Jongchul Lim

List of Publications by Year
in descending order

49 papers	2,881 citations	201575 27 h-index	197736 49 g-index
52 all docs	52 docs citations	52 times ranked	4383 citing authors

#	Article	IF	Citations
1	Excellent Longâ€Range Chargeâ€Carrier Mobility in 2D Perovskites. Advanced Functional Materials, 2022, 32, .	7.8	20
2	Boosting the efficiency of quasi-2D perovskites light-emitting diodes by using encapsulation growth method. Nano Energy, 2021, 80, 105511.	8.2	54
3	Understanding Dark Current-Voltage Characteristics in Metal-Halide Perovskite Single Crystals. Physical Review Applied, 2021, 15, .	1.5	30
4	Revealing Charge Carrier Mobility and Defect Densities in Metal Halide Perovskites via Space-Charge-Limited Current Measurements. ACS Energy Letters, 2021, 6, 1087-1094.	8.8	254
5	Charge Transporting Materials Grown by Atomic Layer Deposition in Perovskite Solar Cells. Energies, 2021, 14, 1156.	1.6	4
6	Balanced Charge Carrier Transport Mediated by Quantum Dot Film Post-organization for Light-Emitting Diode Applications. ACS Applied Materials & Interfaces, 2021, 13, 26170-26179.	4.0	8
7	Monodisperse Perovskite Colloidal Quantum Dots Enable High-Efficiency Photovoltaics. ACS Energy Letters, 2021, 6, 2229-2237.	8.8	26
8	Selfâ€Assembled Perovskite Nanoislands on CH₃NH₃PbI₃ Cuboid Single Crystals by Energetic Surface Engineering. Advanced Functional Materials, 2021, 31, 2105542.	7.8	9
9	Selfâ€Assembled Perovskite Nanoislands on CH₃NH₃PbI₃ Cuboid Single Crystals by Energetic Surface Engineering (Adv. Funct. Mater. 50/2021). Advanced Functional Materials, 2021, 31, .	7.8	1
10	A photo-crosslinkable bis-triarylamine side-chain polymer as a hole-transport material for stable perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 190-198.	2.5	22
11	Polymer Lightâ€Emitting Transistors With Chargeâ€Carrier Mobilities Exceeding 1 cm² V^{âˆ’1} s^{âˆ’1}. Advanced Electronic Materials, 2020, 6, 1901132.	2.6	8
12	Toward Understanding Space-Charge Limited Current Measurements on Metal Halide Perovskites. ACS Energy Letters, 2020, 5, 376-384.	8.8	211
13	Focussed Review of Utilization of Graphene-Based Materials in Electron Transport Layer in Halide Perovskite Solar Cells: Materials-Based Issues. Energies, 2020, 13, 6335.	1.6	7
14	Recent Progress and Challenges of Electron Transport Layers in Organicâ€“Inorganic Perovskite Solar Cells. Energies, 2020, 13, 5572.	1.6	66
15	A piperidinium salt stabilizes efficient metal-halide perovskite solar cells. Science, 2020, 369, 96-102.	6.0	461
16	Electron trapping and extraction kinetics on carrier diffusion in metal halide perovskite thin films. Journal of Materials Chemistry A, 2019, 7, 25838-25844.	5.2	8
17	Deciphering photocarrier dynamics for tuneable high-performance perovskite-organic semiconductor heterojunction phototransistors. Nature Communications, 2019, 10, 4475.	5.8	49
18	Elucidating the long-range charge carrier mobility in metal halide perovskite thin films. Energy and Environmental Science, 2019, 12, 169-176.	15.6	115

#	Article	IF	Citations
19	High Responsivity and Response Speed Singleâ€Layer Mixedâ€Cation Lead Mixedâ€Halide Perovskite Photodetectors Based on Nanogap Electrodes Manufactured on Largeâ€Area Rigid and Flexible Substrates. Advanced Functional Materials, 2019, 29, 1901371.	7.8	39
20	In-depth optical characterization of poly(3-hexylthiophene) after formation of nanosecond laser-induced periodic surface structures. Nanoscale, 2019, 11, 7567-7571.	2.8	3
21	Solution-Processed All-Perovskite Multi-junction Solar Cells. Joule, 2019, 3, 387-401.	11.7	177
22	Balancing Charge Carrier Transport in a Quantum Dot Pâ€"N Junction toward Hysteresis-Free High-Performance Solar Cells. ACS Energy Letters, 2018, 3, 1036-1043.	8.8	37
23	Meso-Superstructured Perovskite Solar Cells: Revealing the Role of the Mesoporous Layer. Journal of Physical Chemistry C, 2018, 122, 21239-21247.	1.5	27
24	Controlling Nucleation and Growth of Metal Halide Perovskite Thin Films for Highâ€Efficiency Perovskite Solar Cells. Small, 2017, 13, 1602808.	5.2	36
25	Interfacial electron accumulation for efficient homo-junction perovskite solar cells. Nano Energy, 2016, 28, 269-276.	8.2	63
26	Enhanced charge carrier transport properties in colloidal quantum dot solar cells via organic and inorganic hybrid surface passivation. Journal of Materials Chemistry A, 2016, 4, 18769-18775.	5.2	29
27	Electron-Transfer Kinetics through Interfaces between Electron-Transport and Ion-Transport Layers in Solid-State Dye-Sensitized Solar Cells Utilizing Solid Polymer Electrolyte. Journal of Physical Chemistry C, 2016, 120, 2494-2500.	1.5	13
28	Fast cascade neutralization of an oxidized sensitizer by an in situ-generated ionic layer of I^{â^'} species on a nanocrystalline TiO₂ electrode. Energy and Environmental Science, 2014, 7, 4029-4034.	15.6	7
29	Dye-Sensitized Solar Cells: Physically Stable Polymer-Membrane Electrolytes for Highly Efficient Solid-State Dye-Sensitized Solar Cells with Long-Term Stability (Adv. Energy Mater. 3/2014). Advanced Energy Materials, 2014, 4, n/a-n/a.	10.2	2
30	Physically Stable Polymerâ€Membrane Electrolytes for Highly Efficient Solidâ€State Dyeâ€Sensitized Solar Cells with Longâ€Term Stability. Advanced Energy Materials, 2014, 4, 1300489.	10.2	27
31	A diketopyrrolopyrrole-containing hole transporting conjugated polymer for use in efficient stable organicâ€"inorganic hybrid solar cells based on a perovskite. Energy and Environmental Science, 2014, 7, 1454.	15.6	374
32	Well-Defined All-Conducting Block Copolymer Bilayer Hybrid Nanostructure: Selective Positioning of Lithium Ions and Efficient Charge Collection. ACS Nano, 2014, 8, 6893-6901.	7.3	10
33	Optically pumped distributed feedback dye lasing with slide-coated TiO_2 inverse-opal slab as Bragg reflector. Optics Letters, 2014, 39, 4743.	1.7	5
34	Bi-functional ion exchangers for enhanced performance of dye-sensitized solar cells. Chemical Communications, 2013, 49, 6671.	2.2	3
35	Tunable Nanoporous Network Polymer Nanocomposites having Size-Selective Ion Transfer for Dye-Sensitized Solar Cells (Adv. Energy Mater. 2/2013). Advanced Energy Materials, 2013, 3, 183-183.	10.2	4
36	Sulfur-incorporated carbon quantum dots with a strong long-wavelength absorption band. Journal of Materials Chemistry C, 2013, 1, 2002.	2.7	65

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37	Charge Density Dependent Mobility of Organic Holeâ€Transporters and Mesoporous TiO₂ Determined by Transient Mobility Spectroscopy: Implications to Dyeâ€Sensitized and Organic Solar Cells. Advanced Materials, 2013, 25, 3227-3233.	11.1	217
38	A novel quasi-solid state dye-sensitized solar cell fabricated using a multifunctional network polymer membrane electrolyte. Energy and Environmental Science, 2013, 6, 1559.	15.6	48
39	Aerosol OT/Water System Coupled with Triiodide/Iodide (I₃^{â^’}/I^{â^’}) Redox Electrolytes for Highly Efficient Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2013, 3, 1344-1350.	10.2	18
40	Tunable Nanoporous Network Polymer Nanocomposites having Sizeâ€Selective Ion Transfer for Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2013, 3, 184-192.	10.2	18
41	Chemical compatibility between a hole conductor and organic dye enhances the photovoltaic performance of solid-state dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 8641.	6.7	34
42	Reduced charge recombination by the formation of an interlayer using a novel dendron coadsorbent in solid-state dye-sensitized solar cells. RSC Advances, 2012, 2, 3467.	1.7	38
43	Facile fabrication of aligned doubly open-ended TiO2 nanotubes, via a selective etching process, for use in front-illuminated dye sensitized solar cells. Chemical Communications, 2012, 48, 8748.	2.2	39
44	Stable Dyeâ€Sensitized Solar Cells by Encapsulation of N719â€Sensitized TiO₂ Electrodes Using Surfaceâ€Induced Crossâ€Linking Polymerization. Advanced Energy Materials, 2012, 2, 219-224.	10.2	43
45	Effect of coadsorbent properties on the photovoltaic performance of dye-sensitized solar cells. Chemical Communications, 2011, 47, 4147.	2.2	86
46	A novel hole transport material for iodine-free solid state dye-sensitized solar cells. Chemical Communications, 2011, 47, 10395.	2.2	28
47	Thermodynamic Control over the Competitive Anchoring of N719 Dye on Nanocrystalline TiO₂ for Improving Photoinduced Electron Generation. Langmuir, 2011, 27, 14647-14653.	1.6	35
48	Vacuum-deposited Cs2AgBiBr6. Photovoltaic devices and fundamental characterization.. , 0, , .		0
49	Solution-Processed All-Perovskite Multi-Junction Solar Cells. , 0, , .		0