

# Donghoe Kim

## List of Publications by Year in Descending Order

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**Version:** 2024-04-26

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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	Perovskite microcells fabricated using swelling-induced crack propagation for colored solar windows.. <i>Nature Communications</i> , <b>2022</b> , 13, 1946	17.4	3
100	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> , <b>2022</b> , 12, 2270083	21.8	
99	High Efficiency Perovskite Solar Cells Exceeding 22% via a Photo-Assisted Two-Step Sequential Deposition. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2006718	15.6	16
98	Wide-Bandgap Metal Halide Perovskites for Tandem Solar Cells. <i>ACS Energy Letters</i> , <b>2021</b> , 6, 232-248	20.1	26
97	Formamidine disulfide oxidant as a localised electron scavenger for >20% perovskite solar cell modules. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 4903-4914	35.4	20
96	Rationally Designed Window Layers for High Efficiency Perovskite/Si Tandem Solar Cells. <i>Advanced Optical Materials</i> , <b>2021</b> , 9, 2100788	8.1	4
95	Synthesis and adsorption properties of gelatin-conjugated hematite (FeO) nanoparticles for lead removal from wastewater. <i>Journal of Hazardous Materials</i> , <b>2021</b> , 416, 125696	12.8	10
94	Intermediate Phase-Free Process for Methylammonium Lead Iodide Thin Film for High-Efficiency Perovskite Solar Cells. <i>Advanced Science</i> , <b>2021</b> , 8, e2102492	13.6	5
93	Enhanced ferroelectric photovoltaic effect in semiconducting single-wall carbon nanotube/BiFeO <sub>3</sub> heterostructures enabled by wide-range light absorption and efficient charge separation. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 10377-10385	13	3
92	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wide-Bandgap Perovskite Solar Cells Beyond 21%. <i>Solar Rrl</i> , <b>2020</b> , 4, 2070065	7.1	1
91	Tailored 2D/3D Halide Perovskite Heterointerface for Substantially Enhanced Endurance in Conducting Bridge Resistive Switching Memory. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 17039-17045 <sup>31</sup>	9.5	
90	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wide-Bandgap Perovskite Solar Cells Beyond 21%. <i>Solar Rrl</i> , <b>2020</b> , 4, 2000082	7.1	46
89	Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. <i>Science</i> , <b>2020</b> , 368, 155-160	33.3	240
88	Revisiting Effects of Ligand-Capped Nanocrystals in Perovskite Solar Cells. <i>ACS Energy Letters</i> , <b>2020</b> , 5, 1032-1034	20.1	16
87	Unassisted Water Splitting Exceeding 9% Solar-to-Hydrogen Conversion Efficiency by Cu(In, Ga)(S, Se) <sub>2</sub> Photocathode with Modified Surface Band Structure and Halide Perovskite Solar Cell. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 2296-2303	6.1	22
86	26.7% Efficient 4-Terminal Perovskite/Silicon Tandem Solar Cell Composed of a High-Performance Semitransparent Perovskite Cell and a Doped Poly-Si/SiO <sub>x</sub> Passivating Contact Silicon Cell. <i>IEEE Journal of Photovoltaics</i> , <b>2020</b> , 10, 417-422	3.7	24
85	Real Impacts of Ligand-Capped Nanocrystals in Perovskite Solar Cells. <i>ECS Meeting Abstracts</i> , <b>2020</b> , MA2020-02, 1901-1901	0	

84	Large-Scale Assembly of Peptide-Based Hierarchical Nanostructures and Their Antiferroelectric Properties. <i>Small</i> , <b>2020</b> , 16, e2003986	11	1
83	Sustainable lead management in halide perovskite solar cells. <i>Nature Sustainability</i> , <b>2020</b> , 3, 1044-1051	22.1	40
82	Carrier lifetimes of >1 ns in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. <i>Science</i> , <b>2019</b> , 364, 475-479	33.3	496
81	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 5972-5979	16.4	170
80	Insights into operational stability and processing of halide perovskite active layers. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 1341-1348	35.4	89
79	Ultimate Charge Extraction of Monolayer PbS Quantum Dot for Observation of Multiple Exciton Generation. <i>ChemPhysChem</i> , <b>2019</b> , 20, 2657-2661	3.2	
78	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. <i>Joule</i> , <b>2019</b> , 3, 1734-1745	27.8	131
77	Ternary diagrams of the phase, optical bandgap energy and photoluminescence of mixed-halide perovskites. <i>Acta Materialia</i> , <b>2019</b> , 181, 460-469	8.4	6
76	Organic-Inorganic Perovskite for Highly Efficient Tandem Solar Cells. <i>Ceramist</i> , <b>2019</b> , 22, 146-169	0.3	
75	Room-Temperature-Processed Amorphous Sn-In-O Electron Transport Layer for Perovskite Solar Cells. <i>Materials</i> , <b>2019</b> , 13,	3.5	6
74	Effect of TiO <sub>2</sub> particle size and layer thickness on mesoscopic perovskite solar cells. <i>Applied Surface Science</i> , <b>2019</b> , 477, 131-136	6.7	38
73	Highly Efficient Perovskite Solar Modules by Scalable Fabrication and Interconnection Optimization. <i>ACS Energy Letters</i> , <b>2018</b> , 3, 322-328	20.1	111
72	Scalable Deposition of High-Efficiency Perovskite Solar Cells by Spray-Coating. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 1853-1857	6.1	59
71	Boosting the solar water oxidation performance of a BiVO <sub>4</sub> photoanode by crystallographic orientation control. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 1299-1306	35.4	227
70	Scalable fabrication of perovskite solar cells. <i>Nature Reviews Materials</i> , <b>2018</b> , 3,	73.3	532
69	Effect of non-stoichiometric solution chemistry on improving the performance of wide-bandgap perovskite solar cells. <i>Materials Today Energy</i> , <b>2018</b> , 7, 232-238	7	26
68	Perovskite Solar Cells: Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation (Adv. Energy Mater. 22/2018). <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1870101	21.8	1
67	Scalable slot-die coating of high performance perovskite solar cells. <i>Sustainable Energy and Fuels</i> , <b>2018</b> , 2, 2442-2449	5.8	109

66	Outlook and Challenges of Perovskite Solar Cells toward Terawatt-Scale Photovoltaic Module Technology. <i>Joule</i> , <b>2018</b> , 2, 1437-1451	27.8	113
65	3D/2D multidimensional perovskites: Balance of high performance and stability for perovskite solar cells. <i>Current Opinion in Electrochemistry</i> , <b>2018</b> , 11, 105-113	7.2	41
64	Simultaneous Ligand Exchange Fabrication of Flexible Perovskite Solar Cells using Newly Synthesized Uniform Tin Oxide Quantum Dots. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 5460-5467	6.4	25
63	Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1800232	21.8	59
62	Do grain boundaries dominate non-radiative recombination in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite thin films?. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 5043-5050	3.6	141
61	Extrinsic ion migration in perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 1234-1242	35.4	336
60	300% Enhancement of Carrier Mobility in Uniaxial-Oriented Perovskite Films Formed by Topotactic-Oriented Attachment. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606831	24	101
59	Highly Efficient and Uniform 1 cm Perovskite Solar Cells with an Electrochemically Deposited NiO Hole-Extraction Layer. <i>ChemSusChem</i> , <b>2017</b> , 10, 2660-2667	8.3	67
58	SnO <sub>2</sub> nanowires decorated with forsythia-like TiO <sub>2</sub> for photoenergy conversion. <i>Materials Letters</i> , <b>2017</b> , 202, 48-51	3.3	5
57	Perovskite ink with wide processing window for scalable high-efficiency solar cells. <i>Nature Energy</i> , <b>2017</b> , 2,	62.3	398
56	Effect of Rubidium Incorporation on the Structural, Electrical, and Photovoltaic Properties of Methylammonium Lead Iodide-Based Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 41898-41905	9.5	46
55	Acid Additives Enhancing the Conductivity of Spiro-OMeTAD Toward High-Efficiency and Hysteresis-Less Planar Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1601451	21.8	90
54	Facile fabrication of large-grain CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -xBr <sub>x</sub> films for high-efficiency solar cells via CH <sub>3</sub> NH <sub>3</sub> Br-selective Ostwald ripening. <i>Nature Communications</i> , <b>2016</b> , 7, 12305	17.4	358
53	Selective dissolution of halide perovskites as a step towards recycling solar cells. <i>Nature Communications</i> , <b>2016</b> , 7, 11735	17.4	92
52	Indium Tin Oxide Nanowire Array Based CdSe/CdS/TiO <sub>2</sub> One-Dimensional Heterojunction Photoelectrode for Enhanced Solar Hydrogen Production. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2016</b> , 4, 1161-1168	8.3	30
51	Facile fabrication of three-dimensional TiO <sub>2</sub> structures for highly efficient perovskite solar cells. <i>Nano Energy</i> , <b>2016</b> , 22, 499-506	17.1	34
50	Green-emitting Lu <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> :Ce <sup>3+</sup> phosphor as a visible light amplifier for dye-sensitized solar cells. <i>RSC Advances</i> , <b>2015</b> , 5, 24737-24741	3.7	15
49	Niobium Doping Effects on TiO <sub>2</sub> Mesoscopic Electron Transport Layer-Based Perovskite Solar Cells. <i>ChemSusChem</i> , <b>2015</b> , 8, 2392-8	8.3	123

48	Epitaxial 1D electron transport layers for high-performance perovskite solar cells. <i>Nanoscale</i> , <b>2015</b> , 7, 15284-90	7.7	44
47	Observation of anatase nanograins crystallizing from anodic amorphous TiO <sub>2</sub> nanotubes. <i>CrystEngComm</i> , <b>2015</b> , 17, 7346-7353	3.3	12
46	Nb-doped TiO <sub>2</sub> air-electrode for advanced Li-air batteriesPeer review under responsibility of The Ceramic Society of Japan and the Korean Ceramic Society.View all notes. <i>Journal of Asian Ceramic Societies</i> , <b>2015</b> , 3, 77-81	2.4	11
45	CdS-sensitized 1-D single-crystalline anatase TiO <sub>2</sub> nanowire arrays for photoelectrochemical hydrogen production. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 863-869	6.7	18
44	Retarding charge recombination in perovskite solar cells using ultrathin MgO-coated TiO <sub>2</sub> nanoparticulate films. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9160-9164	13	142
43	Highly efficient and bending durable perovskite solar cells: toward a wearable power source. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 916-921	35.4	518
42	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> , <b>2015</b> , 113, 390-401	4.6	36
41	Roughness of Ti Substrates for Control of the Preferred Orientation of TiO <sub>2</sub> Nanotube Arrays as a New Orientation Factor. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 13297-13305	3.8	21
40	New Hybrid Hole Extraction Layer of Perovskite Solar Cells with a Planar p <sup>+</sup> Geometry. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 27285-27290	3.8	68
39	Controlled interfacial electron dynamics in highly efficient Zn <sub>2</sub> SnO <sub>4</sub> -based dye-sensitized solar cells. <i>ChemSusChem</i> , <b>2014</b> , 7, 501-9	8.3	40
38	Transparent-conducting-oxide nanowire arrays for efficient photoelectrochemical energy conversion. <i>Nanoscale</i> , <b>2014</b> , 6, 8649-55	7.7	5
37	Rheological and Electrochemical Properties of Nanoclay Added Electrolyte for Dye Sensitized Solar Cells. <i>Electrochimica Acta</i> , <b>2014</b> , 144, 275-281	6.7	6
36	Zn <sub>2</sub> SnO <sub>4</sub> -Based Photoelectrodes for Organolead Halide Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 22991-22994	3.8	76
35	1-D structured flexible supercapacitor electrodes with prominent electronic/ionic transport capabilities. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 268-74	9.5	29
34	Electron emission of Au nanoparticles embedded in ZnO for highly conductive oxide. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 142102	3.4	10
33	Anionic ligand assisted synthesis of 3-D hollow TiO <sub>2</sub> architecture with enhanced photoelectrochemical performance. <i>Langmuir</i> , <b>2014</b> , 30, 15531-9	4	9
32	A Hierarchically Organized Photoelectrode Architecture for Highly Efficient CdS/CdSe-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1300395	21.8	10
31	Surface-area-tuned, quantum-dot-sensitized heterostructured nanoarchitectures for highly efficient photoelectrodes. <i>Nano Research</i> , <b>2014</b> , 7, 144-153	10	24

30	A Simple Method To Control Morphology of Hydroxyapatite Nano- and Microcrystals by Altering Phase Transition Route. <i>Crystal Growth and Design</i> , <b>2013</b> , 13, 3414-3418	3.5	36
29	Anatase TiO <sub>2</sub> nanorod-decoration for highly efficient photoenergy conversion. <i>Nanoscale</i> , <b>2013</b> , 5, 11725-32	3.2	43
28	Tailoring nanobranches in three-dimensional hierarchical rutile heterostructures: a case study of TiO <sub>2</sub> /SnO <sub>2</sub> . <i>CrystEngComm</i> , <b>2013</b> , 15, 2939	3.3	15
27	Controlled synthesis and Li-electroactivity of rutile TiO <sub>2</sub> nanostructure with walnut-like morphology. <i>Dalton Transactions</i> , <b>2013</b> , 42, 4278-84	4.3	7
26	The effect of N-substitution and ethylthio substitution on the performance of phenothiazine donors in dye-sensitized solar cells. <i>Dyes and Pigments</i> , <b>2013</b> , 97, 262-271	4.6	42
25	BaSnO <sub>3</sub> perovskite nanoparticles for high efficiency dye-sensitized solar cells. <i>ChemSusChem</i> , <b>2013</b> , 6, 449-54	8.3	63
24	TiO <sub>2</sub> nanocrystals shell layer on highly conducting indium tin oxide nanowire for photovoltaic devices. <i>Nanoscale</i> , <b>2013</b> , 5, 3520-6	7.7	11
23	Al <sub>2</sub> O <sub>3</sub> nanospheres-directed synthesis of monodispersed BaAl <sub>2</sub> O <sub>4</sub> :Eu <sup>2+</sup> nanosphere phosphors. <i>CrystEngComm</i> , <b>2013</b> , 15, 4797	3.3	8
22	Improved spectral response of sensitized photoelectrodes with the optical modulation layer. <i>Electrochemistry Communications</i> , <b>2012</b> , 15, 29-33	5.1	7
21	Facile hydrothermal synthesis of InVO <sub>4</sub> microspheres and their visible-light photocatalytic activities. <i>Materials Letters</i> , <b>2012</b> , 72, 98-100	3.3	13
20	Transmittance optimized nb-doped TiO <sub>2</sub> /Sn-doped In <sub>2</sub> O <sub>3</sub> multilayered photoelectrodes for dye-sensitized solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2012</b> , 96, 276-280	6.4	28
19	Aligned Photoelectrodes with Large Surface Area Prepared by Pulsed Laser Deposition. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 8102-8110	3.8	28
18	Template-free synthesis of monodispersed Y <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> :Ce <sup>3+</sup> nanosphere phosphor. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 12275		17
17	Crystallographically preferred oriented TiO <sub>2</sub> nanotube arrays for efficient photovoltaic energy conversion. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 7989	35.4	82
16	Synthesis and photovoltaic property of fine and uniform Zn <sub>2</sub> SnO <sub>4</sub> nanoparticles. <i>Nanoscale</i> , <b>2012</b> , 4, 557-62	7.7	60
15	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> , <b>2012</b> , 7, 1817-26	4.5	12
14	Fabrication of TiO <sub>2</sub> /Tin-doped indium oxide-based photoelectrode coated with overlayer materials and its photoelectrochemical behavior. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2012</b> , 12, 1390-4	1.3	4
13	Surface modified TiO <sub>2</sub> nanostructure with 3D urchin-like morphology for dye-sensitized solar cell application. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2012</b> , 12, 1305-9	1.3	4

12	Influence of niobium doping in hierarchically organized titania nanostructure on performance of dye-sensitized solar cells. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2012</b> , 12, 5091-5	1.3	10
11	Electronic Band Structure, Optical Properties, and Photocatalytic Hydrogen Production of Barium Niobium Phosphate Compounds (BaO $\cdot$ Nb <sub>2</sub> O <sub>5</sub> ·xH <sub>2</sub> O). <i>European Journal of Inorganic Chemistry</i> , <b>2011</b> , 2011, 2206-2210	2.3	5
10	Size-controlled synthesis of monodispersed mesoporous alumina spheres by a template-free forced hydrolysis method. <i>Dalton Transactions</i> , <b>2011</b> , 40, 6901-5	4.3	32
9	Electronic band structures and photovoltaic properties of MWO <sub>4</sub> (M=Zn, Mg, Ca, Sr) compounds. <i>Journal of Solid State Chemistry</i> , <b>2011</b> , 184, 2103-2107	3.3	62
8	Synthesis and characteristics of tb-doped Y <sub>2</sub> SiO <sub>5</sub> nanophosphors and luminescent layer for enhanced photovoltaic cell performance. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2011</b> , 11, 8748-53	1.3	9
7	Two-Step Sol-Gel Method-Based TiO <sub>2</sub> Nanoparticles with Uniform Morphology and Size for Efficient Photo-Energy Conversion Devices. <i>Chemistry of Materials</i> , <b>2010</b> , 22, 1958-1965	9.6	153
6	A Newly Designed Nb-Doped TiO <sub>2</sub> /Al-Doped ZnO Transparent Conducting Oxide Multilayer for Electrochemical Photoenergy Conversion Devices. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 13867-13871	3.8	28
5	Low-Temperature Synthesis of Phase-Pure 0D BaTiO <sub>3</sub> Nanostructures Using H <sub>2</sub> Ti <sub>3</sub> O <sub>7</sub> Templates. <i>European Journal of Inorganic Chemistry</i> , <b>2010</b> , 2010, 1343-1347	2.3	11
4	Effects of crystal and electronic structures of ANb <sub>2</sub> O <sub>6</sub> (A=Ca, Sr, Ba) metaniobate compounds on their photocatalytic H <sub>2</sub> evolution from pure water. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 12954-12960	6.7	60
3	Nb-Doped TiO <sub>2</sub> : A New Compact Layer Material for TiO <sub>2</sub> Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 6878-6882	3.8	197
2	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
1	Defect Healing in FAPb(I - x Br x ) <sub>3</sub> Perovskites: Multifunctional Fluorinated Sulfonate Surfactant Anchoring Enables >21% Modules with Improved Operation Stability. <i>Advanced Energy Materials</i> , 2200632	21.8	5