Sangwook Lee

List of Publications by Year
in descending order

120 papers	6,321 citations	71102 41 h-index	69250 77 g-index
120 all docs	120 docs citations	120 times ranked	10844 citing authors

#	Article	IF	Citations
1	Synthesis of Cs2TeI6 thin film and its NO2 gas-sensing properties under blue-light illumination. Scripta Materialia, 2022, 207, 114305.	5.2	11
2	Room-Temperature-Grown amorphous Indium-Tin-Silicon-Oxide thin film as a new electron transporting layer for perovskite solar cells. Applied Surface Science, 2022, 581, 151570.	6.1	2
3	Growth and NO2 sensing properties of Cs2SnI6 thin film. Materials Research Bulletin, 2022, 147, 111628.	5.2	4
4	In-Situ Nano-Auger Probe of Chloride-Ions during CH3NH3PbI3â^'xClx Perovskite Formation. Materials, 2021, 14, 1102.	2.9	5
5	Thermal Evaporation Synthesis of Vertically Aligned Zn2SnO4/ZnO Radial Heterostructured Nanowires Array. Nanomaterials, 2021, 11, 1500.	4.1	4
6	Cost-Effective High-Throughput Calculation Based on Hybrid Density Functional Theory: Application to Cubic, Double, and Vacancy-Ordered Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 7885-7891.	4.6	8
7	Intermediate Phaseâ€Free Process for Methylammonium Lead Iodide Thin Film for Highâ€Efficiency Perovskite Solar Cells. Advanced Science, 2021, 8, e2102492.	11.2	20
8	Structural, optical, and electrical properties of tin iodide-based vacancy-ordered-double perovskites synthesized via mechanochemical reaction. Ceramics International, 2021, , .	4.8	2
9	Effect of tin (II and IV) iodide doping on organicâ€“inorganic bismuth (III) iodide perovskite. Materials Letters, 2020, 262, 127166.	2.6	4
10	Growth and gas sensing properties of methylammonium tin iodide thin film. Scripta Materialia, 2020, 178, 108-113.	5.2	14
11	Room-Temperature-Processed Amorphous Sn-In-O Electron Transport Layer for Perovskite Solar Cells. Materials, 2020, 13, 32.	2.9	7
12	Thermal-assisted photo-annealed TiO2 thin films for perovskite solar cells fabricated under ambient air. Applied Surface Science, 2020, 530, 147221.	6.1	5
13	Room-temperature NO2 sensor based on a hybrid nanomaterial of methylammonium tin iodide submicron spheres and tin dioxide nanowires. Scripta Materialia, 2020, 188, 107-111.	5.2	15
14	Role of oxygen atmosphere on fabrication and photovoltaic properties of amorphous Sn-I-O electron transport layer. Materials Letters, 2020, 273, 127960.	2.6	2
15	Growth and NO₂-Sensing Properties of Biaxial p-SnO/n-ZnO Heterostructured Nanowires. ACS Applied Materials & Interfaces, 2020, 12, 34274-34282.	8.0	22
16	Hydrogen halide-free synthesis of organohalides for organometal trihalide perovskite solar cells. Journal of Industrial and Engineering Chemistry, 2020, 89, 375-382.	5.8	5
17	High-Efficiency Flexible Perovskite Solar Cells Enabled by an Ultrafast Room-Temperature Reactive Ion Etching Process. ACS Applied Materials & Interfaces, 2020, 12, 7125-7134.	8.0	8
18	Synthesis of vanadium dioxide thin films and nanostructures. Journal of Applied Physics, 2020, 128, .	2.5	42

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19	Real time observation of photo-instability of ternary-halide mixed CH3NH3Pb(Br1-x-yClxIy)3 perovskite: Preferential diffusion of small halide ions. Journal of Alloys and Compounds, 2019, 808, 151716.	5.5	5
20	Highâ€Detectivity Flexible Nearâ€Infrared Photodetector Based on Chalcogenide Ag₂Se Nanoparticles. Advanced Optical Materials, 2019, 7, 1900812.	7.3	35
21	Excitation dynamics of MAPb(I1-xBrx)3 during phase separation by photoirradiation: Evidence of sink, band filling, and Br-Rich phase coarsening. Journal of Alloys and Compounds, 2019, 806, 1180-1187.	5.5	7
22	Photo induced NO2 sensing properties of bismuth triiodide (BiI3) nanoplates at room temperature. Scripta Materialia, 2019, 172, 17-22.	5.2	6
23	Ternary diagrams of the phase, optical bandgap energy and photoluminescence of mixed-halide perovskites. Acta Materialia, 2019, 181, 460-469.	7.9	14
24	Photo-annealed amorphous titanium oxide for perovskite solar cells. Nanoscale, 2019, 11, 19488-19496.	5.6	12
25	Wide range tuning of band gap energy of A3B2X9 perovskite-like halides. Scripta Materialia, 2019, 166, 107-111.	5.2	34
26	Effect of TiO2 particle size and layer thickness on mesoscopic perovskite solar cells. Applied Surface Science, 2019, 477, 131-136.	6.1	57
27	Recent progresses on physics and applications of vanadium dioxide. Materials Today, 2018, 21, 875-896.	14.2	318
28	Nanoscale photocurrent mapping in perovskite solar cells. Nano Energy, 2018, 48, 543-550.	16.0	19
29	Recent progressive efforts in perovskite solar cells toward commercialization. Journal of Materials Chemistry A, 2018, 6, 12215-12236.	10.3	56
30	Correlation between photoactivity of TiO2 and diffusion of Na+ ions from soda lime glass. Materials Letters, 2018, 228, 351-355.	2.6	4
31	Oxygen-vacancy-modified brookite TiO2 nanorods as visible-light-responsive photocatalysts. Materials Letters, 2018, 232, 146-149.	2.6	17
32	Fabrication of MASnI3 and MASnxPb(1-x)I3 Thin Films by Conversion from SnS Thin Film. Applied Science and Convergence Technology, 2018, 27, 169-172.	0.9	2
33	Anomalously low electronic thermal conductivity in metallic vanadium dioxide. Science, 2017, 355, 371-374.	12.6	307
34	Pressureâ€“Temperature Phase Diagram of Vanadium Dioxide. Nano Letters, 2017, 17, 2512-2516.	9.1	65
35	Infiltration of methylammonium metal halide in highly porous membranes using sol-gel-derived coating method. Applied Surface Science, 2017, 416, 96-102.	6.1	10
36	SnO 2 nanowires decorated with forsythia-like TiO 2 for photoenergy conversion. Materials Letters, 2017, 202, 48-51.	2.6	6

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37	Enhancing Modulation of Thermal Conduction in Vanadium Dioxide Thin Film by Nanostructured Nanogaps. Scientific Reports, 2017, 7, 7131.	3.3	11
38	Effect of Rubidium Incorporation on the Structural, Electrical, and Photovoltaic Properties of Methylammonium Lead Iodide-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 41898-41905.	8.0	51
39	Modulating Photoluminescence of Monolayer Molybdenum Disulfide by Metalâ€“Insulator Phase Transition in Active Substrates. Small, 2016, 12, 3976-3984.	10.0	30
40	Effective passivation of Ag nanowire-based flexible transparent conducting electrode by TiO2 nanoshell. Nano Convergence, 2016, 3, 20.	12.1	27
41	Epitaxial Anatase TiO2Nanorods Array with Reduced Interfacial Charge Recombination for Solar Water Splitting. Journal of the Electrochemical Society, 2016, 163, H469-H473.	2.9	7
42	Fine tuning of emission property of white light-emitting diodes by quantum-dot-coating on YAG:Ce nanophosphors. Applied Surface Science, 2016, 379, 467-473.	6.1	22
43	Ferroelectrically Gated Atomically Thin Transitionâ€Metal Dichalcogenides as Nonvolatile Memory. Advanced Materials, 2016, 28, 2923-2930.	21.0	134
44	Heteroepitaxy-Induced Rutile VO₂ with Abundantly Exposed (002) Facets for High Lithium Electroactivity. ACS Energy Letters, 2016, 1, 216-224.	17.4	23
45	Roughness of Ti Substrates for Control of the Preferred Orientation of TiO₂ Nanotube Arrays as a New Orientation Factor. Journal of Physical Chemistry C, 2015, 119, 13297-13305.	3.1	26
46	Facile transfer fabrication of transparent, conductive and flexible In2O3:Sn (ITO) nanowire arrays electrode via selective wet-etching ZnO sacrificial layer. Materials Letters, 2015, 158, 304-308.	2.6	8
47	Niobium Doping Effects on TiO₂ Mesoscopic Electron Transport Layerâ€Based Perovskite Solar Cells. ChemSusChem, 2015, 8, 2392-2398.	6.8	139
48	Anisotropic in-plane thermal conductivity of black phosphorus nanoribbons at temperatures higher than 100â€‰K. Nature Communications, 2015, 6, 8573.	12.8	311
49	Epitaxial 1D electron transport layers for high-performance perovskite solar cells. Nanoscale, 2015, 7, 15284-15290.	5.6	49
50	Observation of anatase nanograins crystallizing from anodic amorphous TiO₂ nanotubes. CrystEngComm, 2015, 17, 7346-7353.	2.6	13
51	CdS-sensitized 1-D single-crystalline anatase TiO2 nanowire arrays for photoelectrochemical hydrogen production. International Journal of Hydrogen Energy, 2015, 40, 863-869.	7.1	18
52	Highly efficient and bending durable perovskite solar cells: toward a wearable power source. Energy and Environmental Science, 2015, 8, 916-921.	30.8	602
53	Growth of anatase and rutile TiO2@Sb:SnO2 heterostructures and their application in photoelectrochemical water splitting. International Journal of Hydrogen Energy, 2014, 39, 17508-17516.	7.1	13
54	3-D TiO₂nanoparticle/ITO nanowire nanocomposite antenna for efficient charge collection in solid state dye-sensitized solar cells. Nanoscale, 2014, 6, 6127-6132.	5.6	30

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55	Cerium-Doped Yttrium Aluminum Garnet Hollow Shell Phosphors Synthesized via the Kirkendall Effect. ACS Applied Materials & Interfaces, 2014, 6, 1145-1151.	8.0	14
56	Transparent-conducting-oxide nanowire arrays for efficient photoelectrochemical energy conversion. Nanoscale, 2014, 6, 8649.	5.6	7
57	Elastic Properties of Chemical-Vapor-Deposited Monolayer MoS₂, WS₂, and Their Bilayer Heterostructures. Nano Letters, 2014, 14, 5097-5103.	9.1	512
58	Temperature-Gated Thermal Rectifier for Active Heat Flow Control. Nano Letters, 2014, 14, 4867-4872.	9.1	126
59	Powerful, Multifunctional Torsional Micromuscles Activated by Phase Transition. Advanced Materials, 2014, 26, 1746-1750.	21.0	76
60	Sintering and Dielectric Properties of <scp><scp>Li₂O</scp></scp>â€“<scp><scp>B₂O₃</scp></scp>â€“<scp><scp>Al₂O₃</scp></scp>â€“<scp><scp>SiO₂</scp></scp> Glassâ€Added (<scp><scp>Ca</scp></scp>_{0.7}<scp><scp>Sr</scp></scp>_{0.3}<scp><scp>O</scp></scp>)_{1.03}<scp><scp>ZrO₃</scp></scp> for Copper Electrode. International Journal of Applied Ceramic Technology, 2013, 10, 716-722.	2.1	8
61	Effect of ball size and powder loading on the milling efficiency of a laboratory-scale wet ball mill. Ceramics International, 2013, 39, 8963-8968.	4.8	105
62	A Simple Method To Control Morphology of Hydroxyapatite Nano- and Microcrystals by Altering Phase Transition Route. Crystal Growth and Design, 2013, 13, 3414-3418.	3.0	41
63	Anatase TiO2 nanorod-decoration for highly efficient photoenergy conversion. Nanoscale, 2013, 5, 11725.	5.6	44
64	Tailoring nanobranches in three-dimensional hierarchical rutile heterostructures: a case study of TiO2â€“SnO2. CrystEngComm, 2013, 15, 2939.	2.6	19
65	Surface hydroxylation of TiO2 yields notable visible-light photocatalytic activity to decompose rhodamine B in aqueous solution. Journal of Physics and Chemistry of Solids, 2013, 74, 1136-1142.	4.0	14
66	Axially Engineered Metalâ€“Insulator Phase Transition by Graded Doping VO₂ Nanowires. Journal of the American Chemical Society, 2013, 135, 4850-4855.	13.7	96
67	BaSnO₃ Perovskite Nanoparticles for High Efficiency Dyeâ€Sensitized Solar Cells. ChemSusChem, 2013, 6, 449-454.	6.8	78
68	Surface Modified TiO2 Nanostructure with 3D Urchin-Like Morphology for Dye-Sensitized Solar Cell Application. Journal of Nanoscience and Nanotechnology, 2012, 12, 1305-1309.	0.9	4
69	Aligned Photoelectrodes with Large Surface Area Prepared by Pulsed Laser Deposition. Journal of Physical Chemistry C, 2012, 116, 8102-8110.	3.1	29
70	Crystallographically preferred oriented TiO2 nanotube arrays for efficient photovoltaic energy conversion. Energy and Environmental Science, 2012, 5, 7989.	30.8	88
71	Sb:SnO₂@TiO₂ Heteroepitaxial Branched Nanoarchitectures for Li Ion Battery Electrodes. Journal of Physical Chemistry C, 2012, 116, 21717-21726.	3.1	45
72	Synthesis and photovoltaic property of fine and uniform Zn₂SnO₄nanoparticles. Nanoscale, 2012, 4, 557-562.	5.6	71

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73	Fabrication of TiO2/Tin-Doped Indium Oxide-Based Photoelectrode Coated with Overlayer Materials and Its Photoelectrochemical Behavior. Journal of Nanoscience and Nanotechnology, 2012, 12, 1390-1394.	0.9	4
74	Visible-light photocatalytic activity of NH3-heat-treated Ta2O5 to decompose rhodamine B in aqueous solution. Reaction Kinetics, Mechanisms and Catalysis, 2012, 106, 67-81.	1.7	20
75	Photophysical and Photocatalytic Properties of <scp><scp>Zn</scp>₃<scp>M</scp>₂<scp>O</scp>₈</scp> (MÂ=Â<scp><scp>Nb</scp></scp>, <scp><scp>Ta</scp></scp>). Journal of the American Ceramic Society, 2012, 95, 227-231.	3.8	17
76	Improved spectral response of sensitized photoelectrodes with the optical modulation layer. Electrochemistry Communications, 2012, 15, 29-33.	4.7	9
77	Mesoporous TiO2 nanowires as bi-functional materials for dye-sensitized solar cells. Electrochimica Acta, 2012, 74, 83-86.	5.2	11
78	Transmittance optimized nb-doped TiO2/Sn-doped In2O3 multilayered photoelectrodes for dye-sensitized solar cells. Solar Energy Materials and Solar Cells, 2012, 96, 276-280.	6.2	35
79	Carrier Transport in Dye-Sensitized Solar Cells Using Single Crystalline TiO₂ Nanorods Grown by a Microwave-Assisted Hydrothermal Reaction. Journal of Physical Chemistry C, 2011, 115, 14534-14541.	3.1	71
80	A Quasiâ€Inverse Opal Layer Based on Highly Crystalline TiO₂ Nanoparticles: A New Lightâ€Scattering Layer in Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2011, 1, 546-550.	19.5	71
81	Nanowireâ€Based Threeâ€Dimensional Transparent Conducting Oxide Electrodes for Extremely Fast Charge Collection. Advanced Energy Materials, 2011, 1, 829-835.	19.5	50
82	3D Transparent Conducting Oxides: Nanowireâ€Based Threeâ€Dimensional Transparent Conducting Oxide Electrodes for Extremely Fast Charge Collection (Adv. Energy Mater. 5/2011). Advanced Energy Materials, 2011, 1, 702-702.	19.5	0
83	Electronic band structures and photovoltaic properties of MWO4 (M=Zn, Mg, Ca, Sr) compounds. Journal of Solid State Chemistry, 2011, 184, 2103-2107.	2.9	68
84	Synthesis and Characteristics of Tb-Doped Y₂SiO₅ Nanophosphors and Luminescent Layer for Enhanced Photovoltaic Cell Performance. Journal of Nanoscience and Nanotechnology, 2011, 11, 8748-8753.	0.9	13
85	Effects of carbon content on the photocatalytic activity of C/BiVO4 composites under visible light irradiation. Materials Chemistry and Physics, 2010, 119, 106-111.	4.0	54
86	Lowâ€Temperature Synthesis of Phaseâ€Pure 0Dâ€“1D BaTiO₃ Nanostructures Using H₂Ti₃O₇ Templates. European Journal of Inorganic Chemistry, 2010, 2010, 1343-1347.	2.0	13
87	Influence of nitrogen chemical states on photocatalytic activities of nitrogen-doped TiO2 nanoparticles under visible light. Journal of Photochemistry and Photobiology A: Chemistry, 2010, 213, 129-135.	3.9	65
88	Correlation of anatase particle size with photocatalytic properties. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2288-2291.	1.8	17
89	Photophysical and Photocatalytic Properties of Ag₂M₂O₇ (M=Mo, W). Journal of the American Ceramic Society, 2010, 93, 3867-3872.	3.8	41
90	Preparation of N-Doped CaNb₂O₆ Nanoplates with Ellipsoid-Like Morphology and Their Photocatalytic Activities Under Visible-Light Irradiation. Journal of Nanoscience and Nanotechnology, 2010, 10, 1196-1202.	0.9	6

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91	Hydrothermal Synthesis, Characterization and Photocatalytic Properties of Cu₂PO₄OH with Hierarchical Morphologies. Journal of Nanoscience and Nanotechnology, 2010, 10, 1185-1190.	0.9	11
92	Correlation between Photocatalytic Efficacy and Electronic Band Structure in Hydrothermally Grown TiO₂ Nanoparticles. Journal of Physical Chemistry C, 2010, 114, 15292-15297.	3.1	70
93	Two-Step Solâ^'Gel Method-Based TiO₂ Nanoparticles with Uniform Morphology and Size for Efficient Photo-Energy Conversion Devices. Chemistry of Materials, 2010, 22, 1958-1965.	6.7	166
94	A Newly Designed Nb-Doped TiO₂/Al-Doped ZnO Transparent Conducting Oxide Multilayer for Electrochemical Photoenergy Conversion Devices. Journal of Physical Chemistry C, 2010, 114, 13867-13871.	3.1	30
95	Facile Hydrothermal Synthesis of SrNb₂O₆Nanotubes with Rhombic Cross Sections. Crystal Growth and Design, 2010, 10, 2447-2450.	3.0	9
96	Synthesis and Characterization of Nano-Particulate BaTiO₃ for Ceramic/Polymer Composite Capacitor. Journal of Nanoscience and Nanotechnology, 2010, 10, 1361-1366.	0.9	3
97	SrNb2O6 nanotubes with enhanced photocatalytic activity. Journal of Materials Chemistry, 2010, 20, 3979.	6.7	28
98	Al-Doped ZnO Thin Film: A New Transparent Conducting Layer for ZnO Nanowire-Based Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 7185-7189.	3.1	134
99	Structure and dielectric properties of cubic Bi2(Zn1â^•3Ta2â^•3)2O7 thin films. Journal of Applied Physics, 2009, 106, .	2.5	0
100	Enhanced photovoltaic properties of overlayer-coated nanocrystalline TiO2 dye-sensitized solar cells (DSSCs). Journal of Electroceramics, 2009, 23, 422-425.	2.0	32
101	Photoluminescence and electrical properties of epitaxial Alâ€doped ZnO transparent conducting thin films. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2133-2138.	1.8	14
102	Indiumâ^'Tinâ^'Oxide-Based Transparent Conducting Layers for Highly Efficient Photovoltaic Devices. Journal of Physical Chemistry C, 2009, 113, 7443-7447.	3.1	35
103	Synthesis of CdSeâ^'TiO₂ Nanocomposites and Their Applications to TiO₂ Sensitized Solar Cells. Langmuir, 2009, 25, 5348-5351.	3.5	56
104	Functional Multilayered Transparent Conducting Oxide Thin Films for Photovoltaic Devices. Journal of Physical Chemistry C, 2009, 113, 1083-1087.	3.1	60
105	Nb-Doped TiO₂: A New Compact Layer Material for TiO₂ Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2009, 113, 6878-6882.	3.1	210
106	Photophysical, Photoelectrochemical, and Photocatalytic Properties of Novel SnWO₄ Oxide Semiconductors with Narrow Band Gaps. Journal of Physical Chemistry C, 2009, 113, 10647-10653.	3.1	136
107	Effect of Oxygen Partial Pressure During Liquidâ€Phase Sintering on the Dielectric Properties of 0.9MgTiO₃â€“0.1CaTiO₃. Journal of the American Ceramic Society, 2008, 91, 132-138.	3.8	20
108	Synthesis of Cu₂PO₄OH Hierarchical Superstructures with Photocatalytic Activity in Visible Light. Advanced Functional Materials, 2008, 18, 2154-2162.	14.9	141

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109	Effect of Glass Composition on the Dielectric Properties of a Liquidâ€Phaseâ€Sintered MgOâ€Doped BaTiO₃. Journal of the American Ceramic Society, 2008, 91, 2205-2210.	3.8	7
110	Visible-Light-Induced Photocatalytic Activity in FeNbO₄ Nanoparticles. Journal of Physical Chemistry C, 2008, 112, 18393-18398.	3.1	45
111	Defect energy levels in Ta2O5 and nitrogen-doped Ta2O5. Journal of Applied Physics, 2008, 104, .	2.5	33
112	Acid Adsorption on TiO₂ Nanoparticlesâ€"An Electrochemical Properties Study. Journal of Physical Chemistry C, 2008, 112, 8476-8480.	3.1	53
113	Surfactant-Assisted Shape Evolution of Thermally Synthesized TiO₂ Nanocrystals and Their Applications to Efficient Photoelectrodes. Langmuir, 2008, 24, 4316-4319.	3.5	22
114	Seed-layer mediated orientation evolution in dielectric Biâ€"Znâ€"Tiâ€"Nbâ€"O thin films. Applied Physics Letters, 2007, 91, 232903.	3.3	4
115	Preparation of a Nanoporous CaCO3-Coated TiO2 Electrode and Its Application to a Dye-Sensitized Solar Cell. Langmuir, 2007, 23, 11907-11910.	3.5	58
116	Effects of heterojunction on photoelectrocatalytic properties of ZnOâ€"TiO2ZnOâ€"TiO2 films. International Journal of Hydrogen Energy, 2007, 32, 3137-3140.	7.1	61
117	Enhancing photocatalytic activity by using TiO2â€"MgO core-shell-structured nanoparticles. Applied Physics Letters, 2006, 88, 013107.	3.3	29
118	Enhancement of the photoelectric performance of dye-sensitized solar cells by using a CaCO3-coated TiO2 nanoparticle film as an electrode. Solar Energy Materials and Solar Cells, 2006, 90, 2405-2412.	6.2	43
119	Preparation of Nanoporous MgO-Coated TiO2Nanoparticles and Their Application to the Electrode of Dye-Sensitized Solar Cells. Langmuir, 2005, 21, 10332-10335.	3.5	191
120	Correlation between dispersion properties of TiO2 colloidal sols and photoelectric characteristics of TiO2 films. Journal of Colloid and Interface Science, 2004, 279, 479-483.	9.4	10