

# Michelle L Povinelli

## List of Publications by Year in descending order

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Version: 2024-02-01

69  
papers

3,117  
citations

236833

25  
h-index

182361

51  
g-index

70  
all docs

70  
docs citations

70  
times ranked

3341  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental Realization of an On-Chip All-Optical Analogue to Electromagnetically Induced Transparency. <i>Physical Review Letters</i> , 2006, 96, 123901.	2.9	626
2	Optical absorption enhancement in silicon nanowire arrays with a large lattice constant for photovoltaic applications. <i>Optics Express</i> , 2009, 17, 19371.	1.7	412
3	Evanescent-wave bonding between optical waveguides. <i>Optics Letters</i> , 2005, 30, 3042.	1.7	374
4	Electrical and Optical Characterization of Surface Passivation in GaAs Nanowires. <i>Nano Letters</i> , 2012, 12, 4484-4489.	4.5	183
5	GaAs Nanowire Array Solar Cells with Axial p-n Junctions. <i>Nano Letters</i> , 2014, 14, 3293-3303.	4.5	168
6	Tandem Solar Cells Using GaAs Nanowires on Si: Design, Fabrication, and Observation of Voltage Addition. <i>Nano Letters</i> , 2015, 15, 7217-7224.	4.5	114
7	Optimal design of aperiodic, vertical silicon nanowire structures for photovoltaics. <i>Optics Express</i> , 2011, 19, A1148.	1.7	90
8	Broadband absorption of semiconductor nanowire arrays for photovoltaic applications. <i>Journal of Optics (United Kingdom)</i> , 2012, 14, 024004.	1.0	87
9	Toward Optimized Light Utilization in Nanowire Arrays Using Scalable Nanosphere Lithography and Selected Area Growth. <i>Nano Letters</i> , 2012, 12, 2839-2845.	4.5	80
10	Light-Assisted, Templated Self-Assembly Using a Photonic-Crystal Slab. <i>Nano Letters</i> , 2013, 13, 2290-2294.	4.5	65
11	The dynamics of giant unilamellar vesicle oxidation probed by morphological transitions. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 2615-2624.	1.4	59
12	Limiting efficiencies of tandem solar cells consisting of III-V nanowire arrays on silicon. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	58
13	Tuning the coherent interaction in an on-chip photonic-crystal waveguide-resonator system. <i>Applied Physics Letters</i> , 2010, 97, 101102.	1.5	49
14	Experimental broadband absorption enhancement in silicon nanohole structures with optimized complex unit cells. <i>Optics Express</i> , 2013, 21, A872.	1.7	46
15	Near-Field, On-Chip Optical Brownian Ratchets. <i>Nano Letters</i> , 2016, 16, 5261-5266.	4.5	45
16	Advances in Theory of Photonic Crystals. <i>Journal of Lightwave Technology</i> , 2006, 24, 4493-4501.	2.7	43
17	Experimental demonstration of an all-optical analogue to the superradiance effect in an on-chip photonic crystal resonator system. <i>Physical Review B</i> , 2010, 81, .	1.1	41
18	Aligning microcavity resonances in silicon photonic-crystal slabs using laser-pumped thermal tuning. <i>Applied Physics Letters</i> , 2008, 92, 103114.	1.5	37

#	ARTICLE	IF	CITATIONS
19	Mechanical Kerr nonlinearities due to bipolar optical forces between deformable silicon waveguides. Optics Express, 2011, 19, 10102.	1.7	37
20	The effect of plasmonic particles on solar absorption in vertically aligned silicon nanowire arrays. Applied Physics Letters, 2010, 97, 071110.	1.5	35
21	Experimental demonstration of two methods for controlling the group delay in a system with photonic-crystal resonators coupled to a waveguide. Optics Letters, 2011, 36, 1482.	1.7	34
22	Effect of aperiodicity on the broadband reflection of silicon nanorod structures for photovoltaics. Optics Express, 2012, 20, A125.	1.7	34
23	Light-Assisted, Templated Self-Assembly of Gold Nanoparticle Chains. Nano Letters, 2014, 14, 5184-5188.	4.5	33
24	Enhancing optical switching with coherent control. Applied Physics Letters, 2010, 96, 231108.	1.5	26
25	Optical trapping via guided resonance modes in a Slot-Suzuki-phase photonic crystal lattice. Optics Express, 2012, 20, 6816.	1.7	25
26	Light-assisted templated self assembly using photonic crystal slabs. Optics Express, 2011, 19, 11422.	1.7	24
27	Applications of optomechanical effects for on-chip manipulation of light signals. Current Opinion in Solid State and Materials Science, 2012, 16, 82-90.	5.6	24
28	Large tuning of birefringence in two strip silicon waveguides via optomechanical motion. Optics Express, 2009, 17, 17818.	1.7	22
29	Optical Epitaxial Growth of Gold Nanoparticle Arrays. Nano Letters, 2015, 15, 5841-5845.	4.5	22
30	Solar heating of GaAs nanowire solar cells. Optics Express, 2015, 23, A1363.	1.7	22
31	Effect of periodicity on optical forces between a one-dimensional periodic photonic crystal waveguide and an underlying substrate. Applied Physics Letters, 2010, 97, .	1.5	18
32	Enhanced Fabry-Perot resonance in GaAs nanowires through local field enhancement and surface passivation. Nano Research, 2014, 7, 1146-1153.	5.8	17
33	Design of Passivation Layers on Axial Junction GaAs Nanowire Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1511-1517.	1.5	15
34	High temperature, experimental thermal memory based on optical resonances in photonic crystal slabs. APL Photonics, 2019, 4, .	3.0	15
35	Carrier dynamics and doping profiles in GaAs nanosheets. Nano Research, 2014, 7, 163-170.	5.8	14
36	Enhanced and selective optical trapping in a slot-graphite photonic crystal. Optics Express, 2016, 24, 23271.	1.7	14

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37	Optical trapping of metal-dielectric nanoparticle clusters near photonic crystal microcavities. Optics Letters, 2012, 37, 3690.	1.7	12
38	Fabrication of transferrable, fully suspended silicon photonic crystal nanomembranes exhibiting vivid structural color and high-Q guided resonance. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, 050606.	0.6	11
39	Gold-black phosphorus nanostructured absorbers for efficient light trapping in the mid-infrared. Optics Express, 2020, 28, 19562.	1.7	10
40	Optical absorption enhancement in silicon nanowire and nanohole arrays for photovoltaic applications. , 2010, , .		9
41	Coupled metamaterial optical resonators for infrared emissivity spectrum modulation. Optics Express, 2021, 29, 5840.	1.7	9
42	Variable speed limit. Nature Physics, 2006, 2, 735-736.	6.5	8
43	Capturing light pulses into a pair of coupled photonic crystal cavities. Applied Physics Letters, 2009, 94, 231109.	1.5	7
44	Observation of Asymmetric Nanoscale Optical Cavity in GaAs Nanosheets. ACS Photonics, 2015, 2, 1124-1128.	3.2	7
45	Sudden, Laser-Induced Heating through Silicon Nanopatterning. ACS Photonics, 2015, 2, 1681-1685.	3.2	7
46	Detailed balance limit of silicon nanowire and nanohole array solar cells. Proceedings of SPIE, 2011, , .	0.8	6
47	Design and optical characterization of high-Q guided-resonance modes in the slot-graphite photonic crystal lattice. Optics Express, 2013, 21, 30975.	1.7	6
48	Overcoming gain-bandwidth product constraint in slow light Raman amplification with the use of light-stopping schemes. Applied Physics Letters, 2009, 95, .	1.5	4
49	Photonic surfaces for designable nonlinear power shaping. Applied Physics Letters, 2015, 106, 061110.	1.5	3
50	Experimental realization of an on-chip all-optical analogue to electromagnetically induced transparency. , 2006, , .		1
51	Slow and Stopped Light in Coupled Resonator Systems. Springer Series in Optical Sciences, 2010, , 165-180.	0.5	1
52	Optimal design of aperiodic, vertical silicon nanowire structures for photovoltaics. , 2011, , .		1
53	Large tuning of birefringence in two strip silicon waveguides via optomechanical motion. , 2009, , .		1
54	Optical absorption enhancement in silicon nanowire and nanohole arrays for photovoltaic application. , 2010, , .		1

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55	Optimal design of aperiodic, vertical silicon nanowire structures for photovoltaics. , 2011, , .		1
56	Optimization of Broadband Absorption in Semiconductor Nanowire Arrays for Photovoltaic Applications. , 2011, , .		1
57	Tunable, polarization-sensitive, dual guided-resonance modes in photonic crystals. Optics Express, 2019, 27, 17658.	1.7	1
58	Applications of computational nanophotonics in photonic circuits, self assembly, and solar energy. , 2011, , .		0
59	Optical Trapping, Stretching, and Self-Assembly for Biological Measurements. , 2014, , .		0
60	Thermal heating in GaAs nanowire solar cells. , 2015, , .		0
61	On-chip manipulation of local heating and nanoparticle motion. , 2017, , .		0
62	Theoretical investigation of attractive optical force in periodically-patterned silicon waveguides. , 2010, , .		0
63	Positive and Negative Mechanical Kerr Nonlinearities in Periodically-patterned Silicon Waveguides. , 2010, , .		0
64	Design and Modeling of Nanowire-array Solar Cells. , 2012, , .		0
65	Experimental broadband absorption enhancement in silicon nanohole structures with optimized complex unit cells. , 2013, , .		0
66	Light-assisted Templated Self-Assembly of a Gold Nanoparticle Array. , 2014, , .		0
67	Photonic surfaces for designable nonlinear power shaping. , 2015, , .		0
68	Strong Interaction between Gold Particles in Light-assisted Templated Self-Assembly. , 2015, , .		0
69	Enhanced and preferential optical trapping in a slot-graphite photonic crystal. , 2017, , .		0