Journal of Nanotechnology

Hindawi

Special Issue on

Microfluidics: From Fundamental Material Development to Novel Applications

CALL FOR PAPERS

Microfluidics system, which can be defined as the fluidic devices that manipulate fluids in channels with the submillimeter scale, has attracted tremendous attentions and revolutionized multiple disciplines in recent years, including chemical synthesis, electronics, diagnostics, single-cell analysis, micro/nanofabrication, and pharmaceutics. Compared with their macroscale counterparts, these microdevices dramatically reduce the quantity of reagent and sample size, considerably shorten the detection duration, and greatly improve the detection sensitivity which makes them perfect candidates in various biosensing and biodetection scenarios.

This special issue seeks to cover a wide range of research topics from fundamental material development including inorganic, organic, and hybrid materials for microfluidics and innovative technologies/methods that enable various functions of microfluidics to novel applications including microfluidic reactors, smartphone-based microfluidics devices, and point of care diagnostic system. Due to the wide scope of this special issue, we are expecting to attract the participation and viewers from a wide variety of academic communities including scientists focusing on fundamental scientific areas (chemists, physicists, and biologist), engineers focusing on the material design, microfluidic function design, and application (material engineer, mechanical engineer, and biochemical engineer), and doctors who work on the biomedicine and practice clinical experiments. Both original research results and reviews are acceptable for this issue.

Potential topics include but are not limited to the following:

- Fundamental material development including inorganic, organic, and hybrid materials for microfluidics
- Novel microfluidic system design
- Innovative technologies/methods that enable various functions, such as sample preparation, separation, and fluidic manipulation
- Integration and automation of the microfluidics devices
- Novel applications including smartphone-based microfluidics devices, point of care diagnostic system, microfluidic reactors, and paper-based microfluidic system

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jnt/mfmd/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor
Chao Liu, The University of Texas at Austin, Austin, USA
chaoliu2011@utexas.edu

Guest Editors
Xiaobin Xu, University of California, Los Angeles, USA
xxu2015@g.ucla.edu

Kwanoh Kim, Korea Institute of Machinery and Materials (KIMM), Daejeon, Republic of Korea
kkim@kimm.re.kr

Shuang Hou, University of California, Los Angeles, USA
shuanghou@mednet.ucla.edu

Submission Deadline
Friday, 9 February 2018

Publication Date
June 2018