

**Title: Designed Synthesis of Hybrid materials for Photo(electro)chemical Energy Conversion**

In this IISS talk, my main research topics including both heterogeneous and homogeneous photocatalytic reactions will be introduced. Briefly, I did surface modification for interfacial energy conversion during my Ph.D. course. After graduation, I have been doing photoactive coordination polymers according to my independent thinking (Designed method, experimental, results submission). Although my own direction is still under development, I would like to share some interesting findings and basic concepts. If time allowed, other applications based on photoactive dense MOFs will be briefly introduced.

**Part 1: Molecular Layer Modification on Si surface for (Photo)electrochemical CO<sub>2</sub> Reduction**

**Part 2: Photoactive coordination polymer particles (P-CPPs) and P-CPPs-derived Hybrid materials: Designed Synthesis for Photo(electro)chemical Energy Conversion**