

Materials List for:

Recombination Dynamics in Thin-film Photovoltaic Materials via Time-resolved Microwave Conductivity

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URL: <https://www.jove.com/video/55232>

DOI: [doi:10.3791/55232](https://doi.org/10.3791/55232)

Materials

Name	Company	Catalog Number	Comments
Hellmanex III detergent	Sigma Aldrich www.sigmaaldrich.com/catalog/product/sial/z805939?lang=en&region=AU	Z805939	Corrosive and toxic. See SDS.
Lead(II) iodide (99%)	Sigma Aldrich www.sigmaaldrich.com/catalog/product/aldrich/211168?lang=en&region=AU	211168	Toxic. See SDS.
Anhydrous dimethylformamide (99.8%)	Sigma Aldrich www.sigmaaldrich.com/catalog/product/sial/227056?lang=en&region=AU	227056	Toxic. See SDS.
Anhydrous dimethylsulfoxide (99.9%)	Sigma Aldrich www.sigmaaldrich.com/catalog/product/sial/276855?lang=en&region=AU	276855	Toxic. See SDS.
Anhydrous 2-Propanol (99.5%)	Sigma Aldrich www.sigmaaldrich.com/catalog/product/sial/278475?lang=en&region=AU&gclid=COnIqPaw780CFQZvvAod17EA4Q	278475	
Methylammonium iodide	Dyesol www.dyesol.com/products/dsc-materials/perovskite-precursors/methylammonium-iodide.html	MS101000	Also sold by Sigma Aldrich
Poly(methyl methacrylate)	Sigma Aldrich	445746	
Anhydrous chlorobenzene (99.8%)	Sigma Aldrich www.sigmaaldrich.com/catalog/product/aldrich/445746?lang=en&region=AU	284513	Toxic. See SDS.
Equipment	Company	Model	Comments/Description
UV-VIS-NIR spectrophotometer	Perkin-Elmer	Lambda 900	
Profilometer	Veeco	Dektak 150	
Vector Network Analyzer	Keysight www.keysight.com/en/pdx-x201927-pn-N9918A/fieldfox-handheld-microwave-analyzer-265-ghz?cc=US&lc=eng	Fieldfox N9918A	
Tunable wavelength laser	Opotek www.opotek.com/product/opolette-355	Opolette 355	

Neutral density filters	Thorlabs www.thorlabs.hk/ newgrouppage9.cfm? objectgroup_id=3193	NUK01	
Power meter	Thorlabs www.thorlabs.com/ thorproduct.cfm? partnumber=PM100D	PM100D	
Power sensor	Thorlabs www.thorlabs.com/ thorproduct.cfm? partnumber=S401C	S401C	
Cavity	Custom built		The cavity used in for this experiment was designed and built in-house.