Ivan Favero

List of Publications by Year in descending order

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88 papers	3,875 citations	101543 36 h-index	123424 61 g-index
91 all docs	91 docs citations	91 times ranked	3304 citing authors

#	Article	IF	Citations
1	Multimode Optomechanical Weighting of a Single Nanoparticle. Nano Letters, 2022, 22, 710-715.	9.1	10
2	Real-Time Sensing with Multiplexed Optomechanical Resonators. Nano Letters, 2022, 22, 1866-1873.	9.1	3
3	Photonic Kernel Machine Learning for Ultrafast Spectral Analysis. Physical Review Applied, 2022, 17, .	3.8	9
4	Very-high-frequency probes for atomic force microscopy with silicon optomechanics. Microsystems and Nanoengineering, 2022, 8, 32.	7.0	11
5	Electro-Optomechanical Modulation Instability in a Semiconductor Resonator. Physical Review Letters, 2021, 126, 243901.	7.8	8
6	A multiphysics model for ultra-high frequency optomechanical resonators optically actuated and detected in the oscillating mode. APL Photonics, 2021, 6, 086111.	5.7	3
7	Optomechanical mass spectrometry. Nature Communications, 2020, 11, 3781.	12.8	56
8	Force Sensing with an Optomechanical Self-Oscillator. Physical Review Applied, 2020, 14, .	3.8	17
9	Optomechanical discrete-variable quantum teleportation scheme. Physical Review A, 2020, 101, .	2.5	7
10	Permanent Directional Heat Currents in Lattices of Optomechanical Resonators. Physical Review Letters, 2020, 124, 083601.	7.8	7
11	Second-Harmonic Generation in Suspended AlGaAs Waveguides: A Comparative Study. Micromachines, 2020, 11, 229.	2.9	8
12	Optomechanical resonating probe for very high frequency sensing of atomic forces. Nanoscale, 2020, 12, 2939-2945.	5.6	28
13	Optomechanical detection of vibration modes of a single bacterium. Nature Nanotechnology, 2020, 15, 469-474.	31.5	90
14	Frequency doubling and parametric fluorescence in a four-port aluminum gallium arsenide photonic chip. Optics Letters, 2020, 45, 2878.	3.3	8
15	Optomechanical Interactions. , 2020, , 105-128.		1
16	Zero-Order Second Harmonic Generation from AlGaAs-on-Insulator Metasurfaces. ACS Photonics, 2019, 6, 1226-1231.	6.6	58
17	Polarization- and diffraction-controlled second-harmonic generation from semiconductor metasurfaces. Journal of the Optical Society of America B: Optical Physics, 2019, 36, E55.	2.1	20
18	Brillouin scattering in hybrid optophononic Bragg micropillar resonators at 300â€‰â€‰GHz. Optica, 2019, 6, 854.	9.3	15

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19	Scaling rules in optomechanical semiconductor micropillars. Physical Review A, 2018, 98, .	2.5	5
20	Shaping the Nonlinear Emission Pattern of a Dielectric Nanoantenna by Integrated Holographic Gratings. Nano Letters, 2018, 18, 6750-6755.	9.1	30
21	Nonlinear Goniometry by Second-Harmonic Generation in AlGaAs Nanoantennas. ACS Photonics, 2018, 5, 4386-4392.	6.6	37
22	Metalâ€“dielectric hybrid nanoantennas for efficient frequency conversion at the anapole mode. Beilstein Journal of Nanotechnology, 2018, 9, 2306-2314.	2.8	47
23	Microscopic Nanomechanical Dissipation in Gallium Arsenide Resonators. Physical Review Letters, 2018, 120, 223601.	7.8	30
24	Ultra sensitive optomechanical microdisk resonators with very large scale integration process. , 2018, , .		3
25	Tuning the second-harmonic generation in AlGaAs nanodimers via non-radiative state optimization [Invited]. Photonics Research, 2018, 6, B6.	7.0	49
26	Optical cavity mode dynamics and coherent phonon generation in high- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Q</mml:mi></mml:math> micropillar resonators. Physical Review A, 2018, 98, .	2.5	5
27	Scalable high-precision tuning of photonic resonators by resonant cavity-enhanced photoelectrochemical etching. Nature Communications, 2017, 8, 14267.	12.8	39
28	Controlling second-harmonic generation at the nanoscale with monolithic AlGaAs-on-AlOx antennas. Nanotechnology, 2017, 28, 114005.	2.6	67
29	Quantum communication between remote mechanical resonators. Physical Review A, 2017, 95, .	2.5	14
30	Fully coupled hybrid cavity optomechanics: Quantum interferences and correlations. Physical Review A, 2017, 95, .	2.5	49
31	Light-Mediated Cascaded Locking of Multiple Nano-Optomechanical Oscillators. Physical Review Letters, 2017, 118, 063605.	7.8	74
32	Optomechanical terahertz detection with single meta-atom resonator. Nature Communications, 2017, 8, 1578.	12.8	44
33	Nanomechanical resonators based on adiabatic periodicity-breaking in a superlattice. Applied Physics Letters, 2017, 111, 173107.	3.3	7
34	Micropillar Resonators for Optomechanics in the Extremely High 19â€“95-GHz Frequency Range. Physical Review Letters, 2017, 118, 263901.	7.8	63
35	Optomechanical properties of GaAs/AlAs micropillar resonators operating in the 18 GHz range. Optics Express, 2017, 25, 24437.	3.4	31
36	High frequency optomechanical disk resonators in IIIâ€“V ternary semiconductors. Optics Express, 2017, 25, 24639.	3.4	20

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37	Surface-enhanced gallium arsenide photonic resonator with quality factor of 6â€‰Ã—â€‰10^6. Optica, 2017, 4, 218.	9.3	78
38	Polarization properties of second-harmonic generation in AlGaAs optical nanoantennas. Optics Letters, 2017, 42, 559.	3.3	57
39	Directionally induced quasi-phase matching in homogeneous AlGaAs waveguides. Optics Letters, 2017, 42, 4287.	3.3	20
40	Monolithic AlGaAs second-harmonic nanoantennas. Optics Express, 2016, 24, 15965.	3.4	208
41	Integrated AlGaAs source of highly indistinguishable and energy-time entangled photons. Optica, 2016, 3, 143.	9.3	49
42	Nano-optomechanical disk resonators operating in liquids for sensing applications. , 2016, , .		4
43	High-frequency nano-optomechanical disk resonators in liquids. Nature Nanotechnology, 2015, 10, 810-816.	31.5	101
44	Improved optomechanical disk resonator sitting on a pedestal mechanical shield. New Journal of Physics, 2015, 17, 023016.	2.9	17
45	Photon pair sources in AlGaAs: from electrical injection to quantum state engineering. Journal of Modern Optics, 2015, 62, 1739-1745.	1.3	12
46	Origin of optical losses in gallium arsenide disk whispering gallery resonators. Optics Express, 2015, 23, 19656.	3.4	31
47	Mechanical Resonators in the Middle of an Optical Cavity. , 2014, , 83-119.		7
48	Gallium Arsenide Disks as Optomechanical Resonators. , 2014, , 149-156.		4
49	Second-harmonic generation in AlGaAs microdisks in the telecom range. Optics Letters, 2014, 39, 3062.	3.3	60
50	Photoelastic coupling in gallium arsenide optomechanical disk resonators. Optics Express, 2014, 22, 14072.	3.4	77
51	High-resolution spectral characterization of two photon states via classical measurements. Laser and Photonics Reviews, 2014, 8, L76-L80.	8.7	81
52	Quantum Dot parametric source. Optics Communications, 2014, 327, 27-30.	2.1	3
53	Electrically Injected Photon-Pair Source at Room Temperature. Physical Review Letters, 2014, 112, 183901.	7.8	78
54	Single-Polariton Optomechanics. Physical Review Letters, 2014, 112, 013601.	7.8	123

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55	Near-infrared optical parametric oscillator in a III-V semiconductor waveguide. Applied Physics Letters, 2013, 103, .	3.3	35
56	Cavity-enhanced optical detection of carbon nanotube Brownian motion. Applied Physics Letters, 2013, 102, .	3.3	58
57	AlGaAs microdisk cavities for second-harmonic generation. Optics Letters, 2013, 38, 3965.	3.3	14
58	Direct Bell States Generation on a III-V Semiconductor Chip at Room Temperature. Physical Review Letters, 2013, 110, 160502.	7.8	101
59	Ultrahigh Q-frequency product for optomechanical disk resonators with a mechanical shield. Applied Physics Letters, 2013, 103, .	3.3	34
60	Non-linear Optomechanical Resonators based on Gallium Arsenide. , 2013, , .		0
61	Tuning of a nonlinear THz emitter. Optics Express, 2012, 20, 17678.	3.4	5
62	Optical instability and self-pulsing in silicon nitride whispering gallery resonators. Optics Express, 2012, 20, 29076.	3.4	45
63	Damping of optomechanical disks resonators vibrating in air. Applied Physics Letters, 2012, 100, 242105.	3.3	10
64	The stress of light cools vibration. Nature Physics, 2012, 8, 180-181.	16.7	4
65	Optical Characterization of Nonlinear THz Emitters. , 2012, , .		0
66	GaAs nano-optomechanical systems. , 2012, , .		0
67	Wavelength-sized GaAs optomechanical resonators with gigahertz frequency. Applied Physics Letters, 2011, 98, .	3.3	87
68	Classical and quantum theory of photothermal cavity cooling of a mechanical oscillator. Comptes Rendus Physique, 2011, 12, 860-870.	0.9	58
69	Nearly-degenerate three-wave mixing at 155 Î¼m in oxidized AlGaAs waveguides. Optics Express, 2011, 19, 22582.	3.4	25
70	Large second-harmonic generation at 155â€‰Î¼min oxidized AlGaAs waveguides. Optics Letters, 2011, 36, 2955	3.3	19
71	Critical optical coupling between a GaAs disk and a nanowaveguide suspended on the chip. Applied Physics Letters, 2011, 99, .	3.3	33
72	GaAs disks optomechanics. , 2011, , .		0

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73	GaAs micro-nanodisks probed by a looped fiber taper for optomechanics applications. Proceedings of SPIE, 2010, , .	0.8	16
74	Ultralow loss single-mode silica tapers manufactured by a microheater. Applied Optics, 2010, 49, 2441.	2.1	62
75	Two-photon interference with a semiconductor integrated source at room temperature. Optics Express, 2010, 18, 9967.	3.4	23
76	High Frequency GaAs Nano-Optomechanical Disk Resonator. Physical Review Letters, 2010, 105, 263903.	7.8	155
77	Optomechanics of deformable optical cavities. Nature Photonics, 2009, 3, 201-205.	31.4	333
78	Fluctuating nanomechanical system in a high finesse optical microcavity. Optics Express, 2009, 17, 12813.	3.4	64
79	Parametric amplification in GaAs/AlOx waveguide. Applied Physics Letters, 2009, 94, 171110.	3.3	27
80	Difference frequency generation in GaAs microdisks. Optics Letters, 2008, 33, 2026.	3.3	27
81	Cavity cooling of a nanomechanical resonator by light scattering. New Journal of Physics, 2008, 10, 095006.	2.9	41
82	Optical self cooling of a deformable Fabry-Perot cavity in the classical limit. Physical Review B, 2008, 78, .	3.2	99
83	Doppler Optomechanics of a Photonic Crystal. Physical Review Letters, 2008, 100, 240801.	7.8	36
84	Self-Induced Oscillations in an Optomechanical System Driven by Bolometric Backaction. Physical Review Letters, 2008, 101, 133903.	7.8	184
85	Optical cooling of a micromirror of wavelength size. Applied Physics Letters, 2007, 90, 104101.	3.3	84
86	Unconventional motional narrowing in the optical spectrum of a semiconductor quantum dot. Nature Physics, 2006, 2, 759-764.	16.7	190
87	Huangâ€“Rhys side-bands in the emission line of a single InAs quantum dot. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 336-340.	2.7	2
88	Semiconductor microcavities for enhanced nonlinear optics interactions. Journal of the European Optical Society-Rapid Publications, 0, 3, .	1.9	21