Journal Micromachines

Subjects: Instruments & Instrumentation | Nanoscience & Nanotechnology

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Micromachines (ISSN 2072-666X) first launched in ***2010***，initially published as a quarterly journal，and received 1st Impact Factor in July 2014. In 2015，Micromachines was transferred to a monthly journal.
Micromachines (ISSN 2072-666X) is an international, peer-reviewed, ***open access journal***, which provides an advanced forum for studies on ***micro/nano-scaled structures***, ***materials***, ***devices***, ***systems*** as well as ***related micro- and nanotechnology from fundamental research to applications***. The journal publishes ***reviews, original research articles, and communications*** in this field. Our aim is to encourage scientists to publish their theoretical and experimental results in as much detail as possible. Therefore, there is no restriction on the length of the papers or the number of electronic supplementary files. Full details on experiments, materials and methods must be provided for a research article so that the results can be reproduced. Micromachines is covered by the ***Science Citation Index Expanded*** (Web of Science), ***Ei Compendex***, ***Scopus***, and ***PubMed***, and its 2019 impact factor is ***2.523***.

Nano/Microelectromechanical Systems (N/MEMS) | BioMEMS | organ-on-a-chip | point-of-care diagnostic chips | lab-on-a-chip | Micro/nano fabrication and manufacturing | microfluidics | semiconductors | transistors | miniaturized biosensors | 3D printing | energy harvesting

micromachines

Aims and Scope

This journal seeks and encourages submissions on significant and original works related to all aspects of micro/nano-scaled structures, materials, devices, systems as well as related micro- and nanotechnology from fundamental research to applications. The scope includes, but is not limited to, the following topics:

Fundamentals and Physics

Fundamental micro/nanoscale multiphysics phenomena and device, leading to novel applications such as Nano/Microelectromechanical Systems (N/MEMS); mechanical and electrical transducers, sensors, and actuators; optic devices (including plasmons and metal), optoelectronic devices; micro/nano-scale energy harvesting;

piezoelectric, triboelectric, and pyroelectric nanogenerators; flexible, stretchable, and wearable electronics/sensors; microbots (swarm robotics), nanorobots, and micro air vehicles.

Biology and biomedicine

BioMEMS; miniaturized biosensors; microarrays; DNA chips; PCR chips; electronic noses; organ-on-a-chip; microfluidic cell culture; point-of-care diagnostic chips; μ-TAS; molecular imprinting; applications in medicine (nanomedicine), tissue engineering, regenerative medicine, biomedical research, drug discovery, environment, food, health, security, and safety.

Chemistry

Electrochemical devices; nanoelectrodes; miniaturized gas sensors; miniaturized chemical sensors; microsystems for chemistry; microreactors; lab-on-a-chip, biochips, and microfluidics applications in chemistry (including electrokinetic phenomenon), energy and environmental sciences.

Materials and Processing

Materials based micro/nano structures, devices, system, and its applications: class of materials include silicon, carbon, glasses, polymers (plastics), metals, ceramics, composites, liquid crystals, colloids, semiconductors, superconducting, magnetic materials. Bio-inspired, biomedical and biomolecular materials; optical, photonic and optoelectronic materials; nanoscale materials; surfaces and thin films.

Engineering and Technology

Micro/nano fabrication and manufacturing: deposition, lithography, patterning, etching, surface micromachining, bulk micromachining, laser fabrication, biofabrication, 3D printing, self-assembly, etc.
Design and optimization principles of micro- and nanosystems; micro- nanosystems and advanced technologies for engineering applications: resources engineering, civil engineering, advanced manufacturing engineering, environmental engineering, bioengineering, electronic system (including electrical circuits & devices, transistors, capacitors, inductors, resistors, diodes, insulators and conductors) engineering, etc.