Anthony J Hoffman

List of Publications by Year
in descending order

89 papers	2,784 citations	394421 19 h-index	214800 47 g-index
89 all docs	89 docs citations	89 times ranked	3319 citing authors

#	Article	IF	Citations
1	Negative refraction in semiconductor metamaterials. Nature Materials, 2007, 6, 946-950.	27.5	763
2	Mid-infrared quantum cascade lasers. Nature Photonics, 2012, 6, 432-439.	31.4	499
3	Dispersive Photon Blockade in a Superconducting Circuit. Physical Review Letters, 2011, 107, 053602.	7.8	249
4	Highly power-efficient quantum cascade lasers. Nature Photonics, 2010, 4, 95-98.	31.4	150
5	Tunable Coupling in Circuit Quantum Electrodynamics Using a Superconducting Charge Qubit with a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>V</mml:mi></mml:math>-Shaped Energy Level Diagram. Physical Review Letters, 2011, 106, 083601.	7.8	144
6	Room-temperature continuous-wave quantum cascade lasers grown by MOCVD without lateral regrowth. IEEE Photonics Technology Letters, 2006, 18, 1347-1349.	2.5	88
7	Experimental characterization of impact ionization coefficients for electrons and holes in GaN grown on bulk GaN substrates. Applied Physics Letters, 2018, 112, .	3.3	77
8	Role of interface roughness in the transport and lasing characteristics of quantum-cascade lasers. Applied Physics Letters, 2009, 94, 091101.	3.3	74
9	Hafnia (HfO₂) nanoparticles as an X-ray contrast agent and mid-infrared biosensor. Nanoscale, 2016, 8, 13627-13637.	5.6	62
10	Photonic materials, structures and devices for Reststrahlen optics. Optics Express, 2015, 23, A1418.	3.4	57
11	Midinfrared semiconductor optical metamaterials. Journal of Applied Physics, 2009, 105, .	2.5	54
12	Localized surface phonon polariton resonances in polar gallium nitride. Applied Physics Letters, 2015, 107, .	3.3	54
13	High-Performance Quantum Cascade Lasers: Optimized Design Through Waveguide and Thermal Modeling. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 1054-1064.	2.9	44
14	Coherent control of a superconducting qubit with dynamically tunable qubit-cavity coupling. Physical Review B, 2011, 84, .	3.2	41
15	Engineering absorption and blackbody radiation in the far-infrared with surface phonon polaritons on gallium phosphide. Applied Physics Letters, 2014, 104, .	3.3	41
16	ZnCdSeâˆ•ZnCdMgSe quantum cascade electroluminescence. Applied Physics Letters, 2008, 92, 121105.	3.3	33
17	Selective absorbers and thermal emitters for far-infrared wavelengths. Applied Physics Letters, 2015, 107, .	3.3	31
18	Colloidal Nanosurfactants for 3D Conformal Printing of 2D van der Waals Materials. Advanced Materials, 2020, 32, e2003081.	21.0	23

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19	Engineering the Reststrahlen band with hybrid plasmon/ phonon excitations. MRS Communications, 2016, 6, 1-8.	1.8	20
20	Subdiffraction Confinement in All-Semiconductor Hyperbolic Metamaterial Resonators. ACS Photonics, 2017, 4, 1621-1626.	6.6	20
21	Quantum cascade lasers with voltage defect of less than one longitudinal optical phonon energy. Applied Physics Letters, 2009, 94, .	3.3	19
22	Voltage Tunability of Quantum Cascade Lasers. IEEE Journal of Quantum Electronics, 2009, 45, 730-736.	1.9	19
23	Electromagnetic wave transmittance control using self-organized plasma lattice metamaterial. Journal of Applied Physics, 2018, 124, .	2.5	17
24	Analytical technique for subwavelength far field imaging. Applied Physics Letters, 2010, 97, 101103.	3.3	16
25	Engineering the Berreman mode in mid-infrared polar materials. Optics Express, 2020, 28, 28590.	3.4	14
26	Wavelength selection for quantum cascade lasers by cavity length. Applied Physics Letters, 2009, 94, 091109.	3.3	13
27	Evidence of cascaded emission in a dual-wavelength quantum cascade laser. Applied Physics Letters, 2007, 90, 091104.	3.3	12
28	Low voltage-defect quantum cascade laser with heterogeneous injector regions. Optics Express, 2007, 15, 15818.	3.4	12
29	Engineering optical emission in sub-diffraction hyperbolic metamaterial resonators. Optics Express, 2018, 26, 4382.	3.4	12
30	Monochromatic Multimode Antennas on Epsilonâ€Nearâ€Zero Materials. Advanced Optical Materials, 2019, 7, 1800826.	7.3	12
31	High k-space lasing in a dual-wavelength quantum cascade laser. Nature Photonics, 2009, 3, 50-54.	31.4	11
32	Temperature Dependence of Electron and Hole Impact Ionization Coefficients in GaN. IEEE Transactions on Electron Devices, 2021, 68, 1228-1234.	3.0	11
33	Short Injector Quantum Cascade Lasers. IEEE Journal of Quantum Electronics, 2010, 46, 591-600.	1.9	10
34	Thermoelectric Effect in Quantum Cascade Lasers. IEEE Photonics Journal, 2010, 2, 500-509.	2.0	9
35	Probing dopant incorporation in InAs/GaAs QDIPs by polarization-dependent Fourier transform infrared spectroscopy. Infrared Physics and Technology, 2007, 51, 131-135.	2.9	7
36	Confined hyperbolic metasurface modes for structured illumination microscopy. Optics Express, 2021, 29, 42331.	3.4	7

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37	Negative refraction in mid-infrared semiconductor metamaterials. , 2007, , .		6
38	Sub-diffraction negative and positive index modes in mid-infrared waveguides. Optics Express, 2008, 16, 16404.	3.4	6
39	Optical Quilt Packaging: A New Chip-to-Chip Optical Coupling and Alignment Process for Modular Sensors. , 2014, , .		6
40	Enhanced bandwidth and reduced dispersion through stacking multiple optical metamaterials. Optics Express, 2011, 19, 14990.	3.4	5
41	Optical path length and trajectory stability in rotationally asymmetric multipass cells. Optics Express, 2016, 24, 19497.	3.4	5
42	Potential dependent spectroelectrochemistry of electrofluorogenic dyes on indiumâ€tin oxide. Electrochemical Science Advances, 2022, 2, e2100094.	2.8	5
43	Mid-infrared, long-wave infrared, and terahertz photonics: introduction. Optics Express, 2020, 28, 14169.	3.4	4
44	DX-like centers in InAsâ•GaAs QDIPs observed by polarization-dependent Fourier transform infrared spectroscopy. Journal of Vacuum Science & Technology B, 2007, 25, 1108.	1.3	3
45	High Internal Quantum Efficiency from AlGaN-delta-GaN Quantum Well at 260 nm. , 2020, , .		3
46	The effect of injector barrier thickness and doping level on current transport and optical transition width in a Î»â¼8.0â€‚Î¼m quantum cascade structure. Applied Physics Letters, 2008, 93, 191107.	3.3	2
47	FDTD modeling of chip-to-chip waveguide coupling via optical quilt packaging. Proceedings of SPIE, 2013, , .	0.8	2
48	Experiments on a Plasma-based Metamaterial at Microwave Fequencies. , 2017, , .		2
49	Mid-Infrared Waveguide Array Inter-Chip Coupling Using Optical Quilt Packaging. IEEE Photonics Technology Letters, 2017, 29, 755-758.	2.5	2
50	Limitations to the Power Output and Efficiency of Mid-Infrared Quantum Cascade Lasers Imposed by Transport. , 2010, , .		2
51	Predicting early failure of quantum cascade lasers during accelerated burn-in testing using machine learning. Scientific Reports, 2022, 12, .	3.3	2
52	Intersubband Absorption Loss in High-Performance Mid-Infrared Quantum Cascade Lasers. , 2009, , .		1
53	Lasing-induced reduction in core heating in high wall plug efficiency quantum cascade lasers. Applied Physics Letters, 2009, 94, .	3.3	1
54	Localized Surface Phonon Polariton Resonators in GaN. , 2015, , .		1

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55	Nanoscale Hyperbolic Metamaterial Resonators in Semiconductors. , 2016, , .		1
56	Low-Voltage Defect Quantum Cascade Laser with Heterogeneous Injector Regions. , 2007, , .		0
57	Effect of injection barrier thickness and doping on transport and gain in a Î» = 8.2 Î¼ quantum cascade laser. , 2007, , .		0
58	Cascaded Emission from a Dual-Wavelength Quantum Cascade Laser. , 2007, , .		0
59	High Performance Quantum Cascade Lasers Grown by MOCVD with/without Lateral Regrowth. AIP Conference Proceedings, 2007, , .	0.4	0
60	Low voltage defect heterogeneous quantum cascade laser. , 2008, , .		0
61	Negative Differential Resistance and Pulse Instabilities in Minimalized Quantum Cascade Laser Structures. , 2009, , .		0
62	Rapid and Minimally Invasive Quantum Cascade Wafer Testing. IEEE Photonics Technology Letters, 2009, 21, 531-533.	2.5	0
63	Voltage tuning of gain spectra in quantum cascade lasers. Proceedings of SPIE, 2009, , .	0.8	0
64	Rapid and minimally invasive quantum cascade wafer testing. Proceedings of SPIE, 2009, , .	0.8	0
65	Ultra-Low Voltage Defect Quantum Cascade Lasers. , 2009, , .		0
66	Photon Blockade in Circuit Quantum Electrodynamics. , 2010, , .		0
67	Tunable coupling cavity QED with a superconducting artificial atom. , 2012, , .		0
68	Mid- and far-infrared optical characterization of monoclinic HfO2 nanoparticles and evidence of localized surface phonon polaritons. , 2017, , .		0
69	Importance of coherence in models of mid-infrared quantum cascade laser gain spectra. Journal of Optics (United Kingdom), 2017, 19, 095201.	2.2	0
70	Far-Infrared Emission from an Electrically-Injected Semiconductor Device. , 2018, , .		0
71	Engineering Optical Emission of Sub-diffraction Hyperbolic Metamaterial Resonators. , 2018, , .		0
72	Far-Field Thermal Emission from Optical Antennas on an Epsilon-Near-Zero Substrate. , 2020, , .		0

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73	Mid-infrared Excitation of Plasmonic Resonances in Highly Anisotropic Layered Semiconductor Structures. AIP Conference Proceedings, 2007, , .	0.4	0
74	Excited-state absorption in high-power mid-infrared quantum cascade lasers. , 2008, , .		0
75	Laser action at high k-space values in anti-correlated multi-wavelength quantum cascade lasers. , 2008, , .		0
76	Intaersubband Electroluminescence from a ZnCdSe/ZnCdMgSe quantum cascade structure. , 2008, , .		0
77	Enhancing Wavelength Selection for Quantum Cascade Laser Based Chemical Sensors by Cavity Length Variation. , 2009, , .		0
78	Instantaneous Power and Threshold in Continuous Wave Quantum Cascade Lasers. , 2009, , .		0
79	Quantum Cascade Lasers with Ultra-Strong Coupling Injection. , 2009, , .		0
80	Role of Interface Roughness in the Transport and Lasing Characteristics of Quantum-Cascade lasers. , 2009, , .		0
81	Analytical Technique for Determining the Size of Subwavelength Focal Spots in far Field. , 2010, , .		0
82	Broadband, Low-Dispersion, Mid-Infrared Metamaterials. , 2010, , .		0
83	Mid- and Far-infrared Nanophotonics: Learning to Live with Phonons. , 2016, , .		0
84	Exciting Localized Modes in Polar Epsilon-Near-Zero Materials. , 2017, , .		0
85	Engineering the Coupling Between the Berreman Mode and Nanobar Antennas in Epsilon-near-zero Materials. , 2018, , .		0
86	Surface Phonon Polariton Modes in Zinc Oxide Nanoparticles. , 2020, , .		0
87	Broadband Epsilon-Near-Zero Behavior in Deep-etched Grating Metasurfaces. , 2020, , .		0
88	Thermal Emission from Multi-mode Optical Antennas on an Epsilon-Near-Zero Substrate. , 2020, , .		0
89	Spatiotemporal distribution of chemical signatures exhibited by Myxococcus xanthus in response to metabolic conditions. Analytical and Bioanalytical Chemistry, 2022, 414, 1691-1698.	3.7	0