William E Mcmahon

List of Publications by Year
in descending order

47	953	567281 15	477307 29
papers	citations	h-index	g-index

47	47	47	961
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Building a Six-Junction Inverted Metamorphic Concentrator Solar Cell. IEEE Journal of Photovoltaics, 2018, 8, 626-632.	2.5	148
2	Quadruple-Junction Inverted Metamorphic Concentrator Devices. IEEE Journal of Photovoltaics, 2015, 5, 432-437.	2.5	101
3	Generalized Optoelectronic Model of Series-Connected Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1827-1839.	2.5	97
4	Measuring IV Curves and Subcell Photocurrents in the Presence of Luminescent Coupling. IEEE Journal of Photovoltaics, 2013, 3, 879-887.	2.5	85
5	Design Flexibility of Ultrahigh Efficiency Four-Junction Inverted Metamorphic Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 578-583.	2.5	79
6	Growth of antiphase-domain-free GaP on Si substrates by metalorganic chemical vapor deposition using an in situ AsH3 surface preparation. Applied Physics Letters, 2015, 107, .	3.3	51
7	A Taxonomy for Three-Terminal Tandem Solar Cells. ACS Energy Letters, 2020, 5, 1233-1242.	17.4	51
8	Using Phase Effects to Understand Measurements of the Quantum Efficiency and Related Luminescent Coupling in a Multijunction Solar Cell. IEEE Journal of Photovoltaics, 2012, 2, 424-433.	2.5	26
9	High aspect ratio electrodeposited Ni/Au contacts for GaAsâ€based IIIâ€“V concentrator solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 646-653.	8.1	25
10	Metamorphic IIIâ€“V Solar Cells: Recent Progress and Potential. IEEE Journal of Photovoltaics, 2016, 6, 366-373.	2.5	25
11	Ultrabroadband and Wide-Angle Hybrid Antireflection Coatings With Nanostructures. IEEE Journal of Photovoltaics, 2014, 4, 962-967.	2.5	23
12	GaAs Solar Cells on Nanopatterned Si Substrates. IEEE Journal of Photovoltaics, 2018, 8, 1635-1640.	2.5	23
13	Perspective: Fundamentals of coalescence-related dislocations, applied to selective-area growth and other epitaxial films. APL Materials, 2018, 6, .	5.1	18
14	In situ measurement of CuPt alloy ordering using strain anisotropy. Journal of Applied Physics, 2014, 115, 053502.	2.5	16
15	Multijunction solar cell design revisited: disruption of current matching by atmospheric absorption bands. Progress in Photovoltaics: Research and Applications, 2017, 25, 850-860.	8.1	15
16	Pathway to 50% efficient inverted metamorphic concentrator solar cells. AIP Conference Proceedings, 2017, , .	0.4	15
17	Twoâ€terminal metalâ€interâ€connected multijunction IIIâ€“V solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 593-599.	8.1	13
18	Period-doubling reconstructions of semiconductor partial dislocations. NPG Asia Materials, 2015, 7, e216-e216.	7.9	12

#	Article	IF	Citations
19	Homogenous Voltage-Matched Strings Using Three-Terminal Tandem Solar Cells: Fundamentals and End Losses. IEEE Journal of Photovoltaics, 2021, 11, 1078-1086.	2.5	12
20	Monolithic, Ultra-Thin GaInP/GaAs/GaInAs Tandem Solar Cells. , 2006, , .		11
21	Optimization of Multijunction Solar Cells Through Indoor Energy Yield Measurements. IEEE Journal of Photovoltaics, 2015, 5, 438-445.	2.5	11
22	Spectral binning for energy production calculations and multijunction solar cell design. Progress in Photovoltaics: Research and Applications, 2018, 26, 48-54.	8.1	11
23	Development of High-Efficiency GaAs Solar Cells Grown on Nanopatterned GaAs Substrates. Crystal Growth and Design, 2021, 21, 5955-5960.	3.0	11
24	High-Temperature Nucleation of GaP on V-Grooved Si. Crystal Growth and Design, 2020, 20, 6745-6751.	3.0	10
25	Optoelectronic analysis of multijunction wire array solar cells. Journal of Applied Physics, 2013, 114, .	2.5	9
26	Large Area Atomically Flat Surfaces via Exfoliation of Bulk Bi₂Se₃ Single Crystals. Chemistry of Materials, 2017, 29, 8472-8477.	6.7	8
27	Characterization of multiterminal tandem photovoltaic devices and their subcell coupling. Cell Reports Physical Science, 2021, 2, 100677.	5.6	8
28	Enabling low-cost III-V/Si integration through nucleation of GaP on v-grooved Si substrates. , 2018, , .		6
29	Cell-level thermal management issues in concentrator III–V multijunction solar cells. , 2010, , .		4
30	Measuring IV curves and subcell photocurrents in the presence of luminescent coupling. , 2012, , .		4
31	Fabrication, Measurement, and Modeling of GaInP/GaAs Three-Terminal Cells and Strings. , 2021, , .		4
32	Controlled spalling of (100)-oriented GaAs with a nanoimprint lithography interlayer for thin-film layer transfer without facet formation. Thin Solid Films, 2022, 742, 139049.	1.8	4
33	Energy yield determination of concentrator solar cells using laboratory measurements. AIP Conference Proceedings, 2015, , .	0.4	3
34	Field spectra binning for energy production calculations and multijunction solar cell design. , 2015, , .		3
35	Investigation of GaP/Si heteroepitaxy on MOCVD prepared Si(100) surfaces. , 2015, , .		2
36	Using electron channeling contrast imaging to inform and improve the growth of high-efficiency GaAs solar cells on nanopatterned GaAs substrates. Journal of Crystal Growth, 2022, 581, 126490.	1.5	2

#	Article	IF	Citations
37	Design of ultra-broadband antireflection coatings utilizing integrated moth-eye structures for multi-junction device applications. , 2013, , .		1
38	Measuring IV curves and subcell photocurrents in the presence of luminescent coupling. , 2013, , .		1
39	Single crystalline substrates for III- V growth via exfoliation of bulk single crystals. , 2017, , .		1
40	Rear Heterojunction GaAs Solar Cells With Strain-Balanced GaInAs/GaAsP Quantum Wells. , 2019, , .		1
41	Towards a III-V solar cell with a metamorphic graded buffer directly grown on v-groove Si substrates. , 2021, , .		1
42	Nucleation of high-quality GaP on Si through v-groove Si substrates. , 2020, , .		1
43	Consideration of the Intricacies Inherent in Molecular Beam Epitaxy of the NaCl/GaAs System. ACS Omega, 2022, 7, 24353-24364.	3.5	1
44	Effect of Atmospheric Absorption Bands on the Optimal Design of Multijunction Solar Cells. , 2017, , .		0
45	Fabrication of Thin III-V Solar Cells on Ni Films using Electroless Ni Deposition. , 2019, , .		0
46	Understanding improvements in coalesced epilayers grown over nanopatterned substrates. , 2021, , .		0
47	Surface conversion of single-crystal Bi2Se3 to Î²-In2Se3. Journal of Crystal Growth, 2021, 573, 126306.	1.5	0