Materials List for:

Preparation of Large-area Vertical 2D Crystal Hetero-structures Through the Sulfurization of Transition Metal Films for Device Fabrication

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Materials

Name	Company	Catalog Number	Comments
RF sputtering system	Kao Duen Technology	N/A	
Furnace for sulfurization	Creating Nano Technologies	N/A	
Polymethyl methacrylate (PMMA)	Microchem	8110788	Flammable
KOH,> 85%	Sigma-Aldrich	30603	
Acetone, 99.5%	Echo Chemical	CMOS110	
Sulfur (S), 99.5%	Sigma-Aldrich	13803	
Molybdenum (Mo), 99.95%	Summit-Tech	N/A	
Tungsten (W), 99.95%	Summit-Tech	N/A	
C-plane Sapphire substrate	Summit-Tech	X171999	(0001) ± 0.2 ° one side polished
300 nm SiO_2/Si substrate	Summit-Tech	2YCDDM	P-type Si substrate, resistivity: 1-10 Ω · cm.
Sample holder (sputtering system)	Kao Duen Technology	N/A	Ceramic material
Mechanical pump (sputtering system)	Ulvac	D-330DK	
Diffusion pump (sputtering system)	Ulvac	ULK-06A	
Mass flow controller	Brooks	5850E	The maximum Argon flow is 400 mL/min
Manual wheel Angle poppet valve	King Lai	N/A	Vacuum range from 2500 ~1 × 10^{-8} torr
Raman measurement system	Horiba	Jobin Yvon LabRAM HR800	
Transmission electron microscopy	Fei	Tecnai G2 F20	
Petri dish	Kwo Yi	N/A	
Tweezer	Venus	2A	
Digital dry cabinet	Jwo Ruey Technical	DRY-60	
Dual-channel system sourcemeter	Keithley	2636B	