

Webinar

Moving Charges Through Porous Materials for Solar Energy Conversion

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With the global demand for energy increasing, scientists must focus their attention on harnessing renewable energy sources to reduce our reliance on fossil fuels and to protect Earth's fragile climate. Weakly coupled supramolecular systems are promising materials for solar energy conversion. However, it is important to understand how the through-space electronic coupling between individual components governs the diffusional charge transport within these systems. Taking metal-organic supramolecular system as a model of a weakly coupled electronic system, I will discuss how we can achieve electronic coupling between isolated active sites with these crystallites along a particular direction enabling efficient charge diffusion for solar energy conversion.

References:

1. J. Am. Chem. Soc. 2019, 141, 44, 17696–17702
2. ACS Energy Lett. 2021, 6, 3, 848–853

Wednesday, Aug 25th 2021

4:00 PM