Jingshan Luo

List of Publications by Citations

113 papers	18,938 citations	63 h-index	123 g-index
123 ext. papers	21,172 ext. citations	15.6 avg, IF	6.84 L-index

#	Paper	IF	Citations
113	Water photolysis at 12.3% efficiency via perovskite photovoltaics and Earth-abundant catalysts. *Science*, **2014**, 345, 1593-6	33.3	1920
112	Efficient luminescent solar cells based on tailored mixed-cation perovskites. *Science Advances*, **2016**, 2, e1501170	14.3	1498
111	Polymer-templated nucleation and crystal growth of perovskite films for solar cells with efficiency greater than 21%. *Nature Energy*, **2016**, 1,	62.3	1422
110	A vacuum flash-assisted solution process for high-efficiency large-area perovskite solar cells. *Science*, **2016**, 353, 58-62	33.3	1406
109	Improved performance and stability of perovskite solar cells by crystal crosslinking with alkylphosphonic acid ammonium chlorides. *Nature Chemistry*, **2015**, 7, 703-11	17.6	898
108	Entropic stabilization of mixed A-cation ABX3 metal halide perovskites for high performance perovskite solar cells. *Energy and Environmental Science*, **2016**, 9, 656-662	35.4	882
107	Three-dimensional graphene foam supported Fe lithium battery anodes with long cycle life and high rate capability. *Nano Letters*, **2013**, 13, 6136-43	11.5	670
106	Cu2O Nanowire Photocathodes for Efficient and Durable Solar Water Splitting. *Nano Letters*, **2016**, 16, 1848-57	11.5	439
105	Seed-assisted synthesis of highly ordered TiO2@ Fe2O3 core/shell arrays on carbon textiles for lithium-ion battery applications. *Energy and Environmental Science*, **2012**, 5, 6559	35.4	404
104	Synthesis of free-standing metal sulfide nanoarrays via anion exchange reaction and their electrochemical energy storage application. *Small*, **2014**, 10, 766-73	11	367
103	Three-Dimensional Co3O4@MnO2 Hierarchical Nanoneedle Arrays: Morphology Control and Electrochemical Energy Storage. *Advanced Functional Materials*, **2014**, 24, 3815-3826	15.6	338
102	Solar conversion of CO2 to CO using Earth-abundant electrocatalysts prepared by atomic layer modification of CuO. *Nature Energy*, **2017**, 2,	62.3	334
101	Boosting the performance of Cu2O photocathodes for unassisted solar water splitting devices. *Nature Catalysis*, **2018**, 1, 412-420	36.5	329
100	Europium-Doped CsPbI2Br for Stable and Highly Efficient Inorganic Perovskite Solar Cells. *Joule*, **2019**, 3, 205-214	27.8	290
99	Nanowire perovskite solar cell. *Nano Letters*, **2015**, 15, 2120-6	11.5	282
98	Isomer-Pure Bis-PCBM-Assisted Crystal Engineering of Perovskite Solar Cells Showing Excellent Efficiency and Stability. *Advanced Materials*, **2017**, 29, 1606806	24	276
97	Rationally Designed Hierarchical TiO2@Fe2O3 Hollow Nanostructures for Improved Lithium Ion Storage. *Advanced Energy Materials*, **2013**, 3, 737-743	21.8	274

96	Efficient photosynthesis of carbon monoxide from CO2 using perovskite photovoltaics. *Nature Communications*, **2015**, 6, 7326	17.4	245
95	Self-assembly of well-ordered whisker-like manganese oxide arrays on carbon fiber paper and its application as electrode material for supercapacitors. *Journal of Materials Chemistry*, **2012**, 22, 8634		231
94	Enhancing Efficiency of Perovskite Solar Cells via N-doped Graphene: Crystal Modification and Surface Passivation. *Advanced Materials*, **2016**, 28, 8681-8686	24	228
93	TiO2/(CdS, CdSe, CdSeS) Nanorod Heterostructures and Photoelectrochemical Properties. *Journal of Physical Chemistry C*, **2012**, 116, 11956-11963	3.8	224
92	Covalent Immobilization of a Molecular Catalyst on Cu2O Photocathodes for CO2 Reduction. *Journal of the American Chemical Society*, **2016**, 138, 1938-46	16.4	220
91	High-Performance Perovskite Solar Cells with Enhanced Environmental Stability Based on Amphiphile-Modified CH3 NH3 PbI3. *Advanced Materials*, **2016**, 28, 2910-5	24	207
90	Porous Hydroxide Nanosheets on Preformed Nanowires by Electrodeposition: Branched Nanoarrays for Electrochemical Energy Storage. *Chemistry of Materials*, **2012**, 24, 3793-3799	9.6	192
89	Over 20% PCE perovskite solar cells with superior stability achieved by novel and low-cost hole-transporting materials. *Nano Energy*, **2017**, 41, 469-475	17.1	191
88	Multifunctional molecular modulators for perovskite solar cells with over 20% efficiency and high operational stability. *Nature Communications*, **2018**, 9, 4482	17.4	189
87	A simple spiro-type hole transporting material for efficient perovskite solar cells. *Energy and Environmental Science*, **2015**, 8, 1986-1991	35.4	184
86	11% efficiency solid-state dye-sensitized solar cells with copper(II/I) hole transport materials. *Nature Communications*, **2017**, 8, 15390	17.4	181
85	Atomic-level passivation mechanism of ammonium salts enabling highly efficient perovskite solar cells. *Nature Communications*, **2019**, 10, 3008	17.4	178
84	Ionic Liquid Control Crystal Growth to Enhance Planar Perovskite Solar Cells Efficiency. *Advanced Energy Materials*, **2016**, 6, 1600767	21.8	165
83	A Novel Dopant-Free Triphenylamine Based Molecular Butterfly Hole-Transport Material for Highly Efficient and Stable Perovskite Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1600401	21.8	152
82	Perovskite Photovoltaics with Outstanding Performance Produced by Chemical Conversion of Bilayer Mesostructured Lead Halide/TiO2 Films. *Advanced Materials*, **2016**, 28, 2964-70	24	140
81	Enhanced Charge Collection with Passivation Layers in Perovskite Solar Cells. *Advanced Materials*, **2016**, 28, 3966-72	24	140
80	3D carbon/cobalt-nickel mixed-oxide hybrid nanostructured arrays for asymmetric supercapacitors. *Small*, **2014**, 10, 2937-45	11	126
79	Transparent Cuprous Oxide Photocathode Enabling a Stacked Tandem Cell for Unbiased Water Splitting. *Advanced Energy Materials*, **2015**, 5, 1501537	21.8	123

78	Controlled synthesis of hierarchical graphene-wrapped TiO2@Co3O4 coaxial nanobelt arrays for high-performance lithium storage. *Journal of Materials Chemistry A*, **2013**, 1, 273-281	13	122
77	Efficient and selective carbon dioxide reduction on low cost protected Cu2O photocathodes using a molecular catalyst. *Energy and Environmental Science*, **2015**, 8, 855-861	35.4	119
76	Low-Temperature Nb-Doped SnO2 Electron-Selective Contact Yields over 20% Efficiency in Planar Perovskite Solar Cells. *ACS Energy Letters*, **2018**, 3, 773-778	20.1	119
75	Photon upconversion in hetero-nanostructured photoanodes for enhanced near-infrared light harvesting. *Advanced Materials*, **2013**, 25, 1603-7	24	119
74	A green approach to the synthesis of high-quality graphene oxide flakes via electrochemical exfoliation of pencil core. *RSC Advances*, **2013**, 3, 11745	3.7	119
73	A dopant-free spirobi[cyclopenta[2,1-b:3,4-b?]dithiophene] based hole-transport material for efficient perovskite solar cells. *Materials Horizons*, **2015**, 2, 613-618	14.4	116
72	Self-assembled graphene@PANI nanoworm composites with enhanced supercapacitor performance. *RSC Advances*, **2013**, 3, 5851	3.7	114
71	Unraveling the Reasons for Efficiency Loss in Perovskite Solar Cells. *Advanced Functional Materials*, **2015**, 25, 3925-3933	15.6	114
70	Photoelectrocatalytic Arene C-H Amination. *Nature Catalysis*, **2019**, 2, 266-373	36.5	114
69	Selective C-C Coupling in Carbon Dioxide Electroreduction via Efficient Spillover of Intermediates As Supported by Operando Raman Spectroscopy. *Journal of the American Chemical Society*, **2019**, 141, 18704-18714	16.4	113
68	Comprehensive control of voltage loss enables 11.7% efficient solid-state dye-sensitized solar cells. *Energy and Environmental Science*, **2018**, 11, 1779-1787	35.4	112
67	Bipolar Membrane-Assisted Solar Water Splitting in Optimal pH. *Advanced Energy Materials*, **2016**, 6, 1600100	21.8	108
66	Solution transformation of Cu□ into CuInS□ for solar water splitting. *Nano Letters*, **2015**, 15, 1395-402	11.5	102
65	Boosting the Efficiency of Perovskite Solar Cells with CsBr-Modified Mesoporous TiO2 Beads as Electron-Selective Contact. *Advanced Functional Materials*, **2018**, 28, 1705763	15.6	93
64	Semitransparent Perovskite Solar Cells: From Materials and Devices to Applications. *Advanced Materials*, **2020**, 32, e1806474	24	93
63	CsPb(I Br1)□ solar cells. *Science Bulletin*, **2019**, 64, 1532-1539	10.6	92
62	Hierarchical TiO2 nanobelts@MnO2 ultrathin nanoflakes core□shell array electrode materials for supercapacitors. *RSC Advances*, **2013**, 3, 14413	3.7	90
61	Targeting Ideal Dual-Absorber Tandem Water Splitting Using Perovskite Photovoltaics and CuInxGa1-xSe2 Photocathodes. *Advanced Energy Materials*, **2015**, 5, 1501520	21.8	89

60	A novel photoanode with three-dimensionally, hierarchically ordered nanobushes for highly efficient photoelectrochemical cells. *Advanced Materials*, **2012**, 24, 4157-62	24	89
59	Hierarchical Core/Shell NiCo2O4@NiCo2O4 Nanocactus Arrays with Dual-functionalities for High Performance Supercapacitors and Li-ion Batteries. *Scientific Reports*, **2015**, 5, 12099	4.9	84
58	A novel one-step synthesized and dopant-free hole transport material for efficient and stable perovskite solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 16330-16334	13	78
57	Elucidating the role of chlorine in perovskite solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 7423-7432	13	76
56	Homogeneous photosensitization of complex TiO2 nanostructures for efficient solar energy conversion. *Scientific Reports*, **2012**, 2, 451	4.9	76
55	Dopant-Free Donor (D)-π-D-π-D Conjugated Hole-Transport Materials for Efficient and Stable Perovskite Solar Cells. *ChemSusChem*, **2016**, 9, 2578-2585	8.3	75
54	Integrated photoelectrochemical energy storage: solar hydrogen generation and supercapacitor. *Scientific Reports*, **2012**, 2, 981	4.9	75
53	Atomic Layer Deposition of ZnO on CuO Enables Selective and Efficient Electroreduction of Carbon Dioxide to Liquid Fuels. *Angewandte Chemie - International Edition*, **2019**, 58, 15036-15040	16.4	73
52	Ba-induced phase segregation and band gap reduction in mixed-halide inorganic perovskite solar cells. *Nature Communications*, **2019**, 10, 4686	17.4	65
51	Solution-Processed Cu2S Photocathodes for Photoelectrochemical Water Splitting. *ACS Energy Letters*, **2018**, 3, 760-766	20.1	64
50	Ligand-Modulated Excess PbI Nanosheets for Highly Efficient and Stable Perovskite Solar Cells. *Advanced Materials*, **2020**, 32, e2000865	24	60
49	Low-Temperature Atomic Layer Deposition of Crystalline and Photoactive Ultrathin Hematite Films for Solar Water Splitting. *ACS Nano*, **2015**, 9, 11775-83	16.7	59
48	A copper nickel mixed oxide hole selective layer for Au-free transparent cuprous oxide photocathodes. *Energy and Environmental Science*, **2017**, 10, 912-918	35.4	57
47	NiCo2O4 nanostructure materials: morphology control and electrochemical energy storage. *Dalton Transactions*, **2014**, 43, 15887-97	4.3	53
46	Diffusion-controlled evolution of core-shell nanowire arrays into integrated hybrid nanotube arrays for Li-ion batteries. *Nanoscale*, **2013**, 5, 8105-13	7.7	50
45	Solar Water Splitting with Perovskite/Silicon Tandem Cell and TiC-Supported Pt Nanocluster Electrocatalyst. *Joule*, **2019**, 3, 2930-2941	27.8	49
44	MoS2 architectures supported on graphene foam/carbon nanotube hybrid films: highly integrated frameworks with ideal contact for superior lithium storage. *Journal of Materials Chemistry A*, **2015**, 3, 17534-17543	13	47
43	Morphology Engineering: A Route to Highly Reproducible and High Efficiency Perovskite Solar Cells. *ChemSusChem*, **2017**, 10, 1624-1630	8.3	40

42	An ultrathin cobalt□iron oxide catalyst for water oxidation on nanostructured hematite photoanodes. *Journal of Materials Chemistry A*, **2019**, 7, 6012-6020	13	40
41	Seed-assisted synthesis of Co3O4@□Fe2O3 core□shell nanoneedle arrays for lithium-ion battery anode with high capacity. *RSC Advances*, **2014**, 4, 13241	3.7	39
40	Enhanced light absorption of thin perovskite solar cells using textured substrates. *Solar Energy Materials and Solar Cells*, **2017**, 168, 214-220	6.4	36
39	Preparation of CoAl layered double hydroxide nanoflake arrays and their high supercapacitance performance. *Applied Clay Science*, **2014**, 102, 28-32	5.2	32
38	Atomic Layer Deposition of ZnO on CuO Enables Selective and Efficient Electroreduction of Carbon Dioxide to Liquid Fuels. *Angewandte Chemie*, **2019**, 131, 15178-15182	3.6	27
37	The removal of inevitable NO species in catalysts and the selection of appropriate membrane for measuring electrocatalytic ammonia synthesis accurately. *Journal of Energy Chemistry*, **2020**, 49, 51-58	12	23
36	Temperature-dependent terahertz conductivity of tin oxide nanowire films. *Journal Physics D: Applied Physics*, **2012**, 45, 465101	3	21
35	Ultrafast Exciton Dynamics and Two-Photon Pumped Lasing from ZnSe Nanowires. *Advanced Optical Materials*, **2013**, 1, 319-326	8.1	20
34	Toward Efficient and Stable Perovskite Solar Cells: Choosing Appropriate Passivator to Specific Defects. *Solar Rrl*, **2020**, 4, 2000308	7.1	19
33	Chemically tailored molecular surface modifiers for efficient and stable perovskite photovoltaics. *SmartMat*, **2021**, 2, 33-37	22.8	18
32	Ti/Co-S catalyst covered amorphous Si-based photocathodes with high photovoltage for the HER in non-acid environments. *Journal of Materials Chemistry A*, **2018**, 6, 811-816	13	17
31	Hierarchical self-assembly of CdTe quantum dots into hyperbranched nanobundles: suppression of biexciton Auger recombination. *Nanoscale*, **2011**, 3, 2882-8	7.7	16
30	Hydrogenated TiO Thin Film for Accelerating Electron Transport in Highly Efficient Planar Perovskite Solar Cells. *Advanced Science*, **2017**, 4, 1700008	13.6	15
29	Elucidation of photovoltage origin and charge transport in Cu2O heterojunctions for solar energy conversion. *Sustainable Energy and Fuels*, **2019**, 3, 2633-2641	5.8	14
28	A Promising Beginning for Perovskite Nanocrystals: A Nano Letters Virtual Issue. *Nano Letters*, **2018**, 18, 2747-2750	11.5	13
27	Selective electrochemical reduction of carbon dioxide to ethylene on a copper hydroxide nitrate nanostructure electrode. *Nanoscale*, **2020**, 12, 17013-17019	7.7	12
26	Hyperbranched TiO-CdS nano-heterostructures for highly efficient photoelectrochemical photoanodes. *Nanotechnology*, **2018**, 29, 335404	3.4	11
25	Promoting CO electroreduction on CuO nanowires with a hydrophobic Nafion overlayer. *Nanoscale*, **2021**, 13, 3588-3593	7.7	10

24	The pitfalls in electrocatalytic nitrogen reduction for ammonia synthesis. *Journal of Energy Chemistry*, **2021**, 61, 149-154	12	8
23	Toward Efficient and Stable Perovskite Solar Cells: Choosing Appropriate Passivator to Specific Defects. *Solar Rrl*, **2020**, 4, 2070104	7.1	6
22	Water Stable Haloplumbate Modulation for Efficient and Stable Hybrid Perovskite Photovoltaics. *Advanced Energy Materials*, **2021**, 11, 2101082	21.8	6
21	Effects of guanidinium cations on structural, optoelectronic and photovoltaic properties of perovskites. *Journal of Energy Chemistry*, **2021**, 58, 48-54	12	6
20	Micro-Electrode with Fast Mass Transport for Enhancing Selectivity of Carbonaceous Products in Electrochemical CO2 Reduction. *Advanced Functional Materials*, **2021**, 31, 2103966	15.6	6
19	Interface Etching Leads to the Inversion of the Conduction Band Offset between the CdS/Sb2Se3 Heterojunction and High-Efficient Sb2Se3 Solar Cells. *ACS Applied Energy Materials*,	6.1	4
18	Remarkable Cd-free Sb2Se3 solar cell yield achieved by interface band-alignment and growth orientation screening. *Journal of Materials Chemistry A*,	13	4
17	UV light absorbers executing synergistic effects of passivating defects and improving photostability for efficient perovskite photovoltaics. *Journal of Energy Chemistry*, **2021**,	12	4
16	Copper-indium hydroxides derived electrocatalysts with tunable compositions for electrochemical CO2 reduction. *Journal of Energy Chemistry*, **2021**, 63, 278-278	12	4
15	Bimetallic Cu□n Catalysts for Electrochemical CO2 Reduction: Phase-Separated versus Core□Shell Distribution. *ACS Catalysis*, **2022**, 12, 2741-2748	13.1	4
14	Structural and Compositional Investigations on the Stability of Cuprous Oxide Nanowire Photocathodes for Photoelectrochemical Water Splitting. *ACS Applied Materials & Interfaces*, **2021**, 13, 55080-55091	9.5	3
13	Hydrophobic Organic Ammonium Halide Modification toward Highly Efficient and Stable CsPbI2.25Br0.75 Solar Cell. *Solar Rrl*, **2021**, 5, 2100178	7.1	3
12	Healing the defects in CsPbI3 solar cells by CsPbBr3 quantum dots. *Nano Research*,1	10	3
11	Perovskite Solar Cells for the Generation of Fuels from Sunlight **2016**, 285-305		3
10	Manipulated Crystallization and Passivated Defects for Efficient Perovskite Solar Cells via Addition of Ammonium Iodide. *ACS Applied Materials & Interfaces*, **2021**, 13, 34053-34063	9.5	3
9	Reduced defects and enhanced Vbi in perovskite absorbers through synergetic passivating effect using 4-methoxyphenylacetic acid. *Journal of Power Sources*, **2022**, 518, 230734	8.9	2
8	Crystal facet effect induced by different pretreatment of Cu2O nanowire electrode for enhanced electrochemical CO2 reduction to C2+ products. *Chinese Journal of Catalysis*, **2022**, 43, 1066-1073	11.3	2
7	Solar Cells: Ionic Liquid Control Crystal Growth to Enhance Planar Perovskite Solar Cells Efficiency (Adv. Energy Mater. 20/2016). *Advanced Energy Materials*, **2016**, 6,	21.8	1

6	Exciton Dynamics: Ultrafast Exciton Dynamics and Two-Photon Pumped Lasing from ZnSe Nanowires (Advanced Optical Materials 4/2013). *Advanced Optical Materials*, **2013**, 1, 276-276	8.1	1
5	Interface Modification Uncovers the Potential Application of SnO 2 /TiO 2 Double Electron Transport Layer in Efficient Cadmium-Free Sb 2 Se 3 Devices. *Advanced Materials Interfaces*,2102464	4.6	1
4	Double interface modification promotes efficient Sb2Se3 solar cell by tailoring band alignment and light harvest. *Journal of Energy Chemistry*, **2022**, 70, 191-200	12	1
3	Interface engineering utilizing bifunctional metformin for high performance inverted perovskite solar cells. *Organic Electronics*, **2022**, 106, 106525	3.5	0
2	Recent developments in perovskites-based precursor inks for scalable architectures of perovskite solar cell technology.. *Sustainable Energy and Fuels*,	5.8	0
1	Light Harvesting: Photon Upconversion in Hetero-nanostructured Photoanodes for Enhanced Near-Infrared Light Harvesting (Adv. Mater. 11/2013). *Advanced Materials*, **2013**, 25, 1656-1656	24	