and artificial tissues and organs. Surface microfluidics combines the power of functional surface and fluid control and improves the performance of surfaces/interfaces of biomedical instruments and cutting tools. Through integration with other tools, Lab-on-a-chip and Organ-on-a-Chip technologies also greatly impact manufacturing/biomanufacturing. We welcome any works reporting the utilization of microfluidics for precision manufacturing/biomanufacturing, either as a manufacturing platform or as a tool to improve performance, as well as reviews of related topics.

Guest Editor

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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