

PHYSICAL CHEMISTRY SEMINAR



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Monday, Mar. 9, 2020

4:00 PM

2033 Young Hall

“Bioresponsive Drug Delivery”



Spurred by recent advances in materials chemistry, molecular pharmaceuticals and nanobiotechnology, stimuli-responsive “smart” systems offer opportunities for precisely delivering drugs in dose-, spatial- and temporal-controlled manners. In this talk, I will discuss our ongoing efforts in developing physiological signal-triggered bioinspired drug delivery systems. I will first present the glucose-responsive synthetic systems for biomimetic delivery of insulin for diabetes treatment. Development of smart insulin patches will be emphasized. I will further discuss the local and targeted delivery of immunomodulatory therapeutics for enhanced cancer therapy. Our latest studies utilizing platelets, cell conjugates and sprayed gels for delivery of immune checkpoint inhibitors will be specifically introduced.