

Enrique Barrigon

List of Publications by Year in descending order

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67
papers

978
citations

567281
15
h-index

501196
28
g-index

67
all docs

67
docs citations

67
times ranked

1153
citing authors

#	ARTICLE	IF	CITATIONS
1	Realization of axially defined GaInP/InP/InAsP triple-junction photovoltaic nanowires for high-performance solar cells. <i>Materials Today Energy</i> , 2022, 27, 101050.	4.7	11
2	Development and characterization of photovoltaic tandem-junction nanowires using electron-beam-induced current measurements. <i>Nano Research</i> , 2022, 15, 8510-8515.	10.4	4
3	Understanding the Anisotropy in the Electrical Conductivity of CuPt _B -type Ordered GaInP Thin Films by Combining <i>In Situ</i> TEM Biasing and First Principles Calculations. <i>ACS Applied Electronic Materials</i> , 2022, 4, 3478-3485.	4.3	3
4	Imaging the influence of oxides on the electrostatic potential of photovoltaic InP nanowires. <i>Nano Research</i> , 2021, 14, 4087-4092.	10.4	5
5	Semiconductor nanowire array for transparent photovoltaic applications. <i>Applied Physics Letters</i> , 2021, 118, 191107.	3.3	9
6	Design study of a nanowire three-terminal heterojunction bipolar transistor solar cell. , 2021, , .		1
7	Atomic surface control of Ge(100) in MOCVD reactors coated with (Ga)As residuals. <i>Applied Surface Science</i> , 2021, 565, 150513.	6.1	3
8	Template-assisted vapour-liquid-solid growth of InP nanowires on (001) InP and Si substrates. <i>Nanoscale</i> , 2020, 12, 888-894.	5.6	7
9	Impact of the III-V/Ge nucleation routine on the performance of high efficiency multijunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2020, 207, 110355.	6.2	5
10	Light current-voltage measurements of single, as-grown, nanowire solar cells standing vertically on a substrate. <i>Nano Energy</i> , 2020, 78, 105191.	16.0	14
11	Photovoltaic nanowires affect human lung cell proliferation under illumination conditions. <i>Nanoscale</i> , 2020, 12, 14237-14244.	5.6	2
12	Self-Limiting Polymer Exposure for Vertical Processing of Semiconductor Nanowire-Based Flexible Electronics. <i>ACS Applied Nano Materials</i> , 2020, 3, 7743-7749.	5.0	9
13	Hot-carrier separation in heterostructure nanowires observed by electron-beam induced current. <i>Nanotechnology</i> , 2020, 31, 394004.	2.6	10
14	Unravelling processing issues of nanowire-based solar cell arrays by use of electron beam induced current measurements. <i>Nano Energy</i> , 2020, 71, 104575.	16.0	13
15	Nanowire Solar Cells: A New Radiation Hard PV Technology for Space Applications. <i>IEEE Journal of Photovoltaics</i> , 2020, 10, 502-507.	2.5	15
16	Development and Characterization of a bottom-up InP Nanowire Solar Cell with 16.7% Efficiency. , 2020, , .		6
17	Irradiation Experiments on High Efficiency Nanowire Solar Cells Including Tilted Incidence Angle. , 2020, , .		0
18	Synthesis and Applications of III-V Nanowires. <i>Chemical Reviews</i> , 2019, 119, 9170-9220.	47.7	208

#	ARTICLE	IF	CITATIONS
19	Radiation Tolerant Nanowire Array Solar Cells. ACS Nano, 2019, 13, 12860-12869.	14.6	27
20	Three-Dimensional Imaging of Beam-Induced Biasing of InP/GaInP Tunnel Diodes. Nano Letters, 2019, 19, 3490-3497.	9.1	4
21	Combined photo- and electroreflectance of multijunction solar cells enabled by subcell electric coupling. Applied Physics Letters, 2019, 114, 153501.	3.3	0
22	Nanoprobe-Enabled Electron Beam Induced Current Measurements on III-V Nanowire-Based Solar Cells. , 2019, , .		1
23	GaAs Nanowire pn-Junctions Produced by Low-Cost and High-Throughput Aerotaxy. Nano Letters, 2018, 18, 1088-1092.	9.1	43
24	Understanding InP Nanowire Array Solar Cell Performance by Nanoprobe-Enabled Single Nanowire Measurements. Nano Letters, 2018, 18, 3038-3046.	9.1	69
25	Refractive indexes and extinction coefficients of n- and p-type doped GaInP, AlInP and AlGaInP for multijunction solar cells. Solar Energy Materials and Solar Cells, 2018, 174, 388-396.	6.2	40
26	Degradation of Ge subcells by thermal load during the growth of multijunction solar cells. Progress in Photovoltaics: Research and Applications, 2018, 26, 102-111.	8.1	19
27	Development of the Lattice Matched GaInP/GaInAs/Ge Triple Junction Solar Cell with an Efficiency Over 40%. , 2018, , .		11
28	The effect of Sb-surfactant on GaInP CuPt_B type ordering: assessment through dark field TEM and aberration corrected HAADF imaging. Physical Chemistry Chemical Physics, 2017, 19, 9806-9810.	2.8	4
29	InP/InAsP Nanowire-Based Spatially Separate Absorption and Multiplication Avalanche Photodetectors. ACS Photonics, 2017, 4, 2693-2698.	6.6	27
30	On the thermal degradation of tunnel diodes in multijunction solar cells. AIP Conference Proceedings, 2017, , .	0.4	10
31	Time-resolved photoluminescence characterization of GaAs nanowire arrays on native substrate. Nanotechnology, 2017, 28, 505706.	2.6	7
32	Effect of Ge autodoping during III-V MOVPE growth on Ge substrates. Journal of Crystal Growth, 2017, 475, 378-383.	1.5	10
33	10 MeV proton irradiation effects on GaInP/GaAs/Ge concentrator solar cells and their component subcells. Solar Energy Materials and Solar Cells, 2017, 159, 576-582.	6.2	29
34	GaAsP Nanowire Solar Cell Development Towards Nanowire/Si Tandem Applications. , 2017, , .		0
35	Limiting factors on the semiconductor structure of III-V multijunction solar cells for ultra-high concentration (1000-5000 suns). Progress in Photovoltaics: Research and Applications, 2016, 24, 1332-1345.	8.1	33
36	Quantitative Determination of Luminescent Coupling in Multijunction Solar Cells from Spectral Photovoltage Measurements. Physical Review Applied, 2016, 6, .	3.8	5

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37	Effect of Sb on the quantum efficiency of GaInP solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 1116-1122.	8.1	5
38	Differences between GaAs/GaInP and GaAs/AlInP interfaces grown by movpe revealed by depth profiling and angle-resolved X-ray photoelectron spectroscopies. Applied Surface Science, 2016, 360, 477-484.	6.1	7
39	Why can't I measure the external quantum efficiency of the Ge subcell of my multijunction solar cell?. AIP Conference Proceedings, 2015, , .	0.4	13
40	Analysis of perimeter recombination in the subcells of GaInP/GaAs/Ge triple-junction solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 874-882.	8.1	50
41	On the use of Sb to improve the performance of GaInP subcells of multijunction solar cells. , 2015, , .		2
42	Implications of low breakdown voltage of component subcells on external quantum efficiency measurements of multijunction solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 1597-1607.	8.1	36
43	Optical in situ calibration of Sb for growing disordered GaInP by MOVPE. Journal of Crystal Growth, 2015, 426, 71-74.	1.5	7
44	On the use of I–V curves as a diagnosis tool for proper external quantum efficiency measurements of multijunction solar cells. , 2014, , .		1
45	Highly conductive p ^{+–––} AlGaAs/n ^{+–––} GaInP tunnel junctions for ultra–high concentrator solar cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 399-404.	8.1	35
46	In situ study of Ge(100) surfaces with tertiarybutylphosphine supply in vapor phase epitaxy ambient. Journal of Crystal Growth, 2013, 370, 173-176.	1.5	8
47	Application of photorefectance to advanced multilayer structures for photovoltaics. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 599-608.	3.5	16
48	Optical <i>in situ</i> monitoring of hydrogen desorption from Ge(100) surfaces. Applied Physics Letters, 2013, 102, .	3.3	6
49	<i>In situ</i> control of As dimer orientation on Ge(100) surfaces. Applied Physics Letters, 2012, 101, .	3.3	15
50	Open-atmosphere structural depth profiling of multilayer samples of photovoltaic interest using laser-induced plasma spectrometry. , 2012, , .		0
51	In situ control of Si(100) and Ge(100) surface preparation for the heteroepitaxy of III-V solar cell architectures. , 2012, , .		0
52	Analysis of the surface state of epi-ready Ge wafers. Applied Surface Science, 2012, 258, 8166-8170.	6.1	6
53	Ge(100) surfaces prepared in vapor phase epitaxy process ambient. Physica Status Solidi - Rapid Research Letters, 2012, 6, 178-180.	2.4	7
54	XPS as characterization tool for PV: From the substrate to complete III-V multijunction solar cells. , 2011, , .		0

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55	Triple-junction solar cells for ultra-high concentrator applications. , 2011, , .		1
56	Extended Triple-Junction Solar Cell 3D Distributed Model: Application to Chromatic Aberration-Related Losses. , 2011, , .		12
57	Reflectance anisotropy spectroscopy assessment of the MOVPE nucleation of GaInP on germanium (1 0) Tj ETQq1 1.0.784314.rgBT / 1.5 20		0
58	Si(100) versus Ge(100): Watching the interface formation for the growth of III-V-based solar cells on abundant substrates. , 2011, , .		0
59	XPS as characterization tool for PV: From the substrate to complete III-V multijunction solar cells. , 2011, , .		0
60	Roadmap towards efficiencies over 40% at ultra-high concentrations (> 1000 suns). , 2011, , .		2
61	Capacitance measurements for subcell characterization in multijunction solar cells. , 2010, , .		3
62	Simulating IIIâ€V concentrator solar cells: A comparison of advantages and limitations of lumped analytical models; distributed analytical models and numerical simulation. , 2009, , .		6
63	Application of capacitance-based techniques to the characterization of multijunction solar cells. , 2009, , .		2
64	Compositional analysis and evolution of defects formed on GaInP epilayers grown on Germanium. Superlattices and Microstructures, 2009, 45, 277-284.	3.1	14
65	GaInP/GaInAs/Ge triple junction solar cells for ultra high concentration. , 2009, , .		10
66	IIIâ€V multijunction solar cells for ultra-high concentration photovoltaics. , 2009, , .		15
67	Analysis of germanium epiready wafers for IIIâ€V heteroepitaxy. Journal of Crystal Growth, 2008, 310, 4803-4807.	1.5	15