Albert Schliesser

List of Publications by Year
in descending order

120 papers	11,231 citations	87888 38 h-index	128289 60 g-index
124 all docs	124 docs citations	124 times ranked	7209 citing authors

#	Article	IF	Citations
1	Optical frequency comb generation from a monolithic microresonator. Nature, 2007, 450, 1214-1217.	27.8	1,686
2	Optomechanically Induced Transparency. Science, 2010, 330, 1520-1523.	12.6	1,350
3	Mid-infrared frequency combs. Nature Photonics, 2012, 6, 440-449.	31.4	1,135
4	Quantum-coherent coupling of a mechanical oscillator to an optical cavity mode. Nature, 2012, 482, 63-67.	27.8	747
5	Resolved-sideband cooling of a micromechanical oscillator. Nature Physics, 2008, 4, 415-419.	16.7	533
6	Radiation Pressure Cooling of a Micromechanical Oscillator Using Dynamical Backaction. Physical Review Letters, 2006, 97, 243905.	7.8	503
7	Near-field cavity optomechanics with nanomechanical oscillators. Nature Physics, 2009, 5, 909-914.	16.7	430
8	Resolved-sideband cooling and position measurement of a micromechanical oscillator close to the Heisenberg uncertainty limit. Nature Physics, 2009, 5, 509-514.	16.7	383
9	Optical detection of radio waves through a nanomechanical transducer. Nature, 2014, 507, 81-85.	27.8	382
10	Frequency-comb infrared spectrometer for rapid, remote chemical sensing. Optics Express, 2005, 13, 9029.	3.4	337
11	Ultracoherent nanomechanical resonators via soft clamping and dissipation dilution. Nature Nanotechnology, 2017, 12, 776-783.	31.5	293
12	Measurement-based quantum control of mechanical motion. Nature, 2018, 563, 53-58.	27.8	263
13	Mid-infrared optical frequency combs at 2.5â€‰Î¼m based on crystalline microresonators. Nature Communications, 2013, 4, 1345.	12.8	250
14	Nano-opto-electro-mechanical systems. Nature Nanotechnology, 2018, 13, 11-18.	31.5	208
15	Full Stabilization of a Microresonator-Based Optical Frequency Comb. Physical Review Letters, 2008, 101, 053903.	7.8	204
16	Ultralow-dissipation optomechanical resonators on a chip. Nature Photonics, 2008, 2, 627-633.	31.4	159
17	Frequency Comb Vernier Spectroscopy for Broadband, High-Resolution, High-Sensitivity Absorption and Dispersion Spectra. Physical Review Letters, 2007, 99, 263902.	7.8	157
18	Quantum back-action-evading measurement of motion in a negative mass reference frame. Nature, 2017, 547, 191-195.	27.8	153

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19	Slowing, advancing and switching of microwave signals using circuit nanoelectromechanics. Nature Physics, 2013, 9, 179-184.	16.7	150
20	Optomechanical sideband cooling of a micromechanical oscillator close to the quantum ground state. Physical Review A, 2011, 83, .	2.5	148
21	Determination of the vacuum optomechanical coupling rate using frequency noise calibration. Optics Express, 2010, 18, 23236.	3.4	137
22	Continuous force and displacement measurement below the standard quantum limit. Nature Physics, 2019, 15, 745-749.	16.7	137
23	High-sensitivity monitoring of micromechanical vibration using optical whispering gallery mode resonators. New Journal of Physics, 2008, 10, 095015.	2.9	123
24	Multimode optomechanical system in the quantum regime. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 62-66.	7.1	89
25	Cavity optomechanics with ultrahigh-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Q</mml:mi></mml:mrow></mml:math>crystalline microresonators. Physical Review A, 2010, 82, .	2.5	88
26	Thermal-noise-limited crystalline whispering-gallery-mode resonator for laser stabilization. Physical Review A, 2011, 84, .	2.5	87
27	Cavity Optomechanics with Whispering-Gallery Mode Optical Micro-Resonators. Advances in Atomic, Molecular and Optical Physics, 2010, 58, 207-323.	2.3	84
28	Entanglement between distant macroscopic mechanical and spin systems. Nature Physics, 2021, 17, 228-233.	16.7	71
29	Spectroscopic near-field microscopy using frequency combs in the mid-infrared. Optics Express, 2006, 14, 11222.	3.4	68
30	Radiation-pressure-driven vibrational modes in ultrahigh-Q silica microspheres. Optics Letters, 2007, 32, 2200.	3.3	63
31	Cryogenic properties of optomechanical silica microcavities. Physical Review A, 2009, 80, .	2.5	61
32	Electromechanically induced absorption in a circuit nano-electromechanical system. New Journal of Physics, 2012, 14, 123037.	2.9	60
33	Observing and Verifying the Quantum Trajectory of a Mechanical Resonator. Physical Review Letters, 2019, 123, 163601.	7.8	57
34	Entanglement of propagating optical modes via a mechanical interface. Nature Communications, 2020, 11, 943.	12.8	53
35	Complete characterization of a broadband high-finesse cavity using an optical frequency comb. Optics Express, 2006, 14, 5975.	3.4	51
36	Demonstration of suppressed phonon tunneling losses in phononic bandgap shielded membrane resonators for high-Q optomechanics. Optics Express, 2014, 22, 6810.	3.4	49

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37	Dual-mode temperature compensation technique for laser stabilization to a crystalline whispering gallery mode resonator. Optics Express, 2012, 20, 19185.	3.4	45
38	Antenna-mediated back-scattering efficiency in infrared near-field microscopy. Optics Express, 2008, 16, 11203.	3.4	42
39	Membrane-Based Scanning Force Microscopy. Physical Review Applied, 2021, 15, .	3.8	38
40	Wide-field prime-focus imaging atmospheric Cherenkov telescopes: A systematic study. Astroparticle Physics, 2005, 24, 382-390.	4.3	34
41	Figures of merit for quantum transducers. Quantum Science and Technology, 2020, 5, 034009.	5.8	30
42	Gravitational wave detectors with broadband high frequency sensitivity. Communications Physics, 2021, 4, .	5.3	26
43	Experimental Assessment of Entropy Production in a Continuously Measured Mechanical Resonator. Physical Review Letters, 2020, 125, 080601.	7.8	25
44	Phase noise measurement of external cavity diode lasers and implications for optomechanical sideband cooling of GHz mechanical modes. New Journal of Physics, 2013, 15, 015019.	2.9	23
45	Ground state cooling of an ultracoherent electromechanical system. Nature Communications, 2022, 13, 1507.	12.8	21
46	Soft-Clamped Phononic Dimers for Mechanical Sensing and Transduction. Physical Review Applied, 2020, 14, .	3.8	19
47	Evanescent straight tapered-fiber coupling of ultra-high Q optomechanical micro-resonators in a low-vibration helium-4 exchange-gas cryostat. Review of Scientific Instruments, 2013, 84, 043108.	1.3	18
48	Measuring and imaging nanomechanical motion with laser light. Applied Physics B: Lasers and Optics, 2017, 123, 8.	2.2	16
49	Stroboscopic quantum optomechanics. Physical Review Research, 2020, 2, .	3.6	14
50	Determination of effective mechanical properties of a double-layer beam by means of a nano-electromechanical transducer. Applied Physics Letters, 2014, 105, .	3.3	13
51	Polarimetric analysis of stress anisotropy in nanomechanical silicon nitride resonators. Applied Physics Letters, 2017, 110, .	3.3	13
52	Magnetic resonance imaging with optical preamplification and detection. Scientific Reports, 2019, 9, 18173.	3.3	13
53	Modeling and Observation of Nonlinear Damping in Dissipation-Diluted Nanomechanical Resonators. Physical Review Letters, 2021, 126, 174101.	7.8	13
54	Sensitive optomechanical transduction of electric and magnetic signals to the optical domain. Optics Express, 2019, 27, 18561.	3.4	13

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55	Electrooptomechanical Equivalent Circuits for Quantum Transduction. Physical Review Applied, 2018, 10, .	3.8	11
56	Strong Parametric Coupling between Two Ultracoherent Membrane Modes. Physical Review Letters, 2022, 128, 094301.	7.8	10
57	Cavity Optomechanics with Whispering-Gallery-Mode Microresonators. , 2014, , 121-148.		6
58	Carrier-mediated optomechanical forces in semiconductor nanomembranes with coupled quantum wells. Physical Review B, 2018, 98, .	3.2	6
59	Optical Frequency Comb Generation in Monolithic Microresonators. Optical Science and Engineering, 2009, , 483-506.	0.1	5
60	Mid-Infrared Frequency Combs Based on Microresonators. , 2011, , .		5
61	Optomechanically Induced Transparency. , 2011, , .		4
62	Optical Detection of Radio Waves Through a Nanomechanical Transducer. , 2014, , .		3
63	Cavity quantum optomechanics: Coupling light and micromechanical oscillators. , 2014, , .		2
64	Measuring and Imaging Nanomechanical Motion with Laser Light. , 2018, , 71-85.		2
65	Full stabilization of a frequency comb generated in a monolithic microcavity. , 2008, , .		2
66	Cooling and measurement of a micromechanical oscillator close to the quantum limit. , 2009, , .		1
67	â€œQuantumâ€•Mechanical Systems: bridging foundations and applications. Annalen Der Physik, 2015, 527, A13-A14.	2.4	1
68	Cryogenic properties of optomechanical silica microcavities. , 2009, , .		1
69	Cavity Optomechanics with Crystalline Whispering Gallery Mode Resonators. , 2009, , .		1
70	Controlling Light Propagation via Radiation Pressure Optomechanical Coupling. , 2009, , .		1
71	Quantum Measurement and Control of a Mechanical Resonator. , 2019, , .		1
72	Cooling of a Micro-Mechanical Oscillator Using Radiation Pressure Induced Dynamical Back-Action. , 2007, , .		1

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73	Cavity-Optomechanics with Microresonators at Helium-3 Temperatures. , 2010, , .		1
74	Frequency Comb Generation in Crystalline MgF2 Whispering-Gallery Mode Resonators. , 2011, , .		1
75	Rapid, remote sensing with a coherent-comb infrared spectrometer. , 0, , .		0
76	Spectroscopic s-SNOM powered by infrared frequency-combs. , 2006, , .		0
77	Optical Vernier Spectrometer Broad band, highre solution, highsensitivi t y. , 2007, , .		0
78	Kerr Nonlinearity induced Optical Frequency Comb Generation in Microcavities. , 2007, , .		0
79	Harmonic-frequency-comb spectroscopy in the mid infrared and THz regions. , 2007, , .		0
80	Radiation Pressure Cooling of a Micromechanical Oscillator Using Dynamical Backaction. , 2007, , .		0
81	Resolved-sideband laser cooling of a micro-mechanical oscillator. , 2008, , .		0
82	Cavity optomechanics: Cooling of a micromechanical oscillator close to the quantum limit. , 2009, , .		0
83	Ultralow dissipation optomechanical resonators on a chip. , 2009, , .		0
84	Cryogenic properties of optomechanical silica microcavities. , 2009, , .		0
85	Intermediate Infrared Raman Lasing and Four-Wave Mixing in Crystalline Whispering Gallery Mode Resonators. , 2010, , .		0
86	Cooling of a Micromechanical Oscillator into the Quantum Regime. , 2011, , .		0
87	Cavity optomechanics: Cooling of a micromechanical oscillator into the quantum regime. , 2011, , .		0
88	Mid-infrared frequency combs based on microresonators. , 2011, , .		0
89	Optomechanically induced transparency. , 2011, , .		0
90	Generation of Low Phase-noise Mid-Infrared Optical Frequency Combs from Crystalline Microresonators. , 2012, , .		0

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91	Optical readout of coupling between a nanomembrane and an LC circuit at room temperature. , 2013, , .		0
92	Low phase-noise mid-infrared frequency combs based on microresonators. , 2013, , .		0
93	Multimode quantum optomechanics with ultra-coherent nanomechanical resonators. , 2017, , .		0
94	Counting grains of sound. Nature, 2019, 571, 480-481.	27.8	0
95	Quantum Measurement of a Mechanical Resonator at and Below the Standard Quantum Limit. , 2019, , .		0
96	Towards Quantum Measurement and Control of a Nanomechanical Resonator at Room Temperature. , 2021, , .		0
97	Cooling of a Micro-Mechanical Oscillator Using Radiation-Pressure Induced Dynamical Backaction. , 2007, , .		0
98	Radiation-Pressure Cooling of a Micro-Mechanical Oscillator Using Dynamical Backaction. , 2007, , .		0
99	Cryogenic optomechanics with microtoroids. , 2008, , .		0
100	Direct Stabilization of a Microresonator Frequency Comb at Microwave Frequencies. , 2008, , .		0
101	Mechanical dissipation in optical microresonators. , 2008, , .		0
102	Cavity Optomechanics at the Micro- and Nanoscale. , 2009, , .		0
103	Ultralow Dissipation Optomechanical Resonators on a Chip. , 2009, , .		0
104	A chip-scale microwave repetition rate frequency comb. , 2009, , .		0
105	Cavity-Nano-Optomechanics Using Optical Gradient Fields. , 2009, , .		0
106	Ultra-high Q Crystalline Microresonators for Cavity Optomechanics. , 2010, , .		0
107	Optical Response of Silica Microcavities in Gaseous and Superfluid Helium-4. , 2010, , .		0
108	Mid-Infrared Frequency Combs Based on Microresonators. , 2011, , .		0

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109	Laser cooling of a microresonator and Optomechanically Induced Transparency. , 2011, , .		0
110	Dynamical photothermal response of optical whispering-gallery silica microresonators in helium-4 cryogenic environments. , 2012, , .		0
111	Mid-Infrared Frequency Combs for Direct Molecular Spectroscopy. , 2014, , .		0
112	On-chip RF-to-optical transducer (Conference Presentation). , 2016, , .		0
113	Quantum Back Action Evading Measurements in a Spin-Mechanics Hybrid System. , 2017, , .		0
114	Multimode Quantum Optomechanics with Ultra-coherent Nanomechanical Resonators. , 2017, , .		0
115	Measuring Motion Below the Standard Quantum Limit by Strong Optomechanical Quantum Correlations. , 2019, , .		0
116	Quantum Measurement of a Mechanical Resonator At and Below the Standard Quantum Limit. , 2019, , .		0
117	Mechanically Mediated Entanglement of Propagating Optical Modes. , 2020, , .		0
118	Assembly of opto-mechanical devices. , 2021, , .		0
119	Cooling a nanomechanical membrane resonator from room temperature close to the quantum ground state. , 2021, , .		0
120	Optically cooling a room-temperature nanomechanical membrane resonator close to its quantum ground state. , 2022, , .		0