Metal Organic Framework : MOF

Porous Coordination Polymer : PCP

Metal Organic Framework (Porous Coordination Polymer) is the porous materials obtained by self-assembling metal ion and organic ligands. By bridging metal ion and organic ligand at bonding part, framework structure is built. The cavity which is built in this framework can act as the space for molecule uptake parts. Therefore, MOF (PCP) is the porous material with very large surface area (1000 – 10000 m^2/g).

The already existing porous materials such as zeolites and activated carbon are used as the catalyst, separation materials, purifying and deodorant of water. These porous materials are so essential and they are indispensable to our lives. However, it is not possible to precisely finely modify the structure and size of these porous parts in nano meter size level. This fact impedes the possibility of porous materials to further develop to possess high and multi functions as the future materials.

In this regard, metal organic framework (MOF) can exhibits the very complex structure and high dimension function by incorporating the rigid concept of coordination bonding in their molecular structure. Especially by utilizing the metal complex, materials with new concepts such as porous materials and nano sized capsules can be created which can break through the boundaries between organic and inorganic materials.

Therefore, it is even possible to modify and control the porous structure in nano meter scale level (2-50 nm in range) which was never possible in the materials existed so far.

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Metal organic frameworks (MOF) have the possibility to do

1. **Gas separation (H_2, methane, CO_2)**
2. **Choose and storage of ion and molecule, separation (separation of isomer, p-xylene, m-xylene, ethyl benzene etc…)**
3. **Solid catalyst (oxidation, addition, hydrogenation reactions…)**
4. **Controlled gas release**
5. **Separation and transportation**
6. **Nano sized synthetic vessel**
7. **Electrolyte**
8. **Sensor**

Various kinds of functionality can be expected with metal organic framework (MOF).

FUJI MOF ZIF-8

Zeolite Imidazolate Frameworks

Surface area :(1200-1900 m^2/g)

Minimum order 10g

We are launching other types of MOF in progress.

Please consult any technical detail anytime.

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