Craig L Perkins

List of Publications by Year
in descending order

64 papers	5,165 citations	218677 26 h-index	182427 51 g-index
64 all docs	64 docs citations	64 times ranked	5319 citing authors

#	Article	IF	Citations
1	19Â·9%â€efficient ZnO/CdS/CuInGaSe² solar cell with 81Â·2% fill factor. Progress in Photovoltaics: Research and Applications, 2008, 16, 235-239.	8.1	1,888
2	Properties of 19.2% efficiency ZnO/CdS/CuInGaSe2 thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2003, 11, 225-230.	8.1	909
3	Exceeding 20% efficiency with in situ group V doping in polycrystalline CdTe solar cells. Nature Energy, 2019, 4, 837-845.	39.5	243
4	Atmosphericâ€Pressure Chemical Vapor Deposition of Iron Pyrite Thin Films. Advanced Energy Materials, 2012, 2, 1124-1135.	19.5	147
5	Textured nanoporous Mo:BiVO₄ photoanodes with high charge transport and charge transfer quantum efficiencies for oxygen evolution. Energy and Environmental Science, 2016, 9, 1412-1429.	30.8	135
6	Chemical vapor deposition-formedp-type ZnO thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1342-1346.	2.1	125
7	Revisiting the Valence and Conduction Band Size Dependence of PbS Quantum Dot Thin Films. ACS Nano, 2016, 10, 3302-3311.	14.6	118
8	Synthesis of band-gap-reduced p-type ZnO films by Cu incorporation. Journal of Applied Physics, 2007, 102, .	2.5	114
9	Improved performance in ZnO/CdS/CuGaSe2 thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2003, 11, 535-541.	8.1	110
10	Intrinsic surface passivation of CdTe. Journal of Applied Physics, 2015, 118, .	2.5	106
11	Thin-Film Solar Cells with 19% Efficiency by Thermal Evaporation of CdSe and CdTe. ACS Energy Letters, 2020, 5, 892-896.	17.4	105
12	Control of conduction type in Al- and N-codoped ZnO thin films. Applied Physics Letters, 2005, 86, 202106.	3.3	83
13	Physical characterization of thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2004, 12, 177-217.	8.1	80
14	Molecular Anchors for Self-Assembled Monolayers on ZnO: A Direct Comparison of the Thiol and Phosphonic Acid Moieties. Journal of Physical Chemistry C, 2009, 113, 18276-18286.	3.1	79
15	An inversion layer at the surface of n-type iron pyrite. Energy and Environmental Science, 2014, 7, 1974.	30.8	75
16	Comparison of device performance and measured transport parameters in widely-varying Cu(In,Ga)(Se,S) solar cells. Progress in Photovoltaics: Research and Applications, 2006, 14, 25-43.	8.1	70
17	Development of radio-frequency magnetron sputtered indium molybdenum oxide. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1092-1097.	2.1	66
18	Tailoring MgZnO/CdSeTe Interfaces for Photovoltaics. IEEE Journal of Photovoltaics, 2019, 9, 888-892.	2.5	65

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19	Dielectric function spectra and critical-point energies of Cu2ZnSnSe4 from 0.5 to 9.0 eV. Journal of Applied Physics, 2012, 111, .	2.5	53
20	Surfactant-assisted growth of CdS thin films for photovoltaic applications. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 497-504.	2.1	49
21	Correlation Between Measured Minority-Carrier Lifetime and $hbox{Cu}(hbox{In},) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 66 2957-2963.	3.0	49
22	3D/2D passivation as a secret to success for polycrystalline thin-film solar cells. Joule, 2021, 5, 1057-1073.	24.0	48
23	Synthesis of LaWN ₃ nitride perovskite with polar symmetry. Science, 2021, 374, 1488-1491.	12.6	43
24	Quantitative analysis of graded Cu(In1â^'x,Gax)Se2 thin films by AES, ICP-OES, and EPMA. Applied Surface Science, 2010, 257, 878-886.	6.1	33
25	Two-Dimensional Cadmium Chloride Nanosheets in Cadmium Telluride Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 20561-20565.	8.0	32
26	Impact of Hole Transport Layer Surface Properties on the Morphology of a Polymerâ€Fullerene Bulk Heterojunction. Advanced Energy Materials, 2014, 4, 1301879.	19.5	28
27	SnO₂-Catalyzed Oxidation in High-Efficiency CdTe Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 13003-13010.	8.0	22
28	Complex dielectric function and refractive index spectra of epitaxial CdO thin film grown on r-plane sapphire from 0.74 to 6.45 eV. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 1120-1124.	1.2	21
29	Growth of amorphous and epitaxial ZnSiP₂â€“Si alloys on Si. Journal of Materials Chemistry C, 2018, 6, 2696-2703.	5.5	18
30	Interfaces Between C<roman>d</roman>T<roman>e</roman> and ALD A<roman>l</roman>₂O₃. IEEE Journal of Photovoltaics, 2018, 8, 1858-1861.	2.5	18
31	Non-Conjugated Polymers for Organic Photovoltaics: Physical and Optoelectronic Properties of Poly(perylene diimides). Journal of Physical Chemistry C, 2010, 114, 6784-6790.	3.1	16
32	Microscopic Analysis of Residuals on Polycrystalline CdTe Following Wet CdCl₂ Treatment. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	15
33	Surface Passivation of CdTe Single Crystals. IEEE Journal of Photovoltaics, 2015, 5, 382-385.	2.5	15
34	Synthesis of Lanthanum Tungsten Oxynitride Perovskite Thin Films. Advanced Electronic Materials, 2019, 5, 1900214.	5.1	15
35	Back-Surface Passivation of CdTe Solar Cells Using Solution-Processed Oxidized Aluminum. ACS Applied Materials & Interfaces, 2020, 12, 51337-51343.	8.0	15
36	Thermal Stability of Copperâ€“Nickel and Copperâ€“Nickel Silicide Contacts for Crystalline Silicon. ACS Applied Energy Materials, 2018, 1, 2841-2848.	5.1	14

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37	Combinatorial Nitrogen Gradients in Sputtered Thin Films. ACS Combinatorial Science, 2018, 20, 436-442.	3.8	13
38	Measured minority-carrier lifetime and CIGS device performance. , 2009, , .		12
39	Mechanisms for long carrier lifetime in Cd(Se)Te double heterostructures. Applied Physics Letters, 2021, 118, .	3.3	12
40	Strong Attraction and Adhesion Forces of Dust Particles by System Voltages of Photovoltaic Modules. IEEE Journal of Photovoltaics, 2019, 9, 1121-1127.	2.5	11
41	Se diffusion in CdTe thin films for photovoltaics. Journal Physics D: Applied Physics, 2021, 54, 025501.	2.8	11
42	Comparative operando XPS studies of quasi-Fermi level splitting and open-circuit voltage in CZTSe/CdS and CIGS/CdS junctions and device structures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	10
43	High-Temperature Nucleation of GaP on V-Grooved Si. Crystal Growth and Design, 2020, 20, 6745-6751.	3.0	10
44	Exceeding 200â€‰ns Lifetimes in Polycrystalline CdTe Solar Cells. Solar Rrl, 2021, 5, 2100173.	5.8	10
45	Influence of Protection Layers on Thermal Stability of Nitride Thin Films. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100178.	2.4	9
46	Boron Phosphide Films by Reactive Sputtering: Searching for a Pâ€Type Transparent Conductor. Advanced Materials Interfaces, 2022, 9, .	3.7	8
47	Laboratory Studies of Particle Cementation and PV module Soiling. , 2017, , .		6
48	NREL Efforts to Address Soiling on PV Modules. , 2017, , .		6
49	In situ Al₂O₃ incorporation enhances the efficiency of CuIn(S,Se)₂ solar cells prepared from molecular-ink solutions. Journal of Materials Chemistry A, 2021, 9, 10419-10426.	10.3	6
50	Largeâ€Area (Ag,Cu)(In,Ga)Se₂ Thinâ€Film Solar Cells with Increased Bandgap and Reduced Voltage Losses Realized with Bulk Defect Reduction and Frontâ€Grading of the Absorber Bandgap. Solar Rrl, 2022, 6, .	5.8	6
51	Time-Resolved Switching Studies in a-Si:H and Related Films. Materials Research Society Symposia Proceedings, 2003, 762, 241.	0.1	4
52	Investigation of the effect of I-ZnO window layer on the device performance of the Cd-free CIGS based solar cells. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	3
53	Oxidative segregation of Group V dopants in CdTe solar cells. , 2019, , .		2
54	Storage conditions for high-accuracy composition standards of AlGaAs. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1267.	1.6	1

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55	Heteroepitaxial growth of CZTS. , 2014, , .		1
56	Semi-insulating Sn-Zr-O: Tunable resistance buffer layers. Applied Physics Letters, 2015, 106, 092106.	3.3	1
57	Nucleation of high-quality GaP on Si through v-groove Si substrates. , 2020, , .		1
58	A liquid-phase quartz crystal microbalance for photovoltaics research. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	0
59	A new class of acceptor polymers for applications in organic PV. , 2009, , .		0
60	Ag nanowire based transparent conductor for CIGS PV. , 2011, , .		0
61	Thermal annealing affects vertical morphology, doping and defect density in BHJ OPV devices. , 2014, , .		0
62	Photoelectron spectroscopy, and photovoltaic device study of Cu<inf>2</inf>ZnSnSe<inf>4</inf> and ZnO<inf>x</inf>S<inf>1−x</inf> buffer layer interface. , 2014, , .		0
63	A Novel Method to Investigate Stoichiometry and Performance of Buried Passivated Contacts Utilizing Time-of-Flight SIMS. , 2017, , .		0
64	High Efficiency Evaporated CdSeTe/CdTe Solar Cells with and without MgZnO Buffer Layer. , 2020, , .		0