



所属学院 材料科学与工程学院

学科领域 Biomaterials, Biomedical Engineering

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个人简介

Dr. Xi Chen (Cathy) is an Associate Professor at Engineering Research Center for Biomedical Materials of Ministry of Education (ERCBM) in East China University of Science and Technology (ECUST). She obtained her B.E. and M.E. in Materials Science and Engineering from Jilin University (2009) and Tsinghua University (2012). After getting her Ph.D degree in Chemical and Biomolecular Engineering under supervision of prof. Frank Caruso from the University of Melbourne, she moved to US and spent three years as a postdoc fellow at UCLA (2016-2017) and Harvard University (2017-2019), respectively. She moved back to China in 2019 to started her group of Nano-Bio Interaction within the ERCBM at ECUST. For most of her career she has been jumping between Materials and Biology; her group is now trying to combine them to achieve a molecular understanding of synthetic materials in the biological environment using advanced techniques, such as microfluidic organ-on-a-chip.

研究方向

#1: Organ-on-a-chip

Engineering human bone/bone disease-on-a-chip for drug repurpose and discovery.

#2: Nanotoxicology

Understanding nanomaterials' toxicity in human organs, including lung and bone.

#3: Stem Cell Therapy

Synthesizing biomaterials applied in stem cell therapy for anti-aging and neuron repair.

研究成果及主要发表文章

1. Xi Chen*, Yu Shrike Zhang, Xinping Zhang, Changsheng Liu*. Organ-on-a-Chip Platforms for Accelerating the Evaluation of Nanomedicine. *Bioactive Materials* 2021, 6, 1012.
2. Xi Chen, Wen Jiang, Ayman Ahmed, Clare S. Mahon, Markus Müllner, Bocheng Cao, Tian Xia*. Engineering Protective Polymer Coatings for Liver Microtissues. *Chemical Research in Toxicology* 2019, 32, 49.
3. Xi Chen*. Nanobiomaterials: Classification, Fabrication and Biomedical Applications. Chapter 7. Layer-by-Layer Technique. Wiley 2017. ISBN: 978-3-527-34067-5.
4. Xi Chen, Yan Yan, Markus Müllner, Yuan Ping, Jiwei Cui, Kristian Kempe, Christina Cortez-Jugo, Frank Caruso*. Shape-Dependent Activation of Cytokine Secretion by Polymer Capsules in Monocyte and Macrophage Cell Lines. *Biomacromolecules* 2016, 17, 1205.
5. Xi Chen, Jiwei Cui, Yuan Ping, Tomoya Suma, Francesca Cavalieri, Quinn A. Besford, George Chen, Julia Braunger, Frank Caruso*. Probing Cell Internalisation Mechanics With Polymer Capsules. *Nanoscale* 2016, 8, 17096.