



Graduate Seminar – PhD Oral Defence

Student : Ms. WANG Xuemei
Supervisor : Prof. GAO Zhaoli
Date : 6 June 2023
Time : 9:30 am
Zoom Link : <https://cuhk.zoom.us/j/8594249513?pwd=SW14dllmWTZyU1lreGNPT0xUYk8rZz09>
Meeting ID : 8594249513
Password : 20190801

Title: Designing Biomaterial-Cell Interfaces with Tunable Ligand Presentation Dynamics to Regulate Cellular Behaviors and Functions

Cells can sense and respond to their microenvironment through transmembrane receptors that bind stimulative ligands. The presentation of ligands on biomaterial surfaces at the nanoscale can significantly affect cellular responses and behaviors, including T cell activation and exhaustion, stem cell differentiation, and macrophage polarization. Nanoengineering of biomaterial-cell interfaces to manipulate ligand presentation at the nanoscale is crucial for both basic and translational studies on cell-biomaterial interactions. In this dissertation, the researcher reports new strategies for preparing biomaterial interfaces with tunable ligand presentation dynamics to regulate cellular behaviors for various biomedical applications.

*** ALL ARE WELCOME ***

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