

Title: Microfluidics for tools in nanomedicine

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**Biography:** Xingyu Jiangis a Chair Professor at the Southern University of Science and Technology, Shenzhen, China. He obtained his BS at the University of Chicago (1999) and PhD at Harvard University (with Prof. George Whitesides, 2004). In 2005, he joined the National Center for NanoScience and Technology and the University of the Chinese Academy of Sciences. He moved to the Southern University of Science and Technology in 2018. His research interests include microfluidics and nanomedicine. He was awarded the “Hundred Talents Plan” of the Chinese Academy of Sciences, the National Science Foundation of China’s Distinguished Young Scholars Award, the Scopus Young Researcher Gold Award, the Human Frontier Science Program Young Investigator Award. He is a Fellow of the Royal Society of Chemistry, an associate editor of *Nanoscale* (Royal Society of Chemistry, UK).

**Abstract**: Microfluidics represent an appealing platform for synthesis, screening and discovery of nanoscale therapeutics. We demonstrate that microfluidics can dramatically improve the efficiency of many clinically relevant assays and screens. Driven by miniaturization and surface chemistry, microscale-chips allow the assays of potential drug carriers and novel drugs, with improved throughput, sensitivity and stability. Combined with nanoparticles and nano-materials, microfluidics show great promise in developing novel therapeutics. For example, these platforms are also extraordinarily useful for screening of therapeutics, e.g., nanocarriers for introducing siRNA, CRISPR/Cas, and so forth.

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