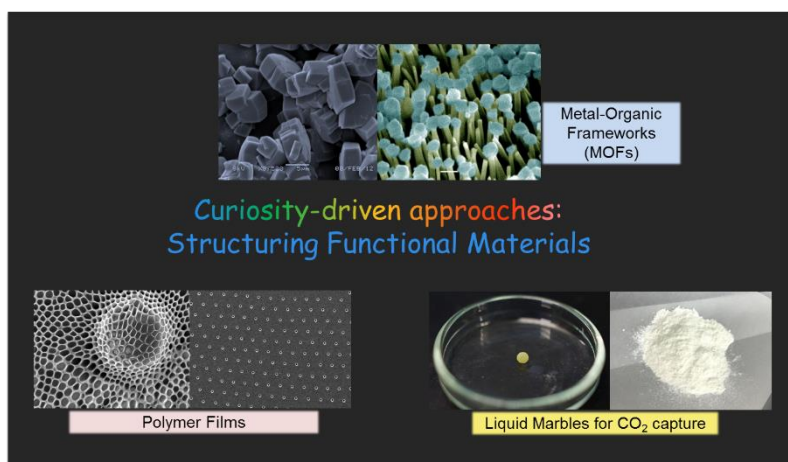


Mixing Work and Play - Metal-Organic Framework Functionalized Materials and Beyond

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This talk addresses some of my group's research highlights on MOFs and other functional materials, whereby we take a quirky, curiosity-driven approach to structure and derive novel applications for MOF materials, dry liquids and polymer films. I will discuss coordination modulation of MOFs to tune crystal morphology so as to produce micro and nanoparticles as well as strategies to produce MOF grass, microflower and micro-mushroom structures for imparting omniphobicity to a surface. I will also explore ways to hierarchically structure MOF composites, and to create non-close-packed pore arrays in a one-step manner. Fabrication of complex microstructures for surface functionalization often requires lithographic techniques and specialized equipment. My group has shown that by exploiting interfacial chemistry, simple bench-top techniques can create typically difficult-to-access microstructures, and show that this approach is applicable to a variety of materials.

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