Sonia Ruiz-Raga

List of Publications by Year
in descending order

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Version: 2024-02-01

47 papers	5,064 citations	147801 31 h-index	206112 48 g-index
50 all docs	50 docs citations	50 times ranked	6917 citing authors

#	Article	IF	Citations
1	Can Laminated Carbon Challenge Gold? Toward Universal, Scalable, and Lowâ€Cost Carbon Electrodes for Perovskite Solar Cells. Advanced Materials Technologies, 2022, 7, 2101148.	5.8	14
2	Solution Processable Direct Bandgap Copperâ€Silverâ€Bismuth Iodide Photovoltaics: Compositional Control of Dimensionality and Optoelectronic Properties. Advanced Energy Materials, 2022, 12, .	19.5	17
3	The impact of spiro-OMeTAD photodoping on the reversible light-induced transients of perovskite solar cells. Nano Energy, 2021, 82, 105658.	16.0	28
4	Balancing Charge Extraction for Efficient Backâ€Contact Perovskite Solar Cells by Using an Embedded Mesoscopic Architecture. Advanced Energy Materials, 2021, 11, 2100053.	19.5	19
5	Honeycomb-shaped charge collecting electrodes for dipole-assisted back-contact perovskite solar cells. Nano Energy, 2020, 67, 104223.	16.0	17
6	Unique Layerâ€Dopingâ€Induced Regulation of Charge Behavior in Metalâ€Free Carbon Nitride Photoanodes for Enhanced Performance. ChemSusChem, 2020, 13, 328-333.	6.8	16
7	The Performanceâ€Determining Role of Lewis Bases in Dyeâ€Sensitized Solar Cells Employing Copperâ€Bisphenanthroline Redox Mediators. Advanced Energy Materials, 2020, 10, 2002067.	19.5	22
8	Light intensity modulated photoluminescence for rapid series resistance mapping of perovskite solar cells. Nano Energy, 2020, 73, 104755.	16.0	6
9	Highâ€Throughput Characterization of Perovskite Solar Cells for Rapid Combinatorial Screening. Solar Rrl, 2020, 4, 2000097.	5.8	18
10	LiTFSIâ€Free Spiroâ€OMeTADâ€Based Perovskite Solar Cells with Power Conversion Efficiencies Exceeding 19%. Advanced Energy Materials, 2019, 9, 1901519.	19.5	85
11	Multiple Roles of Cobalt Pyrazol-Pyridine Complexes in High-Performing Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2019, 10, 4675-4682.	4.6	13
12	Ultrasonic spray deposition of TiO2 electron transport layers for reproducible and high efficiency hybrid perovskite solar cells. Solar Energy, 2019, 188, 697-705.	6.1	11
13	Fatigue stability of CH3NH3PbI3 based perovskite solar cells in day/night cycling. Nano Energy, 2019, 58, 687-694.	16.0	46
14	Significant THz absorption in CH3NH2 molecular defect-incorporated organic-inorganic hybrid perovskite thin film. Scientific Reports, 2019, 9, 5811.	3.3	26
15	Engineering Interface Structure to Improve Efficiency and Stability of Organometal Halide Perovskite Solar Cells. Journal of Physical Chemistry B, 2018, 122, 511-520.	2.6	68
16	Effect of Grain Cluster Size on Backâ€Contact Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1805098.	14.9	32
17	Gas-solid reaction based over one-micrometer thick stable perovskite films for efficient solar cells and modules. Nature Communications, 2018, 9, 3880.	12.8	109
18	Transition metal speciation as a degradation mechanism with the formation of a solid-electrolyte interphase (SEI) in Ni-rich transition metal oxide cathodes. Journal of Materials Chemistry A, 2018, 6, 14449-14463.	10.3	37

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19	Improved Efficiency and Stability of Perovskite Solar Cells Induced by Cï£¾O Functionalized Hydrophobic Ammoniumâ€Based Additives. Advanced Materials, 2018, 30, 1703670.	21.0	132
20	Transferrable optimization of spray-coated PbI₂ films for perovskite solar cell fabrication. Journal of Materials Chemistry A, 2017, 5, 5709-5718.	10.3	54
21	Application of Methylamine Gas in Fabricating Organicâ€“Inorganic Hybrid Perovskite Solar Cells. Energy Technology, 2017, 5, 1750-1761.	3.8	46
22	Interfacial Modification of Perovskite Solar Cells Using an Ultrathin MAI Layer Leads to Enhanced Energy Level Alignment, Efficiencies, and Reproducibility. Journal of Physical Chemistry Letters, 2017, 8, 3947-3953.	4.6	101
23	Transamidation of dimethylformamide during alkylammonium lead triiodide film formation for perovskite solar cells. Journal of Materials Research, 2017, 32, 45-55.	2.6	37
24	The Effect of Impurities on the Impedance Spectroscopy Response of CH₃NH₃PbI₃ Perovskite Solar Cells. Journal of Physical Chemistry C, 2016, 120, 28519-28526.	3.1	35
25	The presence of CH3NH2 neutral species in organometal halide perovskite films. Applied Physics Letters, 2016, 108, .	3.3	50
26	Post-annealing of MAPbI₃ perovskite films with methylamine for efficient perovskite solar cells. Materials Horizons, 2016, 3, 548-555.	12.2	141
27	Thermal degradation of CH₃NH₃PbI₃ perovskite into NH₃ and CH₃I gases observed by coupled thermogravimetryâ€“mass spectrometry analysis. Energy and Environmental Science, 2016, 9, 3406-3410.	30.8	616
28	Rapid perovskite formation by CH₃NH₂ gas-induced intercalation and reaction of PbI₂. Journal of Materials Chemistry A, 2016, 4, 2494-2500.	10.3	115
29	Properties and solar cell applications of Pb-free perovskite films formed by vapor deposition. RSC Advances, 2016, 6, 2819-2825.	3.6	131
30	Perovskite Solar Cells: Silver Iodide Formation in Methyl Ammonium Lead Iodide Perovskite Solar Cells with Silver Top Electrodes (Adv. Mater. Interfaces 13/2015). Advanced Materials Interfaces, 2015, 2, .	3.7	7
31	Silver Iodide Formation in Methyl Ammonium Lead Iodide Perovskite Solar Cells with Silver Top Electrodes. Advanced Materials Interfaces, 2015, 2, 1500195.	3.7	646
32	Pinhole-free hole transport layers significantly improve the stability of MAPbI₃-based perovskite solar cells under operating conditions. Journal of Materials Chemistry A, 2015, 3, 15451-15456.	10.3	122
33	Substantial improvement of perovskite solar cells stability by pinhole-free hole transport layer with doping engineering. Scientific Reports, 2015, 5, 9863.	3.3	119
34	Smooth perovskite thin films and efficient perovskite solar cells prepared by the hybrid deposition method. Journal of Materials Chemistry A, 2015, 3, 14631-14641.	10.3	126
35	Air-Exposure Induced Dopant Redistribution and Energy Level Shifts in Spin-Coated Spiro-MeOTAD Films. Chemistry of Materials, 2015, 27, 562-569.	6.7	357
36	Influence of Air Annealing on High Efficiency Planar Structure Perovskite Solar Cells. Chemistry of Materials, 2015, 27, 1597-1603.	6.7	247

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37	Large formamidinium lead trihalide perovskite solar cells using chemical vapor deposition with high reproducibility and tunable chlorine concentrations. Journal of Materials Chemistry A, 2015, 3, 16097-16103.	10.3	165
38	Temperature-dependent hysteresis effects in perovskite-based solar cells. Journal of Materials Chemistry A, 2015, 3, 9074-9080.	10.3	121
39	High performance perovskite solar cells by hybrid chemical vapor deposition. Journal of Materials Chemistry A, 2014, 2, 18742-18745.	10.3	284
40	Fabrication of semi-transparent perovskite films with centimeter-scale superior uniformity by the hybrid deposition method. Energy and Environmental Science, 2014, 7, 3989-3993.	30.8	213
41	Temperature effects in dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 2328.	2.8	111
42	Molecular Electronic Coupling Controls Charge Recombination Kinetics in Organic Solar Cells of Low Bandgap Diketopyrrolopyrrole, Carbazole, and Thiophene Polymers. Journal of Physical Chemistry C, 2013, 117, 8719-8726.	3.1	13
43	Design and characterization of alkoxy-wrapped pushâ€“pull porphyrins for dye-sensitized solar cells. Chemical Communications, 2012, 48, 4368.	4.1	108
44	Analysis of the Origin of Open Circuit Voltage in Dye Solar Cells. Journal of Physical Chemistry Letters, 2012, 3, 1629-1634.	4.6	208
45	Enhanced diffusion through porous nanoparticle optical multilayers. Journal of Materials Chemistry, 2012, 22, 1751-1757.	6.7	22
46	How the Charge-Neutrality Level of Interface States Controls Energy Level Alignment in Cathode Contacts of Organic Bulk-Heterojunction Solar Cells. ACS Nano, 2012, 6, 3453-3460.	14.6	113
47	SiO2 Aerogel Templated, Porous TiO2 Photoanodes for Enhanced Performance in Dye-Sensitized Solar Cells Containing a Ni(III)/(IV) Bis(dicarbollide) Shuttle. Journal of Physical Chemistry C, 2011, 115, 11257-11264.	3.1	38