Philip Schulz

List of Publications by Year
in descending order

57 papers	8,166 citations	117453 34 h-index	168136 53 g-index
58 all docs	58 docs citations	58 times ranked	10391 citing authors

#	Article	IF	Citations
1	Enhanced mobility CsPbI ₃ quantum dot arrays for record-efficiency, high-voltage photovoltaic cells. Science Advances, 2017, 3, eaao4204.	4.7	801
2	Tailored interfaces of unencapsulated perovskite solar cells for >1,000 hour operational stability. Nature Energy, 2018, 3, 68-74.	19.8	722
3	Leadâ€Free Inverted Planar Formamidinium Tin Triiodide Perovskite Solar Cells Achieving Power Conversion Efficiencies up to 6.22%. Advanced Materials, 2016, 28, 9333-9340.	11.1	636
4	Interface energetics in organo-metal halide perovskite-based photovoltaic cells. Energy and Environmental Science, 2014, 7, 1377.	15.6	624
5	Defect Tolerance in Methylammonium Lead Triiodide Perovskite. ACS Energy Letters, 2016, 1, 360-366.	8.8	500
6	Employing Lead Thiocyanate Additive to Reduce the Hysteresis and Boost the Fill Factor of Planar Perovskite Solar Cells. Advanced Materials, 2016, 28, 5214-5221.	11.1	487
7	Extrinsic ion migration in perovskite solar cells. Energy and Environmental Science, 2017, 10, 1234-1242.	15.6	458
8	Facile fabrication of large-grain CH3NH3PbI3â˜'xBrx films for high-efficiency solar cells via CH3NH3Br-selective Ostwald ripening. Nature Communications, 2016, 7, 12305.	5.8	444
9	Halide Perovskites: Is It All about the Interfaces?. Chemical Reviews, 2019, 119, 3349-3417.	23.0	404
10	Targeted Ligand-Exchange Chemistry on Cesium Lead Halide Perovskite Quantum Dots for High-Efficiency Photovoltaics. Journal of the American Chemical Society, 2018, 140, 10504-10513.	6.6	303
11	Influence of Electrode Interfaces on the Stability of Perovskite Solar Cells: Reduced Degradation Using MoO_{<i>x</i>}/Al for Hole Collection. ACS Energy Letters, 2016, 1, 38-45.	8.8	237
12	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. Nature Communications, 2017, 8, 2230.	5.8	220
13	Electronic Level Alignment in Inverted Organometal Perovskite Solar Cells. Advanced Materials Interfaces, 2015, 2, 1400532.	1.9	174
14	High-Work-Function Molybdenum Oxide Hole Extraction Contacts in Hybrid Organicâ€"Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 31491-31499.	4.0	151
15	Strontium Insertion in Methylammonium Lead Iodide: Long Charge Carrier Lifetime and High Fillâ€Factor Solar Cells. Advanced Materials, 2016, 28, 9839-9845.	11.1	150
16	Efficient charge extraction and slow recombination in organicâ€"inorganic perovskites capped with semiconducting single-walled carbon nanotubes. Energy and Environmental Science, 2016, 9, 1439-1449.	15.6	126
17	Acid Additives Enhancing the Conductivity of Spiroâ€OMeTAD Toward Highâ€Efficiency and Hysteresisâ€Less Planar Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1601451.	10.2	123
18	Revisiting the Valence and Conduction Band Size Dependence of PbS Quantum Dot Thin Films. ACS Nano, 2016, 10, 3302-3311.	7.3	118

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19	Perovskite-Inspired Photovoltaic Materials: Toward Best Practices in Materials Characterization and Calculations. Chemistry of Materials, 2017, 29, 1964-1988.	3.2	116
20	Stability of inverted organic solar cells with ZnO contact layers deposited from precursor solutions. Energy and Environmental Science, 2015, 8, 592-601.	15.6	103
21	Interface Design for Metal Halide Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 1287-1293.	8.8	98
22	Air-Exposure-Induced Gas-Molecule Incorporation into Spiro-MeOTAD Films. Journal of Physical Chemistry Letters, 2014, 5, 1374-1379.	2.1	96
23	Charge Transfer Dynamics between Carbon Nanotubes and Hybrid Organic Metal Halide Perovskite Films. Journal of Physical Chemistry Letters, 2016, 7, 418-425.	2.1	83
24	The existence and impact of persistent ferroelectric domains in MAPbI ₃. Science Advances, 2019, 5, eaas9311.	4.7	77
25	Chemically Controlled Reversible and Irreversible Extraction Barriers Via Stable Interface Modification of Zinc Oxide Electron Collection Layer in Polycarbazoleâ€based Organic Solar Cells. Advanced Functional Materials, 2014, 24, 4671-4680.	7.8	76
26	Reactions at noble metal contacts with methylammonium lead triiodide perovskites: Role of underpotential deposition and electrochemistry. APL Materials, 2019, 7, .	2.2	74
27	Correlation of open-circuit voltage and energy levels in zinc-phthalocyanine: C<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>60</mml:mn></mml:msub></mml:math>bulk heterojunction solar cells with varied mixing ratio. Physical Review B, 2013, 88, .	1.1	71
28	Versatile perovskite solar cell encapsulation by low-temperature ALD-Al₂O₃with long-term stability improvement. Sustainable Energy and Fuels, 2018, 2, 2468-2479.	2.5	66
29	Photoemission Spectroscopy Characterization of Halide Perovskites. Advanced Energy Materials, 2020, 10, 1904007.	10.2	66
30	NiO_{<i>X</i>}/MoO₃ Biâ€Layers as Efficient Hole Extraction Contacts in Organic Solar Cells. Advanced Functional Materials, 2014, 24, 701-706.	7.8	65
31	Amine additive reactions induced by the soft Lewis acidity of Pb²⁺ in halide perovskites. Part I: evidence for Pbâ€“alkylamide formation. Journal of Materials Chemistry C, 2019, 7, 5251-5259.	2.7	56
32	Tailoring Electronâ€Transfer Barriers for Zinc Oxide/C₆₀ Fullerene Interfaces. Advanced Functional Materials, 2014, 24, 7381-7389.	7.8	54
33	High Versatility and Stability of Mechanochemically Synthesized Halide Perovskite Powders for Optoelectronic Devices. ACS Applied Materials & Interfaces, 2019, 11, 30259-30268.	4.0	47
34	Design of Novel Dielectric Surface Modifications for Perylene Thinâ€Film Transistors. Advanced Functional Materials, 2012, 22, 415-420.	7.8	34
35	Amine additive reactions induced by the soft Lewis acidity of Pb²⁺ in halide perovskites. Part II: impacts of amido Pb impurities in methylammonium lead triiodide thin films. Journal of Materials Chemistry C, 2019, 7, 5244-5250.	2.7	30
36	Impact of Hole Transport Layer Surface Properties on the Morphology of a Polymerâ€Fullerene Bulk Heterojunction. Advanced Energy Materials, 2014, 4, 1301879.	10.2	28

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37	Combinatorial In Situ Photoelectron Spectroscopy Investigation of Sb₂Se₃/ZnS Heterointerfaces. Advanced Materials Interfaces, 2016, 3, 1600755.	1.9	28
38	Light-Induced Passivation in Triple Cation Mixed Halide Perovskites: Interplay between Transport Properties and Surface Chemistry. ACS Applied Materials & Interfaces, 2020, 12, 34784-34794.	4.0	25
39	Improved Performance in Bulk Heterojunction Organic Solar Cells with a Solâ€Gel MgZnO Electronâ€Collecting Layer. Advanced Energy Materials, 2014, 4, 1400073.	10.2	22
40	The Role of SnF₂ Additive on Interface Formation in All Leadâ€Free FASnI₃ Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	22
41	Stabilization of wide band-gap p-type wurtzite MnTe thin films on amorphous substrates. Journal of Materials Chemistry C, 2018, 6, 6297-6304.	2.7	21
42	Strong performance enhancement in lead-halide perovskite solar cells through rapid, atmospheric deposition of n-type buffer layer oxides. Nano Energy, 2020, 75, 104946.	8.2	20
43	Disrupted Attosecond Charge Carrier Delocalization at a Hybrid Organic/Inorganic Semiconductor Interface. Journal of Physical Chemistry Letters, 2015, 6, 1935-1941.	2.1	16
44	A New Route to Low Resistance Contacts for Performanceâ€Enhanced Organic Electronic Devices. Advanced Materials Interfaces, 2014, 1, 1300130.	1.9	15
45	Spectroscopy and control of near-surface defects in conductive thin film ZnO. Journal of Physics Condensed Matter, 2016, 28, 094007.	0.7	14
46	Dithiocarbamate Self-Assembled Monolayers as Efficient Surface Modifiers for Low Work Function Noble Metals. Langmuir, 2016, 32, 8812-8817.	1.6	13
47	In-Depth Chemical and Optoelectronic Analysis of Triple-Cation Perovskite Thin Films by Combining XPS Profiling and PL Imaging. ACS Applied Materials & Interfaces, 2022, 14, 34228-34237.	4.0	13
48	Carrier gradients and the role of charge selective contacts in lateral heterojunction all back contact perovskite solar cells. Cell Reports Physical Science, 2021, 2, 100520.	2.8	12
49	Comparison of the Energy-Level Alignment of Thiolate- and Carbodithiolate-Bound Self-Assembled Monolayers on Gold. Journal of Physical Chemistry C, 2010, 114, 20843-20851.	1.5	6
50	Investigation of intermolecular interactions in perylene films on Au(111) by infrared spectroscopy. Journal of Chemical Physics, 2012, 136, 054503.	1.2	6
51	Dynamic temperature effects in perovskite solar cells and energy yield. Sustainable Energy and Fuels, 0, , .	2.5	5
52	Influence of dielectric surface modification on growth, structure and transport properties of perylene films. Physica Status Solidi (B): Basic Research, 2008, 245, 782-787.	0.7	4
53	Chemical Passivation with Phosphonic Acid Derivatives of ZnO Deposited by Atomic Layer Deposition and Its Influence on the Halide Perovskite Interface. ACS Applied Energy Materials, 2021, 4, 5787-5797.	2.5	4
54	On the equilibrium electrostatic potential and lightâ€induced charge redistribution in halide perovskite structures. Progress in Photovoltaics: Research and Applications, 2022, 30, 994-1002.	4.4	2

#	Article	IF	Citations
55	Substrate-Controlled Electronic Properties of Perovskite Layer in Lateral Heterojunction Configuration. , 2021, , .		0
56	Stability of triple cation halide perovskites layers: study of the chemical evolution after light soaking thanks to XPS analysis. , 2020, , .		0
57	Energy Spotlight. ACS Energy Letters, 2022, 7, 2401-2402.	8.8	0