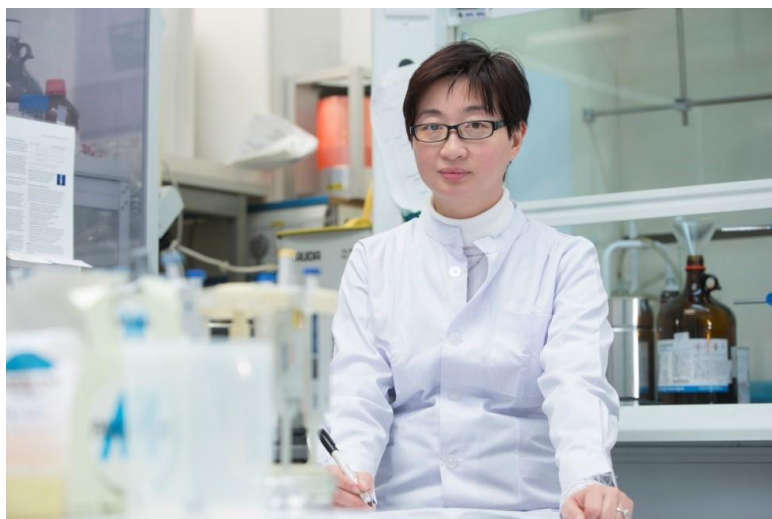


"Physical and Chemical Approaches for Ocular Drug Delivery"

Monday September 25, 2:00-3:00 PM,

NEW LOCATION: East Campus 5, Room 1111 (EC5-1111)

Registration is FREE - Coffee and Cookies will be available



[Dr. Ying Chau](#)

Associate Professor,
Division of Biomedical Engineering and Department
of Chemical and Biomolecular Engineering, Hong
Kong University of Science and Technology (HKUST)

Associate Director,
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Vice Chairman,
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[Dr. Ying Chau](#) is an Associate Professor of Chemical and Biological Engineering at the Hong Kong University of Science and Technology. Her current research interests include the design and translation of drug delivery approaches and biomaterials for ocular applications, and the self-assembly and cell interactions of nanostructures derived from polymers and biomolecules. Two start-up companies based in Hong Kong and Shenzhen have been spun out from her laboratory. She is the Founder and Director of SIGHT (Student Innovation for Global Health Technology), a cross-disciplinary education platform at HKUST geared towards developing and deploying innovations to resource-limited communities. She was a founding member of the Biomedical Engineering discipline in the Hong Kong Institutions of Engineers, and is currently serving as a council member for the Hong Kong Biotechnology Organization. Dr. Chau received her B.S. from Cornell University, M.S. from University of Pennsylvania, and Ph.D. in Chemical Engineering from Massachusetts Institute of Technology.

Abstract:

Because of the structural and dynamic barriers surrounding the eye, the current clinical practice relies on frequent and repeated intravitreal injection to deliver therapeutics to the back of the eye. Motivated by the need of safe and effective methods, two approaches have been developed in my lab. The physical approach involves the use of low-frequency ultrasound, which is found to disrupt ocular barriers temporarily. This allows non-invasive penetration of macromolecules through the transscleral route. The chemical approach involves the design and formulation of an injectable hydrogel. Modified hyaluronic acid and dextran undergo in situ gelation under physiological conditions. The depot is biocompatible with ocular tissues and is capable of releasing protein drugs over multiple months. I will share the latest development and discuss the underlying mechanism of these approaches.



Event is FREE – please RSVP via [EventBrite](#).
Pay parking available in lot Q ([map](#))
cbb.uwaterloo.ca/events

