

Porous Crystalline Frameworks as Intrinsic Photocatalytic Materials

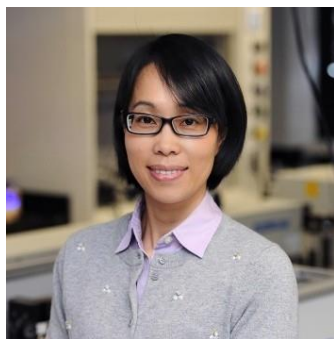
Seminar

Monday,
February 12, 2024

3:00 – 4:00 p.m.

Beaupre Center,
Room 105

Porous crystalline materials such as metal organic frameworks (MOFs) and covalent organic frameworks (COFs) represent a novel class of materials for catalysis due to their inherent porous nature, exceptional thermal and chemical stability, structural flexibility. While many photocatalytic systems based on these materials have been developed in the past decade, a significant gap exists in our understanding of the correlation of photophysical and photocatalytic properties of MOFs/COFs with their structure, which hinders accurate prediction and informed design. We aim to address this challenge using an interdisciplinary approach that combines innovative material design and synthesis, fundamental mechanistic studies, theoretical prediction, and photocatalytic performance evaluation. In this talk, I will discuss our recent progress in developing porous crystalline materials as intrinsic light harvesting materials and heterogenous catalysts for solar fuel generation.



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