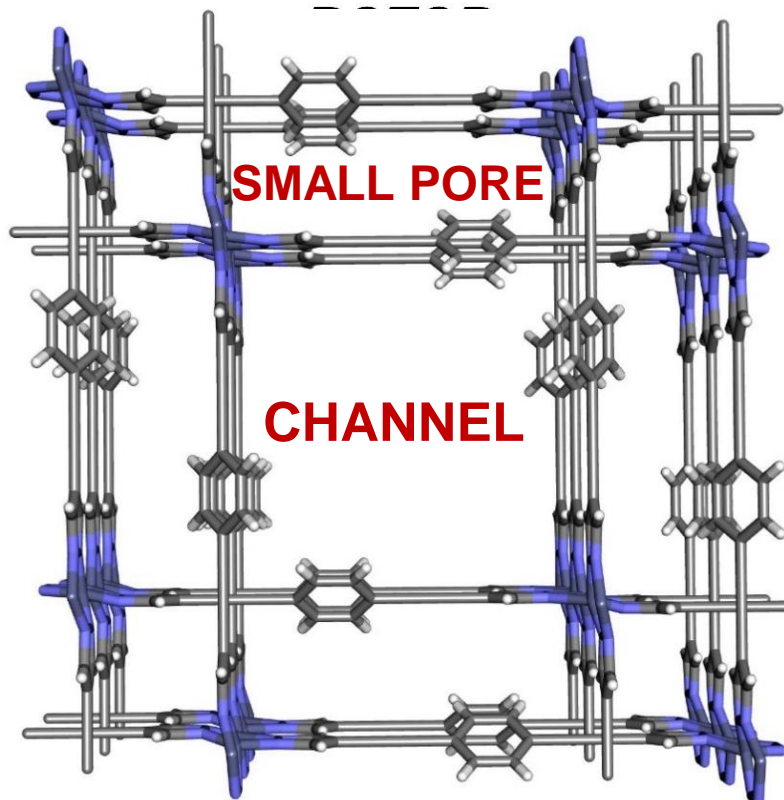
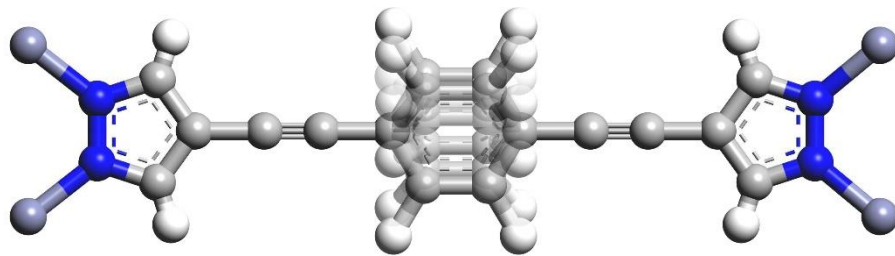
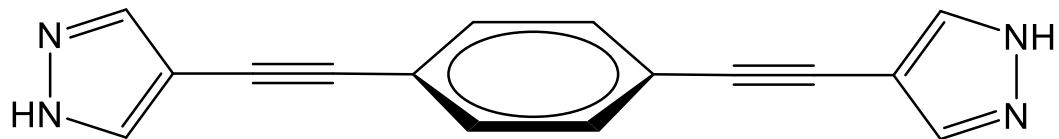


MATERIALI NANO-POROSI

‘Nanospugne’

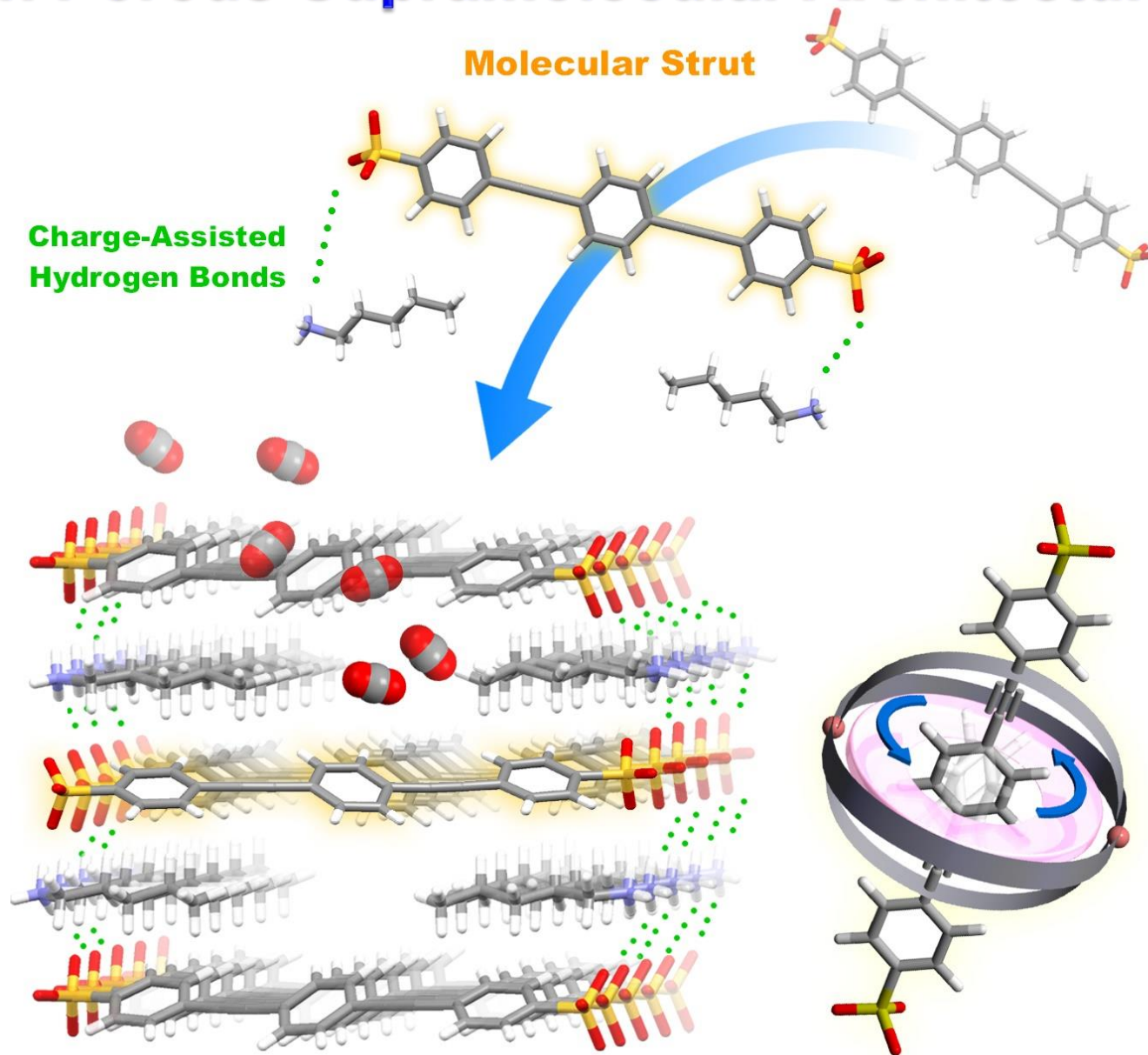
- **Le nano-tecnologie chimiche rappresentano la estrema miniuterizzazione dei fenomeni, fino alla misura di un milionesimo di millimetro .**
- **Su questa scala di dimensioni si ottengono effetti chimici e fisici inaspettati: questo offre un enorme spazio all’innovazione.**
- **Si possono manipolare molecole e regolare fenomeni di evaporazione e lo stato fisico di solidi e gas.**



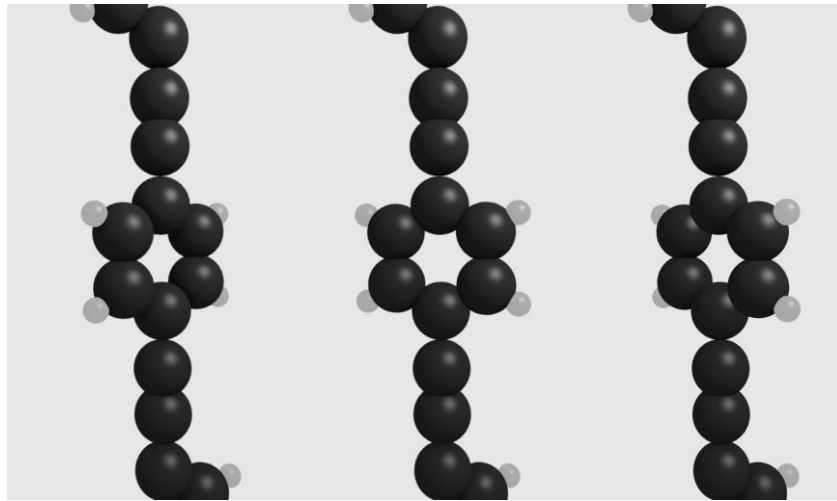


*the minimum distance between adjacent axes of central *p*-phenylene rings is 7.3 Å*

Molecular Rotors in Porous Supramolecular Architectures



2D and 3D ordered arrays in the solid state



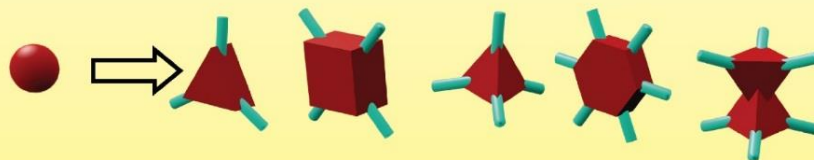
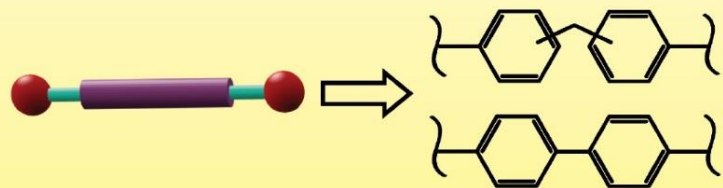
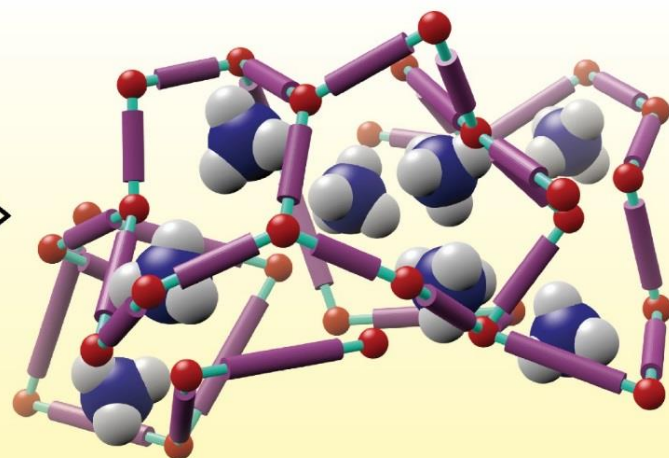
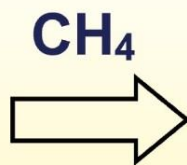
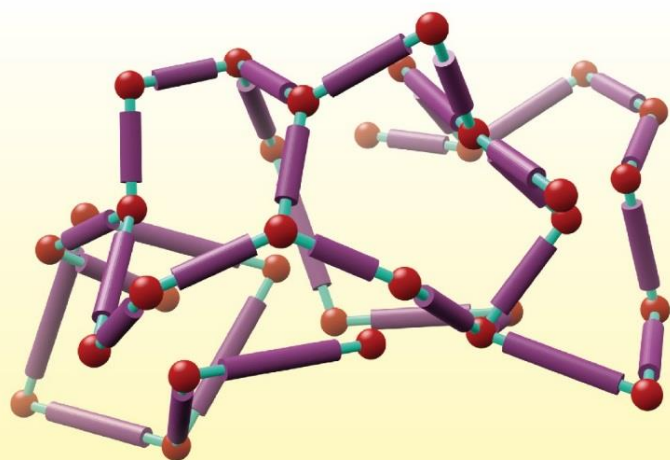
- **POROUS MATERIALS (3D arrays)**
- **SURFACE INCLUSION COMPOUNDS (2D arrays)**

Architetture Nano-porose

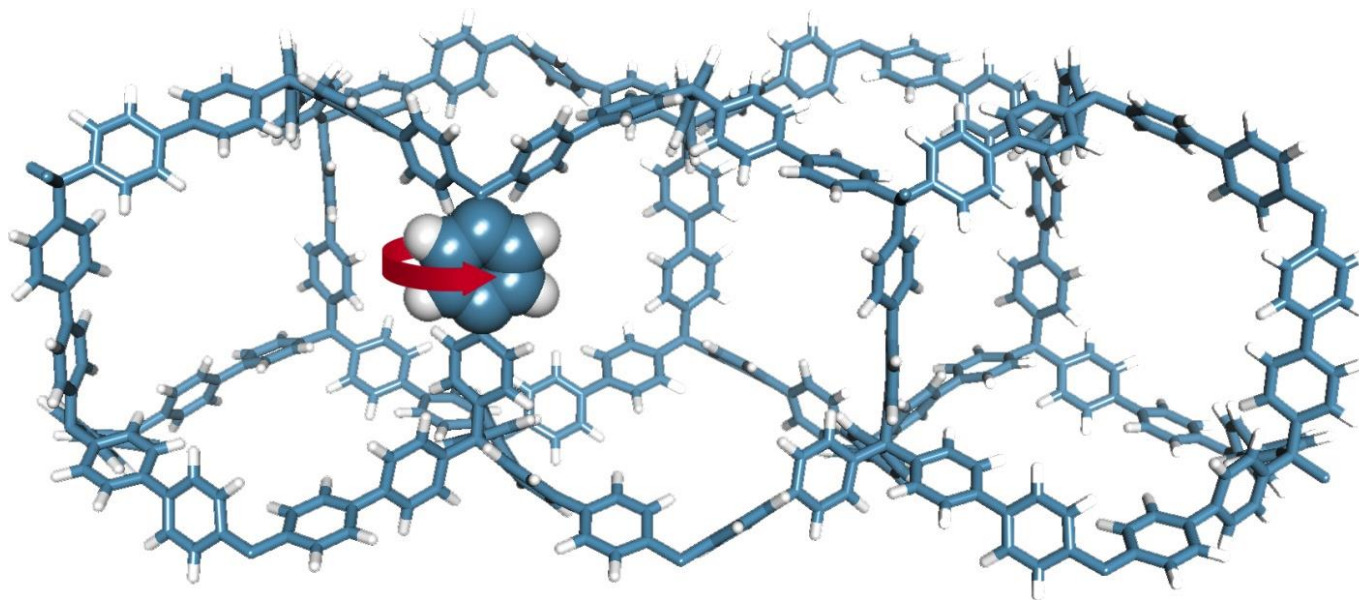
- **Le nuove tecnologie permettono di realizzare materiali in cui le singole cellette hanno le stesse dimensioni dei gas**

UTILITA':

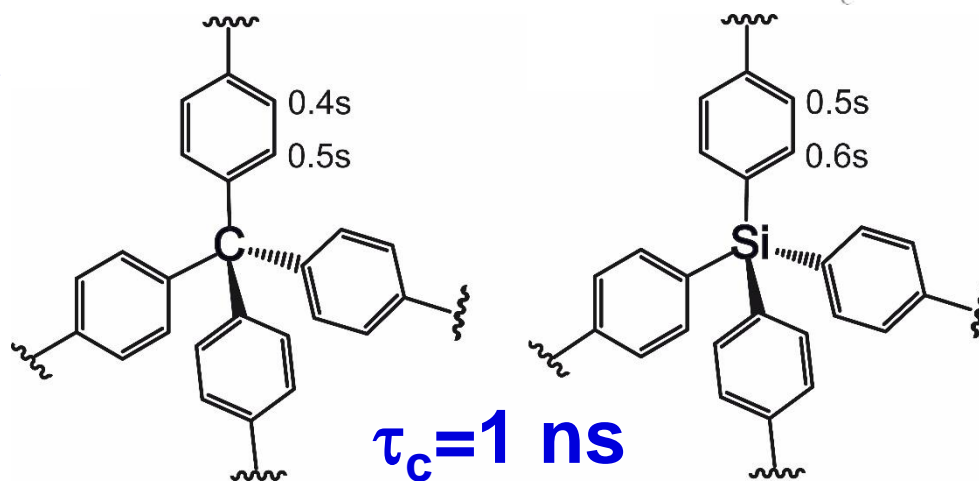
- **Intrappolare grandi quantità di anidride carbonica (CO₂) allo stato solido.**
- **Stoccaggio di metano e idrogeno per una energia piu' pulita.**
- **MATERIALI MOLECOLARI ATTIVI**
- **Polimerizzazioni allo stato confinato., fibre di carbonio ecc...**

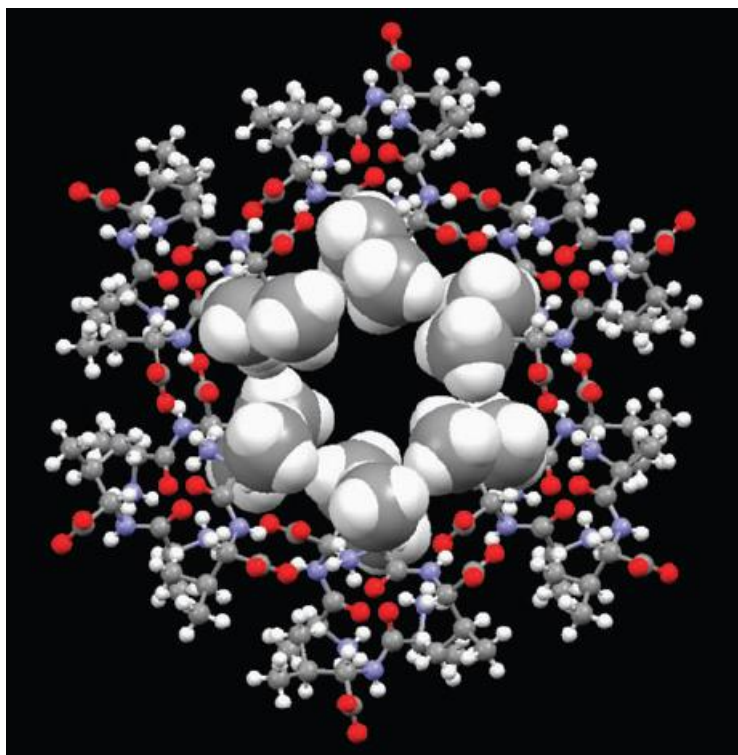


Porous Aromatic Frameworks



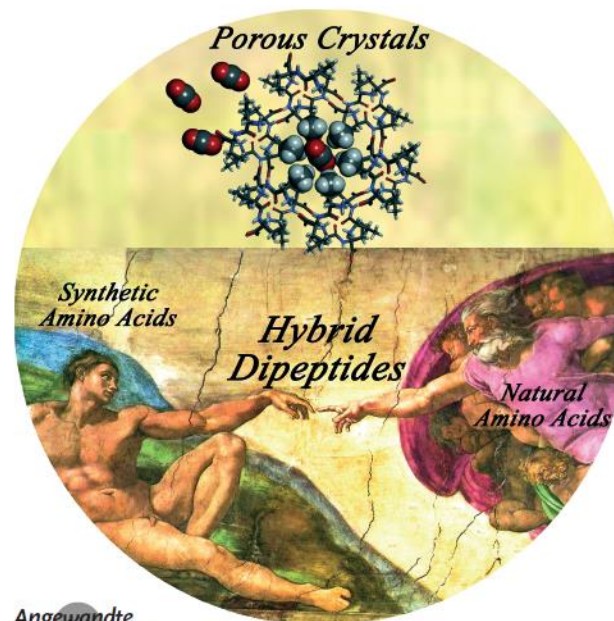
Surface Area
5400 m²/g



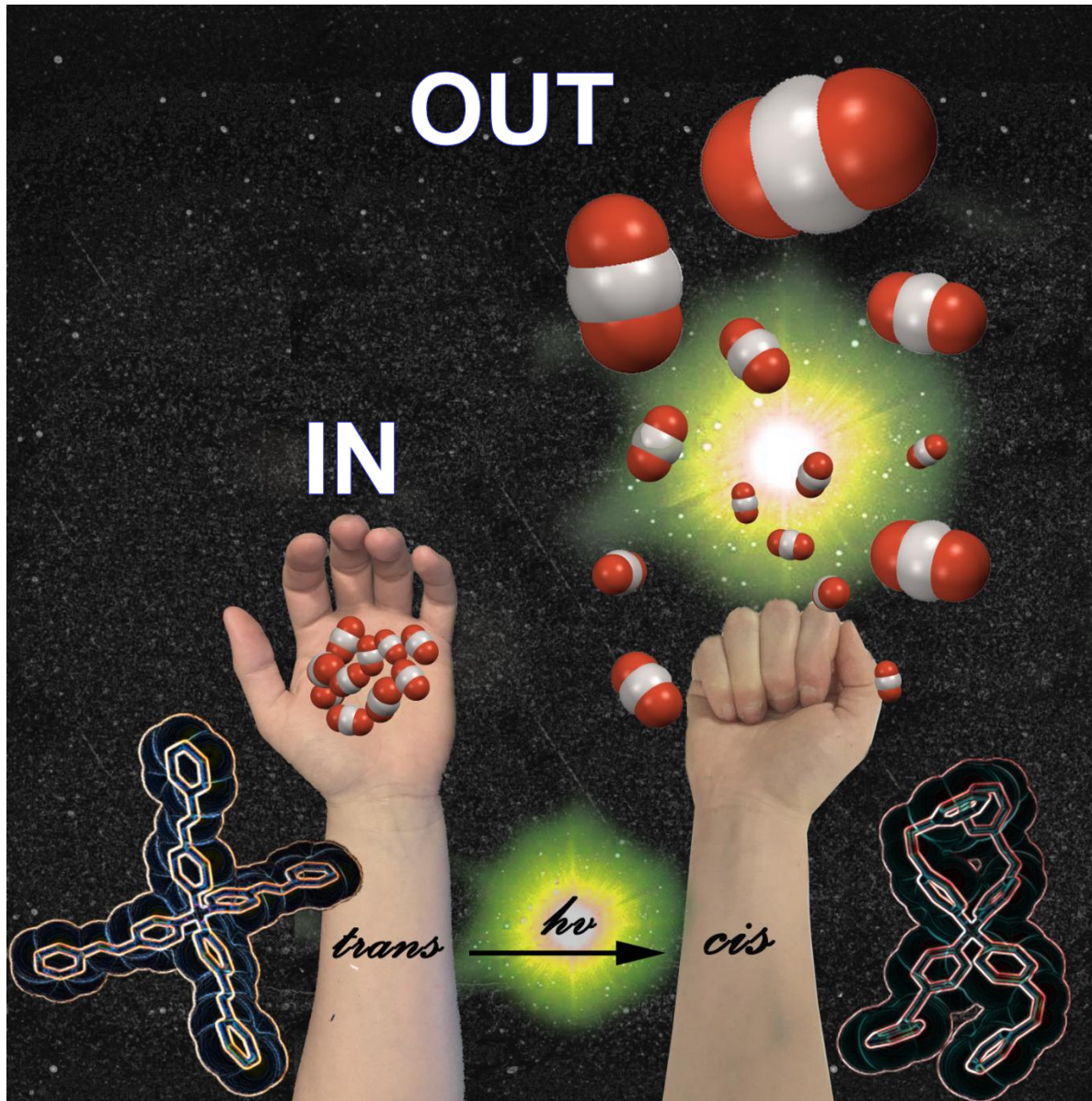


Microporous Molecular Materials from Dipeptides Containing Non-proteinogenic Residues

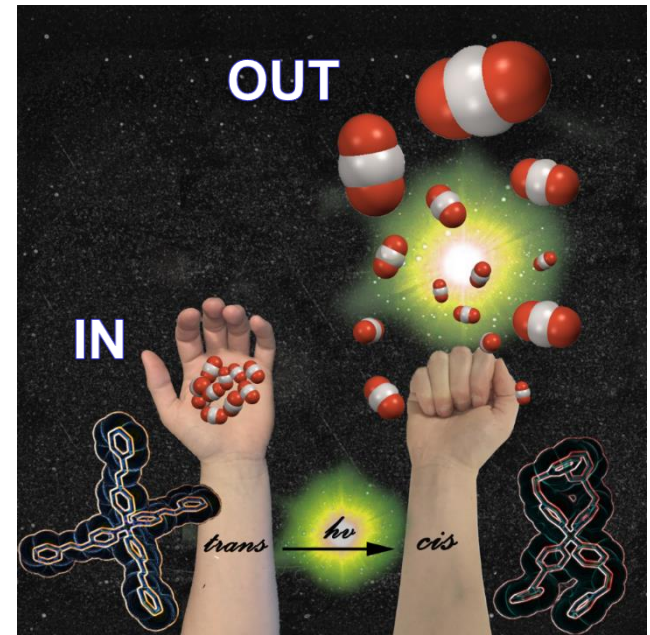
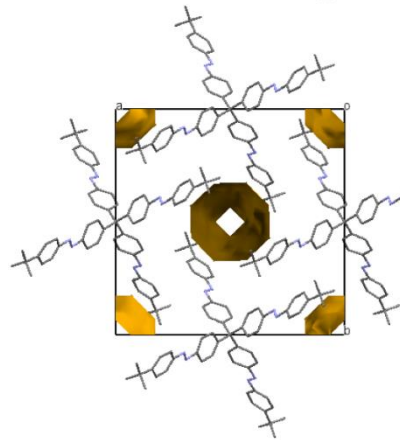
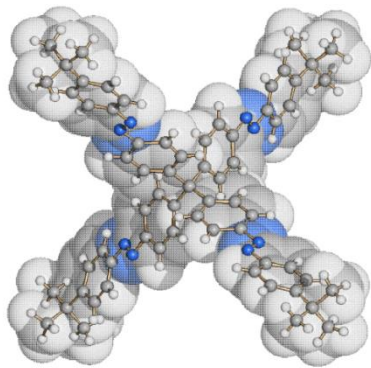
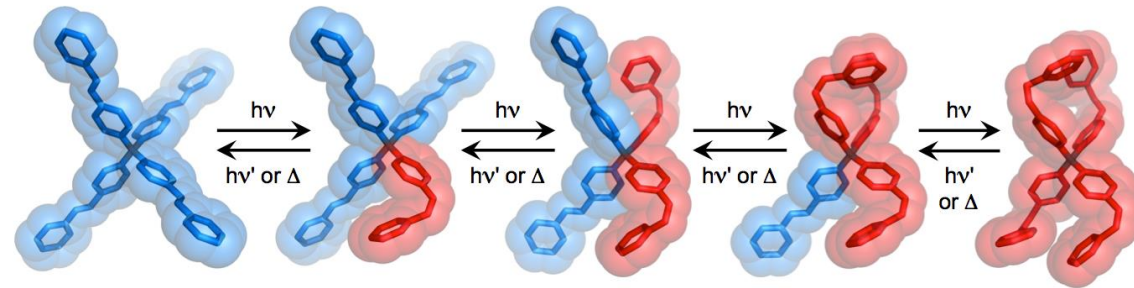
Vitthal N. Yadav, Angiolina Comotti,* Piero Sozzani, Silvia Bracco, Tore Bonge-Hansen, Martin Hennem, and Carl Henrik Görbüz*



CO₂ uptake/release



Cattura e Rilascio di CO2



<https://sites.google.com/site/azopore/home/filmati>

