Daniel Wasserman

List of Publications by Year
in descending order

162 papers	4,776 citations	126907 33 h-index	98798 67 g-index
167 all docs	167 docs citations	167 times ranked	4855 citing authors

#	Article	IF	Citations
1	Negative refraction in semiconductor metamaterials. Nature Materials, 2007, 6, 946-950.	27.5	763
2	Fabrication of 5nm linewidth and 14nm pitch features by nanoimprint lithography. Applied Physics Letters, 2004, 84, 5299-5301.	3.3	564
3	Strong absorption and selective thermal emission from a midinfrared metamaterial. Applied Physics Letters, 2011, 98, .	3.3	225
4	Review of mid-infrared plasmonic materials. Journal of Nanophotonics, 2015, 9, 093791.	1.0	186
5	Mid-infrared designer metals. Optics Express, 2012, 20, 12155.	3.4	173
6	Towards nano-scale photonics with micro-scale photons: the opportunities and challenges of mid-infrared plasmonics. Nanophotonics, 2013, 2, 103-130.	6.0	173
7	All-Semiconductor Plasmonic Nanoantennas for Infrared Sensing. Nano Letters, 2013, 13, 4569-4574.	9.1	154
8	Funneling Light through a Subwavelength Aperture with Epsilon-Near-Zero Materials. Physical Review Letters, 2011, 107, 133901.	7.8	144
9	6 nm half-pitch lines and 0.04 Âµm2static random access memory patterns by nanoimprint lithography. Nanotechnology, 2005, 16, 1058-1061.	2.6	142
10	Phonon-polaritonics: enabling powerful capabilities for infrared photonics. Nanophotonics, 2019, 8, 2129-2175.	6.0	113
11	Next-generation mid-infrared sources. Journal of Optics (United Kingdom), 2017, 19, 123001.	2.2	107
12	Strong absorption and selective emission from engineered metals with dielectric coatings. Optics Express, 2013, 21, 9113.	3.4	91
13	Room-temperature continuous-wave quantum cascade lasers grown by MOCVD without lateral regrowth. IEEE Photonics Technology Letters, 2006, 18, 1347-1349.	2.5	88
14	Strong Coupling of Molecular and Mid-Infrared Perfect Absorber Resonances. IEEE Photonics Technology Letters, 2012, 24, 31-33.	2.5	64
15	Photonic materials, structures and devices for Reststrahlen optics. Optics Express, 2015, 23, A1418.	3.4	57
16	Localized surface phonon polariton resonances in polar gallium nitride. Applied Physics Letters, 2015, 107, .	3.3	54
17	All-Semiconductor Negative-Index Plasmonic Absorbers. Physical Review Letters, 2014, 112, 017401.	7.8	52
18	Doped semiconductors with band-edge plasma frequencies. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	1.2	51

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19	Wafer-Scale Production of Uniform InAs_{<i>y</i>}P_{1â€“<i>y</i>} Nanowire Array on Silicon for Heterogeneous Integration. ACS Nano, 2013, 7, 5463-5471.	14.6	49
20	Probing polaritons in the mid- to far-infrared. Journal of Applied Physics, 2019, 125, .	2.5	48
21	Direct observation of minority carrier lifetime improvement in InAs/GaSb type-II superlattice photodiodes via interfacial layer control. Applied Physics Letters, 2013, 102, .	3.3	47
22	Design, Fabrication, and Characterization of Near-IR Gold Bowtie Nanoantenna Arrays. Journal of Physical Chemistry C, 2014, 118, 20553-20558.	3.1	47
23	Epitaxial growth of engineered metals for mid-infrared plasmonics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	1.2	45
24	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
25	Electrically tunable extraordinary optical transmission gratings. Applied Physics Letters, 2007, 91, 181110.	3.3	42
26	Engineering absorption and blackbody radiation in the far-infrared with surface phonon polaritons on gallium phosphide. Applied Physics Letters, 2014, 104, .	3.3	41
27	Anomalous spin polarization of GaAs two-dimensional hole systems. Physical Review B, 2005, 72, .	3.2	40
28	Midinfrared doping-tunable extraordinary transmission from sub-wavelength Gratings. Applied Physics Letters, 2007, 90, 191102.	3.3	39
29	Mid-wave infrared narrow bandwidth guided mode resonance notch filter. Optics Letters, 2017, 42, 223.	3.3	38
30	Mid-infrared epsilon-near-zero modes in ultra-thin phononic films. Applied Physics Letters, 2017, 111, .	3.3	37
31	Formation of self-assembled InAs quantum dots on (110) GaAs substrates. Applied Physics Letters, 2003, 83, 5050-5052.	3.3	36
32	Damage-Free Smooth-Sidewall InGaAs Nanopillar Array by Metal-Assisted Chemical Etching. ACS Nano, 2017, 11, 10193-10205.	14.6	36
33	Direct minority carrier transport characterization of InAs/InAsSb superlattice nBn photodetectors. Applied Physics Letters, 2015, 106, .	3.3	33
34	Uniform InGaAs quantum dot arrays fabricated using nanosphere lithography. Applied Physics Letters, 2008, 93, 231907.	3.3	31
35	Selective absorbers and thermal emitters for far-infrared wavelengths. Applied Physics Letters, 2015, 107, .	3.3	31
36	Mid-infrared doping tunable transmission through subwavelength metal hole arrays on InSb. Optics Express, 2009, 17, 10223.	3.4	30

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37	All-epitaxial guided-mode resonance mid-wave infrared detectors. Applied Physics Letters, 2021, 118, 201102.	3.3	30
38	Selective thermal emission from patterned steel. Optics Express, 2010, 18, 25192.	3.4	29
39	Midinfrared luminescence from InAs quantum dots in unipolar devices. Applied Physics Letters, 2002, 81, 2848-2850.	3.3	27
40	Room temperature midinfrared electroluminescence from InAs quantum dots. Applied Physics Letters, 2009, 94, 061101.	3.3	27
41	Voltage-controlled active mid-infrared plasmonic devices. Journal of Applied Physics, 2011, 109, 123103.	2.5	27
42	Near-field infrared absorption of plasmonic semiconductor microparticles studied using atomic force microscope infrared spectroscopy. Applied Physics Letters, 2013, 102, .	3.3	27
43	Epsilon-Near-Zero Photonics Wires. ACS Photonics, 2016, 3, 1045-1052.	6.6	26
44	Observation of Rabi Splitting from Surface Plasmon Coupled Conduction State Transitions in Electrically Excited InAs Quantum Dots. Nano Letters, 2011, 11, 338-342.	9.1	25
45	Spin splitting in GaAs (100) two-dimensional holes. Physical Review B, 2004, 69, .	3.2	23
46	Ultra-thin plasmonic detectors. Optica, 2021, 8, 1545.	9.3	22
47	Enhanced Optical Transmission through MacEtchâ€Fabricated Buried Metal Gratings. Advanced Materials, 2016, 28, 1441-1448.	21.0	21
48	Engineering the Reststrahlen band with hybrid plasmon/ phonon excitations. MRS Communications, 2016, 6, 1-8.	1.8	20
49	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Îµ</mml:mi></mml:math>-near-zero enhanced light transmission through a subwavelength slit. Physical Review B, 2014, 89, .	3.2	19
50	All-Epitaxial Integration of Long-Wavelength Infrared Plasmonic Materials and Detectors for Enhanced Responsivity. ACS Photonics, 2020, 7, 1950-1956.	6.6	19
51	Ultra-thin enhanced-absorption long-wave infrared detectors. Applied Physics Letters, 2018, 112, .	3.3	18
52	Multiple wavelength anisotropically polarized mid-infrared emission from InAs quantum dots. Applied Physics Letters, 2006, 88, 191118.	3.3	17
53	Plasmonic mid-infrared beam steering. Applied Physics Letters, 2010, 96, .	3.3	17
54	Modified electron beam induced current technique for in(Ga)As/InAsSb superlattice infrared detectors. Journal of Applied Physics, 2017, 122, .	2.5	17

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55	Enhanced emission from ultra-thin long wavelength infrared superlattices on epitaxial plasmonic materials. Applied Physics Letters, 2020, 116, .	3.3	17
56	2.8â€‰Î¼m emission from type-I quantum wells grown on InAsxP1â^’x/InP metamorphic graded buffers. Applied Physics Letters, 2012, 101, .	3.3	16
57	Room-temperature mid-infrared quantum well lasers on multi-functional metamorphic buffers. Applied Physics Letters, 2016, 109, .	3.3	15
58	Platinum germanides for mid- and long-wave infrared plasmonics. Optics Express, 2015, 23, 3316.	3.4	14
59	Interface structure and luminescence properties of epitaxial PbSe films on InAs(111)A. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	14
60	Engineering the Berreman mode in mid-infrared polar materials. Optics Express, 2020, 28, 28590.	3.4	14
61	Multiscale beam evolution and shaping in corrugated plasmonic systems. Optics Express, 2011, 19, 9269.	3.4	13
62	Evidence of cascaded emission in a dual-wavelength quantum cascade laser. Applied Physics Letters, 2007, 90, 091104.	3.3	12
63	Mid-infrared emission from In(Ga)Sb layers on InAs(Sb). Optics Express, 2014, 22, 24466.	3.4	12
64	Flat mid-infrared composite plasmonic materials using lateral doping-patterned semiconductors. Journal of Optics (United Kingdom), 2014, 16, 094012.	2.2	12
65	Monochromatic Multimode Antennas on Epsilonâ€Nearâ€Zero Materials. Advanced Optical Materials, 2019, 7, 1800826.	7.3	12
66	Measurement of carrier lifetime in micron-scaled materials using resonant microwave circuits. Nature Communications, 2019, 10, 1625.	12.8	12
67	High k-space lasing in a dual-wavelength quantum cascade laser. Nature Photonics, 2009, 3, 50-54.	31.4	11
68	Degenerately doped InGaBiAs:Si as a highly conductive and transparent contact material in the infrared range. Optical Materials Express, 2013, 3, 1197.	3.0	11
69	Mid-infrared electroluminescence from InAs type-I quantum wells grown on InAsP/InP metamorphic buffers. Journal of Applied Physics, 2015, 118, .	2.5	11
70	Narrow stripe-width, low-ridge high power quantum cascade lasers. Applied Physics Letters, 2007, 90, 141107.	3.3	10
71	Active control and spatial mapping of mid-infrared propagating surface plasmons. Optics Express, 2009, 17, 7019.	3.4	10
72	Low-threshold InP quantum dot and InGaP quantum well visible lasers on silicon (001). Optica, 2021, 8, 1495.	9.3	10

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73	Spectral and spatial investigation of midinfrared surface waves on a plasmonic grating. Applied Physics Letters, 2009, 94, .	3.3	9
74	Special issue on mid-infrared and THz photonics. Journal of Optics (United Kingdom), 2014, 16, 090201.	2.2	9
75	Enhanced room temperature infrared LEDs using monolithically integrated plasmonic materials. Optica, 2020, 7, 1355.	9.3	9
76	High operating temperature plasmonic infrared detectors. Applied Physics Letters, 2022, 120, .	3.3	9
77	Cleaved-edge overgrowth of aligned quantum dots on strained layers of InGaAs. Applied Physics Letters, 2004, 85, 5352-5354.	3.3	8
78	Electronic anti-Stokesâ€"Raman emission in quantum-cascade lasers. Applied Physics Letters, 2005, 87, 261113.	3.3	8
79	Controlling quantum dot energies using submonolayer bandstructure engineering. Applied Physics Letters, 2014, 105, 081103.	3.3	8
80	Electrical modulation of degenerate semiconductor plasmonic interfaces. Journal of Applied Physics, 2019, 126, .	2.5	8
81	Room-Temperature Mid-Wave Infrared Guided-Mode Resonance Detectors. IEEE Photonics Technology Letters, 2022, 34, 615-618.	2.5	8
82	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
83	Electroluminescence from quantum dots fabricated with nanosphere lithography. Applied Physics Letters, 2012, 101, .	3.3	7
84	Optical Mapping of RF Field Profiles in Resonant Microwave Circuits. IEEE Photonics Technology Letters, 2018, 30, 331-334.	2.5	7
85	InSb pixel loaded microwave resonator for high-speed mid-wave infrared detection. Infrared Physics and Technology, 2020, 109, 103390.	2.9	7
86	Plasmonic electro-optic modulator based on degenerate semiconductor interfaces. Nanophotonics, 2020, 9, 1105-1113.	6.0	7
87	Minority carrier lifetime and photoluminescence of mid-wave infrared InAsSbBi. Applied Physics Letters, 2020, 117, .	3.3	6
88	Mid-infrared electroluminescence from type-II In(Ga)Sb quantum dots. Applied Physics Letters, 2020, 116, .	3.3	6
89	Measuring Molecular Diffusion Through Thin Polymer Films with Dual-Band Plasmonic Antennas. ACS Nano, 2021, 15, 10393-10405.	14.6	6
90	Characterization of GaAs grown by molecular beam epitaxy on vicinal Ge(100) substrates. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 1893.	1.6	5

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91	Enhanced responsivity resonant RF photodetectors. Optics Express, 2016, 24, 26044.	3.4	5
92	Multiplexed infrared photodetection using resonant radio-frequency circuits. Applied Physics Letters, 2016, 108, .	3.3	5
93	Engineering carrier lifetimes in type-II In(Ga)Sb/InAs mid-IR emitters. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, 02B101.	1.2	5
94	Design and growth of multi-functional InAsP metamorphic buffers for mid-infrared quantum well lasers on InP. Journal of Applied Physics, 2019, 125, .	2.5	5
95	Reflecting metagrating-enhanced thin-film organic light emitting devices. Applied Physics Letters, 2021, 118, .	3.3	5
96	All-epitaxial, laterally structured plasmonic materials. Applied Physics Letters, 2022, 120, .	3.3	5
97	Mid-Infrared Electroluminescence from InAs Quantum Dots in p-n Junctions and Unipolar Tunneling Structures. Physica Status Solidi (B): Basic Research, 2001, 224, 585-590.	1.5	4
98	High speed mid-infrared detectors based on MEMS resonators and spectrally selective metamaterials. , 2016, , .		4
99	Metal germanides for practical on-chip plasmonics in the mid infrared. Optical Materials Express, 2018, 8, 968.	3.0	4
100	Room-Temperature Mid-Infrared Detection via Resonant Microwave Circuits. IEEE Transactions on Electron Devices, 2020, 67, 1632-1638.	3.0	4
101	All-epitaxial long-range surface plasmon polariton structures with integrated active materials. Journal of Applied Physics, 2021, 129, .	2.5	4
102	Scanning nearâ€"field photoluminescence mapping of (110) InAs-GaAs self-assembled quantum dots. Applied Physics Letters, 2004, 85, 2535-2537.	3.3	3
103	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
104	Loss mechanisms in mid-infrared extraordinary optical transmission gratings. Optics Express, 2009, 17, 666.	3.4	3
105	Mid-infrared designer metals. , 2012, , .		3
106	Nanosecond modulation of thermal emission. Light: Science and Applications, 2019, 8, 68.	16.6	3
107	Bright mid-infrared photoluminescence from high dislocation density epitaxial PbSe films on GaAs. APL Materials, 2021, 9, .	5.1	3
108	Epitaxial mid-IR nanophotonic optoelectronics. Applied Physics Letters, 2022, 120, .	3.3	3

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109	High-optical-quality nanosphere lithographically formed InGaAs quantum dots using molecular beam epitaxy assisted GaAs mass transport and overgrowth. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C3C9-C3C14.	1.2	2
110	Growth and characterization of In_{1-x}Ga_xAs/InAs_{0.65}Sb_{0.35} strained layer superlattice infrared detectors. Proceedings of SPIE, 2017, , .	0.8	2
111	Palladium Germanides for Mid- and Long-Wave Infrared Plasmonics. MRS Advances, 2017, 2, 2385-2390.	0.9	2
112	Special Section Guest Editorial: Plasmonics Systems and Applications. Optical Engineering, 2017, 56, 1.	1.0	2
113	Ballistic metamaterials. Optica, 2020, 7, 1773.	9.3	2
114	Selective thermal emission from thin-film metasurfaces. , 2013, , .		1
115	Diffusion characterization of In(Ga)As/InAsSb type-II superlattices via electron beam induced current and time-resolved photoluminescence. , 2016, , .		1
116	Subdiffraction Limited Photonic Funneling of Light. Advanced Optical Materials, 2020, 8, 2001321.	7.3	1
117	Photonic Funnels: Subdiffraction Limited Photonic Funneling of Light (Advanced Optical Materials) Tj ETQq1 1 0.784314 rgBT /Overlo	7.3	1
118	Hyperbolic Metamaterial Photonic Funnels. , 2020, , .		1
119	Cascaded InGaSb quantum dot mid-infrared LEDs. Journal of Applied Physics, 2022, 131, 043105.	2.5	1
120	Extending plasmonic response to the mid-wave infrared with all-epitaxial composites. Optics Letters, 2022, 47, 973.	3.3	1
121	Minority carrier lifetimes in digitally-grown, narrow-gap, AlInAsSb alloys. Applied Physics Letters, 2021, 119, .	3.3	1
122	Plasmon-enhanced distributed Bragg reflectors. Infrared Physics and Technology, 2022, , 104236.	2.9	1
123	Approaches to compact quantum cascade laser modules with integrated coolers. , 0, , .		0
124	(110) InAs Quantum Dots: Growth, Single-Dot Luminescence and Cleaved Edge Alignment. Materials Research Society Symposia Proceedings, 2004, 829, 102.	0.1	0
125	Stimulated electronic anti-stokes Raman emission in quantum cascade lasers. , 0, , .		0
126	MOCVD-grown room temperature continuous-wave quantum cascade lasers without lateral regrowth. , 2006, , .		0

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127	Difference frequency generation from integrated nonlinearities in two-wavelength quantum cascade lasers. , 2007, , .		0
128	Cascaded Emission from a Dual-Wavelength Quantum Cascade Laser. , 2007, , .		0
129	Narrow stripe-width, low-ridge configuration for high power quantum cascade lasers. , 2007, , .		0
130	Difference Frequency Generation from Integrated Nonlinearities in Two-Wavelength Quantum Cascade Lasers. , 2007, , .		0
131	High Performance Quantum Cascade Lasers Grown by MOCVD with/without Lateral Regrowth. AIP Conference Proceedings, 2007, , .	0.4	0
132	Electrically tunable mid-infrared extraordinary optical transmission gratings. , 2008, , .		0
133	Beam Steering of Mid-Infrared Light with Active Plasmonic Structures. , 2010, , .		0
134	Selective Thermal Emission from Patterned Steel Surfaces. , 2011, , .		0
135	All-Semiconductor Plasmonic Perfect Absorber. , 2013, , .		0
136	All Semiconductor Negative-Index Plasmonic Absorbers. , 2014, , .		0
137	Making the Mid-IR nano with epitaxial plasmonic devices. , 2014, , .		0
138	All-Semiconductor Plasmonic Nano-Antennas. , 2014, , .		0
139	Diffusion Characterization Using Electron Beam Induced Current and Time-Resolved Photoluminescence of InAs/InAsSb Type-II Superlattices. , 2015, , .		0
140	Optical Transmission: Enhanced Optical Transmission through MacEtchâ€Fabricated Buried Metal Gratings (Adv. Mater. 7/2016). Advanced Materials, 2016, 28, 1440-1440.	21.0	0
141	Correction to Epsilon-Near-Zero Photonics Wires. ACS Photonics, 2016, 3, 2521-2521.	6.6	0
142	Mid-infrared quantum well lasers on multi-functional metamorphic buffers. , 2017, , .		0
143	Electrical Readout of Carrier Dynamics in Micro-Scale Infrared Materials. , 2018, , .		0
144	Mid-Infrared Detection using a Microwave Resonator Photoconductive Architecture. , 2019, , .		0

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145	Far-Field Thermal Emission from Optical Antennas on an Epsilon-Near-Zero Substrate. , 2020, , .		0
146	Guided-Mode Resonance Enhanced Mid-Wave Infrared Detector. , 2020, , .		0
147	Engineering the Spectral Response of Long-Wave Infrared Detectors. , 2020, , .		0
148	Mid-Wave Infrared Quantum Dot Light Emitting Diodes. , 2020, , .		0
149	Guided-Mode Resonance Enhanced Ultra-Thin HOT Mid-Wave Infrared Detectors. , 2021, , .		0
150	The Ballistic Resonance: plasmonic response across IR with III-V semiconductors. , 2021, , .		0
151	Ultra-Thin All-Epitaxial Plasmonically Enhanced Long-Wave Infrared Detectors. , 2021, , .		0
152	Gallium arsenide and its ternary alloys (self-assembled quantum dots). Series in Optics and Optoelectronics, 2004, , .	0.0	0
153	Mid-infrared Beam Propagation and Modulation in Extraordinary Transmission Gratings. , 2008, , .		0
154	Laser action at high k-space values in anti-correlated multi-wavelength quantum cascade lasers. , 2008, , .		0
155	Platinum germanides for long-wavelength infrared plasmonics. , 2014, , .		0
156	Mid-IR Lasers and LEDs Using Type I and II Materials. , 2016, , .		0
157	Buried Extraordinary Optical Transmission. , 2016, , .		0
158	Epsilon-Near-Zero Photonic Wires. , 2016, , .		0
159	New Sources and Sensors for Mid- to Far-IR Optical Sensing. , 2017, , .		0
160	Classical to Quantum Transitions in Multilayer Plasmonic Metamaterials. , 2019, , .		0
161	Monolithically Integrated Resonant Cavity Enhanced Type-II Superlattice Detectors. , 2020, , .		0
162	Monolithic Semiconductor Plasmonic Devices. , 2020, , .		0