

# William E McMahon

## List of Publications by Year in descending order

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47  
papers

953  
citations

567281

15  
h-index

477307

29  
g-index

47  
all docs

47  
docs citations

47  
times ranked

961  
citing authors

#	ARTICLE	IF	CITATIONS
1	Using electron channeling contrast imaging to inform and improve the growth of high-efficiency GaAs solar cells on nanopatterned GaAs substrates. <i>Journal of Crystal Growth</i> , 2022, 581, 126490.	1.5	2
2	Controlled spalling of (100)-oriented GaAs with a nanoimprint lithography interlayer for thin-film layer transfer without facet formation. <i>Thin Solid Films</i> , 2022, 742, 139049.	1.8	4
3	Consideration of the Intricacies Inherent in Molecular Beam Epitaxy of the NaCl/GaAs System. <i>ACS Omega</i> , 2022, 7, 24353-24364.	3.5	1
4	Fabrication, Measurement, and Modeling of GaInP/GaAs Three-Terminal Cells and Strings. , 2021, , .		4
5	Towards a III-V solar cell with a metamorphic graded buffer directly grown on v-groove Si substrates. , 2021, , .		1
6	Understanding improvements in coalesced epilayers grown over nanopatterned substrates. , 2021, , .		0
7	Homogenous Voltage-Matched Strings Using Three-Terminal Tandem Solar Cells: Fundamentals and End Losses. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 1078-1086.	2.5	12
8	Development of High-Efficiency GaAs Solar Cells Grown on Nanopatterned GaAs Substrates. <i>Crystal Growth and Design</i> , 2021, 21, 5955-5960.	3.0	11
9	Surface conversion of single-crystal Bi <sub>2</sub> Se <sub>3</sub> to $\hat{1}^2$ -In <sub>2</sub> Se <sub>3</sub> . <i>Journal of Crystal Growth</i> , 2021, 573, 126306.	1.5	0
10	Characterization of multiterminal tandem photovoltaic devices and their subcell coupling. <i>Cell Reports Physical Science</i> , 2021, 2, 100677.	5.6	8
11	High-Temperature Nucleation of GaP on V-Grooved Si. <i>Crystal Growth and Design</i> , 2020, 20, 6745-6751.	3.0	10
12	A Taxonomy for Three-Terminal Tandem Solar Cells. <i>ACS Energy Letters</i> , 2020, 5, 1233-1242.	17.4	51
13	Nucleation of high-quality GaP on Si through v-groove Si substrates. , 2020, , .		1
14	Fabrication of Thin III-V Solar Cells on Ni Films using Electroless Ni Deposition. , 2019, , .		0
15	Rear Heterojunction GaAs Solar Cells With Strain-Balanced GaInAs/GaAsP Quantum Wells. , 2019, , .		1
16	Building a Six-Junction Inverted Metamorphic Concentrator Solar Cell. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 626-632.	2.5	148
17	Spectral binning for energy production calculations and multijunction solar cell design. <i>Progress in Photovoltaics: Research and Applications</i> , 2018, 26, 48-54.	8.1	11
18	Enabling low-cost III-V/Si integration through nucleation of GaP on v-grooved Si substrates. , 2018, , .		6

#	ARTICLE	IF	CITATIONS
19	Perspective: Fundamentals of coalescence-related dislocations, applied to selective-area growth and other epitaxial films. APL Materials, 2018, 6, .	5.1	18
20	GaAs Solar Cells on Nanopatterned Si Substrates. IEEE Journal of Photovoltaics, 2018, 8, 1635-1640.	2.5	23
21	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
22	Pathway to 50% efficient inverted metamorphic concentrator solar cells. AIP Conference Proceedings, 2017, , .	0.4	15
23	Large Area Atomically Flat Surfaces via Exfoliation of Bulk Bi <sub>2</sub> Se <sub>3</sub> Single Crystals. Chemistry of Materials, 2017, 29, 8472-8477.	6.7	8
24	Single crystalline substrates for III-V growth via exfoliation of bulk single crystals. , 2017, , .		1
25	Effect of Atmospheric Absorption Bands on the Optimal Design of Multijunction Solar Cells. , 2017, , .		0
26	Design Flexibility of Ultrahigh Efficiency Four-Junction Inverted Metamorphic Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 578-583.	2.5	79
27	Metamorphic III-V Solar Cells: Recent Progress and Potential. IEEE Journal of Photovoltaics, 2016, 6, 366-373.	2.5	25
28	Growth of antiphase-domain-free GaP on Si substrates by metalorganic chemical vapor deposition using an <i>in situ</i> AsH <sub>3</sub> surface preparation. Applied Physics Letters, 2015, 107, .	3.3	51
29	High aspect ratio electrodeposited Ni/Au contacts for GaAs-based III-V concentrator solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 646-653.	8.1	25
30	Energy yield determination of concentrator solar cells using laboratory measurements. AIP Conference Proceedings, 2015, , .	0.4	3
31	Investigation of GaP/Si heteroepitaxy on MOCVD prepared Si(100) surfaces. , 2015, , .		2
32	Period-doubling reconstructions of semiconductor partial dislocations. NPG Asia Materials, 2015, 7, e216-e216.	7.9	12
33	Field spectra binning for energy production calculations and multijunction solar cell design. , 2015, , .		3
34	Generalized Optoelectronic Model of Series-Connected Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1827-1839.	2.5	97
35	Quadruple-Junction Inverted Metamorphic Concentrator Devices. IEEE Journal of Photovoltaics, 2015, 5, 432-437.	2.5	101
36	Two-terminal metal-interconnected multijunction III-V solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 593-599.	8.1	13

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37	Optimization of Multijunction Solar Cells Through Indoor Energy Yield Measurements. IEEE Journal of Photovoltaics, 2015, 5, 438-445.	2.5	11
38	In situ measurement of CuPt alloy ordering using strain anisotropy. Journal of Applied Physics, 2014, 115, 053502.	2.5	16
39	Ultrabroadband and Wide-Angle Hybrid Antireflection Coatings With Nanostructures. IEEE Journal of Photovoltaics, 2014, 4, 962-967.	2.5	23
40	Optoelectronic analysis of multijunction wire array solar cells. Journal of Applied Physics, 2013, 114, .	2.5	9
41	Measuring IV Curves and Subcell Photocurrents in the Presence of Luminescent Coupling. IEEE Journal of Photovoltaics, 2013, 3, 879-887.	2.5	85
42	Design of ultra-broadband antireflection coatings utilizing integrated moth-eye structures for multi-junction device applications. , 2013, , .		1
43	Measuring IV curves and subcell photocurrents in the presence of luminescent coupling. , 2013, , .		1
44	Measuring IV curves and subcell photocurrents in the presence of luminescent coupling. , 2012, , .		4
45	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
46	Cell-level thermal management issues in concentrator III&#x2013;V multijunction solar cells. , 2010, , .		4
47	Monolithic, Ultra-Thin GaInP/GaAs/GaInAs Tandem Solar Cells. , 2006, , .		11