Hwan Kyu Kim

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Novel trifluoropropoxy-substituted asymmetric carbazole derivatives as efficient and hydrophobic hole transporting materials for high-performance and stable perovskite solar cells. Chemical Engineering Journal, 2022, 428, 131108.	6.6	22
2	Nanocrystal co-existed highly dense atomically disperse Pt@3D-hierarchical porous carbon electrocatalysts for tri-iodide and oxygen reduction reactions. Chemical Engineering Journal, 2022, 446, 137249.	6.6	16
3	Porphyrin sensitizers with acceptor structural engineering for dye-sensitized solar cells. Dyes and Pigments, 2021, 187, 109082.	2.0	14
4	In-depth understanding of the energy loss and efficiency limit of dye-sensitized solar cells under outdoor and indoor conditions. Journal of Materials Chemistry A, 2021, 9, 24830-24848.	5.2	28
5	Three-dimensional tellurium and nitrogen Co-doped mesoporous carbons for high performance supercapacitors. RSC Advances, 2021, 11, 8628-8635.	1.7	10
6	Mechanism for Preserving Volatile Nitrogen Dioxide and Sustainable Redox Mediation in the Nonaqueous Lithiumâ€“Oxygen Battery. ACS Applied Materials & Interfaces, 2021, 13, 8159-8168.	4.0	3
7	Dopant-free hole transporting polymeric materials based on pyrroloindacenodithiophene donor unit for efficient perovskite solar cells. Dyes and Pigments, 2021, 192, 109432.	2.0	8
8	Highly efficient gel electrolytes by end group modified PEG-based ABA triblock copolymers for quasi-solid-state dye-sensitized solar cells. Chemical Engineering Journal, 2021, 420, 129899.	6.6	18
9	D-Ï€-A-structured organic sensitizers with Ï€-extended auxiliary acceptor units for high-performance dye-sensitized solar cells. Dyes and Pigments, 2021, 195, 109681.	2.0	24
10	Well-dispersed Te-doped mesoporous carbons as Pt-free counter electrodes for high-performance dye-sensitized solar cells. Dalton Transactions, 2021, 50, 9399-9409.	1.6	15
11	PAN-Based Triblock Copolymers Tailor-Made by Reversible Additionâ€“Fragmentation Chain Transfer Polymerization for High-Performance Quasi-Solid State Dye-Sensitized Solar Cells. ACS Applied Energy Materials, 2021, 4, 1302-1312.	2.5	12
12	<i>In situ</i> preparation of Ruâ€“N-doped template-free mesoporous carbons as a transparent counter electrode for bifacial dye-sensitized solar cells. Nanoscale, 2020, 12, 1602-1616.	2.8	26
13	Tellurium-Doped, Mesoporous Carbon Nanomaterials as Transparent Metal-Free Counter Electrodes for High-Performance Bifacial Dye-Sensitized Solar Cells. Nanomaterials, 2020, 10, 29.	1.9	18
14	Recent progress on nanostructured carbon-based counter/back electrodes for high-performance dye-sensitized and perovskite solar cells. Nanoscale, 2020, 12, 17590-17648.	2.8	48
15	Polymer Gel Electrolytes Based on PEG-Functionalized ABA Triblock Copolymers for Quasi-Solid-State Dye-Sensitized Solar Cells: Molecular Engineering and Key Factors. ACS Applied Materials & Interfaces, 2020, 12, 42067-42080.	4.0	28
16	Dopant-Free Triazatruxene-Based Hole Transporting Materials with Three Different End-Capped Acceptor Units for Perovskite Solar Cells. Nanomaterials, 2020, 10, 936.	1.9	8
17	14.2% Efficiency Dyeâ€Sensitized Solar Cells by Coâ€sensitizing Novel Thieno[3,2â€<i>b</i>]indoleâ€Based Organic Dyes with a Promising Porphyrin Sensitizer. Advanced Energy Materials, 2020, 10, 2000124.	10.2	216
18	Dyeâ€Sensitized Solar Cells: 14.2% Efficiency Dyeâ€Sensitized Solar Cells by Coâ€sensitizing Novel Thieno[3,2â€<i>b</i>]indoleâ€Based Organic Dyes with a Promising Porphyrin Sensitizer (Adv. Energy) Tj ETQq0 0 0 rgBT /Overlock 10 T	10.2	7

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19	A facile route to well-dispersed Ru nanoparticles embedded in self-templated mesoporous carbons for high-performance supercapacitors. Journal of Materials Chemistry A, 2019, 7, 20208-20222.	5.2	28
20	Molecular design and synthesis of Dâ€“Ï€â€“A structured porphyrin dyes with various acceptor units for dye-sensitized solar cells. Journal of Materials Chemistry C, 2019, 7, 2843-2852.	2.7	73
21	Dâˆ'Ï€â€"A-Structured Porphyrins with Extended Auxiliary Ï€-Spacers for Highly Efficient Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 24067-24077.	4.0	46
22	Well-defined triblock copolymer/TiO₂ composite gel electrolytes for high-performance dye-sensitized solar cells. Journal of Materials Chemistry A, 2019, 7, 14743-14752.	5.2	22
23	Phenothiazine Functionalized Multifunctional Aâˆ'Ï€â€"Dâˆ'Ï€â€"Dâˆ'Ï€â€"A-Type Hole-Transporting Materials via Sequential Câ€"H Arylation Approach for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 14011-14022.	4.0	51
24	Soft-Templated Tellurium-Doped Mesoporous Carbon as a Pt-Free Electrocatalyst for High-Performance Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 2093-2102.	4.0	37
25	Novel Ï€-extended porphyrin-based hole-transporting materials with triarylamine donor units for high performance perovskite solar cells. Dyes and Pigments, 2019, 163, 734-739.	2.0	27
26	Exploratory synthesis and photovoltaic performance comparison of Dâ€“Ï€â€“A structured Zn-porphyrins for dye-sensitized solar cells. Dyes and Pigments, 2018, 149, 341-347.	2.0	24
27	Significant Influence of a Single Atom Change in Auxiliary Acceptor on Photovoltaic Properties of Porphyrin-Based Dye-Sensitized Solar Cells. Nanomaterials, 2018, 8, 1030.	1.9	9
28	Comparative study of edge-functionalized graphene nanoplatelets as metal-free counter electrodes for highly efficient dye-sensitized solar cells. Materials Today Energy, 2018, 9, 67-73.	2.5	34
29	Rational design criteria for Dâ€“Ï€â€“A structured organic and porphyrin sensitizers for highly efficient dye-sensitized solar cells. Journal of Materials Chemistry A, 2018, 6, 14518-14545.	5.2	256
30	Comparative Study of Edge-Functionalized Graphene Nanoplatelets As Superior Metal-Free Counter Electrodes for Dye-Sensitized Solar Cells. ECS Meeting Abstracts, 2018, , .	0.0	0
31	Porphyrin Sensitizers Sensitizers Exceeding a World Champion Porphyrin Dye for Dye-Sensitized Solar Cells and Their Tandem Solar Cells. ECS Meeting Abstracts, 2018, , .	0.0	0
32	Significant light absorption enhancement by a single heterocyclic unit change in the Ï€-bridge moiety from thieno[3,2-b]benzothiophene to thieno[3,2-b]indole for high performance dye-sensitized and tandem solar cells. Journal of Materials Chemistry A, 2017, 5, 2297-2308.	5.2	200
33	Porphyrin Sensitizers with Donor Structural Engineering for Superior Performance Dyeâ€Sensitized Solar Cells and Tandem Solar Cells for Water Splitting Applications. Advanced Energy Materials, 2017, 7, 1602117.	10.2	193
34	Simple synthesis and molecular engineering of low-cost and star-shaped carbazole-based hole transporting materials for highly efficient perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 20263-20276.	5.2	92
35	Anchovy-derived nitrogen and sulfur co-doped porous carbon materials for high-performance supercapacitors and dye-sensitized solar cells. RSC Advances, 2017, 7, 35565-35574.	1.7	31
36	A versatile platform for lanthanide(<scp>iii</scp>)-containing organogelators: fabrication of the Er(<scp>iii</scp>)-incorporated polymer nanocomposite from an organogel template. New Journal of Chemistry, 2017, 41, 12366-12370.	1.4	8

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37	Triphenylamine-based organic sensitizers with Ï€-spacer structural engineering for dye-sensitized solar cells: Synthesis, theoretical calculations, molecular spectroscopy and structure-property-performance relationships. Dyes and Pigments, 2017, 136, 496-504.	2.0	49
38	Edge-selectively antimony-doped graphene nanoplatelets as an outstanding counter electrode with an unusual electrochemical stability for dye-sensitized solar cells employing cobalt electrolytes. Journal of Materials Chemistry A, 2016, 4, 9029-9037.	5.2	33
39	In situ real-time and quantitative investigation on the stability of non-aqueous lithium oxygen battery electrolytes. Journal of Materials Chemistry A, 2016, 4, 6332-6341.	5.2	30
40	Metalloid tellurium-doped graphene nanoplatelets as ultimately stable electrocatalysts for cobalt reduction reaction in dye-sensitized solar cells. Nano Energy, 2016, 30, 867-876.	8.2	49
41	Edge-selenated graphene nanoplatelets as durable metal-free catalysts for iodine reduction reaction in dye-sensitized solar cells. Science Advances, 2016, 2, e1501459.	4.7	88
42	Unassisted photoelectrochemical water splitting exceeding 7% solar-to-hydrogen conversion efficiency using photon recycling. Nature Communications, 2016, 7, 11943.	5.8	144
43	Two-terminal DSSC/silicon tandem solar cells exceeding 18% efficiency. Energy and Environmental Science, 2016, 9, 3657-3665.	15.6	41
44	Organic Dyes with Wellâ€Defined Structures for Highly Efficient Dyeâ€Sensitised Solar Cells Based on a Cobalt Electrolyte. Chemistry - A European Journal, 2015, 21, 14804-14811.	1.7	36
45	Thieno[3,2â€‹<i>b</i>][1]benzothiophene Derivative as a New Ï€â€Bridge Unit in Dâ€“Ï€â€“A Structural Organic Sensitizers with Over 10.47% Efficiency for Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2015, 5, 1500300.	10.2	138
46	Dyeâ€Sensitized Tandem Solar Cells with Extremely High Openâ€Circuit Voltage Using Co(II)/Co(III) Electrolyte. Israel Journal of Chemistry, 2015, 55, 1002-1010.	1.0	3
47	Fluorine: Edge-Fluorinated Graphene Nanoplatelets as High Performance Electrodes for Dye-Sensitized Solar Cells and Lithium Ion Batteries (Adv. Funct. Mater. 8/2015). Advanced Functional Materials, 2015, 25, 1328-1328.	7.8	6
48	Dâ€“Ï€â€“A organic dyes with various bulky amine-typed donor moieties for dye-sensitized solar cells employing the cobalt electrolyte. Organic Electronics, 2015, 25, 1-5.	1.4	16
49	Copolymer-templated nitrogen-enriched nanocarbons as a low charge-transfer resistance and highly stable alternative to platinum cathodes in dye-sensitized solar cells. Journal of Materials Chemistry A, 2015, 3, 4413-4419.	5.2	45
50	Edgeâ€Fluorinated Graphene Nanoplatelets as High Performance Electrodes for Dyeâ€Sensitized Solar Cells and Lithium Ion Batteries. Advanced Functional Materials, 2015, 25, 1170-1179.	7.8	174
51	High-performance dye-sensitized solar cells using edge-halogenated graphene nanoplatelets as counter electrodes. Nano Energy, 2015, 13, 336-345.	8.2	85
52	Novel Carbazole-Based Hole-Transporting Materials with Star-Shaped Chemical Structures for Perovskite-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 22213-22217.	4.0	104
53	New thieno[3,2-b][1]benzothiophene-based organic sensitizers containing Ï€-extended thiophene spacers for efficient dye-sensitized solar cells. RSC Advances, 2015, 5, 80859-80870.	1.7	16
54	A Near-IR Organic Sensitizer with Squaraine and Phenothiazine Unit for Dye-Sensitized Solar Cells. Molecular Crystals and Liquid Crystals, 2014, 600, 116-122.	0.4	1

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55	Graphene Nanoplatelets Doped with N at its Edges as Metalâ€Free Cathodes for Organic Dyeâ€Sensitized Solar Cells. Advanced Materials, 2014, 26, 3055-3062.	11.1	140
56	B-Doped Graphene as an Electrochemically Superior Metal-Free Cathode Material As Compared to Pt over a Co(II)/Co(III) Electrolyte for Dye-Sensitized Solar Cell. Chemistry of Materials, 2014, 26, 3586-3591.	3.2	57
57	Edge-carboxylated graphene nanoplatelets as oxygen-rich metal-free cathodes for organic dye-sensitized solar cells. Energy and Environmental Science, 2014, 7, 1044-1052.	15.6	82
58	14.8% perovskite solar cells employing carbazole derivatives as hole transporting materials. Chemical Communications, 2014, 50, 14161-14163.	2.2	159
59	Quinoxaline Dendrimers at the Airâ€"Aqueous Interface and Their Photoluminescent Properties. Chemistry Letters, 2014, 43, 1303-1305.	0.7	1
60	Lanthanide(III) dendrimer complexes based on diphenylquinoxaline derivatives for photonic amplification. Macromolecular Research, 2013, 21, 556-564.	1.0	7
61	Dual-channel anchorable organic dyes with well-defined structures for highly efficient dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 9947.	5.2	48
62	Dyeâ€Sensitized Solar Cells based on Organic Dualâ€Channel Anchorable Dyes with Wellâ€Defined Core Bridge Structures. ChemSusChem, 2013, 6, 2069-2073.	3.6	27
63	A new tetrakis Î²-diketone ligand for NIR emitting LnIII ions: luminescent doped PMMA films and flexible resins for advanced photonic applications. Journal of Materials Chemistry C, 2013, 1, 6935.	2.7	85
64	Dual-channel anchorable organic dye with triphenylamine-based core bridge unit for dye-sensitized solar cells. Dyes and Pigments, 2013, 99, 599-606.	2.0	23
65	Nb-doped TiO2 nanoparticles for organic dye-sensitized solar cells. RSC Advances, 2013, 3, 16380.	1.7	75
66	Novel Dâ€"Ï€â€"A structured porphyrin dyes with diphenylamine derived electron-donating substituents for highly efficient dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 3977.	5.2	75
67	Structural effect of carbazole-based coadsorbents on the photovoltaic performance of organic dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 9114.	5.2	42
68	Novel Dâ€"Ï€â€"A structured Zn(ii)â€"porphyrin dyes with bulky fluorenyl substituted electron donor moieties for dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 9848.	5.2	43
69	N-Doped Graphene Nanoplatelets as Superior Metal-Free Counter Electrodes for Organic Dye-Sensitized Solar Cells. ACS Nano, 2013, 7, 5243-5250.	7.3	238
70	Biphenylene-bridged mesostructured organosilica as a novel hybrid host material for LnIII (Ln = Eu, Gd,) Tj ETQq0 0 0 rgBT /Overlock 10 T 3454.	2.7	42
71	Direct nitrogen fixation at the edges of graphene nanoplatelets as efficient electrocatalysts for energy conversion. Scientific Reports, 2013, 3, 2260.	1.6	204
72	Novel Dâ€"Ï€â€"A structured Zn(ii)-porphyrin dyes containing a bis(3,3-dimethylfluorenyl)amine moiety for dye-sensitised solar cells. Chemical Communications, 2012, 48, 9349.	2.2	91

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73	Ln(iii)-cored complexes based on boron dipyrromethene (Bodipy) ligands for NIR emission. New Journal of Chemistry, 2012, 36, 723-731.	1.4	21
74	A simple triaryl amine-based dual functioned co-adsorbent for highly efficient dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 3786.	6.7	65
75	A Desirable Holeâ€Conducting Coadsorbent for Highly Efficient Dyeâ€Sensitized Solar Cells through an Organic Redox Cascade Strategy. Chemistry - A European Journal, 2011, 17, 11115-11121.	1.7	85
76	Organic dyes incorporating low-band-gap chromophores based on Ï€-extended benzothiadiazole for dye-sensitized solar cells. Dyes and Pigments, 2011, 91, 192-198.	2.0	160
77	Novel D-Ï€-A system based on zinc-porphyrin derivatives for highly efficient dye-sensitised solar cells. Tetrahedron Letters, 2011, 52, 3879-3882.	0.7	57
78	Novel Erbium(III)-encapsulated complexes based on Ï€-extended anthracene ligands bearing G3-aryl-ether dendron: synthesis and photophysical studies. Macromolecular Research, 2009, 17, 672-681.	1.0	0
79	Functionalized alkyne bridged dendron based chromophores for dye-sensitized solar cell applications. Energy and Environmental Science, 2009, 2, 1082.	15.6	29
80	White Light-Emitting Diodes from Novel Silicon-Based Copolymers Containing Both Electron-Transport Oxadiazole and Hole-Transport Carbazole Moieties in the Main Chainâ€. Macromolecules, 2002, 35, 6782-6791.	2.2	114
81	Palladium-Catalyzed Direct Synthesis, Photophysical Properties, and Tunable Electroluminescence of Novel Silicon-Based Alternating Copolymers. Macromolecules, 2000, 33, 9277-9288.	2.2	90
82	Porous Carbon Materials as Supreme Metal-Free Counter Electrode for Dye-Sensitized Solar Cells. , 0, , .		1