Technical Data Sheet

ACS Material Crystalline Covalent Triazine Framework (CTF)

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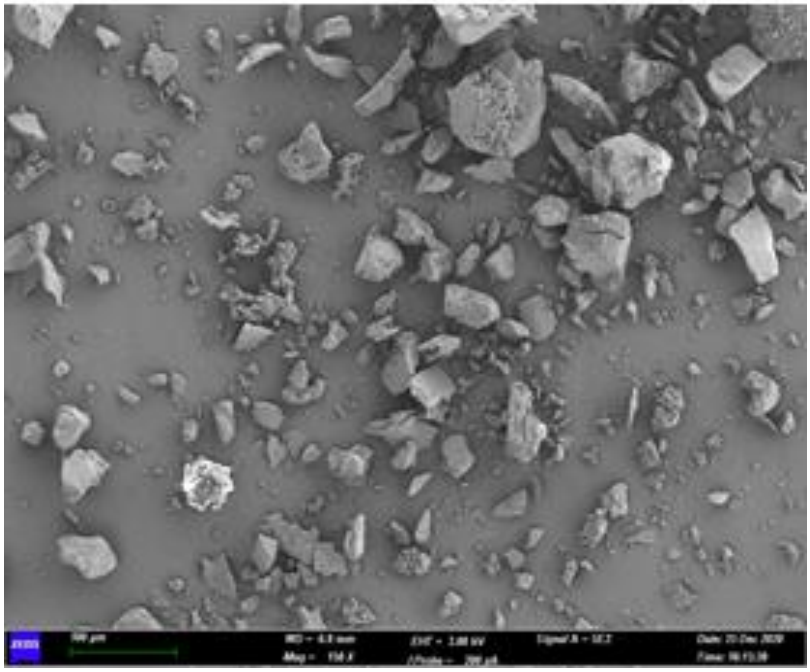
1. Preparation Method

Interfacial Polymerization

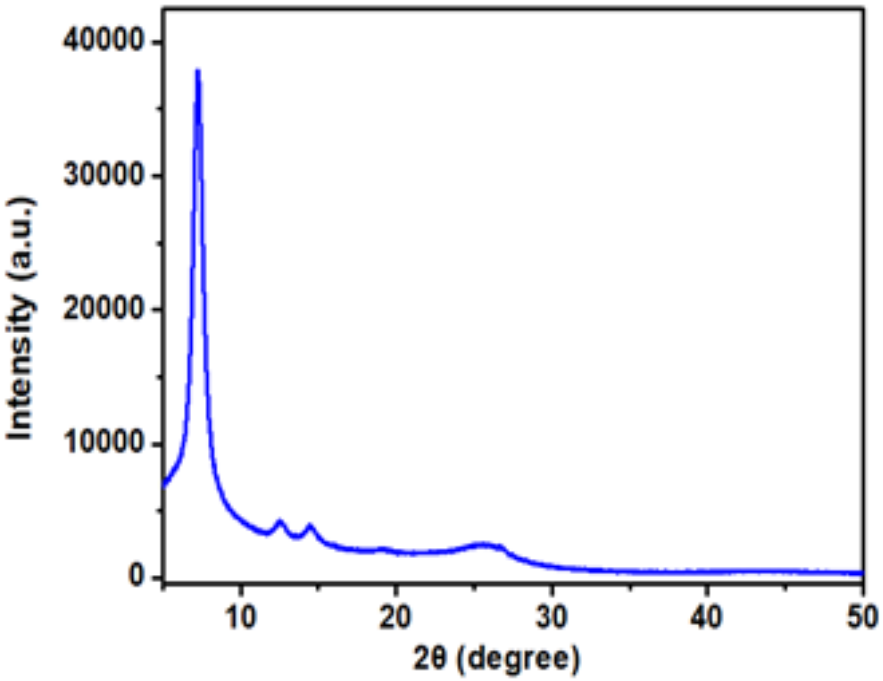
2. Characterizations

Appearance	Black Powder
Purity	>99 wt%
Pore volume	0.96 ml/g
Aperture	1.1 nm
Nitrogen content	20-25 wt%
specific surface area	1500-1600 m^2/g
Conductivity	non-conductive

Crystalline covalent triazine frameworks (CTFs) are black powder. They lack electrons and are strong hydrogen bond receptors. At the same time, the lone pair electrons of nitrogen have strong coordination and complexation. They can be used for reversible removal and separation of acidic substances such as hydrogen sulfide, sulfur dioxide and carbon dioxide, and for separation of heavy metals, radioisotopes, rare materials or rare metals.



Typical TEM Image of ACS Material Crystalline Covalent Triazine Framework (CTF)



XRD Pattern of ACS Material Crystalline Covalent Triazine Framework (CTF)

3. Applications

The crystalline covalent triazine frameworks (CTFs) themselves lack electrons. This is a strong hydrogen bond acceptor. At the same time, the lone pair of N electrons has a strong coordination and complexation.

- Reversible removal and separation of acidic substances such as hydrogen sulfide, sulfur dioxide, carbon dioxide
- the separation of heavy metals, radioisotopes, rare earths or rare metals

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