Shi-Joon Sung

List of Publications by Year
in descending order

103 papers	2,437 citations	257450 24 h-index	206112 48 g-index
103 all docs	103 docs citations	103 times ranked	3346 citing authors

#	Article	IF	Citations
1	Facile growth of a Sb₂Se₃ nanorod array induced by a MoSe₂ interlayer and its application in 3D pâ€“n junction solar cells. Materials Advances, 2022, 3, 978-985.	5.4	7
2	Effect of Metal-Precursor Stacking Order on Volume-Defect Formation in CZTSSe Thin Film: Formation Mechanism of Blisters and Nanopores. ACS Applied Materials & Interfaces, 2022, 14, 30649-30657.	8.0	4
3	Sodium Effects on the Diffusion, Phase, and Defect Characteristics of Kesterite Solar Cells and Flexible Cu₂ZnSn(S,Se)₄ with Greater than 11% Efficiency. Advanced Functional Materials, 2021, 31, 2102238.	14.9	36
4	Design of Grating Al2O3 Passivation Structure Optimized for High-Efficiency Cu(In,Ga)Se2 Solar Cells. Sensors, 2021, 21, 4849.	3.8	3
5	Atomic Layer Deposition of Ultrathin ZnO Films for Hybrid Window Layers for Cu(Inx,Ga1â^'x)Se2 Solar Cells. Nanomaterials, 2021, 11, 2779.	4.1	10
6	Approach to Transparent Photovoltaics Based on Wide Band Gap Sb₂S₃ Absorber Layers and Optics-Based Device Optimization. ACS Applied Energy Materials, 2020, 3, 12644-12651.	5.1	25
7	CZTSSe Formation Mechanism Using a Cu/Zn/SnS Stacked Precursor: Origin of Triple CZTSSe Layer Formation. ACS Applied Materials & Interfaces, 2020, 12, 46037-46044.	8.0	4
8	Enhanced Power Conversion Efficiency of Dye-Sensitized Solar Cells by Band Edge Shift of TiO2 Photoanode. Molecules, 2020, 25, 1502.	3.8	11
9	Flexible Cu2ZnSn(S,Se)4 solar cells with over 10% efficiency and methods of enlarging the cell area. Nature Communications, 2019, 10, 2959.	12.8	100
10	Ultrathin ZrO2 on LiNi0.5Mn0.3Co0.2O2 electrode surface via atomic layer deposition for high-voltage operation in lithium-ion batteries. Applied Surface Science, 2019, 484, 701-709.	6.1	65
11	Void and secondary phase formation mechanisms of CZTSSe using Sn/Cu/Zn/Mo stacked elemental precursors. Nano Energy, 2019, 59, 399-411.	16.0	61
12	Flexible high-efficiency CZTSSe solar cells on stainless steel substrates. Journal of Materials Chemistry A, 2019, 7, 24891-24899.	10.3	27
13	Controlled synthesis of (hk1) preferentially oriented Sb₂Se₃rod arrays by co-evaporation for photovoltaic applications. Journal of Materials Chemistry A, 2019, 7, 25900-25907.	10.3	34
14	Effect of solid-H₂S gas reactions on CZTSSe thin film growth and photovoltaic properties of a 12.62% efficiency device. Journal of Materials Chemistry A, 2019, 7, 25279-25289.	10.3	229
15	Determination of Carrier Lifetimes in Organic-Inorganic Hybrid Solar Cells Based on Sb2S3 by Using the Time-Resolved Photocurrent. Journal of the Korean Physical Society, 2018, 72, 709-715.	0.7	3
16	Mesoporous TiO₂ hierarchical structures: preparation and efficacy in solar cells. RSC Advances, 2017, 7, 49057-49065.	3.6	8
17	Systematic control of nanostructured interfaces of planar Sb 2 S 3 solar cells by simple spin-coating process and its effect on photovoltaic properties. Journal of Industrial and Engineering Chemistry, 2017, 56, 196-202.	5.8	24
18	Quasi-solid state electrolyte for semi-transparent bifacial dye-sensitized solar cell with over 10% power conversion efficiency. Journal of Power Sources, 2017, 361, 87-95.	7.8	31

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19	Enhanced Performance of Dye-Sensitized Solar Cells Based on Electrospun TiO2 Electrode. Journal of Nanoscience and Nanotechnology, 2017, 17, 8117-8121.	0.9	1
20	Retardation of Charge Recombination Between Hole Conductors and TiCl₄:BaCl₂-Modified Photoelectrodes in TiO₂-Based Solar Cells. Journal of Nanoscience and Nanotechnology, 2017, 17, 8144-8148.	0.9	1
21	Spin-Coated Uniform Sb₂S₃ Thin Films for Photovoltaic Applications by Solvent Engineering. Nanoscience and Nanotechnology Letters, 2017, 9, 1327-1331.	0.4	2
22	Performance Enhancement of Dye-Sensitized Solar Cells with KMnO₄-Modified Photoelectrodes. Journal of Nanoscience and Nanotechnology, 2016, 16, 10420-10425.	0.9	1
23	Correlation Between Chemical Composition and Efficiency of Cu2ZnSnS4 Solar Cells Prepared by a Solution Process. Journal of Nanoscience and Nanotechnology, 2016, 16, 8648-8653.	0.9	0
24	Perspective: Understanding of ripening growth model for minimum residual PbI2 and its limitation in the planar perovskite solar cells. APL Materials, 2016, 4, .	5.1	43
25	A band-gap-graded CZTSSe solar cell with 12.3% efficiency. Journal of Materials Chemistry A, 2016, 4, 10151-10158.	10.3	260
26	Preferential (100)-oriented CH₃NH₃PbI₃ perovskite film formation by flash drying and elucidation of formation mechanism. RSC Advances, 2016, 6, 94502-94509.	3.6	4
27	Effect of Morphology of Solution-Processed Precursor Films on Cu₂ZnSnS₄ Thin Film Solar Cells. Journal of Nanoscience and Nanotechnology, 2016, 16, 10758-10762.	0.9	0
28	Fabrication of Dye-Sensitized Solar Cells Based on Embedded Photoelectrodes of TiO₂ Nanotube-Nanoparticles Composite. Journal of Nanoscience and Nanotechnology, 2016, 16, 10716-10719.	0.9	0
29	Low-Cost Nanoporous Cu₂ZnSnS₄ Thin-Film Counter Electrode for Dye-Sensitized Solar Cells. Journal of Nanoscience and Nanotechnology, 2016, 16, 10490-10494.	0.9	1
30	Controlled fabrication of mesoporous TiO₂ hierarchical structures as scattering layers to enhance the power conversion efficiency of dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2016, 18, 30254-30260.	2.8	2
31	Spin-Coating Process of an Inorganic Sb₂S₃ Thin Film for Photovoltaic Applications. Journal of Nanoscience and Nanotechnology, 2016, 16, 10763-10766.	0.9	21
32	Controlled growth of organicâ€“inorganic hybrid CH₃NH₃PbI₃ perovskite thin films from phase-controlled crystalline powders. RSC Advances, 2016, 6, 104359-104365.	3.6	16
33	A discussion on the origin and solutions of hysteresis in perovskite hybrid solar cells. Journal Physics D: Applied Physics, 2016, 49, 473001.	2.8	45
34	Effects of TiO2:MgO-Mixed Overlayer on the Performance of Dye-Sensitized Solar Cells. Journal of Nanoscience and Nanotechnology, 2016, 16, 8575-8579.	0.9	2
35	Effects of Thickness of Electrosprayed Spherical TiO₂ Photoelectrodes on the Performance of Dye-Sensitized Solar Cells. Science of Advanced Materials, 2016, 8, 640-644.	0.7	0
36	Effects of Sodium Dodecyl Sulfate as a Co-Adsorbate on the Performance of Dye-Sensitized Solar Cells. Journal of Nanoscience and Nanotechnology, 2015, 15, 7727-7732.	0.9	4

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37	Effects of Ta Addition Through Co-Sputtering on the Electrical Characteristics of Indium Tin Oxide Thin Film Transistors. Journal of Nanoscience and Nanotechnology, 2015, 15, 386-390.	0.9	3
38	Incorporation of Potassium Water Glass on Photoelectrodes and Its Effects on the Performance of Dye-Sensitized Solar Cells. Journal of Nanoscience and Nanotechnology, 2015, 15, 8854-8858.	0.9	0
39	Hysteresis-less mesoscopic CH3NH3PbI3 perovskite hybrid solar cells by introduction of Li-treated TiO2 electrode. Nano Energy, 2015, 15, 530-539.	16.0	246
40	Nanostructured p-type CZTS thin films prepared by a facile solution process for 3D pâ€“n junction solar cells. Nanoscale, 2015, 7, 11182-11189.	5.6	27
41	Effect of Sulfurization Temperature on Solution-Processed Cu₂ZnSnS₄ Thin Films. Journal of Nanoscience and Nanotechnology, 2015, 15, 2486-2489.	0.9	1
42	Crystallization Behavior of Solution-Processed CIGSe Thin Film Semiconductor by Stepwise Annealing Process. Journal of Nanoscience and Nanotechnology, 2015, 15, 2490-2494.	0.9	4
43	Characterization of in-situ annealed sub-micron thick Cu(In,Ga)Se2 thin films. Thin Solid Films, 2015, 590, 330-334.	1.8	4
44	Effect of Hydrogen Post-Annealing on Transparent Conductive ITO/Ga2O3 Bi-Layer Films for Deep Ultraviolet Light-Emitting Diodes. Journal of Nanoscience and Nanotechnology, 2015, 15, 7777-7780.	0.9	2
45	Improved Photovoltaic Properties of Dye-Sensitized Solar Cells with KNO₃-Modified Photoelectrodes. Journal of Nanoscience and Nanotechnology, 2015, 15, 8859-8863.	0.9	2
46	Effect of TiCl₄ Post-Treatment on the Embedded-Type TiO₂ Nanotubes Dye-Sensitized Solar Cells. Journal of Nanoscience and Nanotechnology, 2015, 15, 7845-7847.	0.9	1
47	Effects of Na and MoS₂ on Cu₂ZnSnS₄ thinâ€film solar cell. Progress in Photovoltaics: Research and Applications, 2015, 23, 862-873.	8.1	108
48	Phase separation structure and interfacial properties of latticeâ€patterned liquid crystalâ€“polymer composites prepared from multicomponent prepolymers. Polymer International, 2014, 63, 214-220.	3.1	2
49	Double-layered TiO_2 photoelectrode with particulate structure prepared by one-step soaking method. Optical Materials Express, 2014, 4, 2401.	3.0	2
50	Solution-processed Cu₂ZnSnS₄ absorbers prepared by appropriate inclusion and removal of thiourea for thin film solar cells. RSC Advances, 2014, 4, 9118-9125.	3.6	44
51	Highly reproducible planar Sb₂S₃-sensitized solar cells based on atomic layer deposition. Nanoscale, 2014, 6, 14549-14554.	5.6	182
52	Effect of hot-pressing on an electrospun TiO2electrode for dye-sensitized solar cells. Applied Physics Express, 2014, 7, 072301.	2.4	6
53	Electroreflectance study of CuIn1â^'xGaxSe2 thin film solar cells. Current Applied Physics, 2014, 14, 318-321.	2.4	5
54	Enhanced Performance of Polymer Solar Cells with a Fluorocyanophenyl Compound as an Additive. Journal of Nanoscience and Nanotechnology, 2014, 14, 9219-9223.	0.9	2

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55	Effect of Ta Addition of Co-sputtered Amorphous Tantalum Indium Zinc Oxide Thin Film Transistors with Bias Stability. Journal of Nanoscience and Nanotechnology, 2014, 14, 8163-8166.	0.9	1
56	Inverted Polymer Solar Cells with a Poly(diallyldimethylammonium chloride) as an Electron Collecting Layer. Science of Advanced Materials, 2014, 6, 2334-2337.	0.7	1
57	Effects of annealing on structural and electrical properties of sub-micron thick CIGS films. Current Applied Physics, 2013, 13, S135-S139.	2.4	12
58	Structure control of lattice-patterned liquid crystalsâ€“polymer composites prepared by polarization-selective UV-curing through the addition of a fluorinated acrylate monomer. Microelectronic Engineering, 2013, 103, 42-48.	2.4	8
59	Particulate counter electrode system for enhanced light harvesting in dye-sensitized solar cells. Optical Materials Express, 2013, 3, 739.	3.0	2
60	Effects of Addition of Ta and Y Ions to InZnO Thin Film Transistors by Solâ€“Gel Process. Journal of Nanoscience and Nanotechnology, 2013, 13, 4211-4215.	0.9	3
61	Heat Resistant Polymer Matrix Containing Acrylo-Polyhedral Silsesquioxane for Erbium-Doped Waveguide Amplifier Applications. Molecular Crystals and Liquid Crystals, 2013, 586, 33-42.	0.9	1
62	Light Harvest Properties of Dye-Sensitized Solar Cells with Different Spatial Configurations of Reflecting Layer. Journal of Nanoscience and Nanotechnology, 2013, 13, 7123-7126.	0.9	3
63	Effect of Soft-annealing on the Properties of CIGSe Thin Films Prepared from Solution Precursors. Bulletin of the Korean Chemical Society, 2013, 34, 1473-1476.	1.9	3
64	Pixel-Isolation Walls of Liquid Crystal Display Based on Prepolymer Containing Vinyl Cinnamate. Journal of Nanoscience and Nanotechnology, 2012, 12, 3360-3363.	0.9	0
65	Investigation of Crystallization Behavior of CIG-Se Bi-Layer Thin Films. Journal of Nanoscience and Nanotechnology, 2012, 12, 3488-3491.	0.9	0
66	Preparation and Physical Properties of Erbium-Doped Polymer Patterns by Micromolding in Capillaries for Optical Waveguide Amplifiers. Molecular Crystals and Liquid Crystals, 2012, 564, 222-232.	0.9	0
67	Effects of Ti addition on sol-gel derived InO and InZnO thin film transistors. Current Applied Physics, 2012, 12, e24-e28.	2.4	13
68	The optical and structural properties of CuIn1âˆ'x Ga x Se2 thin films fabricated with various Ga contents by using the co-evaporation technique. Journal of the Korean Physical Society, 2012, 60, 1708-1712.	0.7	13
69	Lattice-patterned LC-polymer composites containing various nanoparticles as additives. Nanoscale Research Letters, 2012, 7, 46.	5.7	1
70	8.01% CuInGaSe2 solar cells fabricated by air-stable low-cost inks. Physical Chemistry Chemical Physics, 2012, 14, 11154.	2.8	64
71	Simultaneous fabrication of an alignment layer and a wall structure for a liquid crystal display by solvent-assisted micromolding. Macromolecular Research, 2012, 20, 453-458.	2.4	2
72	Contact-free method to prepare photoalignment layers with spacers for flexible liquid crystal displays. Microelectronic Engineering, 2012, 96, 67-70.	2.4	2

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73	The effect of bi-component acrylate prepolymers on the phase separation and electro-optical properties of pixel-isolated liquid crystals. Displays, 2011, 32, 334-337.	3.7	6
74	Effect of hafnium addition on the electrical properties of indium zinc oxide thin film transistors. Thin Solid Films, 2011, 519, 6815-6819.	1.8	24
75	Effect of molecular weight of biscinnamated poly(ethylene glycol) oligomers on the photocycloaddition reaction. Macromolecular Research, 2010, 18, 614-617.	2.4	5
76	High performance and the low voltage operating InGaZnO thin film transistor. Current Applied Physics, 2010, 10, e157-e160.	2.4	22
77	Effect of sputtering condition on the surface properties of silicon oxide thin films prepared for liquid crystal alignment layers. Displays, 2010, 31, 93-98.	3.7	0
78	Low Voltage, High Performance Thin Film Transistor with HfInZnO Channel and HfO[sub 2] Gate Dielectric. Electrochemical and Solid-State Letters, 2010, 13, H274.	2.2	15
79	Pixel-isolation liquid crystals formed by polarization-selective UV-curing of a prepolymer containing cinnamate oligomer. Optics Express, 2010, 18, 11737.	3.4	8
80	The Electro-Optical Behavior of Liquid Crystal Molecules on the Surface of SiO2 Inorganic Thin Films. Journal of Nanoscience and Nanotechnology, 2009, 9, 6938-42.	0.9	3
81	Ultraviolet embossed alignment layers having patterned spacers for flexible liquid crystal display. Displays, 2008, 29, 478-481.	3.7	9
82	Effect of composition and synthetic route on the microstructure of biodegradable diblock copolymer, poly(Îµ-caprolactone-co-L-lactide)-b-poly(ethylene glycol). Macromolecular Research, 2008, 16, 231-237.	2.4	5
83	Molecular Orientation of Liquid Crystal on Polymer Blends of Coumarin and Naphthalenic Polyimide. Polymer Bulletin, 2008, 61, 383-390.	3.3	11
84	Effect of the shape of imprinted alignment layer on the molecular orientation of liquid crystal. Materials Science and Engineering C, 2007, 27, 798-801.	7.3	6
85	Two different reaction mechanisms of cinnamate side groups attached to the various polymer backbones. Polymer, 2006, 47, 2314-2321.	3.8	27
86	Preparation and charateristics of Nafion membrane coated with a PVdF copolymer/recast Nafion blend for direct methanol fuel cell. Journal of Power Sources, 2006, 159, 524-528.	7.8	55
87	Thermal Reaction of Cinnamate Oligomers and Their Effect on the Orientational Stability of Liquid Crystals. Japanese Journal of Applied Physics, 2006, 45, 6442-6444.	1.5	0
88	A coated Nafion membrane with a PVdF copolymer/Nafion blend for direct methanol fuel cells (DMFCs). Solid State Ionics, 2005, 176, 3027-3030.	2.7	30
89	Effect of Plasticization of Poly(Vinyl Cinnamate) on Liquid Crystal Orientation Stability. Japanese Journal of Applied Physics, 2005, 44, L412-L415.	1.5	2
90	Effect of photoreactivity of polyimide on the molecular orientation of liquid crystals on photoreactive polymer/polyimide blends. Liquid Crystals, 2004, 31, 1601-1611.	2.2	4

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91	Carbon black effect on the acoustic properties of nitrile butadiene rubber. Journal of Applied Polymer Science, 2004, 94, 678-683.	2.6	14
92	Novel Photo-Alignment Polymer Layer Capable of Charge Transport. Macromolecular Chemistry and Physics, 2004, 205, 2245-2251.	2.2	15
93	Photo-induced liquid crystal alignment on imide oligomer containing cinnamate group. Materials Science and Engineering C, 2004, 24, 195-199.	7.3	4
94	Photo-induced liquid crystal alignment of poly(vinyl cinnamate) and fluorinated polyimide blends. Materials Science and Engineering C, 2004, 24, 181-184.	7.3	21
95	Proton conducting semi-IPN based on Nafion and crosslinked poly(AMPS) for direct methanol fuel cell. Electrochimica Acta, 2004, 50, 588-593.	5.2	29
96	Dimerization behavior of cinnamate group attached to flexible polymer backbone and its effect on the molecular orientation. Chemical Physics Letters, 2004, 394, 238-243.	2.6	28
97	Effect of Polyethylene Glycol on Gene Delivery of Polyethylenimine.. Biological and Pharmaceutical Bulletin, 2003, 26, 492-500.	1.4	164
98	Photo-induced liquid crystal alignment on polyimide containing fluorinated groups. Liquid Crystals, 2002, 29, 243-250.	2.2	16
99	Relationship between pretilt angle and surface energy of the blended films based on poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10	3.9	12
100	Static charge reducible liquid crystal alignment layer based on PAAc doped PMDA-ODA/polyaniline blend. Synthetic Metals, 2001, 117, 271-272.	3.9	1
101	Photo-induced liquid crystal alignment on polyimide containing fluorine group. Synthetic Metals, 2001, 117, 277-279.	3.9	8
102	Mechanism of Photo-Induced Liquid Crystal Alignment on a Poly(vinyl cinnamate) Thin Layer. Polymer Journal, 2001, 33, 9-12.	2.7	16
103	Synthesis, photo-reaction and photo-induced liquid crystal alignment of soluble polyimide with pendant cinnamate group. Liquid Crystals, 2000, 27, 1343-1356.	2.2	22