

Thomas Walther

List of Publications by Year in descending order

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118
papers

1,837
citations

218592

26
h-index

315616

38
g-index

120
all docs

120
docs citations

120
times ranked

1450
citing authors

#	ARTICLE	IF	CITATIONS
1	Proposal for a loophole-free test of the Bell inequalities. <i>Physical Review A</i> , 1995, 52, 4381-4395.	1.0	163
2	Atom-at-a-time laser resonance ionization spectroscopy of nobelium. <i>Nature</i> , 2016, 538, 495-498.	13.7	103
3	Preparation of a pure number state and measurement of the photon statistics in a high-Qmicromaser. <i>Physical Review A</i> , 1989, 39, 1915-1921.	1.0	95
4	Towards a versatile point-of-care system combining femtosecond laser generated microfluidic channels and direct laser written microneedle arrays. <i>Microsystems and Nanoengineering</i> , 2019, 5, 6.	3.4	67
5	Probing Sizes and Shapes of Nobelium Isotopes by Laser Spectroscopy. <i>Physical Review Letters</i> , 2018, 120, 232503.	2.9	63
6	Precision Measurement of the First Ionization Potential of Nobelium. <i>Physical Review Letters</i> , 2018, 120, 263003.	2.9	56
7	Generic Structural Relaxation in Supercooled Liquids. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 3685-3690.	2.1	50
8	Temperature dependence of the Brillouin linewidth in water. <i>Journal of Modern Optics</i> , 2002, 49, 411-418.	0.6	49
9	Stabilizing a Fabry-Perot Etalon Peak to 3×10^{-1} for Spectrograph Calibration. <i>Publications of the Astronomical Society of the Pacific</i> , 2015, 127, 880-889.	1.0	49
10	A novel approach to a Brillouin-LIDAR for remote sensing of the ocean temperature. <i>Applied Physics B: Lasers and Optics</i> , 2004, 79, 955-961.	1.1	40
11	Generation of Fourier-transform-limited 35-ns pulses with a ramp-hold-fire seeding technique in a Ti:sapphire laser. <i>Applied Optics</i> , 2001, 40, 3046.	2.1	38
12	On an ESFADOF edge-filter for a range resolved Brillouin-lidar: The high vapor density and high pump intensity regime. <i>Applied Physics B: Lasers and Optics</i> , 2010, 98, 667-675.	1.1	38
13	Linewidth of a quantum-cascade laser assessed from its frequency noise spectrum and impact of the current driver. <i>Applied Physics B: Lasers and Optics</i> , 2012, 109, 407-414.	1.1	37
14	Laboratory demonstration of a Brillouin lidar to remotely measure temperature profiles of the ocean. <i>Optical Engineering</i> , 2014, 53, 051407.	0.5	37
15	Four-level atomic coherence and cw VUV lasers. <i>Optics Communications</i> , 2000, 179, 499-504.	1.0	36
16	On an excited state Faraday anomalous dispersion optical filter at moderate pump powers for a Brillouin-lidar receiver system. <i>Optics Communications</i> , 2006, 264, 475-481.	1.0	35
17	Two-photon polymerization based large scaffolds for adhesion and proliferation studies of human primary fibroblasts. <i>Optics and Laser Technology</i> , 2018, 106, 474-480.	2.2	35
18	UV-IR double-resonance spectroscopy of jet-cooled propynal detected by the fluorescence dip method. <i>Chemical Physics Letters</i> , 1994, 231, 64-69.	1.2	34

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19	Actively Controlled Tuning of an External Cavity Diode Laser by Polarization Spectroscopy. <i>Optics Express</i> , 2009, 17, 4991.	1.7	31
20	Depth-resolved temperature measurements of water using the Brillouin lidar technique. <i>Applied Physics B: Lasers and Optics</i> , 2009, 97, 931-934.	1.1	29
21	Photonic Properties of Inverse Opals Fabricated from Lanthanide-Doped LaPO ₄ Nanocrystals. <i>Chemistry of Materials</i> , 2009, 21, 3883-3888.	3.2	29
22	Remote Water Temperature Measurements Based on Brillouin Scattering with a Frequency Doubled Pulsed Yb:doped Fiber Amplifier. <i>Sensors</i> , 2008, 8, 5820-5831.	2.1	28
23	Magneto-optical trapping of neutral mercury. <i>European Physical Journal D</i> , 2011, 65, 251-255.	0.6	28
24	High-transmission excited-state Faraday anomalous dispersion optical filter edge filter based on a Halbach cylinder magnetic-field configuration. <i>Optics Letters</i> , 2012, 37, 4477.	1.7	28
25	Dynamics of water-alcohol mixtures: Insights from nuclear magnetic resonance, broadband dielectric spectroscopy, and triplet solvation dynamics. <i>Journal of Chemical Physics</i> , 2014, 140, 114503.	1.2	28
26	Extension of the mode-hop-free tuning range of an external cavity diode laser based on a model of the mode-hop dynamics. <i>Optics Letters</i> , 2008, 33, 372.	1.7	27
27	Developments for resonance ionization laser spectroscopy of the heaviest elements at SHIP. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2016, 383, 115-122.	0.6	26
28	Diode-laser-based ultraviolet absorption sensor for nitric oxide. <i>Applied Physics B: Lasers and Optics</i> , 2002, 75, 113-117.	1.1	25
29	Fundamental Tests of Quantum Mechanics. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2000, 42, 1-27.	2.3	21
30	Combustion exhaust measurements of nitric oxide with an ultraviolet diode-laser-based absorption sensor. <i>Applied Optics</i> , 2005, 44, 1491.	2.1	21
31	The Status of Quantum-Key-Distribution-Based Long-Term Secure Internet Communication. <i>IEEE Transactions on Sustainable Computing</i> , 2021, 6, 19-29.	2.2	20
32	Application of a difference-frequency-mixing based diode-laser sensor for carbon monoxide detection in the 4.4–4.8 μm spectral region. <i>Applied Physics B: Lasers and Optics</i> , 2006, 85, 185-197.	1.1	19
33	Narrow-linewidth, multi-Watt Yb-doped fiber amplifier at 10148 nm. <i>Applied Optics</i> , 2006, 45, 7908.	2.1	19
34	Scalable Network for Simultaneous Pairwise Quantum Key Distribution via Entanglement-Based Time-Bin Coding. <i>PRX Quantum</i> , 2022, 3, .	3.5	19
35	On laser spectroscopy of the element nobelium (Z=102). <i>European Physical Journal D</i> , 2014, 68, 1.	0.6	18
36	The microwave spectrum and ground-state structure of H ₂ O ⁺ HI. <i>Chemical Physics Letters</i> , 1999, 314, 57-64.	1.2	16

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37	Synchronous, dual-wavelength, injection-seeded amplification of 5-ns pulses in a flash-lamp-pumped Ti:sapphire laser. <i>Optics Letters</i> , 1999, 24, 1496.	1.7	16
38	Local dielectric response in 1-propanol: $\hat{\epsilon}$ -relaxation versus relaxation of mesoscale structures. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 24778-24786.	1.3	16
39	OH sensor based on ultraviolet, continuous-wave absorption spectroscopy utilizing a frequency-quadrupled, fiber-amplified external-cavity diode laser. <i>Optics Letters</i> , 2001, 26, 1870.	1.7	15
40	A gas-jet apparatus for high-resolution laser spectroscopy on the heaviest elements at SHIP. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2020, 463, 272-276.	0.6	15
41	Microstructural analysis of lignocellulosic fiber networks. , 2006, 6318, 341.		14
42	Perspectives for laser spectroscopy of the element nobelium. <i>Hyperfine Interactions</i> , 2014, 227, 69-75.	0.2	14
43	Scaffolds in a shell—a new approach combining one-photon and two-photon polymerization. <i>Optics Express</i> , 2018, 26, 29659.	1.7	14
44	Model for tuning an external-cavity diode laser by polarization locking. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011, 28, 508.	0.9	13
45	Ultrarrow-linewidth, efficient amplification of low-power seed sources by a fiber amplifier. <i>Applied Optics</i> , 1999, 38, 1784.	2.1	12
46	Generation of near-Fourier-transform-limited high-energy pulses in a chain of fiber—bulk amplifiers. <i>Optics Letters</i> , 2001, 26, 13.	1.7	12
47	A fiber amplifier and an ESFADOF: Developments for a transceiver in a Brillouin lidar. <i>Laser Physics</i> , 2007, 17, 975-982.	0.6	12
48	A high spectral brightness Fourier-transform limited nanosecond Yb-doped fiber amplifier. <i>Applied Physics B: Lasers and Optics</i> , 2009, 97, 591-597.	1.1	11
49	The equilibrium velocity of spherical particles in rectangular microfluidic channels for size measurement. <i>Lab on A Chip</i> , 2014, 14, 2319-2326.	3.1	11
50	Solid-state-based laser system as a replacement for Ar^{+} lasers. <i>Optics Letters</i> , 2016, 41, 4186.	1.7	11
51	High-resolution quantum beat spectroscopy in the electronic ground state of a polyatomic molecule by IR—UV pump—probe method. <i>Chemical Physics Letters</i> , 1993, 209, 455-458.	1.2	10
52	Control and active stabilization of the linewidth of an ECDL. <i>Applied Physics B: Lasers and Optics</i> , 2012, 108, 249-253.	1.1	10
53	Impact of buffer gas quenching on the $1S0 \rightarrow 1P1$ ground-state atomic transition in nobelium. <i>European Physical Journal D</i> , 2017, 71, 1.	0.6	10
54	Triplet Solvation Dynamics of Hydrogen Bonding Liquids in Confinement. <i>Zeitschrift Fur Physikalische Chemie</i> , 2018, 232, 1017-1039.	1.4	10

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55	Feasibility of UV lasing without inversion in mercury vapor. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 1964.	0.9	9
56	A nanosecond regenerative Ti:Sapphire amplifier for the simultaneous generation of 940 nm and of 320 nm pulses. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	9
57	Prospects of trapping neutral mercury. Journal of Modern Optics, 2007, 54, 2523-2532.	0.6	8
58	Laser cooling and precision laser spectroscopy of highly charged ions at the storage ring CSRe and the future HIAF. Hyperfine Interactions, 2019, 240, 1.	0.2	8
59	Comment on "Unidirectional radiation of widely tunable THz wave using a prism coupler under noncollinear phase matching condition" [Appl. Phys. Lett. 71, 753 (1997)]. Applied Physics Letters, 1998, 73, 3610-3611.	1.5	7
60	Glycerol in micellar confinement with tunable rigidity. Journal of Chemical Physics, 2016, 145, 234511.	1.2	7
61	Fiber formation and properties of polyester/lignin blends. Journal of Applied Polymer Science, 2019, 136, 48257.	1.3	7
62	Identity of the local and macroscopic dynamic elastic responses in supercooled 1-propanol. Physical Chemistry Chemical Physics, 2021, 23, 16537-16541.	1.3	7
63	An injection-locked, single-mode, continuous wave Ti:Sapphire laser. Laser Physics Letters, 2006, 3, 75-78.	0.6	5
64	Laser cooling of stored relativistic ion beams with large momentum spreads using a laser system with a wide scanning range. Journal of Physics: Conference Series, 2014, 488, 122005.	0.3	5
65	Measurement of the lifetime and the proportion of $^{12}\text{C}^{3+}$ ions in stored relativistic ion beams as a preparation for laser cooling experiments at the CSRe. Nuclear Instruments & Methods in Physics Research B, 2017, 408, 280-284.	0.6	5
66	Frequency stabilized diode laser with variable linewidth at a wavelength of 4047 nm. Optics Letters, 2017, 42, 1508.	1.7	5
67	Angle-tuned type II external-cavity frequency doubling without temperature stabilization. Applied Optics, 1999, 38, 972.	2.1	4
68	Mercury—the Rosetta stone of physics?. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, S376-S383.	1.4	4
69	A laser locked Fabry-Perot etalon with 3 cm/s stability for spectrograph calibration. , 2014, , .		4
70	Efficient continuous wave second harmonic generation of 872 nm diode laser radiation using KNbO ₃ with high stability. Laser Physics Letters, 2017, 14, 095001.	0.6	4
71	The Einstein-Podolsky-Rosen debate: on the way to a final answer. Physica Scripta, 1998, T76, 47.	1.2	4
72	Nuclear quadrupole quantum beat spectroscopy in the electronic ground state of a polyatomic molecule by an IR-UV double resonance method. Chemical Physics Letters, 1995, 240, 79-83.	1.2	3

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73	A Brillouin-lidar for remote sensing of the temperature profile in the ocean: Progress towards the implementation. , 2011, , .		3
74	Triplet state solvation dynamics: extending the accessible timescale by using indole as local probe. Physical Chemistry Chemical Physics, 2021, 23, 683-693.	1.3	3
75	Atom Based Tests of the Bell Inequalities " the Legacy of John Bell Continues , 2002, , 103-117.		3
76	High average power transform limited picosecond laser with flexible repetition rate and pulse duration. Optics Letters, 2020, 45, 4488.	1.7	3
77	Advancing Radiation-Detected Resonance Ionization towards Heavier Elements and More Exotic Nuclides. Atoms, 2022, 10, 41.	0.7	3
78	On Some Aspects of an Hg Based EPR Experiment. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1997, 52, 20-24.	0.7	2
79	A pulsed laser system with large spectral coverage extended by non-linear frequency conversion. Applied Physics B: Lasers and Optics, 2009, 97, 583-589.	1.1	2
80	Improved signal recovery for flow cytometry based on "spatially modulated emission"™. Methods and Applications in Fluorescence, 2017, 5, 035002.	1.1	2
81	Evolutionary algorithm-assisted design of a UV SHG cavity with elliptical focusing to avoid crystal degradation. Applied Physics B: Lasers and Optics, 2019, 125, 1.	1.1	2
82	Non-degrading CW UV generation in \hat{I}^2 -barium borate at 257nm using an elliptical focusing enhancement cavity. Laser Physics Letters, 2019, 16, 075403.	0.6	2
83	Spectral characterization of SPDC-based single-photon sources for quantum key distribution. European Physical Journal: Special Topics, 2021, 230, 1073-1080.	1.2	2
84	Optics in Remote Sensing. , 2016, , 201-222.		2
85	Rubidium traced etalon wavelength calibrators: towards deployment at observatories. , 2018, , .		2
86	An all-solid-state Argon ion laser replacement. , 2013, , .		2
87	Investigation of the First Ionization Potential of Ytterbium in Argon Buffer Gas. Acta Physica Polonica B, 2018, 49, 599.	0.3	2
88	Time-dependent POVM reconstruction for single-photon avalanche photo diodes using adaptive regularization. New Journal of Physics, 0, , .	1.2	2
89	Toward lasing without inversion in the ultraviolet regime: Doppler-free three-photon coherence effects in mercury vapor. Physical Review A, 2022, 105, .	1.0	2
90	Independent storage of the two components of an entangled state. Journal of Modern Optics, 2003, 50, 2341-2350.	0.6	1

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91	Towards a Brillouin-LIDAR for remote sensing of the temperature profile in the ocean. , 2006, , .		1
92	Novel approaches to tunable lasers: Extending mode-hop-free tuning range and spectral coverage. Frequenz, 2008, 62, .	0.6	1
93	Precise measurement of LandÅ© g-factors in the region of the 10V-band of 12CS2. Journal of Molecular Spectroscopy, 2011, 269, 86-91.	0.4	1
94	Cell Size Discrimination Based on the Measurement of the Equilibrium Velocity in Rectangular Microchannels. Micromachines, 2015, 6, 634-647.	1.4	1
95	Towards Lasing Without Inversion in Neutral Mercury. Journal of Physics: Conference Series, 2015, 594, 012007.	0.3	1
96	Impact of long external fiber cavities on the pulse train stabilization of a passively mode-locked quantum dot laser emitting at 1250 nm. , 2017, , .		1
97	Dynamic Intermode Beat Frequency Control of an Optical Frequency Comb Single Section Quantum Dot Laser by Dual-Cavity Optical Self-Injection. IEEE Photonics Journal, 2019, 11, 1-8.	1.0	1
98	Lasing Without Inversion Via Interference of Double-Dark Resonances in Atomic and Quantum Well Systems. , 1999, , 63-72.		1
99	Large 3D direct laser written scaffolds for tissue engineering applications. , 2018, , .		1
100	An Experimental Realization of Bohmâ€™s Spin-1/2 Particle EPR Gedanken Experiment. , 1997, , 431-439.		0
101	A. Interactions in Trapped Atomic Gases. , 2005, , 377-406.		0
102	Fourier-transform limited ns-Pulses Tunable Over a Wide Spectral Range Using a Ti:Sapphire Laser and Non-Linear Frequency Conversion Processes. , 2007, , .		0
103	Alumni Profiles. Chimia, 2008, 62, 157-161.	0.3	0
104	Cooling and Trapping of Neutral Mercury Atoms in a Magneto-Optical Trap. , 2010, , .		0
105	A Brillouin lidar for remote sensing of the temperature profile in the ocean: Towards the laboratory demonstration. , 2012, , .		0
106	Combining Photonic Crystal and Optical Monte Carlo Simulations: Implementation, Validation and Application in a Positron Emission Tomography Detector. IEEE Transactions on Nuclear Science, 2014, 61, 3618-3626.	1.2	0
107	Quantum Dot Frequency Comb Laser Stabilization. , 2018, , .		0
108	Ultrafast Semiconductor Lasers: Pulse Generation and Stabilization. , 2018, , .		0

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109	Optical feedback stabilization of a self-mode-locked quantum dot laser. Materials Today: Proceedings, 2019, 7, 912-915.	0.9	0
110	Cache-Side-Channel Quantification and Mitigation for Quantum Cryptography. Lecture Notes in Computer Science, 2021, , 235-256.	1.0	0
111	Diode-Laser-Based Sensor Measurements of Nitric Oxide and Carbon Monoxide in Combustion Exhaust Streams. , 2003, , .		0
112	Actively Controlled Tuning of an External Cavity Diode Laser by Polarization Spectroscopy. , 2009, , .		0
113	Towards Lasing Without Inversion in mercury at 253.7 nm. , 2013, , .		0
114	Master Oscillator Power Amplifier Systems for Ion Beam Cooling. , 2015, , .		0
115	Picosecond Ultraviolet Pulses at 257 nm with Variable Transform Limited Linewidth and Flexible Repetition Rate. , 2018, , .		0
116	Optical feedback stabilization of a frequency comb generated by a self-mode-locked quantum dot laser emitting at 1255 nm. , 2018, , .		0
117	Evolutionary Algorithm Assisted Design of an Elliptical Focusing Build-up Cavity Avoiding the Degradation Problem in BBO. , 2019, , .		0
118	A Brillouin LIDAR For Remote Sensing the Temperature Profile in the Mixed Layer. , 2020, , .		0