

# Christoph J Brabec

## List of Publications by Year in descending order

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Version: 2024-02-01

740  
papers

72,883  
citations

630

127  
h-index

904

248  
g-index

792  
all docs

792  
docs citations

792  
times ranked

40054  
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular Oligothiopheneâ€“Fullerene Dyad Reaching Over 5% Efficiency in Singleâ€“Material Organic Solar Cells. <i>Advanced Materials</i> , 2022, 34, e2103573.	11.1	34
2	Rare-Earth Ion-Based Photon Up-Conversion for Transmission-Loss Reduction in Solar Cells. , 2022, , 241-267.		1
3	Reducing energy barrier of $\Gamma$ -to- $\Gamma$ phase transition for printed formamidinium lead iodide photovoltaic devices. <i>Nano Energy</i> , 2022, 91, 106658.	8.2	15
4	Comparison of the sputtered $\text{TiO}_2$ anatase and rutile thin films as electron transporting layers in perovskite solar cells. <i>Nano Select</i> , 2022, 3, 990-997.	1.9	2
5	Highly Reflective and Low Resistive Top Electrode for Organic Solar Cells and Modules by Low Temperature Silver Nanoparticle Ink. <i>Solar Rrl</i> , 2022, 6, 2100887.	3.1	12
6	Distinguishing between different types of multi-layered PET-based backsheets of PV modules with near-infrared spectroscopy. <i>Progress in Photovoltaics: Research and Applications</i> , 2022, 30, 859-868.	4.4	8
7	Accelerated lifetime testing of thin-film solar cells at high irradiances and controlled temperatures. <i>Progress in Photovoltaics: Research and Applications</i> , 2022, 30, 518-527.	4.4	7
8	Intercalating-Organic-Cation-Induced Stability Bowing in Quasi-2D Metal-Halide Perovskites. <i>ACS Energy Letters</i> , 2022, 7, 70-77.	8.8	26
9	Layer-by-layer processed binary all-polymer solar cells with efficiency over 16% enabled by finely optimized morphology. <i>Nano Energy</i> , 2022, 93, 106858.	8.2	71
10	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. <i>Joule</i> , 2022, 6, 8-15.	11.7	66
11	Luminescence Analysis of PV-Module Soiling in Germany. <i>IEEE Journal of Photovoltaics</i> , 2022, 12, 81-87.	1.5	7
12	Molecular Doping of a Hole-Transporting Material for Efficient and Stable Perovskite Solar Cells. <i>Chemistry of Materials</i> , 2022, 34, 1499-1508.	3.2	16
13	Revealing the strain-associated physical mechanisms impacting the performance and stability of perovskite solar cells. <i>Joule</i> , 2022, 6, 458-475.	11.7	64
14	Overcoming Temperature-Induced Degradation of Silver Nanowire Electrodes by an $\text{Ag@SnO}_x$ Core-Shell Approach. <i>Advanced Electronic Materials</i> , 2022, 8, .	2.6	7
15	Managing Phase Orientation and Crystallinity of Printed Dionâ€“Jacobson 2D Perovskite Layers via Controlling Crystallization Kinetics. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	33
16	A bilayer conducting polymer structure for planar perovskite solar cells with over 1,400â€“hours operational stability at elevated temperatures. <i>Nature Energy</i> , 2022, 7, 144-152.	19.8	123
17	Oligomer-Assisted Photoactive Layers Enable $>18\%$ Efficiency of Organic Solar Cells. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	12
18	Anomaly detection in IR images of PV modules using supervised contrastive learning. <i>Progress in Photovoltaics: Research and Applications</i> , 2022, 30, 597-614.	4.4	13

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19	Oligomer-Assisted Photoactive Layers Enable >18% Efficiency of Organic Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	43
20	Highly Stable Lasing from Solution-Epitaxially Grown Formamidinium-Lead-Bromide Micro-Resonators. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	3
21	Fully printed organic solar modules with bottom and top silver nanowire electrodes. <i>Progress in Photovoltaics: Research and Applications</i> , 2022, 30, 528-542.	4.4	10
22	Unraveling the Charge-Carrier Dynamics from the Femtosecond to the Microsecond Time Scale in Double-Cable Polymer-Based Single-Component Organic Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, 2103406.	10.2	15
23	Improved Air Processability of Organic Photovoltaics Using a Stabilizing Antioxidant to Prevent Thermal Oxidation. <i>Journal of Physical Chemistry C</i> , 2022, 126, 22-29.	1.5	0
24	Understanding the Limitations of Charge Transporting Layers in Mixed Lead-Tin Halide Perovskite Solar Cells. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	13
25	An alcohol-dispersed conducting polymer complex for fully printable organic solar cells with improved stability. <i>Nature Energy</i> , 2022, 7, 352-359.	19.8	155
26	Tailoring the Nature of Interface States in Efficient and Stable Bilayer Organic Solar Cells by a Transfer-Printing Technique. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	4
27	Steric Engineering Enables Efficient and Photostable Wide-Bandgap Perovskites for All-Perovskite Tandem Solar Cells. <i>Advanced Materials</i> , 2022, 34, e2110356.	11.1	48
28	Georeferencing of photovoltaic modules from aerial infrared videos using structure-from-motion. <i>Progress in Photovoltaics: Research and Applications</i> , 2022, 30, 1122-1135.	4.4	4
29	Fully solution-processed, light-weight, and ultraflexible organic solar cells. <i>Flexible and Printed Electronics</i> , 2022, 7, 025003.	1.5	10
30	Surface versus Bulk Currents and Ionic Space-Charge Effects in CsPbBr <sub>3</sub> Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 3824-3830.	2.1	11
31	An Innovative Anode Interface Combination for Perovskite Solar Cells with Improved Efficiency, Stability, and Reproducibility. <i>Solar Rrl</i> , 2022, 6, .	3.1	3
32	Micropowder Ca <sub>2</sub> YMgScSi <sub>3</sub> O <sub>12</sub> :Ce Silicate Garnet as an Efficient Light Converter for White LEDs. <i>Materials</i> , 2022, 15, 3942.	1.3	6
33	Industrial viability of single-component organic solar cells. <i>Joule</i> , 2022, 6, 1160-1171.	11.7	40
34	Green-synthesis of highly luminescent lead-free Cs <sub>2</sub> Ag <sub>x</sub> Na <sub>1-x</sub> Bi <sub>y</sub> In <sub>1-y</sub> Cl <sub>3</sub> perovskites. <i>Journal of Materials Chemistry C</i> , 2022, 10, 9938-9944.	3.1	6
35	Understanding and Controlling the Evolution of Nanomorphology and Crystallinity of Organic Bulk-Heterojunction Blends with Solvent Vapor Annealing. <i>Solar Rrl</i> , 2022, 6, .	3.1	8
36	Melting and Crystallization Features of CsPbBr <sub>3</sub> Perovskite. <i>Crystal Growth and Design</i> , 2022, 22, 4115-4121.	1.4	5

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37	Design of Highly Efficient Semitransparent Perovskite/Organic Tandem Solar Cells. <i>Solar Rrl</i> , 2022, 6, .	3.1	6
38	Targeted Adjusting Molecular Arrangement in Organic Solar Cells via a Universal Solid Additive. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	11
39	Double-Chain Conjugated Polymers with Pendant Near-Infrared Electron Acceptors for Single-Component Organic Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	28
40	Traps and transport resistance are the next frontiers for stable non-fullerene acceptor solar cells. <i>Nature Communications</i> , 2022, 13, .	5.8	23
41	Molecular Donor-Acceptor Dyads for Efficient Single-Material Organic Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2000653.	3.1	30
42	Solution-coated barriers for organic electronics. , 2021, , 249-303.		3
43	Microscopic Deformation Modes and Impact of Network Anisotropy on the Mechanical and Electrical Performance of Five-fold Twinned Silver Nanowire Electrodes. <i>ACS Nano</i> , 2021, 15, 362-376.	7.3	23
44	Device Performance of Emerging Photovoltaic Materials (Version 1). <i>Advanced Energy Materials</i> , 2021, 11, 2002774.	10.2	93
45	Inkjet printed organic and perovskite photovoltaics—review and perspectives. , 2021, , 305-333.		4
46	Organic photovoltaic modules with new world record efficiencies. <i>Progress in Photovoltaics: Research and Applications</i> , 2021, 29, 24-31.	4.4	75
47	Overcoming photovoltage deficit via natural amino acid passivation for efficient perovskite solar cells and modules. <i>Journal of Materials Chemistry A</i> , 2021, 9, 5857-5865.	5.2	43
48	High performance tandem organic solar cells via a strongly infrared-absorbing narrow bandgap acceptor. <i>Nature Communications</i> , 2021, 12, 178.	5.8	122
49	A History and Perspective of Non-Fullerene Electron Acceptors for Organic Solar Cells. <i>Advanced Energy Materials</i> , 2021, 11, 2003570.	10.2	323
50	Elucidating the Full Potential of OPV Materials Utilizing a High-Throughput Robot-Based Platform and Machine Learning. <i>Joule</i> , 2021, 5, 495-506.	11.7	86
51	Aerosol jet printed AgNW electrode and PEDOT:PSS layers for organic light-emitting diode devices fabrication. , 2021, , .		0
52	Quantifying the Absorption Onset in the Quantum Efficiency of Emerging Photovoltaic Devices. <i>Advanced Energy Materials</i> , 2021, 11, 2100022.	10.2	61
53	Adjusting the energy of interfacial states in organic photovoltaics for maximum efficiency. <i>Nature Communications</i> , 2021, 12, 1772.	5.8	27
54	Recent progress in thick-film organic photovoltaic devices: Materials, devices, and processing. <i>SusMat</i> , 2021, 1, 4-23.	7.8	59

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55	Degradation through Directional Self-Doping and Homogeneous Density of Recombination Centers Hindered by 1,8-Diiodooctane Additive in Non-Fullerene Organic Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2100024.	3.1	4
56	A data fusion approach to optimize compositional stability of halide perovskites. <i>Matter</i> , 2021, 4, 1305-1322.	5.0	75
57	Discovery of temperature-induced stability reversal in perovskites using high-throughput robotic learning. <i>Nature Communications</i> , 2021, 12, 2191.	5.8	77
58	Single-Component Organic Solar Cells with Competitive Performance. <i>Organic Materials</i> , 2021, 03, 228-244.	1.0	36
59	Deep-learning-based pipeline for module power prediction from electroluminescence measurements. <i>Progress in Photovoltaics: Research and Applications</i> , 2021, 29, 920-935.	4.4	11
60	The 2021 flexible and printed electronics roadmap. <i>Flexible and Printed Electronics</i> , 2021, 6, 023001.	1.5	100
61	Balancing the efficiency, stability, and cost potential for organic solar cells via a new figure of merit. <i>Joule</i> , 2021, 5, 1209-1230.	11.7	138
62	Low Temperature Processed Fully Printed Efficient Planar Structure Carbon Electrode Perovskite Solar Cells and Modules. <i>Advanced Energy Materials</i> , 2021, 11, 2101219.	10.2	52
63	Building process design rules for microstructure control in wide-bandgap mixed halide perovskite solar cells by a high-throughput approach. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	8
64	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications. , 2021, 3, 1025-1080.		70
65	Module-Power Prediction from PL Measurements using Deep Learning. , 2021, , .		0
66	Solution processed oxygen and moisture barrier based on glass flakes for encapsulation of organic (opto-) electronic devices. <i>Flexible and Printed Electronics</i> , 2021, 6, 025006.	1.5	12
67	Transparent and Low-Loss Luminescent Solar Concentrators Based on Self-Trapped Exciton Emission in Lead-Free Double Perovskite Nanocrystals. <i>ACS Applied Energy Materials</i> , 2021, 4, 6445-6453.	2.5	27
68	High-Throughput Time-Resolved Photoluminescence Study of Composition- and Size-Selected Aqueous Ag-In-S Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2021, 125, 12185-12197.	1.5	13
69	Parasitic emission in inkjet-printed InP-based quantum dot light-emitting diodes. <i>Organic Electronics</i> , 2021, 93, 106156.	1.4	1
70	Branched side chains improve molecular packing of non-fullerene acceptors. <i>Science China Chemistry</i> , 2021, 64, 1435-1436.	4.2	1
71	Achieving over 17% efficiency of ternary all-polymer solar cells with two well-compatible polymer acceptors. <i>Joule</i> , 2021, 5, 1548-1565.	11.7	281
72	Joint Superresolution and Rectification for Solar Cell Inspection. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 1051-1058.	1.5	0

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73	The evolution of Materials Acceleration Platforms: toward the laboratory of the future with AMANDA. <i>Journal of Materials Science</i> , 2021, 56, 16422-16446.	1.7	31
74	Correlative relationship between nanomorphology, crystallinity, texture and device efficiency of organic BHJ solar cells studied by energy-filtered TEM. <i>Microscopy and Microanalysis</i> , 2021, 27, 390-392.	0.2	0
75	Computer vision tool for detection, mapping, and fault classification of photovoltaics modules in aerial IR videos. <i>Progress in Photovoltaics: Research and Applications</i> , 2021, 29, 1236-1251.	4.4	39
76	Long-term power degradation analysis of crystalline silicon PV modules using indoor and outdoor measurement techniques. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 144, 111005.	8.2	18
77	Understanding the Microstructure Formation of Polymer Films by Spontaneous Solution Spreading Coating with a High-Throughput Engineering Platform. <i>ChemSusChem</i> , 2021, 14, 3590-3598.	3.6	14
78	Preface to the Special Issue of ChemSusChem on Advanced Organic Solar Cells. <i>ChemSusChem</i> , 2021, 14, 3426-3427.	3.6	1
79	Self-Healing Cs <sub>3</sub> Bi <sub>2</sub> Br <sub>3</sub> I <sub>6</sub> Perovskite Wafers for X-Ray Detection. <i>Advanced Functional Materials</i> , 2021, 31, 2102713.	7.8	29
80	High-Throughput Robotic Synthesis and Photoluminescence Characterization of Aqueous Multinary Copper-Silver Indium Chalcogenide Quantum Dots. <i>Particle and Particle Systems Characterization</i> , 2021, 38, 2100169.	1.2	12
81	PEDOT:PSS-Free Polymer Non-Fullerene Polymer Solar Cells with Efficiency up to 18.60% Employing a Binary-Solvent-Chlorinated ITO Anode. <i>Advanced Functional Materials</i> , 2021, 31, 2106846.	7.8	40
82	Utilizing the unique charge extraction properties of antimony tin oxide nanoparticles for efficient and stable organic photovoltaics. <i>Nano Energy</i> , 2021, 89, 106373.	8.2	8
83	Spontaneous alloying of ultrasmall non-stoichiometric AgInS and CuInS quantum dots in aqueous colloidal solutions. <i>RSC Advances</i> , 2021, 11, 21145-21152.	1.7	5
84	Characterization of Aerosol Deposited Cesium Lead Tribromide Perovskite Films on Interdigitated ITO Electrodes. <i>Advanced Electronic Materials</i> , 2021, 7, 2001165.	2.6	5
85	Photoluminescence for Defect Detection on Full-Sized Photovoltaic Modules. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 1419-1429.	1.5	27
86	Upscaling Solution-Processed Perovskite Photovoltaics. <i>Advanced Energy Materials</i> , 2021, 11, 2101973.	10.2	46
87	Phase-Field Simulation of Liquid-Vapor Equilibrium and Evaporation of Fluid Mixtures. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 55988-56003.	4.0	7
88	Last Generation Solar Cells in Outer Space: A STEM Outreach Project with Middle and High School Students in Colombia. <i>European Journal of STEM Education</i> , 2021, 6, 12.	0.7	0
89	Device Performance of Emerging Photovoltaic Materials (Version 2). <i>Advanced Energy Materials</i> , 2021, 11, .	10.2	66
90	Perspectives of solution epitaxially grown defect tolerant lead-halide-perovskites and lead-chalcogenides. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	2

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91	Engineering of the Electron Transport Layer/Perovskite Interface in Solar Cells Designed on TiO <sub>2</sub> Rutile Nanorods. <i>Advanced Functional Materials</i> , 2020, 30, 1909738.	7.8	46
92	Real-Time Study on Structure Formation and the Intercalation Process of Polymer: Fullerene Bulk Heterojunction Thin Films. <i>Solar Rrl</i> , 2020, 4, 1900508.	3.1	1
93	Visualizing and Suppressing Nonradiative Losses in High Open-Circuit Voltage n-i-p-Type CsPbI <sub>3</sub> Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2020, 5, 271-279.	8.8	39
94	Effect of water vapor content during the solid state synthesis of manganese-doped magnesium fluoro-germanate phosphor on its chemistry and photoluminescent properties. <i>Optical Materials</i> , 2020, 99, 109572.	1.7	2
95	Afterglow Effects as a Tool to Screen Emissive Nongeminate Charge Recombination Processes in Organic Photovoltaic Composites. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 2695-2707.	4.0	5
96	Analytical model for light modulating impedance spectroscopy (LIMIS) in all-solid-state p-n junction solar cells at open-circuit. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	13
97	Organic Photovoltaics: A Cost-Effective, Aqueous-Solution-Processed Cathode Interlayer Based on Organosilica Nanodots for Highly Efficient and Stable Organic Solar Cells ( <i>Adv. Mater.</i> 38/2020). <i>Advanced Materials</i> , 2020, 32, 2070284.	11.1	1
98	Fully Solution Processed Pure $\delta$ -Phase Formamidinium Lead Iodide Perovskite Solar Cells for Scalable Production in Ambient Condition. <i>Advanced Energy Materials</i> , 2020, 10, 2001869.	10.2	46
99	Controlling the crystallization dynamics of photovoltaic perovskite layers on larger-area coatings. <i>Energy and Environmental Science</i> , 2020, 13, 4666-4690.	15.6	79
100	Graphene Oxide Thin Films: Synthesis and Optical Characterization. <i>ChemistrySelect</i> , 2020, 5, 11737-11744.	0.7	15
101	Material Strategies to Accelerate OPV Technology Toward a GW Technology. <i>Advanced Energy Materials</i> , 2020, 10, 2001864.	10.2	93
102	Robot-Based High-Throughput Screening of Antisolvents for Lead Halide Perovskites. <i>Joule</i> , 2020, 4, 1806-1822.	11.7	65
103	Unraveling the influence of non-fullerene acceptor molecular packing on photovoltaic performance of organic solar cells. <i>Nature Communications</i> , 2020, 11, 6005.	5.8	112
104	Effects on Photovoltaic Characteristics by Organic Bilayer- and Bulk-Heterojunctions: Energy Losses, Carrier Recombination and Generation. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 55945-55953.	4.0	14
105	Delocalization of exciton and electron wavefunction in non-fullerene acceptor molecules enables efficient organic solar cells. <i>Nature Communications</i> , 2020, 11, 3943.	5.8	458
106	Nondestructive characterization of polymeric components of silicon solar modules by near-infrared absorption spectroscopy (NIRA). <i>Solar Energy Materials and Solar Cells</i> , 2020, 216, 110702.	3.0	14
107	Deciphering the Origins of P1-Induced Power Losses in Cu(In Ga)Se <sub>2</sub> (CIGS) Modules Through Hyperspectral Luminescence. <i>Engineering</i> , 2020, 6, 1395-1402.	3.2	5
108	A Cost-Effective, Aqueous-Solution-Processed Cathode Interlayer Based on Organosilica Nanodots for Highly Efficient and Stable Organic Solar Cells. <i>Advanced Materials</i> , 2020, 32, e2002973.	11.1	60



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109	Composition-Dependent Optical Band Bowing, Vibrational, and Photochemical Behavior of Aqueous Glutathione-Capped (Cu, Ag)â€“Inâ€“S Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2020, 124, 19375-19388.	1.5	15
110	Epitaxial Metal Halide Perovskites by Inkjetâ€“Printing on Various Substrates. <i>Advanced Functional Materials</i> , 2020, 30, 2004612.	7.8	21
111	The role of exciton lifetime for charge generation in organic solar cells at negligible energy-level offsets. <i>Nature Energy</i> , 2020, 5, 711-719.	19.8	214
112	Ion-mediated hopping electrode polarization model for impedance spectra of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	9
113	Strain-activated light-induced halide segregation in mixed-halide perovskite solids. <i>Nature Communications</i> , 2020, 11, 6328.	5.8	86
114	A General Guideline for Vertically Resolved Imaging of Manufacturing Defects in Organic Tandem Solar Cells. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000336.	1.9	2
115	Axisymmetric and Asymmetric Naphthalene-Bisthienothiophene Based Nonfullerene Acceptors: On Constitutional Isomerization and Photovoltaic Performance. <i>ACS Applied Energy Materials</i> , 2020, 3, 5734-5744.	2.5	14
116	Composition Engineering of Allâ€“Inorganic Perovskite Film for Efficient and Operationally Stable Solar Cells. <i>Advanced Functional Materials</i> , 2020, 30, 2001764.	7.8	69
117	Micro-powder Ca <sub>3</sub> Sc <sub>2</sub> Si <sub>3</sub> O <sub>12</sub> :Ce silicate garnets as efficient light converters for WLEDs. <i>Optical Materials</i> , 2020, 107, 109978.	1.7	12
118	Efficient Surface Passivation and Electron Transport Enable Low Temperature-Processed Inverted Perovskite Solar Cells with Efficiency over 20%. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 8848-8856.	3.2	9
119	Light intensity modulated impedance spectroscopy (LIMIS) in all-solid-state solar cells at open-circuit. <i>Nano Energy</i> , 2020, 75, 104982.	8.2	22
120	The Impact of COVID-19-Related Measures on the Solar Resource in Areas with High Levels of Air Pollution. <i>Joule</i> , 2020, 4, 1681-1687.	11.7	17
121	Realâ€“Time Study on Structure Formation and the Intercalation Process of Polymer: Fullerene Bulk Heterojunction Thin Films. <i>Solar Rrl</i> , 2020, 4, 2070035.	3.1	0
122	A phase-field model for the evaporation of thin film mixtures. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 6638-6652.	1.3	17
123	Vertically Aligned 2D/3D Pbâ€“Sn Perovskites with Enhanced Charge Extraction and Suppressed Phase Segregation for Efficient Printable Solar Cells. <i>ACS Energy Letters</i> , 2020, 5, 1386-1395.	8.8	111
124	Spontaneously Selfâ€“Assembly of a 2D/3D Heterostructure Enhances the Efficiency and Stability in Printed Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 2000173.	10.2	126
125	A pressure process for efficient and stable perovskite solar cells. <i>Nano Energy</i> , 2020, 77, 105063.	8.2	35
126	Rational Interface Design and Morphology Control for Bladeâ€“Coating Efficient Flexible Perovskite Solar Cells with a Record Fill Factor of 81%. <i>Advanced Functional Materials</i> , 2020, 30, 2001240.	7.8	77



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127	High-performance all-polymer solar cells with only 0.47 eV energy loss. <i>Science China Chemistry</i> , 2020, 63, 1449-1460.	4.2	62
128	A Cross-Linked Interconnecting Layer Enabling Reliable and Reproducible Solution-Processing of Organic Tandem Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 1903800.	10.2	21
129	Unraveling the Microstructure-Related Device Stability for Polymer Solar Cells Based on Nonfullerene Small-Molecular Acceptors. <i>Advanced Materials</i> , 2020, 32, e1908305.	11.1	161
130	The role of connectivity in significant bandgap narrowing for fused-pyrene based non-fullerene acceptors toward high-efficiency organic solar cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 5995-6003.	5.2	11
131	Embedding physics domain knowledge into a Bayesian network enables layer-by-layer process innovation for photovoltaics. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	18
132	Beyond Ternary OPV: High-Throughput Experimentation and Self-Driving Laboratories Optimize Multicomponent Systems. <i>Advanced Materials</i> , 2020, 32, e1907801.	11.1	138
133	Sensitive Direct Converting X-Ray Detectors Utilizing Crystalline CsPbBr <sub>3</sub> Perovskite Films Fabricated via Scalable Melt Processing. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901575.	1.9	83
134	Novel two-dimensional phosphor thermography by decay-time method using a low frame-rate CMOS camera. <i>Optics and Lasers in Engineering</i> , 2020, 128, 106010.	2.0	4
135	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. <i>Nature Energy</i> , 2020, 5, 35-49.	19.8	797
136	Crystal-structure of active layers of small molecule organic photovoltaics before and after solvent vapor annealing. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2020, 235, 15-28.	0.4	6
137	Ternary All-Polymer Solar Cells With 8.5% Power Conversion Efficiency and Excellent Thermal Stability. <i>Frontiers in Chemistry</i> , 2020, 8, 302.	1.8	19
138	Film Fabrication Techniques: Beyond Ternary OPV: High-Throughput Experimentation and Self-Driving Laboratories Optimize Multicomponent Systems (Adv. Mater. 14/2020). <i>Advanced Materials</i> , 2020, 32, 2070110.	11.1	2
139	Unraveling the Complex Nanomorphology of Ternary Organic Solar Cells with Multimodal Analytical Transmission Electron Microscopy. <i>Solar Rrl</i> , 2020, 4, 2000114.	3.1	7
140	Looking beyond the Surface: The Band Gap of Bulk Methylammonium Lead Iodide. <i>Nano Letters</i> , 2020, 20, 3090-3097.	4.5	16
141	Quantitative Analysis of the Separate Influences of Material Composition and Local Defects on the V <sub>oc</sub> of PV Devices: An Exemplary Study on CIGS. <i>IEEE Journal of Photovoltaics</i> , 2020, 10, 898-904.	1.5	0
142	Inorganic Halide Perovskite Solar Cells: Progress and Challenges. <i>Advanced Energy Materials</i> , 2020, 10, 2000183.	10.2	231
143	Efficient Exciton Diffusion in Organic Bilayer Heterojunctions with Nonfullerene Small Molecular Acceptors. <i>ACS Energy Letters</i> , 2020, 5, 1628-1635.	8.8	52
144	Graded 2D/3D Perovskite Heterostructure for Efficient and Operationally Stable MA-Free Perovskite Solar Cells. <i>Advanced Materials</i> , 2020, 32, e2000571.	11.1	166

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145	Phase diagram and stability of mixed-cation lead iodide perovskites: A theory and experiment combined study. <i>Physical Review Materials</i> , 2020, 4, .	0.9	17
146	Does Covid-19 Impact Photovoltaics?. , 2020, , .		1
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