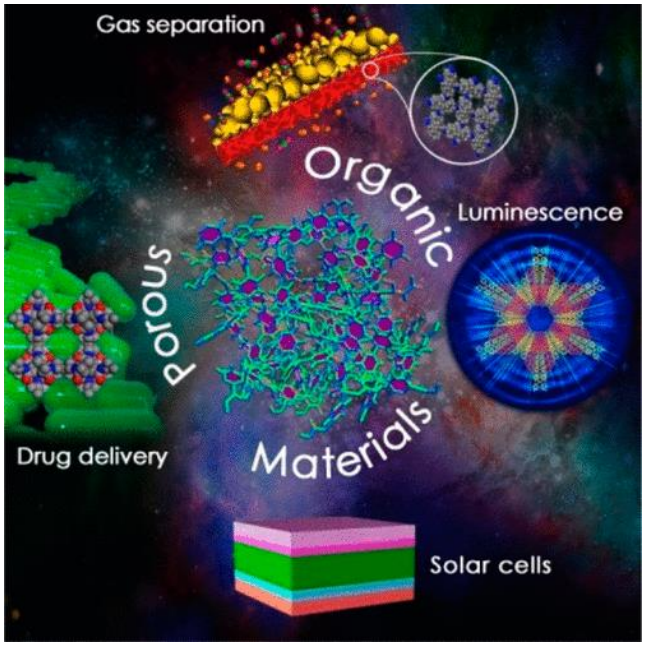
Molecularly Tunable Porous Nanomaterials and Applications

Porous organic materials have garnered colossal interest with the scientific fraternity due to their excellent gas sorption performances, separations such as in membranes, catalytic abilities, energy storage capacities, and other intriguing applications. The presentation by Dr Hassan Beyzavi encompasses the recent significant breakthroughs and the conventional functions and practices in the field of porous nanomaterials such as metal-organic frameworks (MOFs) and covalent organic frameworks (COFs) to find useful applications and imparts a comprehensive understanding of the strategic evolution of the design and synthetic approaches of porous organic materials with tunable characteristics.



Hassan Beyzavi

In May 2013, Hassan graduated (summa cum laude) with his PhD from Freie Universität Berlin, Germany. He focused on the synthesis of functionalized macrocyclic-based systems as photosensitizers for photodynamic therapy (PDT) developing tetrapyrrole-based photosensitizers as potential PDT agents for cancer therapy. In Fall 2013, he was awarded the DFG fellowship to join the laboratories of Professors Fraser Stoddart (Nobel Laureate 2016) and Joe Hupp at Northwestern University to pursue training in nanomaterials chemistry for catalysis and energy sustainability. As a postdoctoral research awardee, his successful stay at NU enabled him to expand his research experience to functional nanomaterials in particular Metal–Organic Frameworks (MOFs). Hassan then accepted the offer from Harvard University to lead the Ritter Lab and advanced research in the field of positron emission tomography (PET) imaging in collaboration with Harvard Medical School and Massachusetts General Hospital. In fall 2017, he accepted the offer from U of Arkansas as an Asst. Professor in the Department of Chemistry and Biochemistry. The research in Beyzavi Group at the University of Arkansas involves the synthesis and study of new transition metal-based catalysts and porous nanomaterials for applications in energy sustainability, small molecule activation, biomedical imaging, e.g. Positron Emission Tomography and cancer therapy, e.g. Photodynamic Therapy.