

Martin A Green

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

606

papers

54,427

citations

110

h-index

220

g-index

669

ext. papers

61,937

ext. citations

7

avg, IF

8.44

L-index

#	Paper	IF	Citations
606	The emergence of perovskite solar cells. <i>Nature Photonics</i> , 2014 , 8, 506-514	33.9	4538
605	Surface plasmon enhanced silicon solar cells. <i>Journal of Applied Physics</i> , 2007 , 101, 093105	2.5	1396
604	Solar cell efficiency tables (Version 45). <i>Progress in Photovoltaics: Research and Applications</i> , 2015 , 23, 1-9	6.8	1325
603	Solar cell efficiency tables (version 39). <i>Progress in Photovoltaics: Research and Applications</i> , 2012 , 20, 12-20	6.8	938
602	Optical properties of intrinsic silicon at 300 K. <i>Progress in Photovoltaics: Research and Applications</i> , 1995 , 3, 189-192	6.8	858
601	Improving solar cell efficiencies by down-conversion of high-energy photons. <i>Journal of Applied Physics</i> , 2002 , 92, 1668-1674	2.5	793
600	Self-consistent optical parameters of intrinsic silicon at 300 K including temperature coefficients. <i>Solar Energy Materials and Solar Cells</i> , 2008 , 92, 1305-1310	6.4	756
599	19.8% efficient honeycomb-textured multicrystalline and 24.4% monocrystalline silicon solar cells. <i>Applied Physics Letters</i> , 1998 , 73, 1991-1993	3.4	752
598	Light trapping properties of pyramidally textured surfaces. <i>Journal of Applied Physics</i> , 1987 , 62, 243-249	2.5	691
597	Solar cell efficiency tables (version 50). <i>Progress in Photovoltaics: Research and Applications</i> , 2017 , 25, 668-676	6.8	663
596	Improving solar cell efficiencies by up-conversion of sub-band-gap light. <i>Journal of Applied Physics</i> , 2002 , 92, 4117-4122	2.5	642
595	Solar cell efficiency tables (version 51). <i>Progress in Photovoltaics: Research and Applications</i> , 2018 , 26, 3-12	6.8	622
594	Solar cell efficiency tables (version 41). <i>Progress in Photovoltaics: Research and Applications</i> , 2013 , 21, 1-11	6.8	618
593	Solar cell efficiency tables (version 37). <i>Progress in Photovoltaics: Research and Applications</i> , 2011 , 19, 84-92	6.8	614
592	Solar cell efficiency tables (Version 53). <i>Progress in Photovoltaics: Research and Applications</i> , 2019 , 27, 3-12	6.8	540
591	Solar cell efficiency tables (Version 55). <i>Progress in Photovoltaics: Research and Applications</i> , 2020 , 28, 3-15	6.8	533
590	Solar cell efficiency tables (version 54). <i>Progress in Photovoltaics: Research and Applications</i> , 2019 , 27, 565-575	6.8	516

589	Solar cell efficiency tables (version 49). <i>Progress in Photovoltaics: Research and Applications</i> , 2017 , 25, 3-13	6.8	514
588	Solar cell efficiency tables (version 48). <i>Progress in Photovoltaics: Research and Applications</i> , 2016 , 24, 905-913	6.8	512
587	Solar cell efficiency tables (version 47). <i>Progress in Photovoltaics: Research and Applications</i> , 2016 , 24, 3-11	6.8	498
586	22.8% efficient silicon solar cell. <i>Applied Physics Letters</i> , 1989 , 55, 1363-1365	3.4	497
585	Solar cell efficiency tables (version 52). <i>Progress in Photovoltaics: Research and Applications</i> , 2018 , 26, 427-436	6.8	491
584	24.5% Efficiency silicon PERT cells on MCZ substrates and 24.7% efficiency PERL cells on FZ substrates. <i>Progress in Photovoltaics: Research and Applications</i> , 1999 , 7, 471-474	6.8	483
583	Silicon nanostructures for third generation photovoltaic solar cells. <i>Thin Solid Films</i> , 2006 , 511-512, 654-662	6.2	477
582	The path to 25% silicon solar cell efficiency: History of silicon cell evolution. <i>Progress in Photovoltaics: Research and Applications</i> , 2009 , 17, 183-189	6.8	460
581	Third generation photovoltaics: Ultra-high conversion efficiency at low cost. <i>Progress in Photovoltaics: Research and Applications</i> , 2001 , 9, 123-135	6.8	457
580	Intrinsic concentration, effective densities of states, and effective mass in silicon. <i>Journal of Applied Physics</i> , 1990 , 67, 2944-2954	2.5	451
579	Solar cell efficiency tables (version 44). <i>Progress in Photovoltaics: Research and Applications</i> , 2014 , 22, 701-710	6.8	436
578	Solar cell efficiency tables (version 46). <i>Progress in Photovoltaics: Research and Applications</i> , 2015 , 23, 805-812	6.8	429
577	Cu ₂ ZnSnS ₄ solar cells with over 10% power conversion efficiency enabled by heterojunction heat treatment. <i>Nature Energy</i> , 2018 , 3, 764-772	62.3	429
576	Luminescent layers for enhanced silicon solar cell performance: Up-conversion. <i>Solar Energy Materials and Solar Cells</i> , 2007 , 91, 829-842	6.4	426
575	Efficient silicon light-emitting diodes. <i>Nature</i> , 2001 , 412, 805-8	50.4	424
574	Solar cell efficiency tables (version 43). <i>Progress in Photovoltaics: Research and Applications</i> , 2014 , 22, 1-9	6.8	420
573	Energy conversion approaches and materials for high-efficiency photovoltaics. <i>Nature Materials</i> , 2016 , 16, 23-34	27	378
572	Benefit of Grain Boundaries in Organic-Inorganic Halide Planar Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 875-80	6.4	367

571	Plasmonics for photovoltaic applications. <i>Solar Energy Materials and Solar Cells</i> , 2010 , 94, 1481-1486	6.4	367
570	Solar cell efficiency tables (version 57). <i>Progress in Photovoltaics: Research and Applications</i> , 2021 , 29, 3-15	6.8	356
569	Solar cell efficiency tables (version 56). <i>Progress in Photovoltaics: Research and Applications</i> , 2020 , 28, 629-638	6.8	337
568	Solar cell efficiency tables (version 36). <i>Progress in Photovoltaics: Research and Applications</i> , 2010 , 18, 346-352	6.8	335
567	Beneficial Effects of PbI ₂ Incorporated in Organo-Lead Halide Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2016 , 6, 1502104	21.8	335
566	Silicon quantum dot nanostructures for tandem photovoltaic cells. <i>Thin Solid Films</i> , 2008 , 516, 6748-6756	6.2	332
565	Solar cell fill factors: General graph and empirical expressions. <i>Solid-State Electronics</i> , 1981 , 24, 788-789	1.7	325
564	. <i>IEEE Transactions on Electron Devices</i> , 1991 , 38, 1925-1934	2.9	324
563	Hole Transport Layer Free Inorganic CsPbI ₃ Perovskite Solar Cell by Dual Source Thermal Evaporation. <i>Advanced Energy Materials</i> , 2016 , 6, 1502202	21.8	317
562	Thin-film solar cells: review of materials, technologies and commercial status. <i>Journal of Materials Science: Materials in Electronics</i> , 2007 , 18, 15-19	2.1	302
561	Lambertian light trapping in textured solar cells and light-emitting diodes: analytical solutions. <i>Progress in Photovoltaics: Research and Applications</i> , 2002 , 10, 235-241	6.8	286
560	Critical Role of Grain Boundaries for Ion Migration in Formamidinium and Methylammonium Lead Halide Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2016 , 6, 1600330	21.8	281
559	Solar cell efficiency tables (version 40). <i>Progress in Photovoltaics: Research and Applications</i> , 2012 , 20, 606-614	6.8	279
558	Solar cell efficiency tables (version 33). <i>Progress in Photovoltaics: Research and Applications</i> , 2009 , 17, 85-94	6.8	273
557	Third generation photovoltaics: solar cells for 2020 and beyond. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 14, 65-70	3	269
556	High Efficiency Silicon Solar Cells		268
555	The current status and future prospects of kesterite solar cells: a brief review. <i>Progress in Photovoltaics: Research and Applications</i> , 2016 , 24, 879-898	6.8	267
554	Solar Energy Conversion Toward 1 Terawatt. <i>MRS Bulletin</i> , 2008 , 33, 355-364	3.2	266

553	Solar cell efficiency tables (version 42). <i>Progress in Photovoltaics: Research and Applications</i> , 2013 , 21, 827-837	6.8	263
552	Over 9% Efficient Kesterite Cu ₂ ZnSnS ₄ Solar Cell Fabricated by Using Zn _{1-x} CdxS Buffer Layer. <i>Advanced Energy Materials</i> , 2016 , 6, 1600046	21.8	260
551	Perovskite Solar Cells: The Birth of a New Era in Photovoltaics. <i>ACS Energy Letters</i> , 2017 , 2, 822-830	20.1	259
550	Strontium-Doped Low-Temperature-Processed CsPbI ₂ Br Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2017 , 2, 2319-2325	20.1	258
549	Solar cell efficiency tables (Version 38). <i>Progress in Photovoltaics: Research and Applications</i> , 2011 , 19, 565-572	6.8	258
548	Radiative efficiency of state-of-the-art photovoltaic cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2012 , 20, 472-476	6.8	255
547	Acoustic-optical phonon up-conversion and hot-phonon bottleneck in lead-halide perovskites. <i>Nature Communications</i> , 2017 , 8, 14120	17.4	245
546	Efficiency enhancement of solar cells by luminescent up-conversion of sunlight. <i>Solar Energy Materials and Solar Cells</i> , 2006 , 90, 3327-3338	6.4	245
545	Silicon quantum dot/crystalline silicon solar cells. <i>Nanotechnology</i> , 2008 , 19, 245201	3.4	243
544	The Passivated Emitter and Rear Cell (PERC): From conception to mass production. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 143, 190-197	6.4	237
543	Terawatt-scale photovoltaics: Trajectories and challenges. <i>Science</i> , 2017 , 356, 141-143	33.3	227
542	Twenty-four percent efficient silicon solar cells with double layer antireflection coatings and reduced resistance loss. <i>Applied Physics Letters</i> , 1995 , 66, 3636-3638	3.4	227
541	Mixed 3D/2D Passivation Treatment for Mixed-Cation Lead Mixed-Halide Perovskite Solar Cells for Higher Efficiency and Better Stability. <i>Advanced Energy Materials</i> , 2018 , 8, 1703392	21.8	226
540	Fabrication of Cu ₂ ZnSnS ₄ solar cells with 5.1% efficiency via thermal decomposition and reaction using a non-toxic sol-gel route. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 500-509	13	220
539	Silicon quantum dot superlattices: Modeling of energy bands, densities of states, and mobilities for silicon tandem solar cell applications. <i>Journal of Applied Physics</i> , 2006 , 99, 114902	2.5	215
538	24% efficient silicon solar cells. <i>Applied Physics Letters</i> , 1990 , 57, 602-604	3.4	214
537	Accuracy of analytical expressions for solar cell fill factors. <i>Solar Cells</i> , 1982 , 7, 337-340		214
536	Enhanced emission from Si-based light-emitting diodes using surface plasmons. <i>Applied Physics Letters</i> , 2006 , 88, 161102	3.4	210

535	Temperature dependence of the radiative recombination coefficient of intrinsic crystalline silicon. <i>Journal of Applied Physics</i> , 2003 , 94, 4930	2.5	210
534	Solar cell efficiency tables (version 35). <i>Progress in Photovoltaics: Research and Applications</i> , 2010 , 18, 144-150	6.8	209
533	High-Efficiency Rubidium-Incorporated Perovskite Solar Cells by Gas Quenching. <i>ACS Energy Letters</i> , 2017 , 2, 438-444	20.1	200
532	General temperature dependence of solar cell performance and implications for device modelling. <i>Progress in Photovoltaics: Research and Applications</i> , 2003 , 11, 333-340	6.8	200
531	Optical Properties of Photovoltaic Organic-Inorganic Lead Halide Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 4774-85	6.4	199
530	CsPbI ₂ Br ₂ Perovskite Solar Cell by Spray-Assisted Deposition. <i>ACS Energy Letters</i> , 2016 , 1, 573-577	20.1	196
529	Methylammonium Lead Bromide Perovskite-Based Solar Cells by Vapor-Assisted Deposition. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 3545-3549	3.8	195
528	Beyond 11% Efficient Sulfide Kesterite Cu ₂ Zn _x Cd _{1-x} SnS ₄ Solar Cell: Effects of Cadmium Alloying. <i>ACS Energy Letters</i> , 2017 , 2, 930-936	20.1	194
527	Crystalline silicon on glass (CSG) thin-film solar cell modules. <i>Solar Energy</i> , 2004 , 77, 857-863	6.8	192
526	Recent developments in photovoltaics. <i>Solar Energy</i> , 2004 , 76, 3-8	6.8	190
525	Crystalline and thin-film silicon solar cells: state of the art and future potential. <i>Solar Energy</i> , 2003 , 74, 181-192	6.8	190
524	Humidity-Induced Degradation via Grain Boundaries of HC(NH ₂) ₂ PbI ₃ Planar Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2018 , 28, 1705363	15.6	172
523	Gas chromatography-mass spectrometry analyses of encapsulated stable perovskite solar cells. <i>Science</i> , 2020 , 368,	33.3	167
522	Solar cell efficiency tables (Version 34). <i>Progress in Photovoltaics: Research and Applications</i> , 2009 , 17, 320-326	6.8	166
521	Hydrothermal deposition of antimony selenosulfide thin films enables solar cells with 10% efficiency. <i>Nature Energy</i> , 2020 , 5, 587-595	62.3	162
520	24% efficient per silicon solar cell: Recent improvements in high efficiency silicon cell research. <i>Solar Energy Materials and Solar Cells</i> , 1996 , 41-42, 87-99	6.4	159
519	Solar cell efficiency tables (Version 58). <i>Progress in Photovoltaics: Research and Applications</i> , 2021 , 29, 657	6.8	151
518	Improved value for the silicon intrinsic carrier concentration from 275 to 375 K. <i>Journal of Applied Physics</i> , 1991 , 70, 846-854	2.5	150

517	Hot carrier solar cells: Principles, materials and design. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010 , 42, 2862-2866	3	147
516	Solar cell efficiency tables (Version 31). <i>Progress in Photovoltaics: Research and Applications</i> , 2008 , 16, 61-67	6.8	146
515	Very efficient light emission from bulk crystalline silicon. <i>Applied Physics Letters</i> , 2003 , 82, 2996-2998	3.4	138
514	Exploring Inorganic Binary Alkaline Halide to Passivate Defects in Low-Temperature-Processed Planar-Structure Hybrid Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2018 , 8, 1800138	21.8	137
513	Defect trapping states and charge carrier recombination in organic/inorganic halide perovskites. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 793-800	7.1	136
512	Silicon photovoltaic modules: a brief history of the first 50 years. <i>Progress in Photovoltaics: Research and Applications</i> , 2005 , 13, 447-455	6.8	133
511	655 mV open-circuit voltage, 17.6% efficient silicon MIS solar cells. <i>Applied Physics Letters</i> , 1979 , 34, 790-793	3.4	126
510	Large area efficient interface layer free monolithic perovskite/homo-junction-silicon tandem solar cell with over 20% efficiency. <i>Energy and Environmental Science</i> , 2018 , 11, 2432-2443	35.4	122
509	Enhancing the Cu ₂ ZnSnS ₄ solar cell efficiency by back contact modification: Inserting a thin TiB ₂ intermediate layer at Cu ₂ ZnSnS ₄ /Mo interface. <i>Applied Physics Letters</i> , 2014 , 104, 051105	3.4	121
508	Slowing of carrier cooling in hot carrier solar cells. <i>Thin Solid Films</i> , 2008 , 516, 6948-6953	2.2	121
507	Accelerated Lifetime Testing of Organic-Inorganic Perovskite Solar Cells Encapsulated by Polyisobutylene. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 25073-25081	9.5	118
506	. <i>IEEE Transactions on Electron Devices</i> , 1990 , 37, 331-336	2.9	116
505	Progress in Laser-Crystallized Thin-Film Polycrystalline Silicon Solar Cells: Intermediate Layers, Light Trapping, and Metallization. <i>IEEE Journal of Photovoltaics</i> , 2014 , 4, 33-39	3.7	115
504	Selective energy contacts for hot carrier solar cells. <i>Thin Solid Films</i> , 2008 , 516, 6968-6973	2.2	114
503	20% efficiency silicon solar cells. <i>Applied Physics Letters</i> , 1986 , 48, 215-217	3.4	114
502	Effective light trapping in polycrystalline silicon thin-film solar cells by means of rear localized surface plasmons. <i>Applied Physics Letters</i> , 2010 , 96, 261109	3.4	113
501	Synthesis and characterization of boron-doped Si quantum dots for all-Si quantum dot tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 273-279	6.4	112
500	Structural, electrical and photovoltaic characterization of Si nanocrystals embedded SiC matrix and Si nanocrystals/c-Si heterojunction devices. <i>Solar Energy Materials and Solar Cells</i> , 2008 , 92, 474-481	6.4	112

499	Detailed balance limit for the series constrained two terminal tandem solar cell. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 14, 96-100	3	112
498	Si nanocrystal p-i-n diodes fabricated on quartz substrates for third generation solar cell applications. <i>Applied Physics Letters</i> , 2009 , 95, 153506	3.4	110
497	n-Type silicon quantum dots and p-type crystalline silicon heteroface solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 684-690	6.4	109
496	Solar energy collection by antennas. <i>Solar Energy</i> , 2002 , 73, 395-401	6.8	108
495	Overcoming the Challenges of Large-Area High-Efficiency Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2017 , 2, 1978-1984	20.1	104
494	The effect of dielectric spacer thickness on surface plasmon enhanced solar cells for front and rear side depositions. <i>Journal of Applied Physics</i> , 2011 , 109, 073105	2.5	103
493	Solar cell efficiency tables (version 30). <i>Progress in Photovoltaics: Research and Applications</i> , 2007 , 15, 425-430	6.8	102
492	Photovoltaics: technology overview. <i>Energy Policy</i> , 2000 , 28, 989-998	7.2	101
491	Mobile Charge-Induced Fluorescence Intermittency in Methylammonium Lead Bromide Perovskite. <i>Nano Letters</i> , 2015 , 15, 4644-9	11.5	97
490	Photovoltaic principles. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 14, 11-17	3	97
489	Estimates of te and in prices from direct mining of known ores. <i>Progress in Photovoltaics: Research and Applications</i> , 2009 , 17, 347-359	6.8	95
488	Solar cell efficiency tables (version 28). <i>Progress in Photovoltaics: Research and Applications</i> , 2006 , 14, 455-461	6.8	93
487	Nanoscale Microstructure and Chemistry of Cu ₂ ZnSnS ₄ /CdS Interface in Kesterite Cu ₂ ZnSnS ₄ Solar Cells. <i>Advanced Energy Materials</i> , 2016 , 6, 1600706	21.8	93
486	High performance light trapping textures for monocrystalline silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2001 , 65, 369-375	6.4	91
485	Polaronic exciton binding energy in iodide and bromide organic-inorganic lead halide perovskites. <i>Applied Physics Letters</i> , 2015 , 107, 231902	3.4	90
484	Surface recombination velocity measurements at the silicon/silicon dioxide interface by microwave-detected photoconductance decay. <i>Journal of Applied Physics</i> , 1994 , 76, 363-370	2.5	89
483	Light Illumination Induced Photoluminescence Enhancement and Quenching in Lead Halide Perovskite. <i>Solar Rrl</i> , 2017 , 1, 1600001	7.1	88
482	Mobile Ion Induced Slow Carrier Dynamics in Organic-Inorganic Perovskite CH ₃ NH ₃ BBr ₃ ACS <i>Applied Materials & Interfaces</i> , 2016 , 8, 5351-7	9.5	87

481	Optical analysis of perovskite/silicon tandem solar cells. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 5679-5689	6.8	86
480	Boosting the efficiency of pure sulfide CZTS solar cells using the In/Cd-based hybrid buffers. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 144, 700-706	6.4	85
479	Consolidation of thin-film photovoltaic technology: the coming decade of opportunity. <i>Progress in Photovoltaics: Research and Applications</i> , 2006 , 14, 383-392	6.8	85
478	Silicon Quantum Dots in a Dielectric Matrix for All-Silicon Tandem Solar Cells. <i>Advances in OptoElectronics</i> , 2007 , 2007, 1-11	0.5	84
477	The Effect of Stoichiometry on the Stability of Inorganic Cesium Lead Mixed-Halide Perovskites Solar Cells. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 19642-19649	3.8	83
476	Beyond 8% ultrathin kesterite Cu ₂ ZnSnS ₄ solar cells by interface reaction route controlling and self-organized nanopattern at the back contact. <i>NPG Asia Materials</i> , 2017 , 9, e401-e401	10.3	83
475	Progress on hot carrier cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 713-719	6.4	83
474	Room temperature optical properties of organic-inorganic lead halide perovskites. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 137, 253-257	6.4	82
473	Manufacturing cost and market potential analysis of demonstrated roll-to-roll perovskite photovoltaic cell processes. <i>Solar Energy Materials and Solar Cells</i> , 2018 , 174, 314-324	6.4	82
472	Balancing electrical and optical losses for efficient 4-terminal Si _{1-x} Perovskite solar cells with solution processed percolation electrodes. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 3583-3592	13	80
471	Morphology and Carrier Extraction Study of Organic-Inorganic Metal Halide Perovskite by One- and Two-Photon Fluorescence Microscopy. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 3849-53	6.4	80
470	Effects of Si-rich oxide layer stoichiometry on the structural and optical properties of Si QD/SiO ₂ multilayer films. <i>Nanotechnology</i> , 2009 , 20, 485703	3.4	80
469	Solar cell efficiency tables (version 29). <i>Progress in Photovoltaics: Research and Applications</i> , 2007 , 15, 35-40	6.8	80
468	Solar cell efficiency tables (version 27). <i>Progress in Photovoltaics: Research and Applications</i> , 2006 , 14, 45-51	6.8	80
467	Fourier transform infrared spectroscopy of annealed silicon-rich silicon nitride thin films. <i>Journal of Applied Physics</i> , 2008 , 104, 104310	2.5	77
466	Very high efficiency silicon solar cells-science and technology. <i>IEEE Transactions on Electron Devices</i> , 1999 , 46, 1940-1947	2.9	77
465	Low-temperature growth of polycrystalline Ge thin film on glass by in situ deposition and ex situ solid-phase crystallization for photovoltaic applications. <i>Applied Surface Science</i> , 2009 , 255, 7028-7035	6.7	74
464	Impurity photovoltaic effect: Fundamental energy conversion efficiency limits. <i>Journal of Applied Physics</i> , 2002 , 92, 1329-1336	2.5	74

463	Silicon solar cells: evolution, high-efficiency design and efficiency enhancements. <i>Semiconductor Science and Technology</i> , 1993 , 8, 1-12	1.8	74
462	Nucleation and Growth Control of HC(NH ₂) ₂ PbI ₃ for Planar Perovskite Solar Cell. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 11262-11267	3.8	74
461	Structural characterization of annealed Si _{1-x} C _x /SiC multilayers targeting formation of Si nanocrystals in a SiC matrix. <i>Journal of Applied Physics</i> , 2008 , 103, 083544	2.5	73
460	Phosphorus-doped silicon quantum dots for all-silicon quantum dot tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 1524-1530	6.4	71
459	Solar cell efficiency tables (Version 32). <i>Progress in Photovoltaics: Research and Applications</i> , 2008 , 16, 435-440	6.8	70
458	Accurate determination of minority carrier- and lattice scattering-mobility in silicon from photoconductance decay. <i>Journal of Applied Physics</i> , 1992 , 72, 4161-4171	2.5	70
457	Photovoltaics: Perovskite cells charge forward. <i>Nature Materials</i> , 2015 , 14, 559-61	27	69
456	Solution-Processed, Silver-Doped NiO _x as Hole Transporting Layer for High-Efficiency Inverted Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2018 , 1, 561-570	6.1	69
455	Roadmap on optical energy conversion. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18, 073004	1.7	69
454	High-efficiency PERL and PERT silicon solar cells on FZ and MCZ substrates. <i>Solar Energy Materials and Solar Cells</i> , 2001 , 65, 429-435	6.4	69
453	21.8% Efficient Monolithic Perovskite/Homo-Junction-Silicon Tandem Solar Cell on 16 cm ² . <i>ACS Energy Letters</i> , 2018 , 3, 2299-2300	20.1	69
452	Spatially resolved analysis and minimization of resistive losses in high-efficiency Si solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 1996 , 4, 399-414	6.8	68
451	Fabrication of Efficient and Stable CsPbI ₃ Perovskite Solar Cells through Cation Exchange Process. <i>Advanced Energy Materials</i> , 2019 , 9, 1901685	21.8	67
450	Solar cell efficiency tables (version 59). <i>Progress in Photovoltaics: Research and Applications</i> , 2022 , 30, 3-12	6.8	67
449	Effects of boron doping on the structural and optical properties of silicon nanocrystals in a silicon dioxide matrix. <i>Nanotechnology</i> , 2008 , 19, 424019	3.4	66
448	Four-Terminal Tandem Solar Cells Using CH ₃ NH ₃ PbBr ₃ by Spectrum Splitting. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 3931-4	6.4	65
447	Evolution of Si (and SiC) nanocrystal precipitation in SiC matrix. <i>Thin Solid Films</i> , 2008 , 516, 3824-3830	2.2	65
446	Solar cell efficiency tables (version 22). <i>Progress in Photovoltaics: Research and Applications</i> , 2003 , 11, 347-352	6.8	65

445	Potential for low dimensional structures in photovoltaics. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2000 , 74, 118-124	3.1	65
444	Limiting loss mechanisms in 23% efficient silicon solar cells. <i>Journal of Applied Physics</i> , 1995 , 77, 3491-3504	3.4	65
443	Novel parallel multijunction solar cell. <i>Applied Physics Letters</i> , 1994 , 65, 2907-2909	3.4	65
442	Solar cell efficiency tables. <i>Progress in Photovoltaics: Research and Applications</i> , 1993 , 1, 25-29	6.8	65
441	40% efficient sunlight to electricity conversion. <i>Progress in Photovoltaics: Research and Applications</i> , 2015 , 23, 685-691	6.8	64
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