

Materials List for:

Synthesis and Characterization of Functionalized Metal-organic Frameworks

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Materials

Name	Company	Catalog Number	Comments
6" Pasteur pipet	VWR	14673-010	For transferring MOF crystals
9" Pasteur pipet	VWR	14673-043	For separating liquid solution from MOF crystals
1-dram vials	VWR		For preparation of NMR samples
2-dram vials	VWR	66011-088	For small-scale SALE reactions
4-dram vials	VWR	66011-121	For <i>de novo</i> pillared-paddlewheel MOF synthesis
NMR tube Grade 7	VWR	897235-0000	
NMR instrument Avance III 500 MHz	Bruker	N/A	
Oven	VWR	414004-566	For solvothermal MOF reactions
Sonicator	Branson	3510-DTH	
Balance	Mettler-Toledo	XS104	
Supercritical CO ₂ dryer	Tousimis™ Samdri®	8755B	For activation of pillared-paddlewheel MOFs
Activation dish	N/A	N/A	
Tristar II 3020	Micromeritics	N/A	For collection of gas isotherms/ measurement of BET surface area
X-ray diffractometer	Bruker	N/A	Kappa geometry goniometer, CuKα radiation and Powder-diffraction data collection plugin.
Capillary tubes	Charles-Supper	Boron-Rich BG07	Thin walled Boron Rich capillary 0.7 mm diameter
Beeswax	Huber	WAX	sticky wax for specimen fixation
Modeling Clay	Van Aken	Plastalina	
CO ₂ (l)	N/A	N/A	
N ₂ (l)	N/A	N/A	
N ₂ (g)	N/A	N/A	
DMF	VWR	MK492908	For MOF reactions and storage
Ethanol	Sigma-Aldrich	459844	For solvent exchange before supercritical drying
Name	Company	Catalog Number	Comments
Zn(NO ₃) ₂ × 6 H ₂ O	Fluka	96482	
dped	TCI	D0936	
dpni			Synthesized according to a published procedure

Br-tcpb			Synthesized according to a published procedure
D ₂ SO ₄	Cambridge Isotopes	DLM-33-50	For MOF NMR
d ₆ -DMSO	Cambridge Isotopes	DLM-10-100	For MOF NMR