

Materials List for:

Experimental Approach for Determining Semiconductor/liquid Junction Energetics by *Operando* Ambient-Pressure X-ray Photoelectron Spectroscopy

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Materials

Name	Company	Catalog Number	Comments
p ⁺ -Si(100)	Addison	3P-111	Resistivity < 0.005 Ω - cm
H ₂ SO ₄	Sigma Aldrich	339741	99.999%
H ₂ O ₂	Sigma Aldrich	216763	30%
HF	Sigma Aldrich	339261	99.99%
millipore H ₂ O	EMDMillipore	Milli-Q® Advantage A10	18.2 MΩ
HCl	Sigma Aldrich	320331	ACS Reagent, 37%
Tetrakis(dimethylamido)titanium(IV) (TDMAT)	Sigma Aldrich	469858	99.999%
N ₂	Praxair	NI 6.0 RS	>99.9999%
Ni target	AJA International	7440-02-0	>99.99%
In/Ga	Sigma Aldrich	495425	>99.99%
Hysol 9460	Ellsworth Adhesives	83128	Dual cartridge
KOH	Sigma Aldrich	306568	Semiconductor grade, 99.99%
Liquid Nitrogen	Praxair	NI 5.0	
Gold foil	Sigma Aldrich	326496	99.99%
HNO ₃	Sigma Aldrich	438073	ACS Reagent, 70%
1-sided copper tape	adafruit	1128	For electrode construction
glass microscope slides	VWR	48300-025	For electrode construction
Ag/AgCl reference electrode	eDAQ	ET072-1	
Platinum foil	Sigma Aldrich	349348	99.99%
SP-300 Biologic Potentiostat	Biologic	SP-300	
Scienta r4000 HiPP-2 Detector APPES	Scienta	HiPP-2	