Rodolphe Le Targat

List of Publications by Year
in descending order

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51 papers	2,938 citations	218677 26 h-index	289244 40 g-index
51 all docs	51 docs citations	51 times ranked	2237 citing authors

#	Article	IF	Citations
1	Quantum Simulation of Frustrated Classical Magnetism in Triangular Optical Lattices. Science, 2011, 333, 996-999.	12.6	543
2	A clock network for geodesy and fundamental science. Nature Communications, 2016, 7, 12443.	12.8	297
3	New Limits on Coupling of Fundamental Constants to Gravity Using<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>Sr</mml:mi><mml:mprescripts /><mml:none /><mml:mn>87</mml:mn></mml:mmultiscripts></mml:math>Optical Lattice Clocks. Physical Review Letters, 2008, 100, 140801.	7.8	261
4	Experimental realization of an optical second with strontium lattice clocks. Nature Communications, 2013, 4, 2109.	12.8	192
5	Test of Special Relativity Using a Fiber Network of Optical Clocks. Physical Review Letters, 2017, 118, 221102.	7.8	155
6	Accurate Optical Lattice Clock withSr87Atoms. Physical Review Letters, 2006, 97, 130801.	7.8	112
7	Hyperpolarizability Effects in a Sr Optical Lattice Clock. Physical Review Letters, 2006, 96, 103003.	7.8	102
8	Spectral purity transfer between optical wavelengths at the 10â^'18 level. Nature Photonics, 2014, 8, 219-223.	31.4	96
9	New bounds on dark matter coupling from a global network of optical atomic clocks. Science Advances, 2018, 4, eaau4869.	10.3	96
10	An optical lattice clock with spin-polarized 87Sr atoms. European Physical Journal D, 2008, 48, 11-17.	1.3	92
11	75%-Efficiency blue generation from an intracavity PPKTP frequency doubler. Optics Communications, 2005, 247, 471-481.	2.1	82
12	Accuracy evaluation of an optical lattice clock with bosonic atoms. Optics Letters, 2007, 32, 1812.	3.3	74
13	Development of a strontium optical lattice clock for the SOC mission on the ISS. Comptes Rendus Physique, 2015, 16, .	0.9	74
14	Optical to microwave clock frequency ratios with a nearly continuous strontium optical lattice clock. Metrologia, 2016, 53, 1123-1130.	1.2	74
15	Search for transient variations of the fine structure constant and dark matter using fiber-linked optical atomic clocks. New Journal of Physics, 2020, 22, 093010.	2.9	67
16	First international comparison of fountain primary frequency standards via a long distance optical fiber link. Metrologia, 2017, 54, 348-354.	1.2	64
17	Comparing a mercury optical lattice clock with microwave and optical frequency standards. New Journal of Physics, 2016, 18, 113002.	2.9	53
18	Creation of quantum-degenerate gases of ytterbium in a compact 2D-/3D-magneto-optical trap setup. Review of Scientific Instruments, 2013, 84, 043109.	1.3	49

#	Article	IF	Citations
19	Ultra-stable clock laser system development towards space applications. Scientific Reports, 2016, 6, 33973.	3.3	49
20	High-precision methanol spectroscopy with a widely tunable SI-traceable frequency-comb-based mid-infrared QCL. Optica, 2019, 6, 411.	9.3	38
21	Rayleigh superradiance and dynamic Bragg gratings in an end-pumped Bose-Einstein condensate. Physical Review A, 2008, 78, .	2.5	35
22	On cavity modification of stimulated Raman scattering. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, 272-278.	1.4	32
23	Atomic fountains and optical clocks at SYRTE: Status and perspectives. Comptes Rendus Physique, 2015, 16, 461-470.	0.9	31
24	A new experiment to test parity symmetry in cold chiral molecules using vibrational spectroscopy. Quantum Electronics, 2019, 49, 288-292.	1.0	31
25	A noise-immune cavity-assisted non-destructive detection for an optical lattice clock in the quantum regime. New Journal of Physics, 2017, 19, 083002.	2.9	30
26	An accurate and robust metrological network for coherent optical frequency dissemination. New Journal of Physics, 2021, 23, 053027.	2.9	29
27	Comparing ultrastable lasers at 7â€‰Ã—â€‰10â^'17 fractional frequency instability through a 2220â€‰km optical fibre network. Nature Communications, 2022, 13, 212.	12.8	27
28	Dispersive heterodyne probing method for laser frequency stabilization based on spectral hole burning in rare-earth doped crystals. Optics Express, 2017, 25, 15539.	3.4	25
29	Polarizabilities of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Sr</mml:mi><mml:mprescripts /><mml:none /><mml:mn>87</mml:mn></mml:mmultiscripts></mml:math>clock transition. Physical Review A, 2015, 92, .	2.5	23
30	Direct comparisons of European primary and secondary frequency standards via satellite techniques. Metrologia, 2020, 57, 045005.	1.2	20
31	Mechanical Tunability of an Ultranarrow Spectral Feature of a Rare-Earth-Doped Crystal via Uniaxial Stress. Physical Review Applied, 2020, 13, .	3.8	12
32	Double-heterodyne probing for an ultra-stable laser based on spectral hole burning in a rare-earth-doped crystal. Optics Letters, 2020, 45, 1930.	3.3	11
33	Development of a strontium optical lattice clock for the SOC mission on the ISS. Proceedings of SPIE, 2016, , .	0.8	10
34	Inhomogeneous response of an ion ensemble from mechanical stress. Physical Review Research, 2020, 2, .	3.6	10
35	Semi-classical dynamics of superradiant Rayleigh scattering in a Boseâ€“Einstein condensate. Journal of Modern Optics, 2016, 63, 1886-1897.	1.3	8
36	Optical Lattice Clocks as Candidates for a Possible Redefinition of the SI Second. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1568-1573.	4.7	6

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37	Precision measurements of electric-field-induced frequency displacements of an ultranarrow optical transition in ions in a solid. Applied Physics Letters, 2020, 117, 221102.	3.3	6
38	Universal formalism for data sharing and processing in clock comparison networks. Physical Review Research, 2020, 2, .	3.6	6
39	Parametric optics with whispering-gallery modes. , 2003, , .		4
40	Accurate laser frequency locking to optical frequency combs under low-signal-to-noise-ratio conditions. Review of Scientific Instruments, 2020, 91, 033202.	1.3	4
41	Accuracy Evaluation of a $^{87}hbox{Sr}$ Optical Lattice Clock. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 336-340.	4.7	3
42	Comparison of two Strontium optical lattice clocks in agreement at the 10^{−16} level. , 2012, , .		3
43	Comparison of two Strontium optical lattice clocks in agreement at the 10^{−16} level. , 2012, , .		1
44	Contributing to TAI with Sr optical lattice clocks. , 2017, , .		1
45	An Optical Lattice Clock with Fermionic and Bosonic Sr Atoms. , 2007, , .		0
46	Toward a highly stable master laser for the interrogation of SYRTE's Sr and Hg optical lattice clocks. , 2014, , .		0
47	Double-Heterodyne Detection of Spectral Hole in Rare Earth Doped Crystal for Laser Frequency Stabilization and Opto-Mechanical Sensing. , 2019, , .		0
48	High-Precision Mid-Infrared Spectroscopy with a Widely Tuneable SI-Traceable Frequency-Comb-Stabilised QCL. , 2019, , .		0
49	Laser Frequency Stabilization Based on Spectral-Hole Burning Using Double-Heterodyne Detection. , 2019, , .		0
50	Strontium and Mercury of Optical Lattice Clocks. , 2012, , .		0
51	Toward a highly stable master laser for the interrogation of SYRTEâ€™s Sr and Hg optical lattice clocks. , 2016, , .		0