

Materials List for:

Integration of Light Trapping Silver Nanostructures in Hydrogenated Microcrystalline Silicon Solar Cells by Transfer Printing

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Materials

Name	Company	Catalog Number	Comments
Nanohole mold	Scivax	FLH230/500-120	
PTFE container	Eishin	n/a	Custom made
Hard-PDMS materials			
Vinylmethylsiloxane-dimethylsiloxane copolymer	Gelest	VDT-731	
Pt-divinyltetramethyldisiloxane complex	Gelest	SIP6831.1	
Methylhydrosiloxane-dimethylsiloxane copolymer	Gelest	HMS-301	
2,4,6,8-tetramethyltetra-vinylcyclotetrasiloxane	Sigma-Aldrich	396281	Additive for hard-PDMS
Soft-PDMS materials	Dow Corning	Sylgard-184	Silicone precursor
PS-b-P2VP	Polymer Source	P5742-S2VP	$M_n \times 10^3 = 133\text{-}b\text{-}132$
Glass/SnO ₂ :F substrates	Asahi Glass Co. Ltd.	Type VU	Chemical mechanical polished by D-process Inc. (http://d-process.jp/index.html) to flatten the surfaces
Detergent	Fruuchi Chemical Co. http://www.furuchi.co.jp/eng/main.htm	Semico-clean 56	Used for the cleaning of Glass/SnO ₂ :F substrates
ZnO:Ga sputtering target	AGC Ceramics Co. Ltd.	5.7GZO	
Ag sputtering target	Mitsubishi Materials Co.	4NAg	
Double-sided adhesive tape	Nisshin EM Co.	732	
Polyimide tape	Dupont	Kapton 650S#25	
Sn-Zn-based Solder	Kuroda Techno Co., Ltd.	Cerasolzer AL-200	
Digital micro pipette	Nichiryo	00-NPX2-20 00-NPX2-200 00-NPX2-1000	
Heating chamber	Tokyo Rikakikai Co., Ltd.	VOS-201SD	
Electron beam evaporator	Canon-Anelva	n/a	Custom made
Electron beam evaporator	Arios	n/a	Custom made
Sputtering system	Ulvac	SBR-2306	
PECVD system	Shimadzu Emit Co. Ltd.	SLCM-13	
Ar plasma system	Diner Electric GmbH	Femto	
RIE system	Samco Inc.	RIE-10NR	
Ultrasonic soldering device	Colby-Eishin Enterprises, Inc.	SUNBONDER	
EQE measurement system	Bunkoukeiki Co. Ltd.	CEP-25BXS	

J-V characteristics measurement system	Bunkoukeiki Co. Ltd.	OTENTOSUN-5S-I/V	
Amorphous Si reference cell	Bunkoukeiki Co. Ltd.	WPVS-NPB-S1	For light intensity calibration
Digital multi-meter	Keithley Instruments Inc.	2400	