

**DEPARTMENT OF MECHANICAL ENGINEERING****SEMINAR****Online**

Title: One-step immobilization of *Lactobacillus plantarum* biofilm for corneal infection treatment and wound healing

Speaker: Mr. Xu Miao (PhD candidate)
Department of Mechanical Engineering
The University of Hong Kong
Hong Kong

Date: 22 April, 2022 (Friday)

Time: 10:30 a.m. (Hong Kong Time)

Zoom meeting: 1) Link to join the meeting:

<https://hku.zoom.us/j/94117294788?pwd=SGZJM3M5Qjd1QlVwd3p3ZEpWSjFDdz09>

2) Meeting ID: 941 1729 4788

3) Password: 097852

Abstract:

Infectious keratitis is still one of the major causes of visual impairment and blindness, often affecting developing countries. Eye-drop therapy to reduce disease progression is the first line of treatment for infectious keratitis. The current limitations in controlling ophthalmic infections include rapid precorneal drug loss and the inability to provide long-term extraocular drug delivery. The aim of the present study was to develop a novel contact lens coating to treat corneal infection. Probiotics have been used to treated with pathogens for thousands of years which was not easy to develop drug-resistance. Here, we help the *Lactobacillus plantarum* adhered to the surface of contact lens via mussel-inspired chemistry and let it develop biofilm on the it. The biofilm consists of polysaccharides which is very biocompatible. Moreover, biofilm is living materials, so it will keep releasing bioactive substance from the coating.

ALL INTERESTED ARE WELCOME

For further information, please contact Prof. A. Shum at 3917 7904.

Research areas: Advanced Materials and Biomedical Engineering