

Materials List for:

# Protocol of Electrochemical Test and Characterization of Aprotic Li-O<sub>2</sub> Battery

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URL: <https://www.jove.com/video/53740>

DOI: [doi:10.3791/53740](https://doi.org/10.3791/53740)

## Materials

Name	Company	Catalog Number	Comments
1-Methyl-2-pyrrolidinone (NMP), 99.5%	Sigma-Aldrich	328634	
Battery test system	MACCOR	Series 4000 Automated Test System	
Dimethyl carbonate (DMC), ≥99%	Sigma-Aldrich	517127	
Ethyl alcohol, ≥99.5%	Sigma-Aldrich	459844	
Formaldehyde solution, 37 wt. % in H <sub>2</sub> O	Sigma-Aldrich	252549	
Graphitized Carbon black, >99.95%	Sigma-Aldrich	699632	
Iron(III) chloride (FeCl <sub>3</sub> ), 97%	Sigma-Aldrich	157740	
Kapton polyimide tubing	Cole-Parmer	EW-95820-09	
Kapton polyimide tape	Cole-Parmer	EW-08277-80	
Kapton window film	SPEX Sample Prep	3511	
Lithium Chip (99.9% Lithium)	MTI Corporation	EQ-Lib-LiC25	
Lithium trifluoromethanesulfonate (LiCF <sub>3</sub> SO <sub>3</sub> )	Sigma-Aldrich	481548	
Palladium hexafluoroacetylacetonate (Pd(hfac) <sub>2</sub> ), 99.9%	Aldrich	401471	
Poly(vinylidene fluoride) (PVDF)	Aldrich	182702	
Potassium permanganate (KMnO <sub>4</sub> ), ≥99.0%	Sigma-Aldrich	223468	
Sodium hydroxide (NaOH), ≥97.0%	Sigma-Aldrich	221465	
Tetraethylene glycol dimethyl ether (TEGDME), ≥99%	Aldrich	172405	
Toray 030 carbon paper	ElectroChem Inc.	590637	