

# R R Lapierre

## List of Publications by Year in descending order

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104  
papers

2,961  
citations

201674

27  
h-index

182427

51  
g-index

106  
all docs

106  
docs citations

106  
times ranked

2725  
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase Diagram for Twinning Superlattice Te-Doped GaAs Nanowires. <i>Nano Letters</i> , 2022, 22, 1345-1349.	9.1	3
2	Thermal Transport in Twinning Superlattice and Mixed-Phase GaAs Nanowires. <i>Nanoscale</i> , 2022, , .	5.6	5
3	Thermal Conductivity of GaAs Nanowire Arrays Measured by the $3\bar{1}\bar{1}$ Method. <i>Nanomaterials</i> , 2022, 12, 1288.	4.1	4
4	Long catalyst-free InAs nanowires grown on silicon by HVPE. <i>CrystEngComm</i> , 2021, 23, 378-384.	2.6	4
5	Conformal Growth of Radial InGaAs Quantum Wells in GaAs Nanowires. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 1275-1283.	4.6	6
6	Characterization of InSb nanopillars for field emission applications. <i>Journal of Physics: Conference Series</i> , 2021, 1765, 012004.	0.4	4
7	Simulation of optical absorption in conical nanowires. <i>Optics Express</i> , 2021, 29, 9544.	3.4	7
8	Improving the yield of GaAs nanowires on silicon by Ga pre-deposition. <i>Nanotechnology</i> , 2021, 32, 265301.	2.6	3
9	Selective Area Growth by Hydride Vapor Phase Epitaxy and Optical Properties of InAs Nanowire Arrays. <i>Crystal Growth and Design</i> , 2021, 21, 5158-5163.	3.0	5
10	Low temperature micro-photoluminescence spectroscopy of microstructures with InAsP/InP strained quantum wells. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 445106.	2.8	1
11	Modelling thermoelectric transport in III-V nanowires using a Boltzmann transport approach: a review. <i>Nanotechnology</i> , 2021, 32, 042001.	2.6	5
12	Be, Te, and Si Doping of GaAs Nanowires: Theory and Experiment. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17299-17307.	3.1	13
13	InAsSb pillars for multispectral long-wavelength infrared absorption. <i>Infrared Physics and Technology</i> , 2020, 111, 103566.	2.9	1
14	Field Emission Characteristics of InSb Patterned Nanowires. <i>Advanced Electronic Materials</i> , 2020, 6, 2000402.	5.1	18
15	Dynamics of Gold Droplet Formation on SiO <sub>2</sub> /Si(111) Surface. <i>Journal of Physical Chemistry C</i> , 2020, 124, 11946-11951.	3.1	17
16	Design and optimization of nanowire betavoltaic generators. <i>Journal of Applied Physics</i> , 2020, 127, 244303.	2.5	14
17	Formation Mechanism of Twinning Superlattices in Doped GaAs Nanowires. <i>Nano Letters</i> , 2020, 20, 3344-3351.	9.1	17
18	Modeling the dynamics of interface morphology and crystal phase change in self-catalyzed GaAs nanowires. <i>Nanotechnology</i> , 2020, 31, 485602.	2.6	4

#	ARTICLE	IF	CITATIONS
19	Optical and structural analysis of ultra-long GaAs nanowires after nitrogen-plasma passivation. Nano Express, 2020, 1, 020019.	2.4	8
20	Genetic Algorithm Optimization of Core-Shell Nanowire Betavoltaic Generators. Nanotechnology, 2020, 31, 455403.	2.6	3
21	Pyrrrolidinium containing perovskites with thermal stability and water resistance for photovoltaics. Journal of Materials Chemistry C, 2019, 7, 11104-11108.	5.5	19
22	Photovoltaic Light Funnels Grown by GaAs Nanowire Droplet Dynamics. IEEE Journal of Photovoltaics, 2019, 9, 1225-1231.	2.5	3
23	Stacking defects in GaP nanowires: Electronic structure and optical properties. Journal of Applied Physics, 2019, 126, 084306.	2.5	3
24	Si Doping of Vapor-grown Liquid-Solid GaAs Nanowires: n-Type or p-Type?. Nano Letters, 2019, 19, 4498-4504.	9.1	26
25	Editorial for focus collection on nanophotonics and nano-optics. Nanotechnology, 2019, 30, 360401.	2.6	0
26	Reverse Micelle Templating Route to Ordered Monodispersed Spherical Organo-Lead Halide Perovskite Nanoparticles for Light Emission. ACS Applied Nano Materials, 2019, 2, 4121-4132.	5.0	32
27	Inter-valley phonon-assisted Auger recombination in InGaAs/InP quantum well. Journal of Applied Physics, 2019, 125, 155703.	2.5	1
28	Simulation and optimization of current generation in gallium phosphide nanowire betavoltaic devices. Journal of Applied Physics, 2019, 125, .	2.5	4
29	InSb nanowires for multispectral infrared detection. Semiconductor Science and Technology, 2019, 34, 035023.	2.0	10
30	Modeling selective-area growth of InAsSb nanowires. Nanotechnology, 2019, 30, 285601.	2.6	8
31	Epitaxial thin film transfer for flexible devices from reusable substrates. Materials Research Express, 2019, 6, 025913.	1.6	5
32	GaP nanowire betavoltaic device. Nanotechnology, 2019, 30, 075401.	2.6	6
33	Efficient wave optics modeling of nanowire solar cells using rigorous coupled-wave analysis. Optics Express, 2019, 27, A133.	3.4	14
34	Tuning the morphology of self-assisted GaP nanowires. Nanotechnology, 2018, 29, 225603.	2.6	18
35	GaAs quantum dots in a GaP nanowire photodetector. Nanotechnology, 2018, 29, 124003.	2.6	15
36	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. Materials Research Express, 2018, 5, 036207.	1.6	1

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37	Doping assessment in GaAs nanowires. <i>Nanotechnology</i> , 2018, 29, 234001.	2.6	39
38	Nanowires for energy: A review. <i>Applied Physics Reviews</i> , 2018, 5, 041305.	11.3	92
39	Recombination dynamics of Landau levels in an InGaAs/InP quantum well. <i>Physical Review B</i> , 2018, 98, .	3.2	0
40	A review of III-V nanowire infrared photodetectors and sensors. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 123001.	2.8	175
41	Three-fold Symmetric Doping Mechanism in GaAs Nanowires. <i>Nano Letters</i> , 2017, 17, 5875-5882.	9.1	29
42	Multispectral absorptance from large-diameter InAsSb nanowire arrays in a single epitaxial growth on silicon. <i>Nano Futures</i> , 2017, 1, 035001.	2.2	16
43	Optical Optimization of Passivated GaAs Nanowire Solar Cells. , 2017, , .		1
44	GaAsP nanowire-on-Si tandem solar cell. <i>Journal of Photonics for Energy</i> , 2017, 7, 1.	1.3	8
45	Resonant photo-thermal modification of vertical gallium arsenide nanowires studied using Raman spectroscopy. <i>Nanotechnology</i> , 2016, 27, 245708.	2.6	8
46	Recombination kinetics of photogenerated electrons in InGaAs/InP quantum wells. <i>Journal of Applied Physics</i> , 2016, 119, 094301.	2.5	2
47	Optimizations of GaAs Nanowire Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 1494-1501.	2.5	21
48	Methods of Ga droplet consumption for improved GaAs nanowire solar cell efficiency. <i>Nanotechnology</i> , 2016, 27, 475403.	2.6	24
49	Optical design of a mid-wavelength infrared InSb nanowire photodetector. <i>Nanotechnology</i> , 2016, 27, 315202.	2.6	19
50	Characterization of a Ga-Assisted GaAs Nanowire Array Solar Cell on Si Substrate. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 661-667.	2.5	43
51	Nanowire dopant measurement using secondary ion mass spectrometry. <i>Journal of Applied Physics</i> , 2015, 118, .	2.5	11
52	Conditions for high yield of selective-area epitaxy InAs nanowires on SiO <sub>2</sub> /Si(111) substrates. <i>Nanotechnology</i> , 2015, 26, 465301.	2.6	23
53	Optimization of GaAs nanowire solar cell efficiency via optoelectronic modeling. , 2015, , .		2
54	Magnetoconductance signatures of subband structure in semiconductor nanowires. <i>Physical Review B</i> , 2015, 91, .	3.2	14

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55	Wavelength-selective absorbance in GaAs, InP and InAs nanowire arrays. <i>Nanotechnology</i> , 2015, 26, 295202.	2.6	29
56	Photoluminescence and photocurrent from InP nanowires with InAsP quantum dots grown on Si by molecular beam epitaxy. <i>Nanotechnology</i> , 2015, 26, 315202.	2.6	21
57	Model of patterned self-assisted nanowire growth. <i>Nanotechnology</i> , 2014, 25, 415304.	2.6	38
58	Highly ordered vertical GaAs nanowire arrays with dry etching and their optical properties. <i>Nanotechnology</i> , 2014, 25, 305303.	2.6	48
59	Multi-spectral optical absorption in substrate-free nanowire arrays. <i>Applied Physics Letters</i> , 2014, 105, 123113.	3.3	12
60	Low resistance indium tin oxide contact to n-GaAs nanowires. <i>Semiconductor Science and Technology</i> , 2014, 29, 054002.	2.0	12
61	Surface passivation of tellurium-doped GaAs nanowires by GaP: Effect on electrical conduction. <i>Journal of Applied Physics</i> , 2014, 115, 234305.	2.5	7
62	Enhanced Photothermal Conversion in Vertically Oriented Gallium Arsenide Nanowire Arrays. <i>Nano Letters</i> , 2014, 14, 5820-5826.	9.1	15
63	III-V nanowire photovoltaics: Review of design for high efficiency. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 815-830.	2.4	204
64	Electron transport in InAs-InAlAs core-shell nanowires. <i>Applied Physics Letters</i> , 2013, 102, 043115.	3.3	18
65	Modeling growth, morphology, and composition of ternary III-V nanowires. , 2013, , .		0
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> , 2013, 7, 845-849.	2.4	22
67	Temperature-dependent electron mobility in InAs nanowires. <i>Nanotechnology</i> , 2013, 24, 225202.	2.6	26
68	Electrostatic model of radial pn junction nanowires. <i>Journal of Applied Physics</i> , 2013, 114, 074317.	2.5	25
69	Current matching and efficiency optimization in a two-junction nanowire-on-silicon solar cell. <i>Nanotechnology</i> , 2013, 24, 065402.	2.6	28
70	Trapped charge dynamics in InAs nanowires. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	18
71	Unlocking doping and compositional profiles of nanowire ensembles using SIMS. <i>Nanotechnology</i> , 2013, 24, 045701.	2.6	19
72	Opportunities and pitfalls in patterned self-catalyzed GaAs nanowire growth on silicon. <i>Semiconductor Science and Technology</i> , 2013, 28, 105025.	2.0	37

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73	Crystal structure and optical characterization of heterostructured GaAs/AlGaAs/GaAs nanowires. Journal of Applied Physics, 2013, 113, .	2.5	8
74	Monitoring the Fermi-level position within the bandgap on a single nanowire: A tool for local investigations of doping. Journal of Applied Physics, 2013, 114, 154308.	2.5	8
75	Surface depletion and electrical transport model of AlInP-passivated GaAs nanowires. Semiconductor Science and Technology, 2013, 28, 105026.	2.0	9
76	Electrical transport and optical model of GaAs-AlInP core-shell nanowires. Journal of Applied Physics, 2012, 111, 094319.	2.5	27
77	Critical shell thickness for InAs-AlxIn1-xAs(P) core-shell nanowires. Journal of Applied Physics, 2012, 112, .	2.5	29
78	Analytical model of surface depletion in GaAs nanowires. Journal of Applied Physics, 2012, 112, 063705.	2.5	51
79	Optical characteristics of GaAs nanowire solar cells. Journal of Applied Physics, 2012, 112, .	2.5	53
80	Improved conductivity and long-term stability of sulfur-passivated n-GaAs nanowires. Applied Physics Letters, 2012, 100, .	3.3	19
81	Effects of Be doping on InP nanowire growth mechanisms. Applied Physics Letters, 2012, 101, .	3.3	23
82	Numerical model of current-voltage characteristics and efficiency of GaAs nanowire solar cells. Journal of Applied Physics, 2011, 109, .	2.5	98
83	Sulfur passivation and contact methods for GaAs nanowire solar cells. Nanotechnology, 2011, 22, 225402.	2.6	94
84	Electron and hole scattering in short-period InGaAs/InP superlattices. Journal of Applied Physics, 2011, 110, 073706.	2.5	0
85	Hybrid GaAs-Nanowire-Carbon-Nanotube Flexible Photovoltaics. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1070-1077.	2.9	10
86	Contact planarization of ensemble nanowires. Nanotechnology, 2011, 22, 245304.	2.6	27
87	Theoretical conversion efficiency of a two-junction III-V nanowire on Si solar cell. Journal of Applied Physics, 2011, 110, .	2.5	85
88	A study of disorder effects in random (AlxGa1-xAs)n(AlyGa1-yAs)m superlattices embedded in a wide parabolic potential. Applied Physics Letters, 2010, 96, 113106.	3.3	7
89	Dependence of InGaP nanowire morphology and structure on molecular beam epitaxy growth conditions. Nanotechnology, 2010, 21, 165601.	2.6	44
90	Photoluminescence model for a hybrid aptamer-GaAs optical biosensor. Journal of Applied Physics, 2010, 107, 104702.	2.5	21

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91	Analytical description of the metal-assisted growth of III-V nanowires: Axial and radial growths. Journal of Applied Physics, 2009, 105, .	2.5	86
92	A GaAs nanowire/P3HT hybrid photovoltaic device. Nanotechnology, 2009, 20, 465205.	2.6	58
93	A growth interruption technique for stacking fault-free nanowire superlattices. Nanotechnology, 2009, 20, 025610.	2.6	27
94	GaAs Core-Shell Nanowires for Photovoltaic Applications. Nano Letters, 2009, 9, 148-154.	9.1	430
95	Structural and optical analysis of GaAsP/GaP core-shell nanowires. Journal of Applied Physics, 2009, 106, 124306.	2.5	37
96	Control of GaAs nanowire morphology and crystal structure. Nanotechnology, 2008, 19, 495603.	2.6	75
97	Growth and Characterization of GaAs Nanowires on Carbon Nanotube Composite Films: Toward Flexible Nanodevices. Nano Letters, 2008, 8, 4075-4080.	9.1	19
98	Growth and Characterization of p-n Junction Core-Shell GaAs Nanowires on Carbon Nanotube Composite Films. Materials Research Society Symposia Proceedings, 2008, 1144, 1.	0.1	0
99	InGaAs/InP core-shell and axial heterostructure nanowires. Nanotechnology, 2007, 18, 385305.	2.6	23
100	GaP/GaAsP/GaP core-multishell nanowire heterostructures on (111) silicon. Nanotechnology, 2007, 18, 445304.	2.6	61
101	Onset of stacking faults in InP nanowires grown by gas source molecular beam epitaxy. Applied Physics Letters, 2007, 90, 013116.	3.3	45
102	Layer-by-layer and step-flow growth mechanisms in GaAsP/GaP nanowire heterostructures. Journal of Materials Research, 2006, 21, 2801-2809.	2.6	47
103	Group V incorporation in InGaAsP grown on InP by gas source molecular beam epitaxy. Journal of Applied Physics, 1996, 79, 3021-3027.	2.5	26
104	In Memoriam - Professor Mark Reed. Nano Futures, 0, , .	2.2	0