



Showcasing research from Materials Discovery Laboratory, (MaD Lab), Department of Chemistry, Oregon State University, USA.

Solvatomorphic diversity dictates the stability and solubility of metal-organic polyhedra

Self-assembly of two building blocks, molybdenum(II) dimers and 5-aminoisophthalate ligands, yielded a novel molybdenum(V) metal-organic polyhedron (MOP). Depending on the reaction-crystallization conditions, molecules of the very same MOP arranged into five different crystalline forms. Each of these five solvatomorphic varieties exhibited a distinct set of physical properties, including porosity, stability, and solubility in water. Importantly, differences in solubility in water between crystalline forms of the same MOP, as well as the electrical conductivity of MOP aqueous solutions behaving as weak electrolytes are reported here for the first time.

As featured in:



See Andrzej Gładysiak, Kyriakos C. Stylianou *et al.*, *Chem. Sci.*, 2025, **16**, 2589.