

“Harness the power of light: optogenetic control of intracellular activities”

Dr. Liting Duan
Stanford University

Date : 5 February 2018

Time: 11:00am to 12:30pm

**Venue: Meeting Room 2-130, 1/F, Block 2, To Yuen Building,
City University of Hong Kong**

Abstract

Optogenetic methods utilize light to control cells with unprecedented spatial and temporal precision, which opens new routes to drug discovery and gene therapy. Optical approaches based on light-inducible protein-protein interactions have gained tremendous success in regulating various intracellular activities. In this talk, I will introduce my recent work on developing optical strategies to control intracellular organelle transport and signal pathways as well as engineering the interaction of photosensory proteins.

Biography

Dr. Liting Duan received a Bachelor degree in Chemistry from Renmin University of China (People's University of China) and a Ph.D. in Chemistry from Stanford University. She is currently working as a postdoctoral researcher at Stanford University with Prof. Bianxiao Cui in Chemistry and Prof. Michael Lin in Bioengineering and Neurobiology. Her research is focused on the study and application of light-inducible protein-protein interactions. She has developed optical strategies to remotely and non-invasively control several critical intracellular processes, including organelle transport, MAPK signaling and NGF/TrkA signaling, with spatiotemporal resolution. In addition, she has investigated and optimized the interaction of photosensory proteins for optogenetic applications.

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All are welcome!