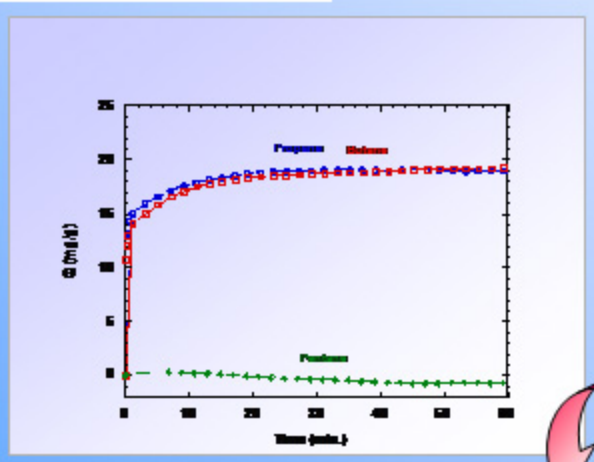
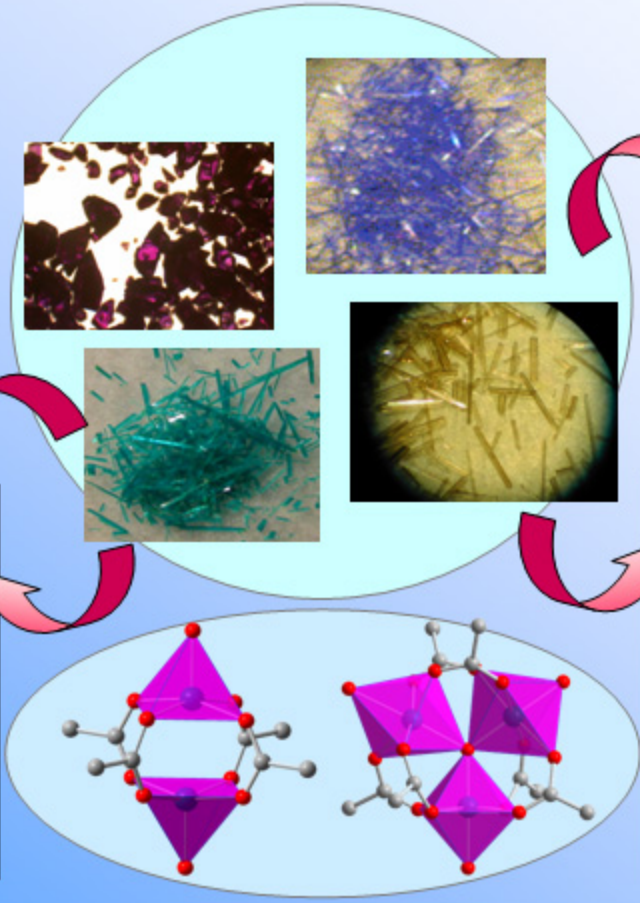
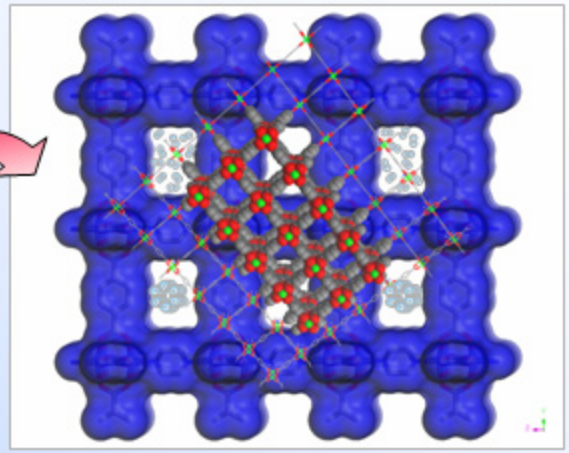
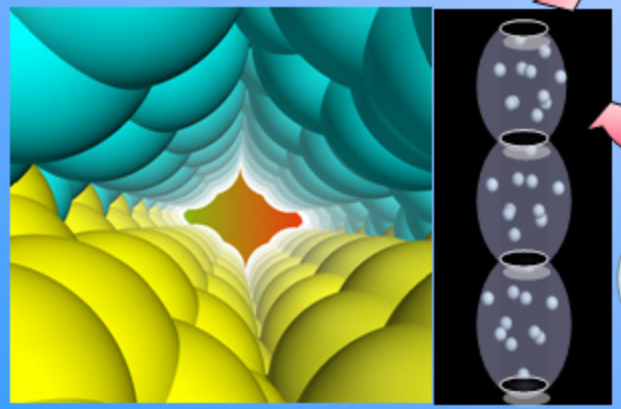
Microporous Metal Organic Frameworks (MMOFs) as Hydrogen Storage Media

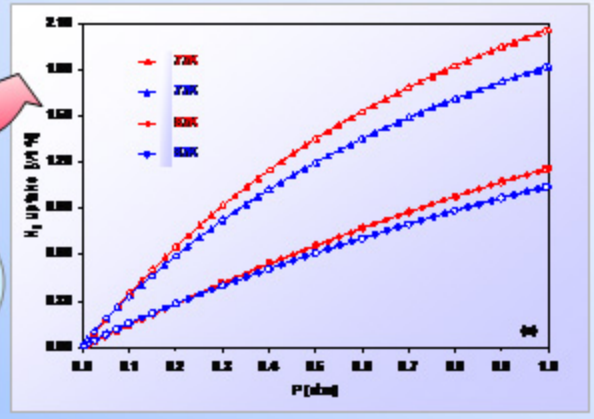
Jing Li, Department of Chemistry and Chemical Biology
Rutgers University, Piscataway, NJ 08854











We have designed and synthesized four types of micrporous metal organic frameworks (MMOFs). By modifying the metal building units and ligands we have successfully optimized pore volume and surface area to reach a high hydrogen uptake of 2.1 wt% (77K, 1 atm) and 4.0 wt% (77K, 40 atm), placing these materials among those with the highest values reported thus far.

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