

Materials List for:

Chemical Vapor Deposition of an Organic Magnet, Vanadium Tetracyanoethylene

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Materials

Name	Company	Catalog Number	Comments
Equipment			
Nitrogen Glovebox	Vacuum Atmospheres	Omni	steps done in nitrogen glovebox can also be done in an argon glovebox
1 L three-neck round bottom flask	Corning	4965A-1L	
500 ml round bottom flask	Sigma Aldrich	64678	
Turbo vacuum pumping station	Agilent Varian	G8701A-011-037	
Glass Stopcock	Kontes	185000-2440	
Glass two way connecting tube	Corning	8940-24	Corning Pyrex(R) 105 degree Angled Tube Adapter with Two-Way 24/40 Standard Taper Joint
Coldfinger			Custom part made by OSU chemistry glass shop
Argon Glovebox	Vacuum Atmospheres	Nexus I	
Hot plate stirrer	Corning	6795	
Thermoelectric cooler	Advanced Thermoelectric	TCP-50	
Temperature controller	Advanced Thermoelectric	TLZ10	for TE cooler
Power supply	Advanced Thermoelectric	PS-145W-12V	for TE cooler and temperature controller
Temperature controller	J-Kem Scientific	Model 150	For heating coil
Heating wire	Pelican Wire Company	Nichrome 60	
Custom glassware pieces			Made by OSU Chemistry glass shop
Vacuum pump	BOC Edwards	XDS-5	Connected to the CVD set-up
Flow meter	Gilmont	GF-2260	
Micrometer valve	Gilmont	7300	Controls flow of argon over TCNE
Micrometer valve	Gilmont	7100	Controls flow of argon over V(CO) ₆
Tubing	Tygon	R3603	1/8 in walls, connected between valves and meter
3-way Stopcock	Nalgene	6470	used to adjust the flow rates
Pressure gauge	Matheson	63-4105	connects to the top of Figure 1 part A
SQUID magnetometer	Quantum Design	MPMS-XL	
EPR	Bruker	Elexsys	
PPMS	Quantum Design	14T PPMS	

Sourcemeater	Keithely	2400	
Materials			
Sodium metal	Sigma Aldrich	262714	
Anthracene	Sigma Aldrich	141062	
Anhydrous tetrahydrofuran	Sigma Aldrich	186562	
Vanadium(III) chloride tetrahydrofuran complex	Sigma Aldrich	395382	
Carbon monoxide gas	OSU stores	98610	
Tetraethylammonium bromide	Sigma Aldrich	241059	
Phosphoric acid	Sigma Aldrich	79622	
Methanol	Sigma Aldrich	14262	
Silicone oil	Sigma Aldrich	146153	
Copper pellets			Cut from spare copper wire
Tetracyanoethylene	Sigma Aldrich	T8809	
Glass slides	Gold Seal	3010	
Activated Charcoal	Sigma Aldrich	242276	