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**Droplet-based microfluidics for smart emulsions and functional microparticles****Jianhong Xu**

Tsinghua University, China

**D**roplet-based microfluidics has recently emerged as a new and promising area of science and technology in the last decades. Preparation of functional materials with microfluidics has attracted great interest from scientist and technologists with different backgrounds and occupations. This work will systematically introduce the recent progress in multiphase flow control in droplet-based microfluidics and preparation of smart emulsions and functional materials with microfluidics mainly by the author's research group. Controlled multiphase flow with different flow patterns by multiphase microfluidics will be introduced. They have been utilized in novel materials preparation of considerable fields such as optics, biomedicine, controlled porous material and drug release.

**Biography**

Jianhong Xu has pursued his BSc and PhD from Tsinghua University in 2002 and 2007 respectively. He has continued his research in Tsinghua University as a Postdoctoral after graduation. He had finished his Postdoctoral program and became a Formal Faculty of the Department of Chemical Engineering, Tsinghua University. He had studied as a Visiting Scholar at Prof David Weitz lab in Harvard University during. Presently, his research areas are on the microstructured chemical system, multiphase microfluidic technology and functional materials synthesis. He has more than 100 peer-reviewed publications. He got the excellent young scientists fund from the national natural science foundation of China (NSFC). In 2016, he was awarded as young scholar of Chang Jiang scholars program of China of MOE.

xujianhong@tsinghua.edu.cn

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