Christoph J Brabec

List of Publications by Year in Descending Order

710 papers	60,318 citations	118 h-index	230 g-index
792 ext. papers	66,550 ext. citations	11.5 avg, IF	7.95 L-index

#	Paper	IF	Citations
710	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. *Joule*, **2022**, 6, 8-15	27.8	14
709	Luminescence Analysis of PV-Module Soiling in Germany. *IEEE Journal of Photovoltaics*, **2022**, 12, 81-87	3.7	0
708	Revealing the strain-associated physical mechanisms impacting the performance and stability of perovskite solar cells. *Joule*, **2022**,	27.8	8
707	A bilayer conducting polymer structure for planar perovskite solar cells with over 1,400 hours operational stability at elevated temperatures. *Nature Energy*, **2022**, 7, 144-152	62.3	24
706	Layer-by-layer processed binary all-polymer solar cells with efficiency over 16% enabled by finely optimized morphology. *Nano Energy*, **2022**, 93, 106858	17.1	13
705	Rare-Earth Ion-Based Photon Up-Conversion for Transmission-Loss Reduction in Solar Cells **2022**, 241-267		0
704	The 2021 flexible and printed electronics roadmap. *Flexible and Printed Electronics*, **2022**, 6, 023001	3.1	33
703	Oligomer-assisted Photoactive Layers Enable >18% Efficiency of Organic Solar Cells.. *Angewandte Chemie - International Edition*, **2022**,	16.4	6
702	Fully printed organic solar modules with bottom and top silver nanowire electrodes. *Progress in Photovoltaics: Research and Applications*, **2022**, 30, 528-542	6.8	1
701	Unraveling the Charge-Carrier Dynamics from the Femtosecond to the Microsecond Time Scale in Double-Cable Polymer-Based Single-Component Organic Solar Cells. *Advanced Energy Materials*, **2022**, 12, 2103406	21.8	2
700	Improved Air Processability of Organic Photovoltaics Using a Stabilizing Antioxidant to Prevent Thermal Oxidation. *Journal of Physical Chemistry C*, **2022**, 126, 22-29	3.8	
699	Understanding the Limitations of Charge Transporting Layers in Mixed Lead Tin Halide Perovskite Solar Cells. *Advanced Energy and Sustainability Research*, **2022**, 3, 2100156	1.6	6
698	Steric Engineering Enables Efficient and Photostable wide-bandgap Perovskites for all-perovskite Tandem Solar Cells.. *Advanced Materials*, **2022**, e2110356	24	7
697	Surface versus Bulk Currents and Ionic Space-Charge Effects in CsPbBr Single Crystals.. *Journal of Physical Chemistry Letters*, **2022**, 3824-3830	6.4	3
696	Micropowder Ca2YMgScSi3O12:Ce Silicate Garnet as an Efficient Light Converter for White LEDs. *Materials*, **2022**, 15, 3942	3.5	1
695	Upscaling of Perovskite Photovoltaics **2021**, 453-496		0
694	Phase-Field Simulation of Liquid-Vapor Equilibrium and Evaporation of Fluid Mixtures. *ACS Applied Materials & Interfaces*, **2021**, 13, 55988-56003	9.5	1

693	Last Generation Solar Cells in Outer Space: A STEM Outreach Project with Middle and High School Students in Colombia. *European Journal of STEM Education*, **2021**, 6, 12	1.8	
692	Upscaling Solution-Processed Perovskite Photovoltaics. *Advanced Energy Materials*, **2021**, 11, 2101973	21.8	12
691	Reducing Energy Barrier of □to-□Phase Transition for Printed Formamidinium Lead Iodide Photovoltaic Devices. *Nano Energy*, **2021**, 106658	17.1	3
690	Quantifying the Absorption Onset in the Quantum Efficiency of Emerging Photovoltaic Devices. *Advanced Energy Materials*, **2021**, 11, 2100022	21.8	20
689	Adjusting the energy of interfacial states in organic photovoltaics for maximum efficiency. *Nature Communications*, **2021**, 12, 1772	17.4	12
688	Recent progress in thick-film organic photovoltaic devices: Materials, devices, and processing. *SusMat*, **2021**, 1, 4-23		18
687	Degradation through Directional Self-Doping and Homogeneous Density of Recombination Centers Hindered by 1,8-Diiodooctane Additive in Non-Fullerene Organic Solar Cells. *Solar Rrl*, **2021**, 5, 2100024	7.1	2
686	A data fusion approach to optimize compositional stability of halide perovskites. *Matter*, **2021**, 4, 1305-1322	12.7	27
685	Discovery of temperature-induced stability reversal in perovskites using high-throughput robotic learning. *Nature Communications*, **2021**, 12, 2191	17.4	26
684	Single-Component Organic Solar Cells with Competitive Performance. *Organic Materials*, **2021**, 03, 228-244	4.9	15
683	Deep-learning-based pipeline for module power prediction from electroluminescense measurements. *Progress in Photovoltaics: Research and Applications*, **2021**, 29, 920-935	6.8	4
682	Balancing the efficiency, stability, and cost potential for organic solar cells via a new figure of merit. *Joule*, **2021**, 5, 1209-1230	27.8	42
681	Low Temperature Processed Fully Printed Efficient Planar Structure Carbon Electrode Perovskite Solar Cells and Modules. *Advanced Energy Materials*, **2021**, 11, 2101219	21.8	18
680	Building process design rules for microstructure control in wide-bandgap mixed halide perovskite solar cells by a high-throughput approach. *Applied Physics Letters*, **2021**, 118, 243903	3.4	2
679	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications **2021**, 3, 1025-1080		24
678	Solution processed oxygen and moisture barrier based on glass flakes for encapsulation of organic (opto-) electronic devices. *Flexible and Printed Electronics*, **2021**, 6, 025006	3.1	3
677	Transparent and Low-Loss Luminescent Solar Concentrators Based on Self-Trapped Exciton Emission in Lead-Free Double Perovskite Nanocrystals. *ACS Applied Energy Materials*, **2021**, 4, 6445-6453	6.1	10
676	High-Throughput Time-Resolved Photoluminescence Study of Composition- and Size-Selected Aqueous Ag□h□ Quantum Dots. *Journal of Physical Chemistry C*, **2021**, 125, 12185-12197	3.8	3

675	Parasitic emission in inkjet-printed InP-based quantum dot light-emitting diodes. *Organic Electronics*, **2021**, 93, 106156	3.5	0
674	Branched side chains improve molecular packing of non-fullerene acceptors. *Science China Chemistry*, **2021**, 64, 1435-1436	7.9	1
673	Achieving over 17% efficiency of ternary all-polymer solar cells with two well-compatible polymer acceptors. *Joule*, **2021**, 5, 1548-1565	27.8	118
672	Joint Superresolution and Rectification for Solar Cell Inspection. *IEEE Journal of Photovoltaics*, **2021**, 11, 1051-1058	3.7	
671	The evolution of Materials Acceleration Platforms: toward the laboratory of the future with AMANDA. *Journal of Materials Science*, **2021**, 56, 16422-16446	4.3	4
670	Correlative relationship between nanomorphology, crystallinity, texture and device efficiency of organic BHJ solar cells studied by energy-filtered TEM. *Microscopy and Microanalysis*, **2021**, 27, 390-392	0.5	
669	Computer vision tool for detection, mapping, and fault classification of photovoltaics modules in aerial IR videos. *Progress in Photovoltaics: Research and Applications*, **2021**, 29, 1236	6.8	11
668	Molecular Donor–Acceptor Dyads for Efficient Single-Material Organic Solar Cells. *Solar Rrl*, **2021**, 5, 2000653	6.3	17
667	Solution-coated barriers for organic electronics **2021**, 249-303		1
666	Microscopic Deformation Modes and Impact of Network Anisotropy on the Mechanical and Electrical Performance of Five-fold Twinned Silver Nanowire Electrodes. *ACS Nano*, **2021**, 15, 362-376	16.7	8
665	Device Performance of Emerging Photovoltaic Materials (Version 1). *Advanced Energy Materials*, **2021**, 11, 2002774	21.8	56
664	Inkjet printed organic and perovskite photovoltaics—review and perspectives **2021**, 305-333		0
663	Organic photovoltaic modules with new world record efficiencies. *Progress in Photovoltaics: Research and Applications*, **2021**, 29, 24-31	6.8	36
662	Overcoming photovoltage deficit via natural amino acid passivation for efficient perovskite solar cells and modules. *Journal of Materials Chemistry A*, **2021**, 9, 5857-5865	13	15
661	High performance tandem organic solar cells via a strongly infrared-absorbing narrow bandgap acceptor. *Nature Communications*, **2021**, 12, 178	17.4	52
660	A History and Perspective of Non-Fullerene Electron Acceptors for Organic Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2003570	21.8	141
659	Elucidating the Full Potential of OPV Materials Utilizing a High-Throughput Robot-Based Platform and Machine Learning. *Joule*, **2021**, 5, 495-506	27.8	29
658	Long-term power degradation analysis of crystalline silicon PV modules using indoor and outdoor measurement techniques. *Renewable and Sustainable Energy Reviews*, **2021**, 144, 111005	16.2	4

657	Understanding the Microstructure Formation of Polymer Films by Spontaneous Solution Spreading Coating with a High-Throughput Engineering Platform. *ChemSusChem*, **2021**, 14, 3590-3598	8.3	3
656	Molecular Oligothiophene-Fullerene Dyad Reaching Over 5% Efficiency in Single-Material Organic Solar Cells. *Advanced Materials*, **2021**, e2103573	24	12
655	Self-Healing Cs3Bi2Br3I6 Perovskite Wafers for X-Ray Detection. *Advanced Functional Materials*, **2021**, 31, 2102713	15.6	9
654	High-Throughput Robotic Synthesis and Photoluminescence Characterization of Aqueous Multinary Copper-Silver Indium Chalcogenide Quantum Dots. *Particle and Particle Systems Characterization*, **2021**, 38, 2100169	3.1	3
653	Utilizing the unique charge extraction properties of antimony tin oxide nanoparticles for efficient and stable organic photovoltaics. *Nano Energy*, **2021**, 89, 106373	17.1	1
652	Spontaneous alloying of ultrasmall non-stoichiometric Ag-In-S and Cu-In-S quantum dots in aqueous colloidal solutions.. *RSC Advances*, **2021**, 11, 21145-21152	3.7	2
651	Characterization of Aerosol Deposited Cesium Lead Tribromide Perovskite Films on Interdigited ITO Electrodes. *Advanced Electronic Materials*, **2021**, 7, 2001165	6.4	2
650	Photoluminescence for Defect Detection on Full-Sized Photovoltaic Modules. *IEEE Journal of Photovoltaics*, **2021**, 1-11	3.7	5
649	Perspectives of solution epitaxially grown defect tolerant lead-halide-perovskites and lead-chalcogenides. *Applied Physics Letters*, **2021**, 119, 230501	3.4	0
648	Strain-activated light-induced halide segregation in mixed-halide perovskite solids. *Nature Communications*, **2020**, 11, 6328	17.4	29
647	A General Guideline for Vertically Resolved Imaging of Manufacturing Defects in Organic Tandem Solar Cells. *Advanced Materials Interfaces*, **2020**, 7, 2000336	4.6	1
646	Axisymmetric and Asymmetric Naphthalene-Bisthienothiophene Based Nonfullerene Acceptors: On Constitutional Isomerization and Photovoltaic Performance. *ACS Applied Energy Materials*, **2020**, 3, 5734-5744	6.1	10
645	Composition Engineering of All-Inorganic Perovskite Film for Efficient and Operationally Stable Solar Cells. *Advanced Functional Materials*, **2020**, 30, 2001764	15.6	42
644	Micro-powder Ca3Sc2Si3O12:Ce silicate garnets as efficient light converters for WLEDs. *Optical Materials*, **2020**, 107, 109978	3.3	4
643	Efficient Surface Passivation and Electron Transport Enable Low Temperature-Processed Inverted Perovskite Solar Cells with Efficiency over 20%. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 8848-8856	8.3	6
642	Light intensity modulated impedance spectroscopy (LIMIS) in all-solid-state solar cells at open-circuit. *Nano Energy*, **2020**, 75, 104982	17.1	11
641	The Impact of COVID-19-Related Measures on the Solar Resource in Areas with High Levels of Air Pollution. *Joule*, **2020**, 4, 1681-1687	27.8	12
640	Real-Time Study on Structure Formation and the Intercalation Process of Polymer: Fullerene Bulk Heterojunction Thin Films. *Solar Rrl*, **2020**, 4, 2070035	7.1	

639	A phase-field model for the evaporation of thin film mixtures. *Physical Chemistry Chemical Physics*, **2020**, 22, 6638-6652	3.6	8
638	Vertically Aligned 2D/3D Pb–Sn Perovskites with Enhanced Charge Extraction and Suppressed Phase Segregation for Efficient Printable Solar Cells. *ACS Energy Letters*, **2020**, 5, 1386-1395	20.1	60
637	Spontaneously Self-Assembly of a 2D/3D Heterostructure Enhances the Efficiency and Stability in Printed Perovskite Solar Cells. *Advanced Energy Materials*, **2020**, 10, 2000173	21.8	81
636	A pressure process for efficient and stable perovskite solar cells. *Nano Energy*, **2020**, 77, 105063	17.1	19
635	Rational Interface Design and Morphology Control for Blade-Coating Efficient Flexible Perovskite Solar Cells with a Record Fill Factor of 81%. *Advanced Functional Materials*, **2020**, 30, 2001240	15.6	49
634	High-performance all-polymer solar cells with only 0.47 eV energy loss. *Science China Chemistry*, **2020**, 63, 1449-1460	7.9	39
633	A Cross-Linked Interconnecting Layer Enabling Reliable and Reproducible Solution-Processing of Organic Tandem Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1903800	21.8	11
632	Unraveling the Microstructure-Related Device Stability for Polymer Solar Cells Based on Nonfullerene Small-Molecular Acceptors. *Advanced Materials*, **2020**, 32, e1908305	24	81
631	The role of connectivity in significant bandgap narrowing for fused-pyrene based non-fullerene acceptors toward high-efficiency organic solar cells. *Journal of Materials Chemistry A*, **2020**, 8, 5995-6003	13	8
630	Embedding physics domain knowledge into a Bayesian network enables layer-by-layer process innovation for photovoltaics. *Npj Computational Materials*, **2020**, 6,	10.9	8
629	Beyond Ternary OPV: High-Throughput Experimentation and Self-Driving Laboratories Optimize Multicomponent Systems. *Advanced Materials*, **2020**, 32, e1907801	24	66
628	Sensitive Direct Converting X-Ray Detectors Utilizing Crystalline CsPbBr3 Perovskite Films Fabricated via Scalable Melt Processing. *Advanced Materials Interfaces*, **2020**, 7, 1901575	4.6	48
627	Novel two-dimensional phosphor thermography by decay-time method using a low frame-rate CMOS camera. *Optics and Lasers in Engineering*, **2020**, 128, 106010	4.6	2
626	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. *Nature Energy*, **2020**, 5, 35-49	62.3	369
625	Crystal-structure of active layers of small molecule organic photovoltaics before and after solvent vapor annealing. *Zeitschrift Fur Kristallographie - Crystalline Materials*, **2020**, 235, 15-28	1	3
624	Ternary All-Polymer Solar Cells With 8.5% Power Conversion Efficiency and Excellent Thermal Stability. *Frontiers in Chemistry*, **2020**, 8, 302	5	11
623	Film Fabrication Techniques: Beyond Ternary OPV: High-Throughput Experimentation and Self-Driving Laboratories Optimize Multicomponent Systems (Adv. Mater. 14/2020). *Advanced Materials*, **2020**, 32, 2070110	24	2
622	Unraveling the Complex Nanomorphology of Ternary Organic Solar Cells with Multimodal Analytical Transmission Electron Microscopy. *Solar Rrl*, **2020**, 4, 2000114	7.1	4

621	Looking beyond the Surface: The Band Gap of Bulk Methylammonium Lead Iodide. *Nano Letters*, **2020**, 20, 3090-3097	11.5	10
620	Quantitative Analysis of the Separate Influences of Material Composition and Local Defects on the Voc of PV Devices: An Exemplary Study on CIGS. *IEEE Journal of Photovoltaics*, **2020**, 10, 898-904	3.7	
619	Inorganic Halide Perovskite Solar Cells: Progress and Challenges. *Advanced Energy Materials*, **2020**, 10, 2000183	21.8	111
618	Phase diagram and stability of mixed-cation lead iodide perovskites: A theory and experiment combined study. *Physical Review Materials*, **2020**, 4,	3.2	6
617	Engineering of the Electron Transport Layer/Perovskite Interface in Solar Cells Designed on TiO2 Rutile Nanorods. *Advanced Functional Materials*, **2020**, 30, 1909738	15.6	30
616	Real-Time Study on Structure Formation and the Intercalation Process of Polymer: Fullerene Bulk Heterojunction Thin Films. *Solar Rrl*, **2020**, 4, 1900508	7.1	1
615	Visualizing and Suppressing Nonradiative Losses in High Open-Circuit Voltage n-i-p-Type CsPbI3 Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 271-279	20.1	24
614	Effect of water vapor content during the solid state synthesis of manganese-doped magnesium fluoro-germanate phosphor on its chemistry and photoluminescent properties. *Optical Materials*, **2020**, 99, 109572	3.3	1
613	Afterglow Effects as a Tool to Screen Emissive Nongeminate Charge Recombination Processes in Organic Photovoltaic Composites. *ACS Applied Materials & Interfaces*, **2020**, 12, 2695-2707	9.5	3
612	Analytical model for light modulating impedance spectroscopy (LIMIS) in all-solid-state p-n junction solar cells at open-circuit. *Applied Physics Letters*, **2020**, 116, 013901	3.4	10
611	Organic Photovoltaics: A Cost-Effective, Aqueous-Solution-Processed Cathode Interlayer Based on Organosilica Nanodots for Highly Efficient and Stable Organic Solar Cells (Adv. Mater. 38/2020). *Advanced Materials*, **2020**, 32, 2070284	24	1
610	Fully Solution Processed Pure □Phase Formamidinium Lead Iodide Perovskite Solar Cells for Scalable Production in Ambient Condition. *Advanced Energy Materials*, **2020**, 10, 2001869	21.8	16
609	Controlling the crystallization dynamics of photovoltaic perovskite layers on larger-area coatings. *Energy and Environmental Science*, **2020**, 13, 4666-4690	35.4	34
608	Graphene Oxide Thin Films: Synthesis and Optical Characterization. *ChemistrySelect*, **2020**, 5, 11737-11744	1.8	3
607	Material Strategies to Accelerate OPV Technology Toward a GW Technology. *Advanced Energy Materials*, **2020**, 10, 2001864	21.8	44
606	Robot-Based High-Throughput Screening of Antisolvents for Lead Halide Perovskites. *Joule*, **2020**, 4, 1806-1822	27.8	32
605	Unraveling the influence of non-fullerene acceptor molecular packing on photovoltaic performance of organic solar cells. *Nature Communications*, **2020**, 11, 6005	17.4	44
604	Effects on Photovoltaic Characteristics by Organic Bilayer- and Bulk-Heterojunctions: Energy Losses, Carrier Recombination and Generation. *ACS Applied Materials & Interfaces*, **2020**, 12, 55945-55953	9.5	7

603	Delocalization of exciton and electron wavefunction in non-fullerene acceptor molecules enables efficient organic solar cells. *Nature Communications*, **2020**, 11, 3943	17.4	222
602	Nondestructive characterization of polymeric components of silicon solar modules by near-infrared absorption spectroscopy (NIRA). *Solar Energy Materials and Solar Cells*, **2020**, 216, 110702	6.4	2
601	Deciphering the Origins of P1-Induced Power Losses in Cu(In Ga1)Se2 (CIGS) Modules Through Hyperspectral Luminescence. *Engineering*, **2020**, 6, 1395-1402	9.7	2
600	A Cost-Effective, Aqueous-Solution-Processed Cathode Interlayer Based on Organosilica Nanodots for Highly Efficient and Stable Organic Solar Cells. *Advanced Materials*, **2020**, 32, e2002973	24	32
599	Composition-Dependent Optical Band Bowing, Vibrational, and Photochemical Behavior of Aqueous Glutathione-Capped (Cu, Ag)InS Quantum Dots. *Journal of Physical Chemistry C*, **2020**, 124, 19375-19388	3.8	6
598	Epitaxial Metal Halide Perovskites by Inkjet-Printing on Various Substrates. *Advanced Functional Materials*, **2020**, 30, 2004612	15.6	10
597	The role of exciton lifetime for charge generation in organic solar cells at negligible energy-level offsets. *Nature Energy*, **2020**, 5, 711-719	62.3	110
596	Ion-mediated hopping electrode polarization model for impedance spectra of CH3NH3PbI3. *Journal of Applied Physics*, **2020**, 128, 075104	2.5	2
595	Efficient Exciton Diffusion in Organic Bilayer Heterojunctions with Nonfullerene Small Molecular Acceptors. *ACS Energy Letters*, **2020**, 5, 1628-1635	20.1	29
594	Graded 2D/3D Perovskite Heterostructure for Efficient and Operationally Stable MA-Free Perovskite Solar Cells. *Advanced Materials*, **2020**, 32, e2000571	24	95
593	2D-3D heterostructure enables scalable coating of efficient low-bandgap SnPb mixed perovskite solar cells. *Nano Energy*, **2019**, 66, 104099	17.1	46
592	Surpassing the 10% efficiency milestone for 1-cm all-polymer solar cells. *Nature Communications*, **2019**, 10, 4100	17.4	96
591	Electrical-Field-Driven Tunable Spectral Responses in a Broadband-Absorbing Perovskite Photodiode. *ACS Applied Materials & Interfaces*, **2019**, 11, 39018-39025	9.5	5
590	Fully Printed Infrared Photodetectors from PbS Nanocrystals with Perovskite Ligands. *ACS Nano*, **2019**, 13, 2389-2397	16.7	24
589	(Gd,Lu)AlO3:Dy3+ and (Gd,Lu)3Al5O12:Dy3+ as high-temperature thermographic phosphors. *Measurement Science and Technology*, **2019**, 30, 034001	2	7
588	Thin Film Encapsulation of Organic Solar Cells by Direct Deposition of Polysilazanes from Solution. *Advanced Energy Materials*, **2019**, 9, 1900598	21.8	23
587	A Generalized Crystallization Protocol for Scalable Deposition of High-Quality Perovskite Thin Films for Photovoltaic Applications. *Advanced Science*, **2019**, 6, 1901067	13.6	71
586	A generic surfactant-free approach to overcome wetting limitations and its application to improve inkjet-printed P3HT:non-fullerene acceptor PV. *Journal of Materials Chemistry A*, **2019**, 7, 13215-13224	13	13

585	Instantaneous charge separation in non-fullerene acceptor bulk-heterojunction of highly efficient solar cells. *EPJ Web of Conferences*, **2019**, 205, 05010	0.3	0
584	Comprehensive Investigation and Analysis of Bulk-Heterojunction Microstructure of High-Performance PCE11:PCBM Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 18555-18563	8.5	19
583	Ionic dipolar switching hinders charge collection in perovskite solar cells with normal and inverted hysteresis. *Solar Energy Materials and Solar Cells*, **2019**, 195, 291-298	6.4	17
582	Discriminating bulk versus interface shunts in organic solar cells by advanced imaging techniques. *Progress in Photovoltaics: Research and Applications*, **2019**, 27, 460-468	6.8	9
581	Sequential Deposition of High-Quality Photovoltaic Perovskite Layers via Scalable Printing Methods. *Advanced Functional Materials*, **2019**, 29, 1900964	15.6	56
580	Evidencing Excellent Thermal- and Photostability for Single-Component Organic Solar Cells with Inherently Built-In Microstructure. *Advanced Energy Materials*, **2019**, 9, 1900409	21.8	67
579	Dual Interfacial Design for Efficient CsPbI Br Perovskite Solar Cells with Improved Photostability. *Advanced Materials*, **2019**, 31, e1901152	24	248
578	An Operando Study on the Photostability of Nonfullerene Organic Solar Cells. *Solar Rrl*, **2019**, 3, 1900077	7.1	40
577	Favorable Mixing Thermodynamics in Ternary Polymer Blends for Realizing High Efficiency Plastic Solar Cells. *Advanced Energy Materials*, **2019**, 9, 1803394	21.8	33
576	Thin-Film Electrostatic Discharge Protection for Highly Segmented OLEDs in Automotive Applications. *Advanced Materials Technologies*, **2019**, 4, 1800696	6.8	
575	Reliable Performance Comparison of Perovskite Solar Cells Using Optimized Maximum Power Point Tracking (Solar RRL 2019). *Solar Rrl*, **2019**, 3, 1970024	7.1	1
574	All sub-nanosecond laser monolithic interconnection of OPV modules. *Progress in Photovoltaics: Research and Applications*, **2019**, 27, 479-490	6.8	11
573	Quantitative Assessment of the Influence of Camera and Parameter Choice for Outdoor Electroluminescence Investigations of Silicon Photovoltaic Panels. *Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences*, **2019**, 74, 645-653	1.4	3
572	Quantitative assessment of the power loss of silicon PV modules by IR thermography and its dependence on data-filtering criteria. *Progress in Photovoltaics: Research and Applications*, **2019**, 27, 856-868	6.8	12
571	Interface Molecular Engineering for Laminated Monolithic Perovskite/Silicon Tandem Solar Cells with 80.4% Fill Factor. *Advanced Functional Materials*, **2019**, 29, 1901476	15.6	27
570	A multi-objective optimization-based layer-by-layer blade-coating approach for organic solar cells: rational control of vertical stratification for high performance. *Energy and Environmental Science*, **2019**, 12, 3118-3132	35.4	83
569	Impurity Tracking Enables Enhanced Control and Reproducibility of Hybrid Perovskite Vapor Deposition. *ACS Applied Materials & Interfaces*, **2019**, 11, 28851-28857	9.5	28
568	Influence of Thiazole-Modified Carbon Nitride Nanosheets with Feasible Electronic Properties on Inverted Perovskite Solar Cells. *Journal of the American Chemical Society*, **2019**, 141, 12322-12328	16.4	40

567	Thermal-Driven Phase Separation of Double-Cable Polymers Enables Efficient Single-Component Organic Solar Cells. *Joule*, **2019**, 3, 1765-1781	27.8	79
566	High-Throughput Optical Screening for Efficient Semitransparent Organic Solar Cells. *Joule*, **2019**, 3, 2241-2254	27.8	89
565	Site-specific assessment of mechanical loads on photovoltaic modules from meteorological reanalysis data. *Solar Energy*, **2019**, 188, 1134-1145	6.8	4
564	In Situ and Ex Situ Energy-Filtered Transmission Electron Microscopy Studies on the Nanomorpholgy Evolution of Organic Bulk Heterojunction Solar Cells. *Microscopy and Microanalysis*, **2019**, 25, 2092-2093	0.5	
563	Revealing Hidden UV Instabilities in Organic Solar Cells by Correlating Device and Material Stability. *Advanced Energy Materials*, **2019**, 9, 1902124	21.8	39
562	High-throughput, outdoor characterization of photovoltaic modules by moving electroluminescence measurements. *Optical Engineering*, **2019**, 58, 1	1.1	5
561	The Relevance of Solubility and Miscibility for the Performance of Organic Solar Cells **2019**, 485-514		1
560	Fast and Robust Detection of Solar Modules in Electroluminescence Images. *Lecture Notes in Computer Science*, **2019**, 519-531	0.9	2
559	A top-down strategy identifying molecular phase stabilizers to overcome microstructure instabilities in organic solar cells. *Energy and Environmental Science*, **2019**, 12, 1078-1087	35.4	73
558	Physics-guided characterization and optimization of solar cells using surrogate machine learning model **2019**,		5
557	Suppressing photo-oxidation of non-fullerene acceptors and their blends in organic solar cells by exploring material design and employing friendly stabilizers. *Journal of Materials Chemistry A*, **2019**, 7, 25088-25101	13	61
556	A Bayesian Approach to Predict Solubility Parameters. *Advanced Theory and Simulations*, **2019**, 2, 1800069	3.5	36
555	Infrared Absorption Imaging of Water Ingress Into the Encapsulation of (Opto-)Electronic Devices. *IEEE Journal of Photovoltaics*, **2019**, 9, 252-258	3.7	4
554	Absence of Charge Transfer State Enables Very Low VOC Losses in SWCNT:Fullerene Solar Cells. *Advanced Energy Materials*, **2019**, 9, 1801913	21.8	22
553	Reliable Performance Comparison of Perovskite Solar Cells Using Optimized Maximum Power Point Tracking. *Solar Rrl*, **2019**, 3, 1800287	7.1	13
552	Assembling Mesoscale-Structured Organic Interfaces in Perovskite Photovoltaics. *Advanced Materials*, **2019**, 31, e1806516	24	11
551	Spray-Coated Organic Photodetectors and Image Sensors with Silicon-Like Performance. *Advanced Materials Technologies*, **2019**, 4, 1800158	6.8	52
550	Efficient Polymer Solar Cells Based on Non-fullerene Acceptors with Potential Device Lifetime Approaching 10 Years. *Joule*, **2019**, 3, 215-226	27.8	229

549	Critical review of the molecular design progress in non-fullerene electron acceptors towards commercially viable organic solar cells. *Chemical Society Reviews*, **2019**, 48, 1596-1625	58.5	617
548	TIPS Pentacene as a Beneficial Interlayer for Organic Photodetectors in Imaging Applications. *IEEE Transactions on Electron Devices*, **2018**, 65, 1516-1522	2.9	21
547	Local Observation of Phase Segregation in Mixed-Halide Perovskite. *Nano Letters*, **2018**, 18, 2172-2178	11.5	124
546	Switching Off Hysteresis in Perovskite Solar Cells by Fine-Tuning Energy Levels of Extraction Layers. *Advanced Energy Materials*, **2018**, 8, 1703376	21.8	36
545	Recent advances in semi-transparent polymer and perovskite solar cells for power generating window applications. *Energy and Environmental Science*, **2018**, 11, 1688-1709	35.4	202
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