

Donghoe Kim

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101
papers

6,726
citations

40
h-index

81
g-index

105
ext. papers

7,895
ext. citations

12.2
avg, IF

5.93
L-index

#	Paper	IF	Citations
101	Scalable fabrication of perovskite solar cells. <i>Nature Reviews Materials</i> , 2018 , 3,	73.3	532
100	Highly efficient and bending durable perovskite solar cells: toward a wearable power source. <i>Energy and Environmental Science</i> , 2015 , 8, 916-921	35.4	518
99	Carrier lifetimes of >1 ns in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. <i>Science</i> , 2019 , 364, 475-479	33.3	496
98	Perovskite ink with wide processing window for scalable high-efficiency solar cells. <i>Nature Energy</i> , 2017 , 2,	62.3	398
97	Facile fabrication of large-grain CH ₃ NH ₃ PbI ₃ -xBr _x films for high-efficiency solar cells via CH ₃ NH ₃ Br-selective Ostwald ripening. <i>Nature Communications</i> , 2016 , 7, 12305	17.4	358
96	Extrinsic ion migration in perovskite solar cells. <i>Energy and Environmental Science</i> , 2017 , 10, 1234-1242	35.4	336
95	Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. <i>Science</i> , 2020 , 368, 155-160	33.3	240
94	Boosting the solar water oxidation performance of a BiVO ₄ photoanode by crystallographic orientation control. <i>Energy and Environmental Science</i> , 2018 , 11, 1299-1306	35.4	227
93	Nb-Doped TiO ₂ : A New Compact Layer Material for TiO ₂ Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 6878-6882	3.8	197
92	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. <i>Journal of the American Chemical Society</i> , 2019 , 141, 5972-5979	16.4	170
91	Two-Step Sol-Gel Method-Based TiO ₂ Nanoparticles with Uniform Morphology and Size for Efficient Photo-Energy Conversion Devices. <i>Chemistry of Materials</i> , 2010 , 22, 1958-1965	9.6	153
90	Retarding charge recombination in perovskite solar cells using ultrathin MgO-coated TiO ₂ nanoparticulate films. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 9160-9164	13	142
89	Do grain boundaries dominate non-radiative recombination in CH ₃ NH ₃ PbI ₃ perovskite thin films?. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 5043-5050	3.6	141
88	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. <i>Joule</i> , 2019 , 3, 1734-1745	27.8	131
87	Niobium Doping Effects on TiO ₂ Mesoscopic Electron Transport Layer-Based Perovskite Solar Cells. <i>ChemSusChem</i> , 2015 , 8, 2392-8	8.3	123
86	Outlook and Challenges of Perovskite Solar Cells toward Terawatt-Scale Photovoltaic Module Technology. <i>Joule</i> , 2018 , 2, 1437-1451	27.8	113
85	Highly Efficient Perovskite Solar Modules by Scalable Fabrication and Interconnection Optimization. <i>ACS Energy Letters</i> , 2018 , 3, 322-328	20.1	111

84	Scalable slot-die coating of high performance perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2018 , 2, 2442-2449	5.8	109
83	300% Enhancement of Carrier Mobility in Uniaxial-Oriented Perovskite Films Formed by Topotactic-Oriented Attachment. <i>Advanced Materials</i> , 2017 , 29, 1606831	24	101
82	Selective dissolution of halide perovskites as a step towards recycling solar cells. <i>Nature Communications</i> , 2016 , 7, 11735	17.4	92
81	Acid Additives Enhancing the Conductivity of Spiro-OMeTAD Toward High-Efficiency and Hysteresis-Less Planar Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2017 , 7, 1601451	21.8	90
80	Insights into operational stability and processing of halide perovskite active layers. <i>Energy and Environmental Science</i> , 2019 , 12, 1341-1348	35.4	89
79	Crystallographically preferred oriented TiO ₂ nanotube arrays for efficient photovoltaic energy conversion. <i>Energy and Environmental Science</i> , 2012 , 5, 7989	35.4	82
78	Zn ₂ SnO ₄ -Based Photoelectrodes for Organolead Halide Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 22991-22994	3.8	76
77	New Hybrid Hole Extraction Layer of Perovskite Solar Cells with a Planar p ⁺ n Geometry. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 27285-27290	3.8	68
76	Highly Efficient and Uniform 1 cm Perovskite Solar Cells with an Electrochemically Deposited NiO Hole-Extraction Layer. <i>ChemSusChem</i> , 2017 , 10, 2660-2667	8.3	67
75	BaSnO ₃ perovskite nanoparticles for high efficiency dye-sensitized solar cells. <i>ChemSusChem</i> , 2013 , 6, 449-54	8.3	63
74	Electronic band structures and photovoltaic properties of MWO ₄ (M=Zn, Mg, Ca, Sr) compounds. <i>Journal of Solid State Chemistry</i> , 2011 , 184, 2103-2107	3.3	62
73	Synthesis and photovoltaic property of fine and uniform Zn ₂ SnO ₄ nanoparticles. <i>Nanoscale</i> , 2012 , 4, 557-62	7.7	60
72	Effects of crystal and electronic structures of ANb ₂ O ₆ (A=Ca, Sr, Ba) metaniobate compounds on their photocatalytic H ₂ evolution from pure water. <i>International Journal of Hydrogen Energy</i> , 2010 , 35, 12954-12960	6.7	60
71	Scalable Deposition of High-Efficiency Perovskite Solar Cells by Spray-Coating. <i>ACS Applied Energy Materials</i> , 2018 , 1, 1853-1857	6.1	59
70	Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation. <i>Advanced Energy Materials</i> , 2018 , 8, 1800232	21.8	59
69	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wide-Bandgap Perovskite Solar Cells Beyond 21%. <i>Solar Rrl</i> , 2020 , 4, 2000082	7.1	46
68	Effect of Rubidium Incorporation on the Structural, Electrical, and Photovoltaic Properties of Methylammonium Lead Iodide-Based Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 41898-41905	9.5	46
67	Epitaxial 1D electron transport layers for high-performance perovskite solar cells. <i>Nanoscale</i> , 2015 , 7, 15284-90	7.7	44

66	Anatase TiO ₂ nanorod-decoration for highly efficient photoenergy conversion. <i>Nanoscale</i> , 2013 , 5, 11725-32	7.32	43
65	The effect of N-substitution and ethylthio substitution on the performance of phenothiazine donors in dye-sensitized solar cells. <i>Dyes and Pigments</i> , 2013 , 97, 262-271	4.6	42
64	3D/2D multidimensional perovskites: Balance of high performance and stability for perovskite solar cells. <i>Current Opinion in Electrochemistry</i> , 2018 , 11, 105-113	7.2	41
63	Controlled interfacial electron dynamics in highly efficient Zn ₂ SnO ₄ -based dye-sensitized solar cells. <i>ChemSusChem</i> , 2014 , 7, 501-9	8.3	40
62	Sustainable lead management in halide perovskite solar cells. <i>Nature Sustainability</i> , 2020 , 3, 1044-1051	22.1	40
61	Effect of TiO ₂ particle size and layer thickness on mesoscopic perovskite solar cells. <i>Applied Surface Science</i> , 2019 , 477, 131-136	6.7	38
60	The effect of the number, position, and shape of methoxy groups in triphenylamine donors on the performance of dye-sensitized solar cells. <i>Dyes and Pigments</i> , 2015 , 113, 390-401	4.6	36
59	A Simple Method To Control Morphology of Hydroxyapatite Nano- and Microcrystals by Altering Phase Transition Route. <i>Crystal Growth and Design</i> , 2013 , 13, 3414-3418	3.5	36
58	Facile fabrication of three-dimensional TiO ₂ structures for highly efficient perovskite solar cells. <i>Nano Energy</i> , 2016 , 22, 499-506	17.1	34
57	Size-controlled synthesis of monodispersed mesoporous alumina spheres by a template-free forced hydrolysis method. <i>Dalton Transactions</i> , 2011 , 40, 6901-5	4.3	32
56	Tailored 2D/3D Halide Perovskite Heterointerface for Substantially Enhanced Endurance in Conducting Bridge Resistive Switching Memory. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 17039-17045	9.531	31
55	Indium Oxide Nanowire Array Based CdSe/CdS/TiO ₂ One-Dimensional Heterojunction Photoelectrode for Enhanced Solar Hydrogen Production. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 1161-1168	8.3	30
54	1-D structured flexible supercapacitor electrodes with prominent electronic/ionic transport capabilities. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 268-74	9.5	29
53	Transmittance optimized nb-doped TiO ₂ /Sn-doped In ₂ O ₃ multilayered photoelectrodes for dye-sensitized solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 96, 276-280	6.4	28
52	Aligned Photoelectrodes with Large Surface Area Prepared by Pulsed Laser Deposition. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 8102-8110	3.8	28
51	A Newly Designed Nb-Doped TiO ₂ /Al-Doped ZnO Transparent Conducting Oxide Multilayer for Electrochemical Photoenergy Conversion Devices. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 13867-13871	3.8	28
50	Effect of non-stoichiometric solution chemistry on improving the performance of wide-bandgap perovskite solar cells. <i>Materials Today Energy</i> , 2018 , 7, 232-238	7	26
49	Wide-Bandgap Metal Halide Perovskites for Tandem Solar Cells. <i>ACS Energy Letters</i> , 2021 , 6, 232-248	20.1	26

48	Simultaneous Ligand Exchange Fabrication of Flexible Perovskite Solar Cells using Newly Synthesized Uniform Tin Oxide Quantum Dots. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 5460-5467	6.4	25
47	26.7% Efficient 4-Terminal Perovskite/Silicon Tandem Solar Cell Composed of a High-Performance Semitransparent Perovskite Cell and a Doped Poly-Si/SiO _x Passivating Contact Silicon Cell. <i>IEEE Journal of Photovoltaics</i> , 2020 , 10, 417-422	3.7	24
46	Surface-area-tuned, quantum-dot-sensitized heterostructured nanoarchitectures for highly efficient photoelectrodes. <i>Nano Research</i> , 2014 , 7, 144-153	10	24
45	Unassisted Water Splitting Exceeding 9% Solar-to-Hydrogen Conversion Efficiency by Cu(In, Ga)(S, Se) ₂ Photocathode with Modified Surface Band Structure and Halide Perovskite Solar Cell. <i>ACS Applied Energy Materials</i> , 2020 , 3, 2296-2303	6.1	22
44	Roughness of Ti Substrates for Control of the Preferred Orientation of TiO ₂ Nanotube Arrays as a New Orientation Factor. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 13297-13305	3.8	21
43	Formamidine disulfide oxidant as a localised electron scavenger for >20% perovskite solar cell modules. <i>Energy and Environmental Science</i> , 2021 , 14, 4903-4914	35.4	20
42	CdS-sensitized 1-D single-crystalline anatase TiO ₂ nanowire arrays for photoelectrochemical hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2015 , 40, 863-869	6.7	18
41	Template-free synthesis of monodispersed Y ₃ Al ₅ O ₁₂ :Ce ³⁺ nanosphere phosphor. <i>Journal of Materials Chemistry</i> , 2012 , 22, 12275		17
40	Revisiting Effects of Ligand-Capped Nanocrystals in Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2020 , 5, 1032-1034	20.1	16
39	High Efficiency Perovskite Solar Cells Exceeding 22% via a Photo-Assisted Two-Step Sequential Deposition. <i>Advanced Functional Materials</i> , 2021 , 31, 2006718	15.6	16
38	Green-emitting Lu ₃ Al ₅ O ₁₂ :Ce ³⁺ phosphor as a visible light amplifier for dye-sensitized solar cells. <i>RSC Advances</i> , 2015 , 5, 24737-24741	3.7	15
37	Tailoring nanobranches in three-dimensional hierarchical rutile heterostructures: a case study of TiO ₂ /SnO ₂ . <i>CrystEngComm</i> , 2013 , 15, 2939	3.3	15
36	Facile hydrothermal synthesis of InVO ₄ microspheres and their visible-light photocatalytic activities. <i>Materials Letters</i> , 2012 , 72, 98-100	3.3	13
35	Observation of anatase nanograins crystallizing from anodic amorphous TiO ₂ nanotubes. <i>CrystEngComm</i> , 2015 , 17, 7346-7353	3.3	12
34	Influence of solvent and bridge structure in alkylthio-substituted triphenylamine dyes on the photovoltaic properties of dye-sensitized solar cells. <i>Chemistry - an Asian Journal</i> , 2012 , 7, 1817-26	4.5	12
33	Nb-doped TiO ₂ air-electrode for advanced Li-air batteries Peer review under responsibility of The Ceramic Society of Japan and the Korean Ceramic Society. View all notes. <i>Journal of Asian Ceramic Societies</i> , 2015 , 3, 77-81	2.4	11
32	TiO ₂ nanocrystals shell layer on highly conducting indium tin oxide nanowire for photovoltaic devices. <i>Nanoscale</i> , 2013 , 5, 3520-6	7.7	11
31	Low-Temperature Synthesis of Phase-Pure 0D/1D BaTiO ₃ Nanostructures Using H ₂ Ti ₃ O ₇ Templates. <i>European Journal of Inorganic Chemistry</i> , 2010 , 2010, 1343-1347	2.3	11

30	Electron emission of Au nanoparticles embedded in ZnO for highly conductive oxide. <i>Applied Physics Letters</i> , 2014 , 104, 142102	3.4	10
29	A Hierarchically Organized Photoelectrode Architecture for Highly Efficient CdS/CdSe-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2014 , 4, 1300395	21.8	10
28	Influence of niobium doping in hierarchically organized titania nanostructure on performance of dye-sensitized solar cells. <i>Journal of Nanoscience and Nanotechnology</i> , 2012 , 12, 5091-5	1.3	10
27	Synthesis and adsorption properties of gelatin-conjugated hematite (Fe ₂ O ₃) nanoparticles for lead removal from wastewater. <i>Journal of Hazardous Materials</i> , 2021 , 416, 125696	12.8	10
26	Anionic ligand assisted synthesis of 3-D hollow TiO ₂ architecture with enhanced photoelectrochemical performance. <i>Langmuir</i> , 2014 , 30, 15531-9	4	9
25	Synthesis and characteristics of Tb-doped Y ₂ SiO ₅ nanophosphors and luminescent layer for enhanced photovoltaic cell performance. <i>Journal of Nanoscience and Nanotechnology</i> , 2011 , 11, 8748-53 ¹⁻³	1.3	9
24	All-in-One Lewis Base for Enhanced Precursor and Device Stability in Highly Efficient Perovskite Solar Cells. <i>ACS Energy Letters</i> , 3425-3434	20.1	9
23	Al ₂ O ₃ nanospheres-directed synthesis of monodispersed BaAl ₂ O ₄ :Eu ²⁺ nanosphere phosphors. <i>CrystEngComm</i> , 2013 , 15, 4797	3.3	8
22	Improved spectral response of sensitized photoelectrodes with the optical modulation layer. <i>Electrochemistry Communications</i> , 2012 , 15, 29-33	5.1	7
21	Controlled synthesis and Li-electroactivity of rutile TiO ₂ nanostructure with walnut-like morphology. <i>Dalton Transactions</i> , 2013 , 42, 4278-84	4.3	7
20	Ternary diagrams of the phase, optical bandgap energy and photoluminescence of mixed-halide perovskites. <i>Acta Materialia</i> , 2019 , 181, 460-469	8.4	6
19	Rheological and Electrochemical Properties of Nanoclay Added Electrolyte for Dye Sensitized Solar Cells. <i>Electrochimica Acta</i> , 2014 , 144, 275-281	6.7	6
18	Room-Temperature-Processed Amorphous Sn-In-O Electron Transport Layer for Perovskite Solar Cells. <i>Materials</i> , 2019 , 13,	3.5	6
17	SnO ₂ nanowires decorated with forsythia-like TiO ₂ for photoenergy conversion. <i>Materials Letters</i> , 2017 , 202, 48-51	3.3	5
16	Transparent-conducting-oxide nanowire arrays for efficient photoelectrochemical energy conversion. <i>Nanoscale</i> , 2014 , 6, 8649-55	7.7	5
15	Electronic Band Structure, Optical Properties, and Photocatalytic Hydrogen Production of Barium Niobium Phosphate Compounds (Ba _{1-x} Nb ₂ O ₅ B ₂ O ₅). <i>European Journal of Inorganic Chemistry</i> , 2011 , 2011, 2206-2210	2.3	5
14	Intermediate Phase-Free Process for Methylammonium Lead Iodide Thin Film for High-Efficiency Perovskite Solar Cells. <i>Advanced Science</i> , 2021 , 8, e2102492	13.6	5
13	Defect Healing in FAPb(I 1- x Br x) ₃ Perovskites: Multifunctional Fluorinated Sulfonate Surfactant Anchoring Enables >21% Modules with Improved Operation Stability. <i>Advanced Energy Materials</i> , 2200632 ^{21.8}	21.8	5

12	Fabrication of TiO ₂ /Tin-doped indium oxide-based photoelectrode coated with overlayer materials and its photoelectrochemical behavior. <i>Journal of Nanoscience and Nanotechnology</i> , 2012 , 12, 1390-4	1.3	4
11	Surface modified TiO ₂ nanostructure with 3D urchin-like morphology for dye-sensitized solar cell application. <i>Journal of Nanoscience and Nanotechnology</i> , 2012 , 12, 1305-9	1.3	4
10	Rationally Designed Window Layers for High Efficiency Perovskite/Si Tandem Solar Cells. <i>Advanced Optical Materials</i> , 2021 , 9, 2100788	8.1	4
9	Enhanced ferroelectric photovoltaic effect in semiconducting single-wall carbon nanotube/BiFeO ₃ heterostructures enabled by wide-range light absorption and efficient charge separation. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 10377-10385	13	3
8	Perovskite microcells fabricated using swelling-induced crack propagation for colored solar windows.. <i>Nature Communications</i> , 2022 , 13, 1946	17.4	3
7	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wide-Bandgap Perovskite Solar Cells Beyond 21%. <i>Solar Rrl</i> , 2020 , 4, 2070065	7.1	1
6	Perovskite Solar Cells: Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation (Adv. Energy Mater. 22/2018). <i>Advanced Energy Materials</i> , 2018 , 8, 1870101	21.8	1
5	Large-Scale Assembly of Peptide-Based Hierarchical Nanostructures and Their Antiferroelectric Properties. <i>Small</i> , 2020 , 16, e2003986	11	1
4	Ultimate Charge Extraction of Monolayer PbS Quantum Dot for Observation of Multiple Exciton Generation. <i>ChemPhysChem</i> , 2019 , 20, 2657-2661	3.2	
3	Real Impacts of Ligand-Capped Nanocrystals in Perovskite Solar Cells. <i>ECS Meeting Abstracts</i> , 2020 , MA2020-02, 1901-1901	0	
2	Organic-Inorganic Perovskite for Highly Efficient Tandem Solar Cells. <i>Ceramist</i> , 2019 , 22, 146-169	0.3	
1	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). <i>Advanced Energy Materials</i> , 2022 , 12, 2270083	21.8	