Hyun Suk Jung

List of Publications by Citations

213 papers	9,740 citations	51 h-index	92 g-index
224 ext. papers	11,309 ext. citations	8.9 avg, IF	6.7 L-index

#	Paper	IF	Citations
213	Perovskite solar cells: from materials to devices. *Small*, **2015**, 11, 10-25	11	967
212	High-Efficiency Perovskite Solar Cells. *Chemical Reviews*, **2020**, 120, 7867-7918	68.1	587
211	Highly efficient and bending durable perovskite solar cells: toward a wearable power source. *Energy and Environmental Science*, **2015**, 8, 916-921	35.4	518
210	Superflexible, high-efficiency perovskite solar cells utilizing graphene electrodes: towards future foldable power sources. *Energy and Environmental Science*, **2017**, 10, 337-345	35.4	307
209	An ultra-thin, un-doped NiO hole transporting layer of highly efficient (16.4%) organic-inorganic hybrid perovskite solar cells. *Nanoscale*, **2016**, 8, 11403-12	7.7	242
208	Organolead Halide Perovskites for Low Operating Voltage Multilevel Resistive Switching. *Advanced Materials*, **2016**, 28, 6562-7	24	219
207	Nb-Doped TiO2: A New Compact Layer Material for TiO2 Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2009**, 113, 6878-6882	3.8	197
206	Preparation of nanoporous MgO-coated TiO2 nanoparticles and their application to the electrode of dye-sensitized solar cells. *Langmuir*, **2005**, 21, 10332-5	4	181
205	Ferroelectric Polarization in CH3NH3PbI3 Perovskite. *Journal of Physical Chemistry Letters*, **2015**, 6, 1729[illegible]	6.5	165
204	Reduced Graphene Oxide/Mesoporous TiO2 Nanocomposite Based Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2015**, 7, 23521-6	9.5	153
203	Two-Step Sol[illegible]el Method-Based TiO2 Nanoparticles with Uniform Morphology and Size for Efficient Photo-Energy Conversion Devices. *Chemistry of Materials*, **2010**, 22, 1958-1965	9.6	153
202	Flexible Perovskite Solar Cells. *Joule*, **2019**, 3, 1850-1880	27.8	146
201	Retarding charge recombination in perovskite solar cells using ultrathin MgO-coated TiO2 nanoparticulate films. *Journal of Materials Chemistry A*, **2015**, 3, 9160-9164	13	142
200	Dye Sensitized Solar Cells for Economically Viable Photovoltaic Systems. *Journal of Physical Chemistry Letters*, **2013**, 4, 1682-93	6.4	137
199	Controlling the surface nanostructure of ZnO and Al-doped ZnO thin films using electrostatic spraying for their application in 12% efficient perovskite solar cells. *Nanoscale*, **2014**, 6, 9127-38	7.7	136
198	Niobium Doping Effects on TiO2 Mesoscopic Electron Transport Layer-Based Perovskite Solar Cells. *ChemSusChem*, **2015**, 8, 2392-8	8.3	123
197	Synthesis of Cu2PO4OH Hierarchical Superstructures with Photocatalytic Activity in Visible Light. *Advanced Functional Materials*, **2008**, 18, 2154-2162	15.6	123

196	BiVO/WO/SnO Double-Heterojunction Photoanode with Enhanced Charge Separation and Visible-Transparency for Bias-Free Solar Water-Splitting with a Perovskite Solar Cell. *ACS Applied Materials & Interfaces*, **2017**, 9, 1479-1487	9.5	121
195	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	3.8	119
194	Passivation in perovskite solar cells: A review. *Materials Today Energy*, **2018**, 7, 267-286	7	111
193	Control of osteogenic differentiation and mineralization of human mesenchymal stem cells on composite nanofibers containing poly[lactic-co-(glycolic acid)] and hydroxyapatite. *Macromolecular Bioscience*, **2010**, 10, 173-82	5.5	95
192	Selective dissolution of halide perovskites as a step towards recycling solar cells. *Nature Communications*, **2016**, 7, 11735	17.4	92
191	Antisolvent with an Ultrawide Processing Window for the One-Step Fabrication of Efficient and Large-Area Perovskite Solar Cells. *Advanced Materials*, **2018**, 30, e1802763	24	91
190	Surface-Plasmon Assisted Energy Conversion in Dye-Sensitized Solar Cells. *Advanced Energy Materials*, **2011**, 1, 415-421	21.8	85
189	Effect of bidentate and tridentate additives on the photovoltaic performance and stability of perovskite solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 4977-4987	13	83
188	Fully solution-processed transparent electrodes based on silver nanowire composites for perovskite solar cells. *Nanoscale*, **2016**, 8, 6308-16	7.7	82
187	Crystallographically preferred oriented TiO2 nanotube arrays for efficient photovoltaic energy conversion. *Energy and Environmental Science*, **2012**, 5, 7989	35.4	82
186	Improved carriers injection capacity in perovskite solar cells by introducing A-site interstitial defects. *Journal of Materials Chemistry A*, **2017**, 5, 7905-7911	13	80
185	Observation of Enhanced Hole Extraction in Br Concentration Gradient Perovskite Materials. *Nano Letters*, **2016**, 16, 5756-63	11.5	80
184	Ultra-flexible perovskite solar cells with crumpling durability: toward a wearable power source. *Energy and Environmental Science*, **2019**, 12, 3182-3191	35.4	78
183	CaSnO3: An Electrocatalyst for Two-Electron Water Oxidation Reaction to Form H2O2. *ACS Energy Letters*, **2019**, 4, 352-357	20.1	77
182	Selective and Efficient Gd-Doped BiVO4 Photoanode for Two-Electron Water Oxidation to H2O2. *ACS Energy Letters*, **2019**, 4, 720-728	20.1	76
181	Influence of anatase-rutile phase transformation on dielectric properties of sol-gel derived TiO2 thin films. *Journal of Electroceramics*, **2006**, 16, 447-451	1.5	76
180	A simple self-assembly route to single crystalline SnO2 nanorod growth by oriented attachment for dye sensitized solar cells. *Nanoscale*, **2013**, 5, 1188-94	7.7	71
179	In situ observation of hydroxyapatite nanocrystal formation from amorphous calcium phosphate in calcium-rich solutions. *Materials Chemistry and Physics*, **2005**, 91, 500-506	4.4	71

178	A Quasi-Inverse Opal Layer Based on Highly Crystalline TiO2 Nanoparticles: A New Light-Scattering Layer in Dye-Sensitized Solar Cells. *Advanced Energy Materials*, **2011**, 1, 546-550	21.8	69
177	New Hybrid Hole Extraction Layer of Perovskite Solar Cells with a Planar p-i-n Geometry. *Journal of Physical Chemistry C*, **2015**, 119, 27285-27290	3.8	68
176	Origin of Hysteresis in CH3NH3PbI3 Perovskite Thin Films. *Advanced Functional Materials*, **2017**, 27, 1701924	15.6	66
175	BaSnO3 perovskite nanoparticles for high efficiency dye-sensitized solar cells. *ChemSusChem*, **2013**, 6, 449-54	8.3	63
174	Electronic band structures and photovoltaic properties of MWO4 (M=Zn, Mg, Ca, Sr) compounds. *Journal of Solid State Chemistry*, **2011**, 184, 2103-2107	3.3	62
173	Synthesis and photovoltaic property of fine and uniform Zn2SnO4 nanoparticles. *Nanoscale*, **2012**, 4, 557-62	7.7	60
172	Nanoscale size effect of titania (anatase) nanotubes with uniform wall thickness as high performance anode for lithium-ion secondary battery. *Journal of Power Sources*, **2012**, 204, 162-167	8.9	57
171	Crystallization behaviors of nanosized MgO particles from magnesium alkoxides. *Journal of Colloid and Interface Science*, **2003**, 259, 127-32	9.3	57
170	Functional Multilayered Transparent Conducting Oxide Thin Films for Photovoltaic Devices. *Journal of Physical Chemistry C*, **2009**, 113, 1083-1087	3.8	56
169	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	4.7	56
168	Preparation of a nanoporous CaCO3-coated TiO2 electrode and its application to a dye-sensitized solar cell. *Langmuir*, **2007**, 23, 11907-10	4	56
167	In situ observation of the stability of anatase nanoparticles and their transformation to rutile in an acidic solution. *Langmuir*, **2004**, 20, 11732-7	4	56
166	Long-term stable stacked CsPbBr quantum dot films for highly efficient white light generation in LEDs. *Nanoscale*, **2016**, 8, 19523-19526	7.7	54
165	Acid Adsorption on TiO2 Nanoparticles: An Electrochemical Properties Study. *Journal of Physical Chemistry C*, **2008**, 112, 8476-8480	3.8	53
164	Crystal phase evolution of TiO2 nanoparticles with reaction time in acidic solutions studied via freeze-drying method. *Journal of Solid State Chemistry*, **2005**, 178, 15-21	3.3	53
163	Efficient Carrier Separation and Intriguing Switching of Bound Charges in Inorganic-Organic Lead Halide Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 2355-62	6.4	52
162	Nanowire-Based Three-Dimensional Transparent Conducting Oxide Electrodes for Extremely Fast Charge Collection. *Advanced Energy Materials*, **2011**, 1, 829-835	21.8	48
161	Phase evolution and dielectric properties of MgTi2O5 ceramic sintered with lithium borosilicate glass. *Materials Research Bulletin*, **2005**, 40, 2021-2028	5.1	47

160	Recent progressive efforts in perovskite solar cells toward commercialization. *Journal of Materials Chemistry A*, **2018**, 6, 12215-12236	13	47
159	Epitaxial 1D electron transport layers for high-performance perovskite solar cells. *Nanoscale*, **2015**, 7, 15284-90	7.7	44
158	A Zn:BiVO4/Mo:BiVO4 homojunction as an efficient photoanode for photoelectrochemical water splitting. *Journal of Materials Chemistry A*, **2019**, 7, 9019-9024	13	43
157	Anatase TiO2 nanorod-decoration for highly efficient photoenergy conversion. *Nanoscale*, **2013**, 5, 11725-32	7.7	43
156	Origin of low photocatalytic activity of rutile TiO2. *Electronic Materials Letters*, **2009**, 5, 73-76	2.9	41
155	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	6.4	41
154	Simple large-scale synthesis of hydroxyapatite nanoparticles: in situ observation of crystallization process. *Langmuir*, **2010**, 26, 384-8	4	40
153	Sustainable lead management in halide perovskite solar cells. *Nature Sustainability*, **2020**, 3, 1044-1051	22.1	40
152	Visible-Light-Induced Photocatalytic Activity in FeNbO4 Nanoparticles. *Journal of Physical Chemistry C*, **2008**, 112, 18393-18398	3.8	38
151	Effect of TiO2 particle size and layer thickness on mesoscopic perovskite solar cells. *Applied Surface Science*, **2019**, 477, 131-136	6.7	38
150	Photophysical and Photocatalytic Properties of Ag2M2O7 (M=Mo, W). *Journal of the American Ceramic Society*, **2010**, 93, 3867-3872	3.8	37
149	A Simple Method To Control Morphology of Hydroxyapatite Nano- and Microcrystals by Altering Phase Transition Route. *Crystal Growth and Design*, **2013**, 13, 3414-3418	3.5	36
148	Low-temperature sintering and microwave dielectric properties of Ba5Nb4O15 with ZnB2O4 glass. *Journal of the European Ceramic Society*, **2006**, 26, 2105-2109	6	35
147	Spin-Coating Process for 10 cm □ 10 cm Perovskite Solar Modules Enabled by Self-Assembly of SnO2 Nanocolloids. *ACS Energy Letters*, **2019**, 4, 1845-1851	20.1	34
146	Rapid Flame-Annealed CuFe2O4 as Efficient Photocathode for Photoelectrochemical Hydrogen Production. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 5867-5874	8.3	34
145	Facile fabrication of three-dimensional TiO 2 structures for highly efficient perovskite solar cells. *Nano Energy*, **2016**, 22, 499-506	17.1	34
144	Aspartic Acid-Assisted Synthesis of Multifunctional Strontium-Substituted Hydroxyapatite Microspheres. *Crystal Growth and Design*, **2016**, 16, 4318-4326	3.5	34
143	Electro-spray deposition of a mesoporous TiO2 charge collection layer: toward large scale and continuous production of high efficiency perovskite solar cells. *Nanoscale*, **2015**, 7, 20725-33	7.7	33

142	Indium Tin Oxide-Based Transparent Conducting Layers for Highly Efficient Photovoltaic Devices. *Journal of Physical Chemistry C*, **2009**, 113, 7443-7447	3.8	33
141	Influence of Ca/P ratios of starting solutions on the crystallization of amorphous calcium phosphate to hydroxyapatite. *Metals and Materials International*, **2004**, 10, 171-175	2.4	33
140	Design of long-term stable red-emitting CsPb(Br0.4, I0.6)3 perovskite quantum dot film for generation of warm white light. *Chemical Engineering Journal*, **2017**, 313, 461-465	14.7	32
139	Tailored 2D/3D Halide Perovskite Heterointerface for Substantially Enhanced Endurance in Conducting Bridge Resistive Switching Memory. *ACS Applied Materials & Interfaces*, **2020**, 12, 17039-17045	9.5	31
138	Influence of Anatase Rutile Phase Transformation on Dielectric Properties of Sol Gel Derived TiO2Thin Films. *Japanese Journal of Applied Physics*, **2005**, 44, 6148-6151	1.4	31
137	Indium Tin Oxide Nanowire Array Based CdSe/CdS/TiO2 One-Dimensional Heterojunction Photoelectrode for Enhanced Solar Hydrogen Production. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 1161-1168	8.3	30
136	Chlorine-modified SnO2 electron transport layer for high-efficiency perovskite solar cells. *InformaMaterly*, **2020**, 2, 401-408	23.1	30
135	Fabrication of in vitro 3D mineralized tissue by fusion of composite spheroids incorporating biomineral-coated nanofibers and human adipose-derived stem cells. *Acta Biomaterialia*, **2018**, 74, 464-477	10.8	30
134	3-D TiO2 nanoparticle/ITO nanowire nanocomposite antenna for efficient charge collection in solid state dye-sensitized solar cells. *Nanoscale*, **2014**, 6, 6127-32	7.7	29
133	Enhanced photovoltaic properties of overlayer-coated nanocrystalline TiO2 dye-sensitized solar cells (DSSCs). *Journal of Electroceramics*, **2009**, 23, 422-425	1.5	29
132	Chemical Bath Deposition of Co-Doped TiO2 Electron Transport Layer for Hysteresis-Suppressed High-Efficiency Planar Perovskite Solar Cells. *Solar Rrl*, **2019**, 3, 1900176	7.1	28
131	Insulated Interlayer for Efficient and Photostable Electron-Transport-Layer-Free Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 10132-10140	9.5	28
130	Aligned Photoelectrodes with Large Surface Area Prepared by Pulsed Laser Deposition. *Journal of Physical Chemistry C*, **2012**, 116, 8102-8110	3.8	28
129	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	3.8	28
128	Efficient and stable green-emitting CsPbBr3 perovskite nanocrystals in a microcapsule for light emitting diodes. *Chemical Engineering Journal*, **2018**, 352, 957-963	14.7	28
127	Functionalization of nanomaterials by non-thermal large area atmospheric pressure plasmas: application to flexible dye-sensitized solar cells. *Nanoscale*, **2013**, 5, 7825-30	7.7	27
126	Reversible change in electrical and optical properties in epitaxially grown Al-doped ZnO thin films. *Journal of Applied Physics*, **2008**, 104, 073706	2.5	27
125	Microwave dielectric properties of nanocrystalline TiO2 prepared using spark plasma sintering. *Journal of the European Ceramic Society*, **2007**, 27, 2937-2940	6	27

124	Ion-induced secondary electron emission behavior of sol□gel-derived MgO thin films used for protective layers in alternating current plasma display panels. *Journal of Applied Physics*, **2002**, 92, 2855-2860	2.5	27
123	The novel design of a remote phosphor ceramic plate for white light generation in high power LEDs. *Journal of Materials Chemistry C*, **2015**, 3, 6148-6152	7.1	26
122	Confined crystallization of anatase TiO2 nanotubes and their implications on transport properties. *Journal of Materials Chemistry A*, **2013**, 1, 14080	13	26
121	SrNb2O6 nanotubes with enhanced photocatalytic activity. *Journal of Materials Chemistry*, **2010**, 20, 3979		26
120	Roles of MgO Coating Layer on Mesoporous TiO2/ITO Electrode in a Photoelectrochemical Cell for Water Splitting. *Journal of Physical Chemistry C*, **2008**, 112, 9937-9942	3.8	26
119	Enhancing photocatalytic activity by using TiO2□MgO core-shell-structured nanoparticles. *Applied Physics Letters*, **2006**, 88, 013107	3.4	26
118	Electrical behavior of laser-sintered Cu based metal-organic decomposition ink in air environment and application as current collectors in supercapacitor. *International Journal of Precision Engineering and Manufacturing - Green Technology*, **2015**, 2, 333-337	3.8	25
117	Simultaneous Ligand Exchange Fabrication of Flexible Perovskite Solar Cells using Newly Synthesized Uniform Tin Oxide Quantum Dots. *Journal of Physical Chemistry Letters*, **2018**, 9, 5460-5467	6.4	25
116	Mobility enhanced photoactivity in sol-gel grown epitaxial anatase TiO2 films. *Langmuir*, **2008**, 24, 2695-8	4	24
115	Interface Design of Hybrid Electron Extraction Layer for Relieving Hysteresis and Retarding Charge Recombination in Perovskite Solar Cells. *Advanced Materials Interfaces*, **2018**, 5, 1800993	4.6	23
114	Tin doped indium oxide core□TiO2 shell nanowires on stainless steel mesh for flexible photoelectrochemical cells. *Applied Physics Letters*, **2012**, 100, 084104	3.4	23
113	Nanodome Structured BiVO4/GaOxN1□ Photoanode for Solar Water Oxidation. *Advanced Materials Interfaces*, **2017**, 4, 1700323	4.6	22
112	Investigation of useful or deleterious residual thermal stress component to the capacitance of a multilayer ceramic capacitor. *Microelectronic Engineering*, **2005**, 77, 270-276	2.5	22
111	Screening effect on photovoltaic performance in ferroelectric CH3NH3PbI3 perovskite thin films. *Journal of Materials Chemistry A*, **2015**, 3, 20352-20358	13	21
110	Polyethylenimine-assisted growth of high-aspect-ratio nitrogen-doped ZnO (NZO) nanorod arrays and their effect on performance of dye-sensitized solar cells. *ACS Applied Materials & Interfaces*, **2014**, 6, 10028-43	9.5	21
109	Surfactant-assisted shape evolution of thermally synthesized TiO2 nanocrystals and their applications to efficient photoelectrodes. *Langmuir*, **2008**, 24, 4316-9	4	21
108	Residual stress evolution in multilayer ceramic capacitors corresponding to layer increase and its correlation to the dielectric constant. *Journal of Applied Physics*, **2005**, 97, 094504	2.5	21
107	Trapping charges at grain boundaries and degradation of CHNHPb(I Br) perovskite solar cells. *Nanotechnology*, **2017**, 28, 315402	3.4	20

106	Effects of Acetic Acid on the Crystallization Temperature of Sol□Gel-Derived MgO Nano-Powders and Thin Films. *Journal of the American Ceramic Society*, **2005**, 88, 784-787	3.8	20
105	Conducting Bridge Resistive Switching Behaviors in Cubic MAPbI3, Orthorhombic RbPbI3, and Their Mixtures. *Advanced Electronic Materials*, **2019**, 5, 1800586	6.4	20
104	Formamidine disulfide oxidant as a localised electron scavenger for >20% perovskite solar cell modules. *Energy and Environmental Science*, **2021**, 14, 4903-4914	35.4	20
103	Graded functionalization of biomaterial surfaces using mussel-inspired adhesive coating of polydopamine. *Colloids and Surfaces B: Biointerfaces*, **2017**, 159, 546-556	6	19
102	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	1.6	19
101	Voltage-Tunable Dielectric Properties of Pyrochlore Bi□ZnNbTiO Solid-Solution Thin Films. *Japanese Journal of Applied Physics*, **2005**, 44, 6648-6653	1.4	19
100	Stable and Efficient Methylammonium-, Cesium-, and Bromide-Free Perovskite Solar Cells by In-Situ Interlayer Formation. *Advanced Functional Materials*, **2021**, 31, 2007520	15.6	19
99	Dual function of a high-contrast hydrophobic□hydrophilic coating for enhanced stability of perovskite solar cells in extremely humid environments. *Nano Research*, **2017**, 10, 3885-3895	10	18
98	Study on the enhanced and stable field emission behavior of a novel electrosprayed Al-doped ZnO bilayer film. *RSC Advances*, **2014**, 4, 9072	3.7	18
97	Role of strain in the blistering of hydrogen-implanted silicon. *Applied Physics Letters*, **2006**, 89, 101901	3.4	18
96	Ultrarapid and ultrasensitive electrical detection of proteins in a three-dimensional biosensor with high capture efficiency. *Nanoscale*, **2015**, 7, 9844-51	7.7	17
95	Measurement of Quantum Yields of Monolayer TMDs Using Dye-Dispersed PMMA Thin Films. *Nanomaterials*, **2020**, 10,	5.4	17
94	Revisiting Effects of Ligand-Capped Nanocrystals in Perovskite Solar Cells. *ACS Energy Letters*, **2020** , 5, 1032-1034	20.1	16
93	Synthesis of Titanium Carbide Nanoparticles with a High Specific Surface Area from a TiO2 Core□Sucrose Shell Precursor. *Journal of the American Ceramic Society*, **2009**, 92, 2512-2516	3.8	16
92	Effects of defects generated in ALD TiO2 films on electrical properties and interfacial reaction in TiO2/SiO2/Si system upon annealing in vacuum. *Metals and Materials International*, **2008**, 14, 759-765	2.4	16
91	Synthesis of nano-sized MgO particle and thin film from diethanolamine-stabilized magnesium-methoxide. *Journal of Solid State Chemistry*, **2003**, 175, 278-283	3.3	16
90	Effective passivation of Ag nanowire-based flexible transparent conducting electrode by TiO nanoshell. *Nano Convergence*, **2016**, 3, 20	9.2	16
89	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	6.7	16

88	High Efficiency Perovskite Solar Cells Exceeding 22% via a Photo-Assisted Two-Step Sequential Deposition. *Advanced Functional Materials*, **2021**, 31, 2006718	15.6	16
87	Green-emitting Lu3Al5O12:Ce3+ phosphor as a visible light amplifier for dye-sensitized solar cells. *RSC Advances*, **2015**, 5, 24737-24741	3.7	15
86	Understanding the role of the dye/oxide interface via SnO2-based MK-2 dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2015**, 17, 15193-200	3.6	15
85	Aminosilane monolayer-assisted patterning of conductive poly(3,4-ethylenedioxythiophene) source/drain electrodes for bottom contact pentacene thin film transistors. *Organic Electronics*, **2010**, 11, 338-343	3.5	15
84	Degradation of CH3NH3PbI3 perovskite materials by localized charges and its polarity dependency. *Journal of Materials Chemistry A*, **2019**, 7, 12075-12085	13	14
83	Single-Solution Bar-Coated Halide Perovskite Films via Mediating Crystallization for Scalable Solar Cell Fabrication. *ACS Applied Materials & Interfaces*, **2019**, 11, 11537-11544	9.5	14
82	Cerium-doped yttrium aluminum garnet hollow shell phosphors synthesized via the Kirkendall effect. *ACS Applied Materials & Interfaces*, **2014**, 6, 1145-51	9.5	14
81	Photoluminescence and electrical properties of epitaxial Al-doped ZnO transparent conducting thin films. *Physica Status Solidi (A) Applications and Materials Science*, **2009**, 206, 2133-2138	1.6	14
80	Correlation of anatase particle size with photocatalytic properties. *Physica Status Solidi (A) Applications and Materials Science*, **2010**, 207, 2288-2291	1.6	14
79	Highly Efficient Photo-Induced Charge Separation Enabled by Metal-Chalcogenide Interfaces in Quantum-Dot/Metal-Oxide Hybrid Phototransistors. *ACS Applied Materials & Interfaces*, **2020**, 12, 16620-16629	9.5	13
78	In2O3:Sn/TiO2/CdS heterojunction nanowire array photoanode in photoelectrochemical cells. *International Journal of Hydrogen Energy*, **2014**, 39, 17473-17480	6.7	13
77	Role of lithium borosilicate glass in the decomposition of MgTiO3-based dielectric ceramic during sintering. *Materials Research Bulletin*, **2006**, 41, 1206-1214	5.1	13
76	Direct Observation of Hydroxyapatite Nucleation from Amorphous Phase in a Stoichiometric Calcium/Phosphate Aqueous Solution. *Chemistry Letters*, **2004**, 33, 1292-1293	1.7	13
75	Advanced Characterization Techniques for Overcoming Challenges of Perovskite Solar Cell Materials. *Advanced Energy Materials*, **2021**, 11, 2001753	21.8	13
74	Direct Low-Temperature Growth of Single-Crystalline Anatase TiO2 Nanorod Arrays on Transparent Conducting Oxide Substrates for Use in PbS Quantum-Dot Solar Cells. *ACS Applied Materials & Interfaces*, **2015**, 7, 10324-30	9.5	12
73	Observation of anatase nanograins crystallizing from anodic amorphous TiO2 nanotubes. *CrystEngComm*, **2015**, 17, 7346-7353	3.3	12
72	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	3.9	12
71	Design of water stable green-emitting CH3NH3PbBr3 perovskite luminescence materials with encapsulation for applications in optoelectronic device. *Chemical Engineering Journal*, **2016**, 306, 791-795	14.7	12

70	Size and shape control of monoclinic vanadium dioxide thermochromic particles for smart window applications. *Ceramics International*, **2019**, 45, 4123-4127	5.1	12
69	Dynamic structural property of organic-inorganic metal halide perovskite. *IScience*, **2021**, 24, 101959	6.1	12
68	Design of a thermally stable rGO-embedded remote phosphor for applications in white LEDs. *Journal of Materials Chemistry C*, **2015**, 3, 235-238	7.1	11
67	Fabrication of a Stable New Polymorph Gold Nanowire with Sixfold Rotational Symmetry. *Advanced Materials*, **2018**, 30, e1706261	24	11
66	Mesoporous TiO2 nanowires as bi-functional materials for dye-sensitized solar cells. *Electrochimica Acta*, **2012**, 74, 83-86	6.7	11
65	Low Temperature Synthesis of Rutile TiO2 Nanocrystals and Their Photovoltaic and Photocatalytic Properties. *Journal of Nanoscience and Nanotechnology*, **2015**, 15, 4516-21	1.3	11
64	TiO2 nanocrystals shell layer on highly conducting indium tin oxide nanowire for photovoltaic devices. *Nanoscale*, **2013**, 5, 3520-6	7.7	11
63	Enhancing the Densification of Nanocrystalline TiO2 by Reduction in Spark Plasma Sintering. *Journal of the American Ceramic Society*, **2010**, 93, 993-997	3.8	11
62	Strain Relaxation in Sol□el Grown Epitaxial Anatase Thin Films. *Journal of Physical Chemistry C*, **2008**, 112, 4205-4208	3.8	11
61	Enhanced stability of guanidinium-based organic-inorganic hybrid lead triiodides in resistance switching. *APL Materials*, **2019**, 7, 081107	5.7	10
60	ITO and electron transport layer-free planar perovskite solar cells on transparent Nb-doped anatase TiO2-x electrodes. *Journal of Alloys and Compounds*, **2020**, 845, 155531	5.7	10
59	Preparation and luminescence characteristics of single-phase rod-like BaSi2O2N2:Eu2+ phosphor with new synthetic route for white light generation. *Materials Letters*, **2014**, 129, 178-181	3.3	10
58	Osteoinductive superparamagnetic Fe nanocrystal/calcium phosphate heterostructured microspheres. *Nanoscale*, **2017**, 9, 19145-19153	7.7	10
57	A Hierarchically Organized Photoelectrode Architecture for Highly Efficient CdS/CdSe-Sensitized Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1300395	21.8	10
56	Role of submicron residual fillers in improving optical reflectance of barrier rib glasses for plasma display panels. *Journal of Materials Research*, **2006**, 21, 1753-1758	2.5	10
55	Effect of Metal Electrodes on Aging-Induced Performance Recovery in Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 48497-48504	9.5	10
54	Synthesis and adsorption properties of gelatin-conjugated hematite (⊞FeO) nanoparticles for lead removal from wastewater. *Journal of Hazardous Materials*, **2021**, 416, 125696	12.8	10
53	Photo-annealed amorphous titanium oxide for perovskite solar cells. *Nanoscale*, **2019**, 11, 19488-19496	7.7	9

52	Facile Hydrothermal Synthesis of SrNb2O6 Nanotubes with Rhombic Cross Sections. *Crystal Growth and Design*, **2010**, 10, 2447-2450	3.5	9
51	All-in-One Lewis Base for Enhanced Precursor and Device Stability in Highly Efficient Perovskite Solar Cells. *ACS Energy Letters*,3425-3434	20.1	9
50	Effect of margin widths on the residual stress in a multi-layer ceramic capacitor. *Microelectronic Engineering*, **2006**, 83, 2558-2563	2.5	8
49	Physical origin of residual thermal stresses in a multilayer ceramic capacitor. *Journal of Applied Physics*, **2007**, 101, 063527	2.5	8
48	Dielectric properties of nanocrystalline TiO2 prepared using spark plasma sintering. *Journal of Electroceramics*, **2006**, 17, 913-917	1.5	8
47	Correlation between dispersion properties of TiO2 colloidal sols and photoelectric characteristics of TiO2 films. *Journal of Colloid and Interface Science*, **2004**, 279, 479-83	9.3	8
46	A highly efficient and stable green-emitting mesoporous silica (MP)@(Cs0.4Rb0.6)PbBr3 perovskite composite for application in optoelectronic devices. *New Journal of Chemistry*, **2017**, 41, 14076-14079	3.6	7
45	Point defect-reduced colloidal SnO electron transport layers for stable and almost hysteresis-free perovskite solar cells.. *RSC Advances*, **2019**, 9, 7334-7337	3.7	7
44	Improved spectral response of sensitized photoelectrodes with the optical modulation layer. *Electrochemistry Communications*, **2012**, 15, 29-33	5.1	7
43	Effect of Glass Composition on the Dielectric Properties of a Liquid-Phase-Sintered MgO-Doped BaTiO3. *Journal of the American Ceramic Society*, **2008**, 91, 2205-2210	3.8	7
42	Epitaxial Anatase TiO2Nanorods Array with Reduced Interfacial Charge Recombination for Solar Water Splitting. *Journal of the Electrochemical Society*, **2016**, 163, H469-H473	3.9	7
41	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	3.3	6
40	High-Efficiency Flexible Perovskite Solar Cells Enabled by an Ultrafast Room-Temperature Reactive Ion Etching Process. *ACS Applied Materials & Interfaces*, **2020**, 12, 7125-7134	9.5	6
39	Sintering and Dielectric Properties of Li2O–B2O3–Al2O3–SiO2 Glass-Added (Ca0.7Sr0.3O)1.03(Ti0.1Zr0.9)O2 for Copper Electrode. *International Journal of Applied Ceramic Technology*, **2013**, 10, 716-722	2	6
38	Electrochemically controlled CdS@CdSe nanoparticles on ITO@TiO2 dual core–shell nanowires for enhanced photoelectrochemical hydrogen production. *Applied Surface Science*, **2020**, 505, 144569	6.7	6
37	Tailoring of Ligand-Off Nanoparticles Inks for Thin p-Type Oxide Overlayers Formation with Maintaining Intact Halide Perovskite. *Advanced Functional Materials*, **2021**, 31, 2100863	15.6	6
36	Enhanced stabilisation of tetragonal (t)-ZrO2 in the controlled nanotubular geometry. *RSC Advances*, **2015**, 5, 80472-80479	3.7	5
35	Transparent-conducting-oxide nanowire arrays for efficient photoelectrochemical energy conversion. *Nanoscale*, **2014**, 6, 8649-55	7.7	5

34	Electrical and optical properties of epitaxial and polycrystalline undoped and Al-doped ZnO thin films grown by pulsed laser deposition. *Journal of Electroceramics*, **2009**, 23, 497-501	1.5	5
33	Dielectric properties of ZnNb2 O 6 -TiO 2 mixture thin films. *Journal of Electroceramics*, **2006**, 17, 179-183	1.5	5
32	Sustainable Green Process for Environmentally Viable Perovskite Solar Cells. *ACS Energy Letters*, **2022**, 7, 1154-1177	20.1	5
31	Defect Healing in FAPb(I 1- x Br x) 3 Perovskites: Multifunctional Fluorinated Sulfonate Surfactant Anchoring Enables >21% Modules with Improved Operation Stability. *Advanced Energy Materials*,2200632	27.8	5
30	Sintering Behavior of Copper Nanoparticle Ink by Laser in Air. *Journal of Nanoscience and Nanotechnology*, **2019**, 19, 1261-1268	1.3	4
29	Design of orange-emitting CsPb0.77Mn0.23Cl3 perovskite film for application in optoelectronic device. *Chemical Engineering Journal*, **2018**, 331, 803-808	14.7	4
28	A Sharp Focus on Perovskite Solar Cells at Sungkyun International Solar Forum (SISF). *ACS Energy Letters*, **2016**, 1, 500-502	20.1	4
27	Correlation between photoactivity of TiO2 and diffusion of Na+ ions from soda lime glass. *Materials Letters*, **2018**, 228, 351-355	3.3	4
26	Hot Scientific Debate on Halide Perovskites: Fundamentals, Photovoltaics, and Optoelectronics at Eighth Sungkyun International Solar Forum 2019 (SISF 2019). *ACS Energy Letters*, **2019**, 4, 2475-2479	20.1	3
25	Enhanced ferroelectric photovoltaic effect in semiconducting single-wall carbon nanotube/BiFeO3 heterostructures enabled by wide-range light absorption and efficient charge separation. *Journal of Materials Chemistry A*, **2020**, 8, 10377-10385	13	3
24	Synthesis of carbon-incorporated titanium oxide nanocrystals by pulsed solution plasma: electrical, optical investigation and nanocrystals analysis. *RSC Advances*, **2015**, 5, 9497-9502	3.7	3
23	Seed-layer mediated orientation evolution in dielectric Bi□nTiNbO thin films. *Applied Physics Letters*, **2007**, 91, 232903	3.4	3
22	Oxide Passivation of Halide Perovskite Resistive Memory Device: A Strategy for Overcoming Endurance Problem. *ACS Applied Materials & Interfaces*, **2021**, 13, 44577-44584	9.5	3
21	Ion-irradiation enhanced epitaxial growth of sol□el TiO2 films. *Applied Physics A: Materials Science and Processing*, **2011**, 103, 179-184	2.6	2
20	Role of Liquid Phase in Achieving a Fine Microstructure and Diffusive Phase Transition of MgO-Doped BaTiO3. *International Journal of Applied Ceramic Technology*, **2009**, 6, 679-686	2	2
19	Influence of strain on the dielectric properties of Bi□nTiNbO solid solution thin films. *Journal of the European Ceramic Society*, **2006**, 26, 2161-2164	6	2
18	Recent cutting-edge strategies for flexible perovskite solar cells toward commercialization. *Chemical Communications*, **2021**, 57, 11604-11612	5.8	2
17	Natural bone-mimicking nanopore-incorporated hydroxyapatite scaffolds for enhanced bone tissue regeneration.. *Biomaterials Research*, **2022**, 26, 7	16.8	2

16	Enthusiastic Discussions on Halide Perovskite Materials beyond Photovoltaics at Sungkyun International Solar Forum 2017 (SISF2017). *ACS Energy Letters*, **2018**, 3, 199-203	20.1	1
15	Calcined MnO2–ZrO2–SiO2 sintering aid for a non-reducible (Ca0.7Sr0.3O)1.03(Ti0.1Zr0.9)O2 dielectric material. *Ceramics International*, **2015**, 41, 3910-3917	5.1	1
14	Influence of annealing atmosphere on the electrical conductivity of copper nanoparticle films. *Electronic Materials Letters*, **2016**, 12, 338-342	2.9	1
13	Flexible Perovskite Solar Cell **2016**, 325-341		1
12	Safety and efficacy of tacrolimus-coated silicone plates as an alternative to mitomycin C in a rabbit model of conjunctival fibrosis. *PLoS ONE*, **2019**, 14, e0219194	3.7	0
11	Direct patterning of metal oxides by hard templates and atomic layer deposition. *International Journal of Nanotechnology*, **2013**, 10, 692	1.5	0
10	Room-Temperature-Grown Amorphous Indium-Tin-Silicon-Oxide Thin Film as a New Electron Transporting Layer for Perovskite Solar Cells. *Applied Surface Science*, **2021**, 151570	6.7	0
9	Effect of phosphate ions on the formation of iron oxide/hydroxide as a stabilizer. *Journal of Solid State Chemistry*, **2022**, 305, 122688	3.3	0
8	Ultimate Charge Extraction of Monolayer PbS Quantum Dot for Observation of Multiple Exciton Generation. *ChemPhysChem*, **2019**, 20, 2657-2661	3.2	
7	3D Transparent Conducting Oxides: Nanowire-Based Three-Dimensional Transparent Conducting Oxide Electrodes for Extremely Fast Charge Collection (Adv. Energy Mater. 5/2011). *Advanced Energy Materials*, **2011**, 1, 702-702	21.8	
6	Structure and dielectric properties of cubic Bi2(Zn1/3Ta2/3)2O7 thin films. *Journal of Applied Physics* , **2009**, 106, 084103	2.5	
5	Ferroelectric Properties of Highly (111) Oriented Pb(Zr0.4Ti0.6)O3 Thin Films Fabricated Using Sol-Gel Process. *Integrated Ferroelectrics*, **2004**, 67, 181-190	0.8	
4	Effects of defects generated in ALD TiO2 films on electrical properties and interfacial reaction in TiO2/SiO2/Si system upon annealing in vacuum. *Metals and Materials International*, **2008**, 14, 759-765	2.4	
3	Halide Perovskites: Tailoring of Ligand-Off Nanoparticles Inks for Thin p-Type Oxide Overlayers Formation with Maintaining Intact Halide Perovskite (Adv. Funct. Mater. 31/2021). *Advanced Functional Materials*, **2021**, 31, 2170223	15.6	
2	Defect Healing in FAPb(I 1- x Br x) 3 Perovskites: Multifunctional Fluorinated Sulfonate Surfactant Anchoring Enables >21% Modules with Improved Operation Stability (Adv. Energy Mater. 20/2022). *Advanced Energy Materials*, **2022**, 12, 2270083	21.8	
1	Combinatorial Physical Vapor Deposition : A New Methodology for Exploring Eco-friendly Composition for Halide-based Resistive Switching Memory. *Advanced Materials Interfaces*,2200662	4.6	