Shi-Joon Sung

List of Publications by Year
in descending order

103 papers	2,437 citations	257101 24 h-index	205818 48 g-index
103 all docs	103 docs citations	103 times ranked	3346 citing authors

#	Article	IF	Citations
1	A band-gap-graded CZTSSe solar cell with 12.3% efficiency. Journal of Materials Chemistry A, 2016, 4, 10151-10158.	5.2	260
2	Hysteresis-less mesoscopic CH3NH3PbI3 perovskite hybrid solar cells by introduction of Li-treated TiO2 electrode. Nano Energy, 2015, 15, 530-539.	8.2	246
3	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.	5.2	229
4	Highly reproducible planar Sb₂S₃-sensitized solar cells based on atomic layer deposition. Nanoscale, 2014, 6, 14549-14554.	2.8	182
5	Effect of Polyethylene Glycol on Gene Delivery of Polyethylenimine.. Biological and Pharmaceutical Bulletin, 2003, 26, 492-500.	0.6	164
6	Effects of Na and MoS₂ on Cu₂ZnSnS₄ thinâ€film solar cell. Progress in Photovoltaics: Research and Applications, 2015, 23, 862-873.	4.4	108
7	Flexible Cu2ZnSn(S,Se)4 solar cells with over 10% efficiency and methods of enlarging the cell area. Nature Communications, 2019, 10, 2959.	5.8	100
8	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.	3.1	65
9	8.01% CuInGaSe2 solar cells fabricated by air-stable low-cost inks. Physical Chemistry Chemical Physics, 2012, 14, 11154.	1.3	64
10	Void and secondary phase formation mechanisms of CZTSSe using Sn/Cu/Zn/Mo stacked elemental precursors. Nano Energy, 2019, 59, 399-411.	8.2	61
11	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.	4.0	55
12	A discussion on the origin and solutions of hysteresis in perovskite hybrid solar cells. Journal Physics D: Applied Physics, 2016, 49, 473001.	1.3	45
13	Solution-processed Cu₂ZnSnS₄ absorbers prepared by appropriate inclusion and removal of thiourea for thin film solar cells. RSC Advances, 2014, 4, 9118-9125.	1.7	44
14	Perspective: Understanding of ripening growth model for minimum residual PbI2 and its limitation in the planar perovskite solar cells. APL Materials, 2016, 4, .	2.2	43
15	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.	7.8	36
16	Controlled synthesis of (hk1) preferentially oriented Sb₂Se₃rod arrays by co-evaporation for photovoltaic applications. Journal of Materials Chemistry A, 2019, 7, 25900-25907.	5.2	34
17	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.	4.0	31
18	A coated Nafion membrane with a PVdF copolymer/Nafion blend for direct methanol fuel cells (DMFCs). Solid State Ionics, 2005, 176, 3027-3030.	1.3	30

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19	Proton conducting semi-IPN based on Nafion and crosslinked poly(AMPS) for direct methanol fuel cell. Electrochimica Acta, 2004, 50, 588-593.	2.6	29
20	Dimerization behavior of cinnamate group attached to flexible polymer backbone and its effect on the molecular orientation. Chemical Physics Letters, 2004, 394, 238-243.	1.2	28
21	Two different reaction mechanisms of cinnamate side groups attached to the various polymer backbones. Polymer, 2006, 47, 2314-2321.	1.8	27
22	Nanostructured p-type CZTS thin films prepared by a facile solution process for 3D pâ€“n junction solar cells. Nanoscale, 2015, 7, 11182-11189.	2.8	27
23	Flexible high-efficiency CZTSSe solar cells on stainless steel substrates. Journal of Materials Chemistry A, 2019, 7, 24891-24899.	5.2	27
24	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.	2.5	25
25	Effect of hafnium addition on the electrical properties of indium zinc oxide thin film transistors. Thin Solid Films, 2011, 519, 6815-6819.	0.8	24
26	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.	2.9	24
27	Synthesis, photo-reaction and photo-induced liquid crystal alignment of soluble polyimide with pendant cinnamate group. Liquid Crystals, 2000, 27, 1343-1356.	0.9	22
28	High performance and the low voltage operating InGaZnO thin film transistor. Current Applied Physics, 2010, 10, e157-e160.	1.1	22
29	Photo-induced liquid crystal alignment of poly(vinyl cinnamate) and fluorinated polyimide blends. Materials Science and Engineering C, 2004, 24, 181-184.	3.8	21
30	Spin-Coating Process of an Inorganic Sb₂S₃ Thin Film for Photovoltaic Applications. Journal of Nanoscience and Nanotechnology, 2016, 16, 10763-10766.	0.9	21
31	Mechanism of Photo-Induced Liquid Crystal Alignment on a Poly(vinyl cinnamate) Thin Layer. Polymer Journal, 2001, 33, 9-12.	1.3	16
32	Photo-induced liquid crystal alignment on polyimide containing fluorinated groups. Liquid Crystals, 2002, 29, 243-250.	0.9	16
33	Controlled growth of organicâ€“inorganic hybrid CH₃NH₃PbI₃ perovskite thin films from phase-controlled crystalline powders. RSC Advances, 2016, 6, 104359-104365.	1.7	16
34	Novel Photo-Alignment Polymer Layer Capable of Charge Transport. Macromolecular Chemistry and Physics, 2004, 205, 2245-2251.	1.1	15
35	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
36	Carbon black effect on the acoustic properties of nitrile butadiene rubber. Journal of Applied Polymer Science, 2004, 94, 678-683.	1.3	14

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37	Effects of Ti addition on sol-gel derived InO and InZnO thin film transistors. Current Applied Physics, 2012, 12, e24-e28.	1.1	13
38	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.	0.3	13
39	Relationship between pretilt angle and surface energy of the blended films based on poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.1	12
40	Effects of annealing on structural and electrical properties of sub-micron thick CIGS films. Current Applied Physics, 2013, 13, S135-S139.	1.1	12
41	Molecular Orientation of Liquid Crystal on Polymer Blends of Coumarin and Naphthalenic Polyimide. Polymer Bulletin, 2008, 61, 383-390.	1.7	11
42	Enhanced Power Conversion Efficiency of Dye-Sensitized Solar Cells by Band Edge Shift of TiO2 Photoanode. Molecules, 2020, 25, 1502.	1.7	11
43	Atomic Layer Deposition of Ultrathin ZnO Films for Hybrid Window Layers for Cu(Inx,Ga1âˆ'x)Se2 Solar Cells. Nanomaterials, 2021, 11, 2779.	1.9	10
44	Ultraviolet embossed alignment layers having patterned spacers for flexible liquid crystal display. Displays, 2008, 29, 478-481.	2.0	9
45	Photo-induced liquid crystal alignment on polyimide containing fluorine group. Synthetic Metals, 2001, 117, 277-279.	2.1	8
46	Pixel-isolation liquid crystals formed by polarization-selective UV-curing of a prepolymer containing cinnamate oligomer. Optics Express, 2010, 18, 11737.	1.7	8
47	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.	1.1	8
48	Mesoporous TiO₂ hierarchical structures: preparation and efficacy in solar cells. RSC Advances, 2017, 7, 49057-49065.	1.7	8
49	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.	2.6	7
50	Effect of the shape of imprinted alignment layer on the molecular orientation of liquid crystal. Materials Science and Engineering C, 2007, 27, 798-801.	3.8	6
51	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.	2.0	6
52	Effect of hot-pressing on an electrospun TiO2electrode for dye-sensitized solar cells. Applied Physics Express, 2014, 7, 072301.	1.1	6
53	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.	1.0	5
54	Effect of molecular weight of biscinnamated poly(ethylene glycol) oligomers on the photocycloaddition reaction. Macromolecular Research, 2010, 18, 614-617.	1.0	5

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55	Electroreflectance study of CuIn1â^'xGaxSe2 thin film solar cells. Current Applied Physics, 2014, 14, 318-321.	1.1	5
56	Effect of photoreactivity of polyimide on the molecular orientation of liquid crystals on photoreactive polymer/polyimide blends. Liquid Crystals, 2004, 31, 1601-1611.	0.9	4
57	Photo-induced liquid crystal alignment on imide oligomer containing cinnamate group. Materials Science and Engineering C, 2004, 24, 195-199.	3.8	4
58	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
59	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
60	Characterization of in-situ annealed sub-micron thick Cu(In,Ga)Se2 thin films. Thin Solid Films, 2015, 590, 330-334.	0.8	4
61	Preferential (100)-oriented CH₃NH₃PbI₃ perovskite film formation by flash drying and elucidation of formation mechanism. RSC Advances, 2016, 6, 94502-94509.	1.7	4
62	CZTSSe Formation Mechanism Using a Cu/Zn/SnS Stacked Precursor: Origin of Triple CZTSSe Layer Formation. ACS Applied Materials & Interfaces, 2020, 12, 46037-46044.	4.0	4
63	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.	4.0	4
64	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
65	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
66	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
67	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
68	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.	0.3	3
69	Design of Grating Al2O3 Passivation Structure Optimized for High-Efficiency Cu(In,Ga)Se2 Solar Cells. Sensors, 2021, 21, 4849.	2.1	3
70	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.	1.0	3
71	Effect of Plasticization of Poly(Vinyl Cinnamate) on Liquid Crystal Orientation Stability. Japanese Journal of Applied Physics, 2005, 44, L412-L415.	0.8	2
72	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.	1.0	2

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73	Contact-free method to prepare photoalignment layers with spacers for flexible liquid crystal displays. Microelectronic Engineering, 2012, 96, 67-70.	1.1	2
74	Particulate counter electrode system for enhanced light harvesting in dye-sensitized solar cells. Optical Materials Express, 2013, 3, 739.	1.6	2
75	Phase separation structure and interfacial properties of latticeâ€patterned liquid crystalâ€“polymer composites prepared from multicomponent prepolymers. Polymer International, 2014, 63, 214-220.	1.6	2
76	Double-layered TiO_2 photoelectrode with particulate structure prepared by one-step soaking method. Optical Materials Express, 2014, 4, 2401.	1.6	2
77	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
78	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
79	Improved Photovoltaic Properties of Dye-Sensitized Solar Cells with KNO₃-Modified Photoelectrodes. Journal of Nanoscience and Nanotechnology, 2015, 15, 8859-8863.	0.9	2
80	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.	1.3	2
81	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
82	Spin-Coated Uniform Sb₂S₃ Thin Films for Photovoltaic Applications by Solvent Engineering. Nanoscience and Nanotechnology Letters, 2017, 9, 1327-1331.	0.4	2
83	Static charge reducible liquid crystal alignment layer based on PAAc doped PMDA-ODA/polyaniline blend. Synthetic Metals, 2001, 117, 271-272.	2.1	1
84	Lattice-patterned LC-polymer composites containing various nanoparticles as additives. Nanoscale Research Letters, 2012, 7, 46.	3.1	1
85	Heat Resistant Polymer Matrix Containing Acrylo-Polyhedral Silsesquioxane for Erbium-Doped Waveguide Amplifier Applications. Molecular Crystals and Liquid Crystals, 2013, 586, 33-42.	0.4	1
86	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
87	Effect of Sulfurization Temperature on Solution-Processed Cu₂ZnSnS₄ Thin Films. Journal of Nanoscience and Nanotechnology, 2015, 15, 2486-2489.	0.9	1
88	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
89	Performance Enhancement of Dye-Sensitized Solar Cells with KMnO₄-Modified Photoelectrodes. Journal of Nanoscience and Nanotechnology, 2016, 16, 10420-10425.	0.9	1
90	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

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91	Enhanced Performance of Dye-Sensitized Solar Cells Based on Electrospun TiO2 Electrode. Journal of Nanoscience and Nanotechnology, 2017, 17, 8117-8121.	0.9	1
92	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
93	Inverted Polymer Solar Cells with a Poly(diallyldimethylammonium chloride) as an Electron Collecting Layer. Science of Advanced Materials, 2014, 6, 2334-2337.	0.1	1
94	Thermal Reaction of Cinnamate Oligomers and Their Effect on the Orientational Stability of Liquid Crystals. Japanese Journal of Applied Physics, 2006, 45, 6442-6444.	0.8	0
95	Effect of sputtering condition on the surface properties of silicon oxide thin films prepared for liquid crystal alignment layers. Displays, 2010, 31, 93-98.	2.0	0
96	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
97	Investigation of Crystallization Behavior of CIG-Se Bi-Layer Thin Films. Journal of Nanoscience and Nanotechnology, 2012, 12, 3488-3491.	0.9	0
98	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.	0.4	0
99	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
100	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
101	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
102	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
103	Effects of Thickness of Electrosprayed Spherical TiO₂ Photoelectrodes on the Performance of Dye-Sensitized Solar Cells. Science of Advanced Materials, 2016, 8, 640-644.	0.1	0