

## CBC SEMINAR ANNOUNCEMENT



**Chiar Professor Xingyu Jiang**  
**Southern University of Science and Technology, China**

### Microfluidics for Biochemical Analysis and Synthesis

Microfluidics can be useful for synthesis and analysis of biochemicals. We demonstrate that microfluidics can dramatically improve the efficiency of these assays and screens. Driven by miniaturization and surface chemistry, microscale-chips allow the assays of clinically important biochemicals, with improved throughput, sensitivity and stability. Combined with nanoparticles and nano-materials, microfluidics show great promise in the synthesis and analysis of novel conjugates of biomolecules. For example, these platforms are also extraordinarily useful for the synthesis and analysis of therapeutics that can be potentially useful in the clinics, e.g., nanocarriers for introducing siRNA, CRISPR/Cas, and so forth.

#### Selected references:

1. Cao HY, Wang YY, Gao Y, Deng XL, Cong YL, Liu Y, Jiang XY, *Angew Chem Int Ed*, (2019), 1626-1631.
2. Yang MZ, Liu Y, Jiang XY, *Chem Soc Rev*, (2019), 850-884.
3. Xianyu YL, Wu J, Chen Y, Zheng W, Xie M, Jiang XY, *Angew Chem Int Ed*, 130, 7625-7639. (2018). M. Yang, Y. Chen, J. Yang, W. Zheng, X. Jiang, *Science Advances*, DOI: 10.1126/sciadv.aao4862 (2017).
4. Cheng SY, Jin Y, Wang NX, Cao F, Zhang W, Bai W, Zheng WF, Jiang XY, *Adv Mater*, (2017). Article number: 1700171.
5. Lei YF, Tang LX, Xie YZY, Xianyu YL, Zhang LM, Wang P, Hamada Y, Jiang K, Zheng WF, Jiang XY, *Nature Communications*, DOI: 10.1038/ncomms15130. (2017)
6. Andersen AS, Zheng WF, Sutherland DS, Jiang XY, *Lab Chip*, 15, 4524-4532(2015).
7. Zhang L, Feng Q, Wang JL, Sun JS, Shi XH, Jiang XY. *Angew Chem Int Ed*, 54, 3952-3956. (2015)

**Date:** 26<sup>th</sup> June 2019 (Wednesday)  
**Time:** 11.00 am to 12.30 pm  
**Venue:** SPMS Research & Graduate  
Studies Office Conference Room  
**Host:** Associate Professor Xing Bengang