



Showcasing research from MolSim Lab,
School of Chemistry, University of Hyderabad, India

Carbon dioxide sequestration in natural gas
hydrates – effect of flue and Noble gases

The Sharma Group is working on elucidating atomic factors that could enhance carbon dioxide - methane exchange in Natural Gas Hydrates (NGHs). This work highlights that dual hydrate cages play a crucial role during formation of NGHs. The large-large and small-large dual cages control the formation of hydrate growth synthon that forms the unit cell of NGHs. Argon forms energetically favourable dual cages with carbon dioxide than with methane and enhances carbon dioxide capture and release of methane for clean energy from NGHs.

As featured in:



See Manju Sharma and Satyam Singh,
Phys. Chem. Chem. Phys.,
2023, **25**, 30211.