

## Materials List for:

**Synthesis of a Thiol Building Block for the Crystallization of a Semiconducting Gyroidal Metal-sulfur Framework**Yonghe He<sup>1</sup>, Jiahong Huang<sup>1</sup>, Jun He<sup>1</sup>, Zhengtao Xu<sup>2</sup><sup>1</sup>School of Chemical Engineering and Light Industry, Guangdong University of Technology<sup>2</sup>Department of Chemistry, City University of Hong KongCorrespondence to: Jun He at [junhe@gdut.edu.cn](mailto:junhe@gdut.edu.cn), Zhengtao Xu at [zhengtao@cityu.edu.hk](mailto:zhengtao@cityu.edu.hk)URL: <https://www.jove.com/video/57455>DOI: [doi:10.3791/57455](https://doi.org/10.3791/57455)**Materials**

Name	Company	Catalog Number	Comments
Bromine	DAMAO CHEMICAL REAGENT FACTORY	7726-95-6	Highly toxic
Triphenylene	HWRK Chem	HWG45510	
Iron powder	Sigma-Aldrich	12310	
Nitrobenzene	DAMAO CHEMICAL REAGENT FACTORY	2934	
Diethyl ether	DAMAO CHEMICAL REAGENT FACTORY	48	
Dichloromethane	DAMAO CHEMICAL REAGENT FACTORY	3067	
Sodium metal	J&K	WM-NMS-54-25X-50G	Air sensitive
Tetrahydrofuran	J&K	315353	
Dimethyl disulfide	INTERNATIONAL LABORATORY USA	726415	
1,3-Dimethyl-2-imadazolidinone	J&K	50483	Dried over 4Å sieves
Valeryl chloride	J&K	99590	
Methanol	Guangzhou Chemical Reagent Factory	2334	
Sodium hydroxide	Guangzhou Chemical Reagent Factory	1588	
Ethylene diamine	Riedel-de Haën	15070	
Lead acetate trihydrate	PEKING CHEMICAL WORKE	861218	