Technical Data Sheet

ACS Material Covalent Organic Framework-TpPa-1
(COF-TpPa-1)

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1. Preparation Method

2. Characterizations

| Form:                   | Powder crystal  
|                        | A two-dimensional planar material with one-dimensional channels |
| Solubility:            | Insoluble in water or common organic solvents (N,N-dimethylformamide, tetrahydrofuran, dimethyl sulfoxide, acetone, trichloromethane) |
| Stability (Tg):        | 300-540 °C |
| BET Surface Area:      | ~1360 m$^2$/g |
| Pore Size:             | 1.5-1.8 nm (depending on the R-group, the pore size varies slightly) |
| R-group:               | -CH$_3$/-NO$_2$/H |
Typical SEM Image (1) of ACS Material COF-TpPa-1

Typical SEM Image (2) of ACS Material COF-TpPa-1
FT-IR Spectra of ACS Material COF-TpPa-1 (red), 1,3,5-triformylbenzene

SsNMR Spectra of ACS Material COF-TpPa-1
PXRD pattern of As-synthesized ACS Material COF-TpPa-1 (Blue) compared with the Eclipsed (Black) and staggered (Red) stacking models.

\( \text{N}_2 \) adsorption (filled symbols) and desorption (empty symbols) isotherms of ACS Material COF-TpPa-1
BET surface area plot for ACS Material COF-TpPa-1 calculated from the isotherm.

Pore size distribution of ACS Material COF-TpPa-1.

Correlation: 0.9988
BET Surface area: 535.132 m²/g
3. Application Fields

1) Metal Coordination Catalysis
2) Recognition of metal ions
3) Bio-Detection
4) Chiral separation

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