

Materials List for:

Synthesis Method for Cellulose Nanofiber Biotemplated Palladium Composite Aerogels

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Materials

Name	Company	Catalog Number	Comments
0.5 mm platinum wire electrode	BASi	MW-4130	Used for auxillary electrode and separately for lacquer coating and use as a working electrode
1-ethyl-3-(3-dimethylaminopropyl) carbodiimide hydrochloride (EDC)	Sigma-Aldrich	1892-57-5	
2-(N-morpholino)ethanesulfonic acid (MES)	Sigma-Aldrich	117961-21-4	
Ag/AgCl (3M NaCl) Reference Electrode	BASi	MF-2052	
Carboxymethyl cellulose, TEMPO Cellulose Nanofibrils, Dry Powder	University of Maine Process Development Center	No 8	
Ethanol, 200 proof	PHARMCO-AAPER	241000200	
Ethylenediamine	Sigma-Aldrich	107-15-3	
Fourier-Transform Infrared (FTIR) Spectrometer, Frontier	Perkin Elmer	L1280044	
Hydrochloric Acid	CORCO	7647-01-0	
Na ₂ PdCl ₄	Sigma-Aldrich	13820-40-1	
NaBH ₄	Sigma-Aldrich	16940-66-2	
Pd(NH ₃) ₄ Cl ₂	Sigma-Aldrich	13933-31-8	
Potentiostat	Biologic-USA	VMP-3	Electrochemical analysis-EIS, CV
Scanning Electron Microscope (SEM) Helios 600 Nanolab	ThermoFisher Scientific		
Supercritical Dryer	Leica	EM CPD300	Aerogel supercritical drying with CO ₂
Surface and Pore Analyzer	Quantachrome	NOVA 4000e	Nitrogen gas adsorption
Thermal Gravimetric Analysis	TA instruments	TGA Q500	
Ultrasonic Cleaner	MTI	EQ-VGT-1860QTD	
XRD	PanAlytical	Empyrean	X-ray diffractometry