Emily L Warren

List of Publications by Year
in descending order

70 papers	12,841 citations	331642 21 h-index	265191 42 g-index
75 all docs	75 docs citations	75 times ranked	15939 citing authors

#	Article	IF	Citations
1	Solar Water Splitting Cells. Chemical Reviews, 2010, 110, 6446-6473.	47.7	8,307
2	Enhanced absorption and carrier collection in Si wire arrays for photovoltaic applications. Nature Materials, 2010, 9, 239-244.	27.5	1,085
3	Photoelectrochemical Hydrogen Evolution Using Si Microwire Arrays. Journal of the American Chemical Society, 2011, 133, 1216-1219.	13.7	561
4	Energy-Conversion Properties of Vapor-Liquid-Solidâ€“Grown Silicon Wire-Array Photocathodes. Science, 2010, 327, 185-187.	12.6	489
5	Evaluation of Pt, Ni, and Niâ€“Mo electrocatalysts for hydrogen evolution on crystalline Si electrodes. Energy and Environmental Science, 2011, 4, 3573.	30.8	440
6	Si microwire-array solar cells. Energy and Environmental Science, 2010, 3, 1037.	30.8	217
7	Hydrogen-evolution characteristics of Niâ€“Mo-coated, radial junction, n+p-silicon microwire array photocathodes. Energy and Environmental Science, 2012, 5, 9653.	30.8	182
8	Silicon Microwire Arrays for Solar Energy-Conversion Applications. Journal of Physical Chemistry C, 2014, 118, 747-759.	3.1	85
9	Maximizing tandem solar cell power extraction using a three-terminal design. Sustainable Energy and Fuels, 2018, 2, 1141-1147.	4.9	67
10	pH-Independent, 520 mV Open-Circuit Voltages of Si/Methyl Viologen^{2+/+} Contacts Through Use of Radial n⁺p-Si Junction Microwire Array Photoelectrodes. Journal of Physical Chemistry C, 2011, 115, 594-598.	3.1	52
11	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
12	A Taxonomy for Three-Terminal Tandem Solar Cells. ACS Energy Letters, 2020, 5, 1233-1242.	17.4	51
13	Solar energy conversion properties and defect physics of ZnSiP₂. Energy and Environmental Science, 2016, 9, 1031-1041.	30.8	49
14	Ray optical light trapping in silicon microwires: exceeding the 2n2 intensity limit. Optics Express, 2011, 19, 3316.	3.4	47
15	Three-terminal IIIâ€“V/Si tandem solar cells enabled by a transparent conductive adhesive. Sustainable Energy and Fuels, 2020, 4, 549-558.	4.9	46
16	Unassisted solar-driven photoelectrosynthetic HI splitting using membrane-embedded Si microwire arrays. Energy and Environmental Science, 2015, 8, 1484-1492.	30.8	35
17	Equivalent Performance in Three-Terminal and Four-Terminal Tandem Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1584-1589.	2.5	31
18	Backâ€contacted bottom cells with three terminals: Maximizing power extraction from currentâ€mismatched tandem cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 410-423.	8.1	31

#	Article	IF	Citations
19	Transparent Conductive Adhesives for Tandem Solar Cells Using Polymerâ€“Particle Composites. ACS Applied Materials & Interfaces, 2018, 10, 8086-8091.	8.0	25
20	GaAs Solar Cells on Nanopatterned Si Substrates. IEEE Journal of Photovoltaics, 2018, 8, 1635-1640.	2.5	23
21	Perspective: Fundamentals of coalescence-related dislocations, applied to selective-area growth and other epitaxial films. APL Materials, 2018, 6, .	5.1	18
22	Toward Low-Cost 4-Terminal GaAs//Si Tandem Solar Cells. ACS Applied Energy Materials, 2019, 2, 2375-2380.	5.1	17
23	Wafer-Scale Growth of Silicon Microwire Arrays for Photovoltaics and Solar Fuel Generation. IEEE Journal of Photovoltaics, 2012, 2, 294-297.	2.5	15
24	III-V-on-Si Tandem Solar Cells. Joule, 2021, 5, 514-518.	24.0	15
25	Comparison between the measured and modeled hydrogen-evolution activity of Ni- or Pt-coated silicon photocathodes. International Journal of Hydrogen Energy, 2014, 39, 16220-16226.	7.1	13
26	Optimization of four terminal rear heterojunction GaAs on Si interdigitated back contact tandem solar cells. Applied Physics Letters, 2021, 118, .	3.3	13
27	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
28	Photoelectrochemical water splitting: silicon photocathodes for hydrogen evolution. , 2010, , .		11
29	Development of High-Efficiency GaAs Solar Cells Grown on Nanopatterned GaAs Substrates. Crystal Growth and Design, 2021, 21, 5955-5960.	3.0	11
30	Surfaces and interfaces governing the OMVPE growth of APD-free GaP on AsH3-cleaned vicinal Si(100). Journal of Crystal Growth, 2016, 452, 235-239.	1.5	10
31	High-Temperature Nucleation of GaP on V-Grooved Si. Crystal Growth and Design, 2020, 20, 6745-6751.	3.0	10
32	Characterization of multiterminal tandem photovoltaic devices and their subcell coupling. Cell Reports Physical Science, 2021, 2, 100677.	5.6	8
33	Demonstrating the GaInP/GaAs Three-Terminal Heterojunction Bipolar Transistor Solar Cell. , 2019, , .		7
34	Ordered Silicon Microwire Arrays Grown from Substrates Patterned Using Imprint Lithography and Electrodeposition. ACS Applied Materials & Interfaces, 2015, 7, 1396-1400.	8.0	6
35	Selective area growth of GaAs on Si patterned using nanoimprint lithography. , 2016, , .		6
36	Enabling low-cost III-V/Si integration through nucleation of GaP on v-grooved Si substrates. , 2018, , .		6

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37	Lamination of transparent conductive adhesives for tandem solar cell applications. Journal Physics D: Applied Physics, 2021, 54, 184002.	2.8	6
38	Design principles of tandem cascade photoelectrochemical devices. Sustainable Energy and Fuels, 2021, 5, 6361-6371.	4.9	6
39	Progress in threeâ€terminal heterojunction bipolar transistor solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 843-850.	8.1	6
40	Single crystal growth and phase stability of photovoltaic grade ZnSiP2 by flux technique. , 2015, , .		5
41	Transparent Conductive Adhesives for Tandem Solar Cells. , 2017, , .		5
42	High-Throughput Experimental Study of Wurtzite Mn1â€“xZnxO Alloys for Water Splitting Applications. ACS Omega, 2019, 4, 7436-7447.	3.5	5
43	Photoelectrochemical characterization of Si microwire array solar cells. , 2012, , .		4
44	Study of nickel silicide as a copper diffusion barrier in monocrystalline silicon solar cells. , 2016, , .		4
45	Operating principles of three-terminal solar cells. , 2018, , .		4
46	Application of templated vapor-liquid-solid growth to heteroepitaxy of InP on Si. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 013404.	2.1	4
47	Fabrication, Measurement, and Modeling of GaInP/GaAs Three-Terminal Cells and Strings. , 2021, , .		4
48	Inverted GaInP/GaAs Three-Terminal Heterojunction Bipolar Transistor Solar Cell. , 2020, , .		4
49	III- V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2017, , .		3
50	Sonic Lift-off of GaAs-based Solar Cells with Reduced Surface Facets. , 2021, , .		3
51	Investigation of GaP/Si heteroepitaxy on MOCVD prepared Si(100) surfaces. , 2015, , .		2
52	Energy conversion properties of ZnSiP<inf>2</inf>, a lattice-matched material for silicon-based tandem photovoltaics. , 2016, , .		2
53	Yield analysis and comparison of GaInP/Si and GaInP/GaAs multi-terminal tandem solar cells. AIP Conference Proceedings, 2018, , .	0.4	2
54	III-V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2019, , .		2

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55	Communicationâ€"Electrodeposition of Indium Directly on Silicon. Journal of the Electrochemical Society, 2022, 169, 012503.	2.9	2
56	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
57	Wafer-scale growth of silicon microwire arrays for photovoltaics. , 2011, , .		1
58	III-V/Si tandem cell to module interconnection - comparison between different operation modes. , 2017, , .		1
59	Modeling three-terminal III- V lSi tandem solar cells. , 2017, , .		1
60	A simple physical model for three-terminal tandem cell operation. , 2019, , .		1
61	Compensated contacts for three-terminal transistor solar cells. , 2021, , .		1
62	Towards a III-V solar cell with a metamorphic graded buffer directly grown on v-groove Si substrates. , 2021, , .		1
63	Nucleation of high-quality GaP on Si through v-groove Si substrates. , 2020, , .		1
64	Mix and match light absorbers. Nature Energy, 2022, 7, 218-219.	39.5	1
65	Characterization of heteroepitaxial GaAs films grown on Si using selective area nucleation. , 2017, , .		0
66	Fabrication of Thin III-V Solar Cells on Ni Films using Electroless Ni Deposition. , 2019, , .		0
67	Understanding improvements in coalesced epilayers grown over nanopatterned substrates. , 2021, , .		0
68	Improving GaAsP/Si Tandem Solar Cells Using Silicon Passivated Contacts. , 2020, , .		0
69	Templated Vapor-Liquid-Solid Epitaxy of III-V Semiconductors on Silicon. , 2020, , .		0
70	Templated Liquid-Phase Epitaxy of InP Structures on Si. , 2021, , .		0