Nicklas Anttu

List of Publications by Year
in descending order

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59 papers	2,678 citations	331259 21 h-index	182168 51 g-index
59 all docs	59 docs citations	59 times ranked	2862 citing authors

#	Article	IF	Citations
1	Designing outcoupling of light from nanostructured emitter in stratified medium with parasitic absorption. Journal of Applied Physics, 2022, 131, 223104.	1.1	0
2	Symmetry Reduction in FEM Optics Modeling of Single and Periodic Nanostructures. Symmetry, 2021, 13, 752.	1.1	2
3	Applied electromagnetic optics simulations for nanophotonics. Journal of Applied Physics, 2021, 129, .	1.1	18
4	Wafer-Scale Synthesis and Optical Characterization of InP Nanowire Arrays for Solar Cells. Nano Letters, 2021, 21, 7347-7353.	4.5	7
5	Absorption of Light in Finite Semiconductor Nanowire Arrays and the Effect of Missing Nanowires. Symmetry, 2021, 13, 1654.	1.1	3
6	Nanowire Oligomer Waveguide Modes towards Reduced Lasing Threshold. Materials, 2020, 13, 5510.	1.3	2
7	Management of light and scattering in InP NWs by dielectric polymer shell. Nanotechnology, 2020, 31, 384003.	1.3	3
8	Geometry Tailoring of Emission from Semiconductor Nanowires and Nanocones. Photonics, 2020, 7, 23.	0.9	10
9	Optical far-field extinction of a single GaAs nanowire towards in situ size control of aerotaxy nanowire growth. Nanotechnology, 2020, 31, 134001.	1.3	8
10	Comparison of absorption simulation in semiconductor nanowire and nanocone arrays with the Fourier modal method, the finite element method, and the finite-difference time-domain method. Nano Express, 2020, 1, 030034.	1.2	13
11	Absorption modeling with FMM, FEM and FDT. , 2019, , .		1
12	Absorption of light in a single vertical nanowire and a nanowire array. Nanotechnology, 2019, 30, 104004.	1.3	19
13	Single-photon sources with quantum dots in IIIâ€“V nanowires. Nanophotonics, 2019, 8, 747-769.	2.9	47
14	Tailored emission to boost open-circuit voltage in solar cells. Journal of Physics Communications, 2019, 3, 055009.	0.5	4
15	Modal analysis of resonant and non-resonant optical response in semiconductor nanowire arrays. Nanotechnology, 2019, 30, 025710.	1.3	17
16	Physics and design for 20% and 25% efficiency nanowire array solar cells. Nanotechnology, 2019, 30, 074002.	1.3	22
17	Emission enhancement, light extraction and carrier dynamics in InGaAs/GaAs nanowire arrays. Nano Futures, 2018, 2, 015001.	1.0	13
18	Optimized efficiency in InP nanowire solar cells with accurate 1D analysis. Nanotechnology, 2018, 29, 045401.	1.3	14

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19	Nanowires for Biosensing: Lightguiding of Fluorescence as a Function of Diameter and Wavelength. Nano Letters, 2018, 18, 4796-4802.	4.5	29
20	Absorption and transmission of light in IIIâ€“V nanowire arrays for tandem solar cell applications. Nanotechnology, 2017, 28, 205203.	1.3	34
21	Bipolar Photothermoelectric Effect Across Energy Filters in Single Nanowires. Nano Letters, 2017, 17, 4055-4060.	4.5	32
22	Increased absorption in InAsSb nanowire clusters through coupled optical modes. Applied Physics Letters, 2017, 110, .	1.5	10
23	Single-nanowire, low-bandgap hot carrier solar cells with tunable open-circuit voltage. Nanotechnology, 2017, 28, 434001.	1.3	17
24	Time-resolved photoluminescence characterization of GaAs nanowire arrays on native substrate. Nanotechnology, 2017, 28, 505706.	1.3	7
25	Full optoelectronic simulation of nanowire LEDs: Effects of temperature. , 2017, , .		0
26	Measurement of Nanowire Optical Modes Using Cross-Polarization Microscopy. Scientific Reports, 2017, 7, 17790.	1.6	6
27	One-dimensional electrical modeling of axial p-i-n junction InP nanowire array solar cells. , 2017, , .		1
28	Optical analysis of a III-V-nanowire-array-on-Si dual junction solar cell. Optics Express, 2017, 25, A665.	1.7	12
29	GaAsP Nanowire Solar Cell Development Towards Nanowire/Si Tandem Applications. , 2017, , .		0
30	Nondestructive Complete Mechanical Characterization of Zinc Blende and Wurtzite GaAs Nanowires Using Time-Resolved Pumpâ€“Probe Spectroscopy. Nano Letters, 2016, 16, 4792-4798.	4.5	25
31	Absorption in and scattering from single horizontal Au-contacted InAs/InP heterostructure nanowires. , 2016, , .		0
32	Spectroscopic investigations of arrays containing vertically and horizontally aligned silicon nanowires. Materials Research Express, 2016, 3, 125021.	0.8	1
33	Modifying the emission of light from a semiconductor nanowire array. Journal of Applied Physics, 2016, 120, 043108.	1.1	17
34	Connection between modeled blackbody radiation and dipole emission in large-area nanostructures. Optics Letters, 2016, 41, 1494.	1.7	4
35	Optimization of the short-circuit current in an InP nanowire array solar cell through opto-electronic modeling. Nanotechnology, 2016, 27, 435404.	1.3	33
36	Performance of GaAs Nanowire Array Solar Cells for Varying Incidence Angles. IEEE Journal of Photovoltaics, 2016, 6, 1502-1508.	1.5	18

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37	Confinement effects on Brillouin scattering in semiconductor nanowire photonic crystal. Physical Review B, 2016, 94, .	1.1	7
38	Dense, Regular GaAs Nanowire Arrays by Catalyst-Free Vapor Phase Epitaxy for Light Harvesting. ACS Applied Materials & Interfaces, 2016, 8, 22484-22492.	4.0	2
39	Design for strong absorption in a nanowire array tandem solar cell. Scientific Reports, 2016, 6, 32349.	1.6	27
40	A GaAs Nanowire Array Solar Cell With 15.3% Efficiency at 1 Sun. IEEE Journal of Photovoltaics, 2016, 6, 185-190.	1.5	280
41	Optical response of wurtzite and zinc blende GaP nanowire arrays. Optics Express, 2015, 23, 30177.	1.7	12
42	Shockleyâ€“Queisser Detailed Balance Efficiency Limit for Nanowire Solar Cells. ACS Photonics, 2015, 2, 446-453.	3.2	69
43	A Comparative Study of Absorption in Vertically and Laterally Oriented InP Coreâ€“Shell Nanowire Photovoltaic Devices. Nano Letters, 2015, 15, 1809-1814.	4.5	57
44	In Situ Characterization of Nanowire Dimensions and Growth Dynamics by Optical Reflectance. Nano Letters, 2015, 15, 3597-3602.	4.5	53
45	Absorption through a coupled optical resonance in a horizontal InP nanowire array. Photonics Research, 2015, 3, 125.	3.4	5
46	Tunable absorption resonances in the ultraviolet for InP nanowire arrays. Optics Express, 2014, 22, 29204.	1.7	22
47	Absorption of light in InP nanowire arrays. Nano Research, 2014, 7, 816-823.	5.8	85
48	Crystal Phase-Dependent Nanophotonic Resonances in InAs Nanowire Arrays. Nano Letters, 2014, 14, 5650-5655.	4.5	26
49	InP Nanowire Array Solar Cells Achieving 13.8% Efficiency by Exceeding the Ray Optics Limit. Science, 2013, 339, 1057-1060.	6.0	1,093
50	Optical Far-Field Method with Subwavelength Accuracy for the Determination of Nanostructure Dimensions in Large-Area Samples. Nano Letters, 2013, 13, 2662-2667.	4.5	15
51	Diameter-Dependent Photocurrent in InAsSb Nanowire Infrared Photodetectors. Nano Letters, 2013, 13, 1380-1385.	4.5	139
52	Photoluminescence study of as-grown vertically standing wurtzite InP nanowire ensembles. Nanotechnology, 2013, 24, 115706.	1.3	15
53	Geometrical optics, electrostatics, and nanophotonic resonances in absorbing nanowire arrays. Optics Letters, 2013, 38, 730.	1.7	44
54	Reflection measurements to reveal the absorption in nanowire arrays. Optics Letters, 2013, 38, 1449.	1.7	11

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55	Efficient light management in vertical nanowire arrays for photovoltaics. Optics Express, 2013, 21, A558.	1.7	136
56	Colorful InAs Nanowire Arrays: From Strong to Weak Absorption with Geometrical Tuning. Nano Letters, 2012, 12, 1990-1995.	4.5	90
57	Drastically increased absorption in vertical semiconductor nanowire arrays: A non-absorbing dielectric shell makes the difference. Nano Research, 2012, 5, 863-874.	5.8	29
58	Surface-enhanced Raman scattering on dual-layer metallic grating structures. Science Bulletin, 2010, 55, 2643-2648.	1.7	9
59	Enhanced Optical Biosensing by Aerotaxy Ga(As)P Nanowire Platforms Suitable for Scalable Production. ACS Applied Nano Materials, 0, , .	2.4	3