

Tin





Metal Organic Framework



MOF



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The unique properties of metal organic frameworks, like internal surface areas, uniform channels, low density, (sub) nanometer sized cavities, thermal stability (above 300°C), adjustable chemical functionalities or chemical tailor ability, offer an ideal platform for the development of the sensitive layer. They can be considered as crystalline materials with tunable porosity (Pore volume: 1.59cm³/g), large internal surface area and organic functionality. The topology structure or surface area of MOFs can be controlled through choosing different organic linkers. They have structural diversity and specific adsorption affinity for the application in gas storage.

Quick Facts

Stock No.	:	NS6130-12-000880
CAS	:	7440-31-5
Purity	:	99 %
APS	:	30-40µm
Molecular Formula	:	Sn
Molecular Weight	:	150.71 g/mol
Form	:	Powder



Properties

- Large Surface Area
- High degree of crystallinity
- Low density
- Uniform channels
- Porosity
- High thermal stability
- Chemical tailor ability

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Applications

01 Food

- Quality control (e.g. moisture control)
- Food storage (e.g. suppression of ripening agents)
- Shelf life management (e.g. triggered release of ripening agents)
- Delivery of agrochemicals (e.g. triggered release of fertilizers etc.)

02 Gas storage

- Compressed gas storage (e.g. natural gas, hydrogen, etc.)
- Toxic and reactive gas systems (e.g. via sub-atmospheric storage systems)
- Carbon capture and sequestration (CCS)

03 Conductivity

- Electronics
- Batteries (e.g. electrodes, electrolytes, etc.)
- Optoelectronic devices (e.g. solar cells)
- Additives

04 Catalysis

- Catalytic support and immobilization
- Encapsulation of catalytic active species
- Unprecedented selectivity and activity

05 Sensoring and detection

- Gas/vapor and small molecule detection
- Luminescence (e.g. scintillation)
- Medical diagnostics
- Explosive detection

06 Gas Treatment

- Separation (e.g. hydrocarbons, CO₂, O₂, H₂, NH₃, H₂S, toxics, etc.)
- Purification
- Impurity and odor removal
- Filtering (e.g. molecular sieves)

07 Textile upgrading

- Additives
- Personal protection
- Chemical, biological, radiological and nuclear (CBRN) defense

08 Gas and liquid adsorption

- Drug Delivery (e.g. slow release of target molecules)
- Water harvesting
- Removal of toxic and hazardous substances (e.g. chemical warfare agents)
- Heat transformation (e.g. adsorption heat pumps)
- Respiratory systems (e.g. gas masks)
- Water treatment (e.g. heavy metal removal)



ISO 9001:2015
CERTIFIED COMPANY

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