

# R R Lapierre

## List of Publications by Citations

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97  
papers

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25  
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46  
g-index

106  
ext. papers

2,730  
ext. citations

3.8  
avg. IF

5.51  
L-index

#	Paper	IF	Citations
97	GaAs core-shell nanowires for photovoltaic applications. <i>Nano Letters</i> , <b>2009</b> , 9, 148-54	11.5	382
96	III-V nanowire photovoltaics: Review of design for high efficiency. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 815-830	2.5	162
95	A review of III-V nanowire infrared photodetectors and sensors. <i>Journal Physics D: Applied Physics</i> , <b>2017</b> , 50, 123001	3	117
94	Numerical model of current-voltage characteristics and efficiency of GaAs nanowire solar cells. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 034311	2.5	86
93	Sulfur passivation and contact methods for GaAs nanowire solar cells. <i>Nanotechnology</i> , <b>2011</b> , 22, 225402	3.4	78
92	Analytical description of the metal-assisted growth of III-V nanowires: Axial and radial growths. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 114304	2.5	77
91	Theoretical conversion efficiency of a two-junction III-V nanowire on Si solar cell. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 014310	2.5	77
90	Control of GaAs nanowire morphology and crystal structure. <i>Nanotechnology</i> , <b>2008</b> , 19, 495603	3.4	71
89	GaP/GaAsP/GaP core-multishell nanowire heterostructures on (111) silicon. <i>Nanotechnology</i> , <b>2007</b> , 18, 445304	3.4	55
88	Nanowires for energy: A review. <i>Applied Physics Reviews</i> , <b>2018</b> , 5, 041305	17.3	53
87	Optical characteristics of GaAs nanowire solar cells. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 104311	2.5	49
86	A GaAs nanowire/P3HT hybrid photovoltaic device. <i>Nanotechnology</i> , <b>2009</b> , 20, 465205	3.4	46
85	Analytical model of surface depletion in GaAs nanowires. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 063705	2.5	44
84	Onset of stacking faults in InP nanowires grown by gas source molecular beam epitaxy. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 013116	3.4	44
83	Highly ordered vertical GaAs nanowire arrays with dry etching and their optical properties. <i>Nanotechnology</i> , <b>2014</b> , 25, 305303	3.4	42
82	Layer-by-layer and step-flow growth mechanisms in GaAsP/GaP nanowire heterostructures. <i>Journal of Materials Research</i> , <b>2006</b> , 21, 2801-2809	2.5	41
81	Dependence of InGaP nanowire morphology and structure on molecular beam epitaxy growth conditions. <i>Nanotechnology</i> , <b>2010</b> , 21, 165601	3.4	40

80	Structural and optical analysis of GaAsP/GaP core-shell nanowires. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 124306	2.5	36
79	Opportunities and pitfalls in patterned self-catalyzed GaAs nanowire growth on silicon. <i>Semiconductor Science and Technology</i> , <b>2013</b> , 28, 105025	1.8	35
78	Model of patterned self-assisted nanowire growth. <i>Nanotechnology</i> , <b>2014</b> , 25, 415304	3.4	33
77	Characterization of a Ga-Assisted GaAs Nanowire Array Solar Cell on Si Substrate. <i>IEEE Journal of Photovoltaics</i> , <b>2016</b> , 6, 661-667	3.7	32
76	Doping assessment in GaAs nanowires. <i>Nanotechnology</i> , <b>2018</b> , 29, 234001	3.4	30
75	A growth interruption technique for stacking fault-free nanowire superlattices. <i>Nanotechnology</i> , <b>2009</b> , 20, 025610	3.4	27
74	Electrical transport and optical model of GaAs-AlInP core-shell nanowires. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 094319	2.5	26
73	Critical shell thickness for InAs-AlxIn <sub>1-x</sub> As(P) core-shell nanowires. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 124305	2.5	26
72	Current matching and efficiency optimization in a two-junction nanowire-on-silicon solar cell. <i>Nanotechnology</i> , <b>2013</b> , 24, 065402	3.4	24
71	Contact planarization of ensemble nanowires. <i>Nanotechnology</i> , <b>2011</b> , 22, 245304	3.4	23
70	Group V incorporation in InGaAsP grown on InP by gas source molecular beam epitaxy. <i>Journal of Applied Physics</i> , <b>1996</b> , 79, 3021-3027	2.5	23
69	Three-fold Symmetric Doping Mechanism in GaAs Nanowires. <i>Nano Letters</i> , <b>2017</b> , 17, 5875-5882	11.5	22
68	Effects of Be doping on InP nanowire growth mechanisms. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 263106	3.4	22
67	Wavelength-selective absorptance in GaAs, InP and InAs nanowire arrays. <i>Nanotechnology</i> , <b>2015</b> , 26, 295202	3.4	21
66	Study of radial growth in patterned self-catalyzed GaAs nanowire arrays by gas source molecular beam epitaxy. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 845-849	2.5	21
65	Electrostatic model of radial pn junction nanowires. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 074317	2.5	21
64	InGaAs/InP core-shell and axial heterostructure nanowires. <i>Nanotechnology</i> , <b>2007</b> , 18, 385305	3.4	21
63	Conditions for high yield of selective-area epitaxy InAs nanowires on SiO <sub>2</sub> /Si(111) substrates. <i>Nanotechnology</i> , <b>2015</b> , 26, 465301	3.4	20

62	Methods of Ga droplet consumption for improved GaAs nanowire solar cell efficiency. <i>Nanotechnology</i> , <b>2016</b> , 27, 475403	3.4	19
61	Improved conductivity and long-term stability of sulfur-passivated n-GaAs nanowires. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 203122	3.4	19
60	Photoluminescence model for a hybrid aptamer-GaAs optical biosensor. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 104702	2.5	19
59	Growth and characterization of GaAs nanowires on carbon nanotube composite films: toward flexible nanodevices. <i>Nano Letters</i> , <b>2008</b> , 8, 4075-80	11.5	19
58	Reverse Micelle Templating Route to Ordered Monodispersed Spherical Organo-Lead Halide Perovskite Nanoparticles for Light Emission. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 4121-4132	5.6	18
57	Photoluminescence and photocurrent from InP nanowires with InAsP quantum dots grown on Si by molecular beam epitaxy. <i>Nanotechnology</i> , <b>2015</b> , 26, 315202	3.4	18
56	Si Doping of Vapor-Liquid-Solid GaAs Nanowires: n-Type or p-Type?. <i>Nano Letters</i> , <b>2019</b> , 19, 4498-4504	11.5	17
55	Electron transport in InAs-InAlAs core-shell nanowires. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 043115	3.4	17
54	Temperature-dependent electron mobility in InAs nanowires. <i>Nanotechnology</i> , <b>2013</b> , 24, 225202	3.4	17
53	Multispectral absorptance from large-diameter InAsSb nanowire arrays in a single epitaxial growth on silicon. <i>Nano Futures</i> , <b>2017</b> , 1, 035001	3.6	16
52	Trapped charge dynamics in InAs nanowires. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 024511	2.5	16
51	Unlocking doping and compositional profiles of nanowire ensembles using SIMS. <i>Nanotechnology</i> , <b>2013</b> , 24, 045701	3.4	16
50	Optimizations of GaAs Nanowire Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2016</b> , 6, 1494-1501	3.7	15
49	Tuning the morphology of self-assisted GaP nanowires. <i>Nanotechnology</i> , <b>2018</b> , 29, 225603	3.4	14
48	Enhanced photothermal conversion in vertically oriented gallium arsenide nanowire arrays. <i>Nano Letters</i> , <b>2014</b> , 14, 5820-6	11.5	14
47	Optical design of a mid-wavelength infrared InSb nanowire photodetector. <i>Nanotechnology</i> , <b>2016</b> , 27, 315202	3.4	13
46	Pyrrolidinium containing perovskites with thermal stability and water resistance for photovoltaics. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 11104-11108	7.1	12
45	Multi-spectral optical absorption in substrate-free nanowire arrays. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 123113	3.4	12

44	Magnetoconductance signatures of subband structure in semiconductor nanowires. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	11
43	GaAs quantum dots in a GaP nanowire photodetector. <i>Nanotechnology</i> , <b>2018</b> , 29, 124003	3.4	10
42	Low resistance indium tin oxide contact to n-GaAs nanowires. <i>Semiconductor Science and Technology</i> , <b>2014</b> , 29, 054002	1.8	10
41	Hybrid GaAs-Nanowire-Carbon-Nanotube Flexible Photovoltaics. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2011</b> , 17, 1070-1077	3.8	10
40	Formation Mechanism of Twinning Superlattices in Doped GaAs Nanowires. <i>Nano Letters</i> , <b>2020</b> , 20, 3344-3351	3.5	9
39	Nanowire dopant measurement using secondary ion mass spectrometry. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 114306	2.5	9
38	InSb nanowires for multispectral infrared detection. <i>Semiconductor Science and Technology</i> , <b>2019</b> , 34, 035023	1.8	8
37	Crystal structure and optical characterization of heterostructured GaAs/AlGaAs/GaAs nanowires. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 164311	2.5	8
36	Monitoring the Fermi-level position within the bandgap on a single nanowire: A tool for local investigations of doping. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 154308	2.5	8
35	Surface depletion and electrical transport model of AlInP-passivated GaAs nanowires. <i>Semiconductor Science and Technology</i> , <b>2013</b> , 28, 105026	1.8	8
34	Efficient wave optics modeling of nanowire solar cells using rigorous coupled-wave analysis. <i>Optics Express</i> , <b>2019</b> , 27, A133-A147	3.3	8
33	Field Emission Characteristics of InSb Patterned Nanowires. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000402	4.0	8
32	Modeling selective-area growth of InAsSb nanowires. <i>Nanotechnology</i> , <b>2019</b> , 30, 285601	3.4	7
31	Dynamics of Gold Droplet Formation on SiO <sub>2</sub> /Si(111) Surface. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 11946-11951	3.8	7
30	Surface passivation of tellurium-doped GaAs nanowires by GaP: Effect on electrical conduction. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 234305	2.5	7
29	A study of disorder effects in random (Al <sub>x</sub> Ga <sub>1-x</sub> As) <sub>n</sub> (Al <sub>y</sub> Ga <sub>1-y</sub> As) <sub>m</sub> superlattices embedded in a wide parabolic potential. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 113106	3.4	7
28	Design and optimization of nanowire betavoltaic generators. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 244303	3.5	6
27	GaAsP nanowire-on-Si tandem solar cell. <i>Journal of Photonics for Energy</i> , <b>2017</b> , 7, 1	1.2	6

26	Be, Te, and Si Doping of GaAs Nanowires: Theory and Experiment. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 17299-17307	3.8	6
25	Resonant photo-thermal modification of vertical gallium arsenide nanowires studied using Raman spectroscopy. <i>Nanotechnology</i> , <b>2016</b> , 27, 245708	3.4	6
24	GaP nanowire betavoltaic device. <i>Nanotechnology</i> , <b>2019</b> , 30, 075401	3.4	4
23	Conformal Growth of Radial InGaAs Quantum Wells in GaAs Nanowires. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 1275-1283	6.4	4
22	Simulation and optimization of current generation in gallium phosphide nanowire betavoltaic devices. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 165704	2.5	3
21	Modelling thermoelectric transport in III-V nanowires using a Boltzmann transport approach: a review. <i>Nanotechnology</i> , <b>2021</b> , 32, 042001	3.4	3
20	Epitaxial thin film transfer for flexible devices from reusable substrates. <i>Materials Research Express</i> , <b>2019</b> , 6, 025913	1.7	3
19	Long catalyst-free InAs nanowires grown on silicon by HVPE. <i>CrystEngComm</i> , <b>2021</b> , 23, 378-384	3.3	3
18	Stacking defects in GaP nanowires: Electronic structure and optical properties. <i>Journal of Applied Physics</i> , <b>2019</b> , 126, 084306	2.5	2
17	Photovoltaic Light Funnels Grown by GaAs Nanowire Droplet Dynamics. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 1225-1231	3.7	2
16	Optimization of GaAs nanowire solar cell efficiency via optoelectronic modeling <b>2015</b> ,		2
15	Genetic Algorithm Optimization of Core-Shell Nanowire Betavoltaic Generators. <i>Nanotechnology</i> , <b>2020</b> , 31, 455403	3.4	2
14	Modeling the dynamics of interface morphology and crystal phase change in self-catalyzed GaAs nanowires. <i>Nanotechnology</i> , <b>2020</b> , 31, 485602	3.4	2
13	Optical and structural analysis of ultra-long GaAs nanowires after nitrogen-plasma passivation. <i>Nano Express</i> , <b>2020</b> , 1, 020019	2	2
12	Characterization of InSb nanopillars for field emission applications. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 1765, 012004	0.3	2
11	Inter-valley phonon-assisted Auger recombination in InGaAs/InP quantum well. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 155703	2.5	1
10	Microstructure development and photoluminescence of annealed nanosized Ce:YAG/Al <sub>2</sub> O <sub>3</sub> and Ce:YAG/Cr:Al <sub>2</sub> O <sub>3</sub> powder composites. <i>Materials Research Express</i> , <b>2018</b> , 5, 036207	1.7	1
9	InAsSb pillars for multispectral long-wavelength infrared absorption. <i>Infrared Physics and Technology</i> , <b>2020</b> , 111, 103566	2.7	1

8	Simulation of optical absorption in conical nanowires. <i>Optics Express</i> , <b>2021</b> , 29, 9544-9552	3.3	1
7	Selective Area Growth by Hydride Vapor Phase Epitaxy and Optical Properties of InAs Nanowire Arrays. <i>Crystal Growth and Design</i> , <b>2021</b> , 21, 5158-5163	3.5	1
6	Mapping electrostatic potentials across the p-n junction in GaAs nanowires by off-axis electron holography <b>2016</b> , 743-744		1
5	Recombination kinetics of photogenerated electrons in InGaAs/InP quantum wells. <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 094301	2.5	1
4	Low temperature micro-photoluminescence spectroscopy of microstructures with InAsP/InP strained quantum wells. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 445106	3	0
3	Editorial for focus collection on nanophotonics and nano-optics. <i>Nanotechnology</i> , <b>2019</b> , 30, 360401	3.4	
2	Electron and hole scattering in short-period InGaAs/InP superlattices. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 073706	2.5	
1	Growth and Characterization of p-n Junction Core-Shell GaAs Nanowires on Carbon Nanotube Composite Films. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1144, 1		