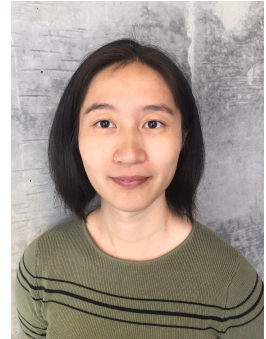


When: Friday 16:15 – 17:05, October 2, 2020

Where: <https://tamu.zoom.us/j/514754727>

Speaker: Xuejun Zhu, Ph.D.

Assistant Professor
Department of Chemical Engineering
Texas A&M University



Title: Engineered biosynthesis of natural products and the applications

Abstract: Natural products have played an indispensable role in modern medicines. It has been estimated that the majority of antibiotics and more than 70% of anticancer drugs are natural products or their derivatives. However, challenges exist during natural product overproduction, diversification, and quantification, which are key processes during natural product-based drug discovery and development. In this seminar, I will present our recent effort in the engineered biosynthesis of a medicinally active natural product in a fast-growing industrial microbe for compound overproduction and diversification. I will also discuss how we developed a new synthetic biology tool to address the challenges during natural product quantification.

Bio: Dr. Zhu is an Assistant Professor in the Department of Chemical Engineering at Texas A&M University since 2019. Xuejun received her Ph.D. in chemical engineering at UC Berkeley and did her postdoc at MIT and Wyss Institute. The research interest in her lab is biomolecular engineering for applications in health and agriculture. The research themes include discovery of biological molecules involved in microbe-, environment-, and host-microbe interactions, elucidating the biosynthetic routes to make these molecules, and leveraging the knowledge to design bio-based systems to program microbe-mediated interactions and for drug development applications.