Sonia Ruiz-Raga

List of Publications by Citations

47 papers	4,012 citations	29 h-index	50 g-index
50 ext. papers	4,526 ext. citations	11.6 avg, IF	5.75 L-index

#	Paper	IF	Citations
47	Silver Iodide Formation in Methyl Ammonium Lead Iodide Perovskite Solar Cells with Silver Top Electrodes. *Advanced Materials Interfaces*, **2015**, 2, 1500195	4.6	500
46	Thermal degradation of CH3NH3PbI3 perovskite into NH3 and CH3I gases observed by coupled thermogravimetry□mass spectrometry analysis. *Energy and Environmental Science*, **2016**, 9, 3406-3410	35.4	468
45	Air-Exposure Induced Dopant Redistribution and Energy Level Shifts in Spin-Coated Spiro-MeOTAD Films. *Chemistry of Materials*, **2015**, 27, 562-569	9.6	289
44	High performance perovskite solar cells by hybrid chemical vapor deposition. *Journal of Materials Chemistry A*, **2014**, 2, 18742-18745	13	233
43	Influence of Air Annealing on High Efficiency Planar Structure Perovskite Solar Cells. *Chemistry of Materials*, **2015**, 27, 1597-1603	9.6	212
42	Fabrication of semi-transparent perovskite films with centimeter-scale superior uniformity by the hybrid deposition method. *Energy and Environmental Science*, **2014**, 7, 3989-3993	35.4	193
41	Analysis of the Origin of Open Circuit Voltage in Dye Solar Cells. *Journal of Physical Chemistry Letters*, **2012**, 3, 1629-34	6.4	176
40	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	13	139
39	Post-annealing of MAPbI3 perovskite films with methylamine for efficient perovskite solar cells. *Materials Horizons*, **2016**, 3, 548-555	14.4	109
38	Smooth perovskite thin films and efficient perovskite solar cells prepared by the hybrid deposition method. *Journal of Materials Chemistry A*, **2015**, 3, 14631-14641	13	108
37	Temperature-dependent hysteresis effects in perovskite-based solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 9074-9080	13	105
36	Design and characterization of alkoxy-wrapped push-pull porphyrins for dye-sensitized solar cells. *Chemical Communications*, **2012**, 48, 4368-70	5.8	104
35	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, 3453-60	16.7	104
34	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	13	101
33	Substantial improvement of perovskite solar cells stability by pinhole-free hole transport layer with doping engineering. *Scientific Reports*, **2015**, 5, 9863	4.9	101
32	Improved Efficiency and Stability of Perovskite Solar Cells Induced by C?O Functionalized Hydrophobic Ammonium-Based Additives. *Advanced Materials*, **2018**, 30, 1703670	24	100
31	Rapid perovskite formation by CH3NH2 gas-induced intercalation and reaction of PbI2. *Journal of Materials Chemistry A*, **2016**, 4, 2494-2500	13	98

30	Properties and solar cell applications of Pb-free perovskite films formed by vapor deposition. *RSC Advances*, **2016**, 6, 2819-2825	3.7	93
29	Temperature effects in dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2013**, 15, 2328-36	3.6	91
28	Gas-solid reaction based over one-micrometer thick stable perovskite films for efficient solar cells and modules. *Nature Communications*, **2018**, 9, 3880	17.4	82
27	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	6.4	76
26	Engineering Interface Structure to Improve Efficiency and Stability of Organometal Halide Perovskite Solar Cells. *Journal of Physical Chemistry B*, **2018**, 122, 511-520	3.4	48
25	LiTFSI-Free Spiro-OMeTAD-Based Perovskite Solar Cells with Power Conversion Efficiencies Exceeding 19%. *Advanced Energy Materials*, **2019**, 9, 1901519	21.8	46
24	Transferrable optimization of spray-coated PbI2 films for perovskite solar cell fabrication. *Journal of Materials Chemistry A*, **2017**, 5, 5709-5718	13	45
23	The presence of CH3NH2 neutral species in organometal halide perovskite films. *Applied Physics Letters*, **2016**, 108, 073901	3.4	40
22	Application of Methylamine Gas in Fabricating Organic–Inorganic Hybrid Perovskite Solar Cells. *Energy Technology*, **2017**, 5, 1750-1761	3.5	38
21	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	3.8	36
20	Fatigue stability of CH3NH3PbI3 based perovskite solar cells in day/night cycling. *Nano Energy*, **2019**, 58, 687-694	17.1	33
19	Transamidation of dimethylformamide during alkylammonium lead triiodide film formation for perovskite solar cells. *Journal of Materials Research*, **2017**, 32, 45-55	2.5	31
18	Effect of Grain Cluster Size on Back-Contact Perovskite Solar Cells. *Advanced Functional Materials*, **2018**, 28, 1805098	15.6	28
17	The Effect of Impurities on the Impedance Spectroscopy Response of CH3NH3PbI3 Perovskite Solar Cells. *Journal of Physical Chemistry C*, **2016**, 120, 28519-28526	3.8	27
16	Enhanced diffusion through porous nanoparticle optical multilayers. *Journal of Materials Chemistry*, **2012**, 22, 1751-1757		22
15	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	13	22
14	The impact of spiro-OMeTAD photodoping on the reversible light-induced transients of perovskite solar cells. *Nano Energy*, **2021**, 82, 105658	17.1	13
13	Significant THz absorption in CHNH molecular defect-incorporated organic-inorganic hybrid perovskite thin film. *Scientific Reports*, **2019**, 9, 5811	4.9	12

12	Multiple Roles of Cobalt Pyrazol-Pyridine Complexes in High-Performing Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2019**, 10, 4675-4682	6.4	12
11	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	3.8	11
10	Honeycomb-shaped charge collecting electrodes for dipole-assisted back-contact perovskite solar cells. *Nano Energy*, **2020**, 67, 104223	17.1	11
9	Unique Layer-Doping-Induced Regulation of Charge Behavior in Metal-Free Carbon Nitride Photoanodes for Enhanced Performance. *ChemSusChem*, **2020**, 13, 328-333	8.3	10
8	The Performance-Determining Role of Lewis Bases in Dye-Sensitized Solar Cells Employing Copper-Bisphenanthroline Redox Mediators. *Advanced Energy Materials*, **2020**, 10, 2002067	21.8	10
7	High-Throughput Characterization of Perovskite Solar Cells for Rapid Combinatorial Screening. *Solar Rrl*, **2020**, 4, 2000097	7.1	8
6	Ultrasonic spray deposition of TiO2 electron transport layers for reproducible and high efficiency hybrid perovskite solar cells. *Solar Energy*, **2019**, 188, 697-705	6.8	7
5	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,	4.6	6
4	Balancing Charge Extraction for Efficient Back-Contact Perovskite Solar Cells by Using an Embedded Mesoscopic Architecture. *Advanced Energy Materials*, **2021**, 11, 2100053	21.8	6
3	Can Laminated Carbon Challenge Gold? Toward Universal, Scalable, and Low-Cost Carbon Electrodes for Perovskite Solar Cells. *Advanced Materials Technologies*,2101148	6.8	4
2	Light intensity modulated photoluminescence for rapid series resistance mapping of perovskite solar cells. *Nano Energy*, **2020**, 73, 104755	17.1	3
1	Working Principles of Perovskite Solar Cells **2018**, 81-99		1