# Thomas Walther

List of Publications by Year
in descending order



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|---|---|---|---|
| 119 papers | 1,837 citations | 218677 26 h-index | 315739 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. Physical Review A, 1995, 52, 4381-4395. | 2.5 | 163 |
| 2 | Atom-at-a-time laser resonance ionization spectroscopy of nobelium. Nature, 2016, 538, 495-498. | 27.8 | 103 |
| 3 | Preparation of a pure number state and measurement of the photon statistics in a high-Qmicromaser. Physical Review A, 1989, 39, 1915-1921. | 2.5 | 95 |
| 4 | Towards a versatile point-of-care system combining femtosecond laser generated microfluidic channels and direct laser written microneedle arrays. Microsystems and Nanoengineering, 2019, 5, 6. | 7.0 | 67 |
| 5 | Probing Sizes and Shapes of Nobelium Isotopes by Laser Spectroscopy. Physical Review Letters, 2018, 120, 232503. | 7.8 | 63 |
| 6 | Precision Measurement of the First Ionization Potential of Nobelium. Physical Review Letters, 2018, 120, 263003. | 7.8 | 56 |
| 7 | Generic Structural Relaxation in Supercooled Liquids. Journal of Physical Chemistry Letters, 2021, 12, 3685-3690. | 4.6 | 50 |
| 8 | Temperature dependence of the Brillouin linewidth in water. Journal of Modern Optics, 2002, 49, 411-418. | 1.3 | 49 |
| 9 | Stabilizing a Fabryâ€“Perot Etalon Peak to 3ÂcmÂs<sup>-1</sup>for Spectrograph Calibration. Publications of the Astronomical Society of the Pacific, 2015, 127, 880-889. | 3.1 | 49 |
| 10 | A novel approach to a Brillouinâ€“LIDAR for remote sensing of the ocean temperature. Applied Physics B: Lasers and Optics, 2004, 79, 955-961. | 2.2 | 40 |
| 11 | Generation of Fourier-transform-limited 35-ns pulses with a ramp-hold-fire seeding technique in a Ti:sapphire laser. Applied Optics, 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. Applied Physics B: Lasers and Optics, 2010, 98, 667-675. | 2.2 | 38 |
| 13 | Linewidth of a quantum-cascade laser assessed from its frequency noise spectrum and impact of the current driver. Applied Physics B: Lasers and Optics, 2012, 109, 407-414. | 2.2 | 37 |
| 14 | Laboratory demonstration of a Brillouin lidar to remotely measure temperature profiles of the ocean. Optical Engineering, 2014, 53, 051407. | 1.0 | 37 |
| 15 | Four-level atomic coherence and cw VUV lasers. Optics Communications, 2000, 179, 499-504. | 2.1 | 36 |
| 16 | On an excited state Faraday anomalous dispersion optical filter at moderate pump powers for a Brillouin-lidar receiver system. Optics Communications, 2006, 264, 475-481. | 2.1 | 35 |
| 17 | Two-photon polymerization based large scaffolds for adhesion and proliferation studies of human primary fibroblasts. Optics and Laser Technology, 2018, 106, 474-480. | 4.6 | 35 |
| 18 | UV-IR double-resonance spectroscopy of jet-cooled propynal detected by the fluorescence dip method. Chemical Physics Letters, 1994, 231, 64-69. | 2.6 | 34 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Actively Controlled Tuning of an External Cavity Diode Laser by Polarization Spectroscopy. Optics Express, 2009, 17, 4991. | 3.4 | 31 |
| 20 | Depth-resolved temperature measurements of water using theÂBrillouin lidar technique. Applied Physics B: Lasers and Optics, 2009, 97, 931-934. | 2.2 | 29 |
| 21 | Photonic Properties of Inverse Opals Fabricated from Lanthanide-Doped LaPO4 Nanocrystals. Chemistry of Materials, 2009, 21, 3883-3888. | 6.7 | 29 |
| 22 | Remote Water Temperature Measurements Based on Brillouin Scattering with a Frequency Doubled Pulsed Yb:doped Fiber Amplifier. Sensors, 2008, 8, 5820-5831. | 3.8 | 28 |
| 23 | Magneto-optical trapping of neutral mercury. European Physical Journal D, 2011, 65, 251-255. | 1.3 | 28 |
| 24 | High-transmission excited-state Faraday anomalous dispersion optical filter edge filter based on a Halbach cylinder magnetic-field configuration. Optics Letters, 2012, 37, 4477. | 3.3 | 28 |
| 25 | Dynamics of water-alcohol mixtures: Insights from nuclear magnetic resonance, broadband dielectric spectroscopy, and triplet solvation dynamics. Journal of Chemical Physics, 2014, 140, 114503. | 3.0 | 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. Optics Letters, 2008, 33, 372. | 3.3 | 27 |
| 27 | Developments for resonance ionization laser spectroscopy of the heaviest elements at SHIP. Nuclear Instruments & Methods in Physics Research B, 2016, 383, 115-122. | 1.4 | 26 |
| 28 | Diode-laser-based ultraviolet absorption sensor for nitric oxide. Applied Physics B: Lasers and Optics, 2002, 75, 113-117. | 2.2 | 25 |
| 29 | Fundamental Tests of Quantum Mechanics. Advances in Atomic, Molecular and Optical Physics, 2000, 42, 1-27. | 2.3 | 21 |
| 30 | Combustion exhaust measurements of nitric oxide with an ultraviolet diode-laser-based absorption sensor. Applied Optics, 2005, 44, 1491. | 2.1 | 21 |
| 31 | The Status of Quantum-Key-Distribution-Based Long-Term Secure Internet Communication. IEEE Transactions on Sustainable Computing, 2021, 6, 19-29. | 3.1 | 20 |
| 32 | Application of a difference-frequency-mixing based diode-laser sensor for carbon monoxide detection in the 4.4â€“4.8ÂÎ¼m spectral region. Applied Physics B: Lasers and Optics, 2006, 85, 185-197. | 2.2 | 19 |
| 33 | Narrow-linewidth, multi-Watt Yb-doped fiber amplifier at 10148 nm. Applied Optics, 2006, 45, 7908. | 2.1 | 19 |
| 34 | Scalable Network for Simultaneous Pairwise Quantum Key Distribution via Entanglement-Based Time-Bin Coding. PRX Quantum, 2022, 3, . | 9.2 | 19 |
| 35 | On laser spectroscopy of the element nobelium (ZÂ=Â102). European Physical Journal D, 2014, 68, 1. | 1.3 | 18 |
| 36 | The microwave spectrum and ground-state structure of H2Oâ‹¯HI. Chemical Physics Letters, 1999, 314, 57-64. | 2.6 | 16 |

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|---|---|---|---|
| 37 | Synchronous, dual-wavelength, injection-seeded amplification of 5-ns pulses in a flash-lamp-pumped Ti:sapphire laser. Optics Letters, 1999, 24, 1496. | 3.3 | 16 |
| 38 | Local dielectric response in 1-propanol: Î±-relaxation versus relaxation of mesoscale structures. Physical Chemistry Chemical Physics, 2019, 21, 24778-24786. | 2.8 | 16 |
| 39 | OH sensor based on ultraviolet, continuous-wave absorption spectroscopy utilizing a frequency-quadrupled, fiber-amplified external-cavity diode laser. Optics Letters, 2001, 26, 1870. | 3.3 | 15 |
| 40 | A gas-jet apparatus for high-resolution laser spectroscopy on the heaviest elements at SHIP. Nuclear Instruments & Methods in Physics Research B, 2020, 463, 272-276. | 1.4 | 15 |
| 41 | Microstructural analysis of lignocellulosic fiber networks. , 2006, 6318, 341. | | 14 |
| 42 | Perspectives for laser spectroscopy of the element nobelium. Hyperfine Interactions, 2014, 227, 69-75. | 0.5 | 14 |
| 43 | Scaffolds in a shellâ€“a new approach combining one-photon and two-photon polymerization. Optics Express, 2018, 26, 29659. | 3.4 | 14 |
| 44 | Model for tuning an external-cavity diode laser by polarization locking. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 508. | 2.1 | 13 |
| 45 | Ultranarrow-linewidth, efficient amplification of low-power seed sources by a fiber amplifier. Applied Optics, 1999, 38, 1784. | 2.1 | 12 |
| 46 | Generation of near-Fourier-transform-limited high-energy pulses in a chain of fiberâ€“bulk amplifiers. Optics Letters, 2001, 26, 13. | 3.3 | 12 |
| 47 | A fiber amplifier and an ESFADOF: Developments for a transceiver in a Brillouin lidar. Laser Physics, 2007, 17, 975-982. | 1.2 | 12 |
| 48 | A high spectral brightness Fourier-transform limited nanosecond Yb-doped fiber amplifier. Applied Physics B: Lasers and Optics, 2009, 97, 591-597. | 2.2 | 11 |
| 49 | The equilibrium velocity of spherical particles in rectangular microfluidic channels for size measurement. Lab on A Chip, 2014, 14, 2319-2326. | 6.0 | 11 |
| 50 | Solid-state-based laser system as a replacement for Ar^+ lasers. Optics Letters, 2016, 41, 4186. | 3.3 | 11 |
| 51 | High-resolution quantum beat spectroscopy in the electronic ground state of a polyatomic molecule by IRâ€”UV pumpâ€”probe method. Chemical Physics Letters, 1993, 209, 455-458. | 2.6 | 10 |
| 52 | Control and active stabilization of the linewidth of an ECDL. Applied Physics B: Lasers and Optics, 2012, 108, 249-253. | 2.2 | 10 |
| 53 | Impact of buffer gas quenching on the 1S0Âà†'Â1P1 ground-state atomic transition in nobelium. European Physical Journal D, 2017, 71, 1. | 1.3 | 10 |
| 54 | Triplet Solvation Dynamics of Hydrogen Bonding Liquids in Confinement. Zeitschrift Fur Physikalische Chemie, 2018, 232, 1017-1039. | 2.8 | 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. | 2.1 | 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. | 2.2 | 9 |
| 57 | Prospects of trapping neutral mercury. Journal of Modern Optics, 2007, 54, 2523-2532. | 1.3 | 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. | 0.5 | 8 |
| 59 | Comment on â€œUnidirectional radiation of widely tunable THz wave using a prism coupler under noncollinear phase matching conditionâ€•[Appl. Phys. Lett. 71, 753 (1997)]. Applied Physics Letters, 1998, 73, 3610-3611. | 3.3 | 7 |
| 60 | Glycerol in micellar confinement with tunable rigidity. Journal of Chemical Physics, 2016, 145, 234511. | 3.0 | 7 |
| 61 | Fiber formation and properties of polyester/lignin blends. Journal of Applied Polymer Science, 2019, 136, 48257. | 2.6 | 7 |
| 62 | Identity of the local and macroscopic dynamic elastic responses in supercooled 1-propanol. Physical Chemistry Chemical Physics, 2021, 23, 16537-16541. | 2.8 | 7 |
| 63 | An injection-locked, single-mode, continuous wave Ti:Sapphire laser. Laser Physics Letters, 2006, 3, 75-78. | 1.4 | 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. | 0.4 | 5 |
| 65 | Measurement of the lifetime and the proportion of 12 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. | 1.4 | 5 |
| 66 | Frequency stabilized diode laser with variable linewidth at a wavelength of 4047â€‰â€‰nm. Optics Letters, 2017, 42, 1508. | 3.3 | 5 |
| 67 | Angle-tuned type II external-cavity frequency doubling without temperature stabilization. Applied Optics, 1999, 38, 972. | 2.1 | 4 |
| 68 | Mercury$mdash$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 872â€‰nm diode laser radiation using KNbO3 with high stability. Laser Physics Letters, 2017, 14, 095001. | 1.4 | 4 |
| 71 | The Einstein?Podolsky?Rosen debate: on the way to a final answer. Physica Scripta, 1998, T76, 47. | 2.5 | 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. | 2.6 | 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. | 2.8 | 3 |
| 75 | Atom Based Tests of the Bell Inequalities â€" 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. | 3.3 | 3 |
| 77 | Advancing Radiation-Detected Resonance Ionization towards Heavier Elements and More Exotic Nuclides. Atoms, 2022, 10, 41. | 1.6 | 3 |
| 78 | On Some Aspects of an Hg Based EPR Experiment. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1997, 52, 20-24. | 1.5 | 2 |
| 79 | A pulsed laser system with large spectral coverage extended byÂnon-linear frequency conversion. Applied Physics B: Lasers and Optics, 2009, 97, 583-589. | 2.2 | 2 |
| 80 | Improved signal recovery for flow cytometry based on â€˜spatially modulated emissionâ€™. Methods and Applications in Fluorescence, 2017, 5, 035002. | 2.3 | 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. | 2.2 | 2 |
| 82 | Non-degrading CW UV generation in Î²-barium borate at 257â€‰nm using an elliptical focusing enhancement cavity. Laser Physics Letters, 2019, 16, 075403. | 1.4 | 2 |
| 83 | Spectral characterization of SPDC-based single-photon sources for quantum key distribution. European Physical Journal: Special Topics, 2021, 230, 1073-1080. | 2.6 | 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. | 0.8 | 2 |
| 88 | Time-dependent POVM reconstruction for single-photon avalanche photo diodes using adaptive regularization. New Journal of Physics, 0, , . | 2.9 | 2 |
| 89 | Toward lasing without inversion in the ultraviolet regime: Doppler-free three-photon coherence effects in mercury vapor. Physical Review A, 2022, 105, . | 2.5 | 2 |
| 90 | Independent storage of the two components of an entangled state. Journal of Modern Optics, 2003, 50, 2341-2350. | 1.3 | 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, . | 0.9 | 1 |
| 93 | Precise measurement of LandÃ© g-factors in the region of the 10V-band of 12CS2. Journal of Molecular Spectroscopy, 2011, 269, 86-91. | 1.2 | 1 |
| 94 | Cell Size Discrimination Based on the Measurement of the Equilibrium Velocity in Rectangular Microchannels. Micromachines, 2015, 6, 634-647. | 2.9 | 1 |
| 95 | Towards Lasing Without Inversion in Neutral Mercury. Journal of Physics: Conference Series, 2015, 594, 012007. | 0.4 | 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. | 2.0 | 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. | 0.6 | 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. | 2.0 | 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. | 1.8 | 0 |
| 110 | Cache-Side-Channel Quantification and Mitigation for Quantum Cryptography. Lecture Notes in Computer Science, 2021, , 235-256. | 1.3 | 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 |
| 119 | Independent storage of the two components of an entangled state. Journal of Modern Optics, 2003, 50, 2341-2350. | 1.3 | 0 |