

## Poster Presentation

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### *Crystalline porous materials for gas adsorption*

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The covalent organic framework or COFs [1] are the new emerging field of crystalline porous materials and concerned substantial research interest because of their extensive potential application such as gas adsorption, catalysis, energy storage devices, sensing and separation technologies [2]. It is the class of layered crystalline porous materials composed of light weight elements with covalent bond linking between the atoms in plane and weak  $\pi$ - $\pi$  interactions in between layers. The adsorption of natural gas, whose component is methane, is an attractive for vehicle application and also the adsorption of hydrogen and carbon dioxide are related to the environmental issue. The adsorption process involving through physisorption based in porous materials offers in efficient storage methodology. By judicious choice of ligand we can vary the pore size of the material. The adsorption capacity of the material not only depends on its porosity also rely on the molecular level fictionalization in the molecule.

[1] Kandambeth, S. et al. (2012). J. Am. Chem. Soc. 134, 19524–19527.

[2] Côté, A. P. et al. (2005). Science 310, 1166-1170.

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