Nicklas Anttu

List of Publications by Year
in descending order

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	InP Nanowire Array Solar Cells Achieving 13.8% Efficiency by Exceeding the Ray Optics Limit. Science, 2013, 339, 1057-1060.	6.0	1,093
2	A GaAs Nanowire Array Solar Cell With 15.3% Efficiency at 1 Sun. IEEE Journal of Photovoltaics, 2016, 6, 185-190.	1.5	280
3	Diameter-Dependent Photocurrent in InAsSb Nanowire Infrared Photodetectors. Nano Letters, 2013, 13, 1380-1385.	4.5	139
4	Efficient light management in vertical nanowire arrays for photovoltaics. Optics Express, 2013, 21, A558.	1.7	136
5	Colorful InAs Nanowire Arrays: From Strong to Weak Absorption with Geometrical Tuning. Nano Letters, 2012, 12, 1990-1995.	4.5	90
6	Absorption of light in InP nanowire arrays. Nano Research, 2014, 7, 816-823.	5.8	85
7	Shockleyâ€"Queisser Detailed Balance Efficiency Limit for Nanowire Solar Cells. ACS Photonics, 2015, 2, 446-453.	3.2	69
8	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
9	In Situ Characterization of Nanowire Dimensions and Growth Dynamics by Optical Reflectance. Nano Letters, 2015, 15, 3597-3602.	4.5	53
10	Single-photon sources with quantum dots in IIIâ€"V nanowires. Nanophotonics, 2019, 8, 747-769.	2.9	47
11	Geometrical optics, electrostatics, and nanophotonic resonances in absorbing nanowire arrays. Optics Letters, 2013, 38, 730.	1.7	44
12	Absorption and transmission of light in IIIâ€"V nanowire arrays for tandem solar cell applications. Nanotechnology, 2017, 28, 205203.	1.3	34
13	Optimization of the short-circuit current in an InP nanowire array solar cell through opto-electronic modeling. Nanotechnology, 2016, 27, 435404.	1.3	33
14	Bipolar Photothermoelectric Effect Across Energy Filters in Single Nanowires. Nano Letters, 2017, 17, 4055-4060.	4.5	32
15	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
16	Nanowires for Biosensing: Lightguiding of Fluorescence as a Function of Diameter and Wavelength. Nano Letters, 2018, 18, 4796-4802.	4.5	29
17	Design for strong absorption in a nanowire array tandem solar cell. Scientific Reports, 2016, 6, 32349.	1.6	27
18	Crystal Phase-Dependent Nanophotonic Resonances in InAs Nanowire Arrays. Nano Letters, 2014, 14, 5650-5655.	4.5	26

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19	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
20	Tunable absorption resonances in the ultraviolet for InP nanowire arrays. Optics Express, 2014, 22, 29204.	1.7	22
21	Physics and design for 20% and 25% efficiency nanowire array solar cells. Nanotechnology, 2019, 30, 074002.	1.3	22
22	Absorption of light in a single vertical nanowire and a nanowire array. Nanotechnology, 2019, 30, 104004.	1.3	19
23	Performance of GaAs Nanowire Array Solar Cells for Varying Incidence Angles. IEEE Journal of Photovoltaics, 2016, 6, 1502-1508.	1.5	18
24	Applied electromagnetic optics simulations for nanophotonics. Journal of Applied Physics, 2021, 129, .	1.1	18
25	Modifying the emission of light from a semiconductor nanowire array. Journal of Applied Physics, 2016, 120, 043108.	1.1	17
26	Single-nanowire, low-bandgap hot carrier solar cells with tunable open-circuit voltage. Nanotechnology, 2017, 28, 434001.	1.3	17
27	Modal analysis of resonant and non-resonant optical response in semiconductor nanowire arrays. Nanotechnology, 2019, 30, 025710.	1.3	17
28	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
29	Photoluminescence study of as-grown vertically standing wurtzite InP nanowire ensembles. Nanotechnology, 2013, 24, 115706.	1.3	15
30	Optimized efficiency in InP nanowire solar cells with accurate 1D analysis. Nanotechnology, 2018, 29, 045401.	1.3	14
31	Emission enhancement, light extraction and carrier dynamics in InGaAs/GaAs nanowire arrays. Nano Futures, 2018, 2, 015001.	1.0	13
32	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
33	Optical response of wurtzite and zinc blende GaP nanowire arrays. Optics Express, 2015, 23, 30177.	1.7	12
34	Optical analysis of a III-V-nanowire-array-on-Si dual junction solar cell. Optics Express, 2017, 25, A665.	1.7	12
35	Reflection measurements to reveal the absorption in nanowire arrays. Optics Letters, 2013, 38, 1449.	1.7	11
36	Increased absorption in InAsSb nanowire clusters through coupled optical modes. Applied Physics Letters, 2017, 110, .	1.5	10

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37	Geometry Tailoring of Emission from Semiconductor Nanowires and Nanocones. Photonics, 2020, 7, 23.	0.9	10
38	Surface-enhanced Raman scattering on dual-layer metallic grating structures. Science Bulletin, 2010, 55, 2643-2648.	1.7	9
39	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
40	Confinement effects on Brillouin scattering in semiconductor nanowire photonic crystal. Physical Review B, 2016, 94, .	1.1	7
41	Time-resolved photoluminescence characterization of GaAs nanowire arrays on native substrate. Nanotechnology, 2017, 28, 505706.	1.3	7
42	Wafer-Scale Synthesis and Optical Characterization of InP Nanowire Arrays for Solar Cells. Nano Letters, 2021, 21, 7347-7353.	4.5	7
43	Measurement of Nanowire Optical Modes Using Cross-Polarization Microscopy. Scientific Reports, 2017, 7, 17790.	1.6	6
44	Absorption through a coupled optical resonance in a horizontal InP nanowire array. Photonics Research, 2015, 3, 125.	3.4	5
45	Connection between modeled blackbody radiation and dipole emission in large-area nanostructures. Optics Letters, 2016, 41, 1494.	1.7	4
46	Tailored emission to boost open-circuit voltage in solar cells. Journal of Physics Communications, 2019, 3, 055009.	0.5	4
47	Management of light and scattering in InP NWs by dielectric polymer shell. Nanotechnology, 2020, 31, 384003.	1.3	3
48	Absorption of Light in Finite Semiconductor Nanowire Arrays and the Effect of Missing Nanowires. Symmetry, 2021, 13, 1654.	1.1	3
49	Enhanced Optical Biosensing by Aerotaxy Ga(As)P Nanowire Platforms Suitable for Scalable Production. ACS Applied Nano Materials, 0, , .	2.4	3
50	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
51	Nanowire Oligomer Waveguide Modes towards Reduced Lasing Threshold. Materials, 2020, 13, 5510.	1.3	2
52	Symmetry Reduction in FEM Optics Modeling of Single and Periodic Nanostructures. Symmetry, 2021, 13, 752.	1.1	2
53	Spectroscopic investigations of arrays containing vertically and horizontally aligned silicon nanowires. Materials Research Express, 2016, 3, 125021.	0.8	1
54	One-dimensional electrical modeling of axial p-i-n junction InP nanowire array solar cells. , 2017, , .		1

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55	Absorption modeling with FMM, FEM and FDT. , 2019, , .		1
56	Absorption in and scattering from single horizontal Au-contacted InAs/InP heterostructure nanowires. , 2016, , .		0
57	Full optoelectronic simulation of nanowire LEDs: Effects of temperature. , 2017, , .		0
58	GaAsP Nanowire Solar Cell Development Towards Nanowire/Si Tandem Applications. , 2017, , .		0
59	Designing outcoupling of light from nanostructured emitter in stratified medium with parasitic absorption. Journal of Applied Physics, 2022, 131, 223104.	1.1	0