

Materials List for:

Assessment of Boron Doped Diamond Electrode Quality and Application to *In Situ* Modification of Local pH by Water Electrolysis

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Materials

Name	Company	Catalog Number	Comments
Pt Wire			Counter Electrode
Saturated Calomel Electrode	IJ Cambria Scientific Ltd.	2056	Reference Electrode (alternatively use Ag/AgCl)
BDD Electrode			Working Electrode
Iridium Tetrachloride	VWR International Ltd	12184.01	
Hydrogen Peroxide	Sigma-Aldrich	H1009	(30% w/w) Corrosive
Oxalic Acid	Sigma-Aldrich	241172	Harmful, Irritant
Anhydrous Potassium Chloride	Sigma-Aldrich	451029	
Sulphuric Acid	VWR International Ltd	102765G	(98%) Corrosive
Potassium Nitrate	Sigma-Aldrich	221295	
Hexamine Ruthenium Chloride	Strem Chemicals Inc.	44-0620	Irritant
Perchloric Acid	Sigma-Aldrich	311421	Oxidising, Corrosive
2-Propanol	Sigma-Aldrich	24137	Flammable
Nitric Acid	Sigma-Aldrich	695033	Oxidising, Corrosive
Sputter/ Evapourator			With Ti & Au targets
Raman			514.5 nm laser
Annealing Oven			Capable of 400 °C
Ag paste	Sigma-Aldrich	735825	or other conductive paint
Potentiostat			
pH Buffer solutions	Sigma-Aldrich	38740-38752	Fixanal buffer concentrates
Phenolphthalein Indicator	VWR International Ltd	210893Q	
Methyl Red Indicator	Sigma-Aldrich	32654	