

Materials List for:

## Well-aligned Vertically Oriented ZnO Nanorod Arrays and their Application in Inverted Small Molecule Solar Cells

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URL: <https://www.jove.com/video/56149>

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### Materials

Name	Company	Catalog Number	Comments
AZO target	Ultimate Materials Technology Co., Ltd.	none	AZO (2 wt% Al <sub>2</sub> O <sub>3</sub> in ZnO) , 3"φx 3mmt + 3mmt Cu B/P + Bonding
SMPV1	Luminescence Technology Corp.	1651168-29-4	2,6-Bis[2,5-bis(3-octylrhodanine)-(3,3-dioctyl-2,2':5,2''-terthiophene)]-4,8-bis((5-ethylhexyl)thiophen-2-yl)benzo[1,2-b:4,5-b']dithiophene
RF sputtering system	Kao Duen Technology Co., Ltd	none	<a href="http://www.kaoduen.com.tw/index.php?action=product">http://www.kaoduen.com.tw/index.php?action=product</a>
Zinc Acetate Dihydrate	J. T. Baker	5970456	4.39 g
Monoethanolamine	J. T. Baker	141435	1.22 g
2-methoxyethanol	Sigma-Aldrich	109864	40 mL
Zinc Nitrate Hexahydrate	J. T. Baker	10196186	1.49 g
Hexamethylenetetramine	Sigma-Aldrich	100-97-0	0.7 g
Indium tin oxide (ITO)	RITdisplay	none	coated glass substrates (<10 Ω sq <sup>-1</sup> )
AFM	Veeco	Innova SPM	
SEM	FEI	Nova 200 NanoSEM	operation voltage: 10 kV
XRD	Bruker	D8 X-ray diffractometer	2θ range: 10–90 °; step size: 0.008 °
PL	Horiba	Jobin-Yvon HR800	excitation source: 325 nm UV Laser 20 mW
solar simulator	Newport	91192A	AM 1.5G
Precision Semiconductor Parameter Analyzer	Keysight Technologies	Agilent 4156C	sweep from -1 to +1 V
toluene	Sigma-Aldrich	108-88-3	1 mL
PC <sub>71</sub> BM	Sigma-Aldrich	609771-63-3	11.25 mg
Thermal evaporation system	Kao Duen Technology Co., Ltd	Kao Duen PVD System	<a href="http://www.kaoduen.com.tw/index.php?action=product">http://www.kaoduen.com.tw/index.php?action=product</a>
HCl	Sigma-Aldrich	7647-01-0	
MoO <sub>3</sub>	Alfa Aesar	1313-27-5	99.50%
silver ingot	ADMAT Inc.	none	100.00%
Thin Film Deposition Controller	INFICON	XTC	

anti-corrosion tape (Polyimide Film)	3M Taiwan Corporation	none	<a href="http://solutions.3m.com.tw/wps/portal/3M/zh_TW/InsulatingTape/home/product/Polyimide/">http://solutions.3m.com.tw/wps/portal/3M/zh_TW/InsulatingTape/home/product/Polyimide/</a>
spin-coater	Chemmat Technology, Inc	KW-4A	<a href="http://www.chemmat.com/chematscientific/KW-4A.aspx">http://www.chemmat.com/chematscientific/KW-4A.aspx</a>