Hong Kong University of Science and Technology
Bioengineering Graduate Program

PhD Thesis Presentation

Developing New Protein Self-Assembling Strategies for Biomaterials Design and Synthesis

by
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Abstract
Protein assembly remain at the forefront of 3D molecular networks efforts for biomedical applications including drug delivery, in-vitro cell encapsulation and cell culturing. Over the past couple of decades, various innovative strategies have been developed in the field of protein assembly, unexpected and rapid developments have been made. Additionally, fully protein-based materials naturally engaged with genetical encodability as promising building blocks that carry biological information have attracted lot attentions to fulfill certain fundamental request. But many, lack the mechanical tunability and topology control necessary to substitute synthetic polymeric hydrogels. To address these, we carefully investigated several candidates from function and structure perspective. In this thesis, we tailored different assembly strategies including light/enzyme mediate gelation, metal coordinate network formation as well as self-assembly via protein-protein interaction regarding their unique sequence composition.

Date: 1 Aug 2019 (Thursday)
Time: 2:30 pm
Venue: Room 4582 (Lifts 27-28)

Examination Committee:
Prof. Man Yu Wong (Chair)
Prof. Fei Sun (Supervisor)
Prof. Zhengtang Luo
Prof. Shuhuai Yao
Prof. Yusong Guo
Prof. Ting Zhu (Tsinghua U)

All are welcome!

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