Serge Galliou

List of Publications by Year
in descending order

81 papers	900 citations	516561 16 h-index	526166 27 g-index
81 all docs	81 docs citations	81 times ranked	599 citing authors

#	Article	IF	Citations
1	Extremely Low Loss Phonon-Trapping Cryogenic Acoustic Cavities for Future Physical Experiments. Scientific Reports, 2013, 3, 2132.	1.6	87
2	Extremely low-loss acoustic phonons in a quartz bulk acoustic wave resonator at millikelvin temperature. Applied Physics Letters, 2012, 100, .	1.5	73
3	Testing the generalized uncertainty principle with macroscopic mechanical oscillators and pendulums. Physical Review D, 2019, 100, .	1.6	70
4	Coherent population trapping resonances in Csâ€“Ne vapor microcells for miniature clocks applications. Journal of Applied Physics, 2011, 109, 014912.	1.1	49
5	Observation of Rayleigh Phonon Scattering through Excitation of Extremely High Overtones in Low-Loss Cryogenic Acoustic Cavities for Hybrid Quantum Systems. Physical Review Letters, 2013, 111, 085502.	2.9	49
6	Losses in high quality quartz crystal resonators at cryogenic temperatures. Applied Physics Letters, 2011, 98, .	1.5	43
7	Laser light routing in an elongated micromachined vapor cell with diffraction gratings for atomic clock applications. Scientific Reports, 2015, 5, 14001.	1.6	33
8	Demonstration of the mass-producible feature of a Cs vapor microcell technology for miniature atomic clocks. Sensors and Actuators A: Physical, 2018, 280, 99-106.	2.0	30
9	Estimation of the uncertainty for a phase noise optoelectronic metrology system. Physica Scripta, 2012, T149, 014025.	1.2	25
10	Quartz resonator instabilities under cryogenic conditions. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 21-29.	1.7	20
11	Rare Events Detected with a Bulk Acoustic Wave High Frequency Gravitational Wave Antenna. Physical Review Letters, 2021, 127, 071102.	2.9	20
12	Observation of the fundamental Nyquist noise limit in an ultra-high Q-factor cryogenic bulk acoustic wave cavity. Applied Physics Letters, 2014, 105, .	1.5	18
13	Cryogenic transistor measurement and modeling for engineering applications. Cryogenics, 2010, 50, 381-389.	0.9	17
14	Advances in development of quartz crystal oscillators at liquid helium temperatures. Cryogenics, 2013, 57, 104-112.	0.9	17
15	Predicting phase noise in crystal oscillators. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 27-30.	1.7	16
16	High-precision temperature stabilization for sapphire resonators in microwave oscillators. Review of Scientific Instruments, 2005, 76, 095110.	0.6	16
17	Computation method for the short-term stability of quartz crystal resonators obtained from passive phase noise measures. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1530-1532.	1.7	16
18	Mitigation of Temperature-Induced Light-Shift Effects in Miniaturized Atomic Clocks. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1962-1967.	1.7	16

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19	A parametric quartz crystal oscillator. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2003, 50, 1656-1661.	1.7	15
20	Ultra-stable crystal ovens and simple characterisation. Electronics Letters, 2007, 43, 900.	0.5	14
21	Recent investigations on BAW resonators at cryogenic temperatures. , 2011, , .		14
22	New phase-noise model for crystal oscillators: application to the Clapp oscillator. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2003, 50, 1422-1428.	1.7	13
23	Quartz crystal resonators exhibiting extremely high Q-factors at cryogenic temperatures. Electronics Letters, 2008, 44, 889.	0.5	13
24	Thermal management of fully LTCC-packaged Cs vapour cell for MEMS atomic clock. Sensors and Actuators A: Physical, 2012, 174, 58-68.	2.0	13
25	Generation of ultralow power phononic combs. Physical Review Research, 2020, 2, .	1.3	13
26	Quality Factor Measurements of Various Types of Quartz Crystal Resonators Operating Near 4ÂK. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 975-980.	1.7	12
27	Advanced bridge instrument for the measurement of the phase noise and of the short-term frequency stability of ultra-stable quartz resonators. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	11
28	A New Generation of Very High Stability BVA Oscillators. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	10
29	Investigations on LGS and LGT crystals to realize BAW resonators. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 2384-2391.	1.7	10
30	Low offset frequency <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mi>f</mml:mi> flicker noise in spin-torque vortex oscillators. Physical Review B, 2019, 99, .		10
31	Piezo-optomechanical coupling of a 3D microwave resonator to a bulk acoustic wave crystalline resonator. Applied Physics Letters, 2019, 115, .	1.5	9
32	About Quartz Crystal Resonator Noise: Recent Study. , 2009, , .		8
33	Precision close-to-carrier phase noise simulation of BAW oscillators. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 6-9.	1.7	8
34	A new type of infrared-sensitive resonator used as a thermal sensor. Sensors and Actuators A: Physical, 1998, 65, 147-151.	2.0	7
35	A Program to Analyse the Origin of Noise in Ultra-Stable Quartz Crystal Resonators. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	7
36	A high-performance frequency stability compact CPT clock based on a Cs-Ne microcell. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 2584-2587.	1.7	7

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37	Temperature coefficients of crystalline-quartz elastic constants over the cryogenic range [4â€‰K, 15â€‰K]. Applied Physics Letters, 2016, 109, .	1.5	7
38	Temperature processing of an ultra stable quartz oscillator. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2001, 48, 1539-1546.	1.7	6
39	Thermal characterization of crystal ovens used in phase noise measurement system. , 2006, , .		6
40	Investigations on 10 MHz LGS and LGT crystal resonators. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	6
41	Development of a 10 MHz Oscillator Working with an LGT Crystal Resonator: Preliminary Results. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1913-1920.	1.7	6
42	Cryogenic optomechanic cavity in low mechanical loss material. Journal of Applied Physics, 2018, 124, 073104.	1.1	6
43	The effect of power-drive level on the calibration of the bridge instrument for the measurement of the quartz stability. , 2009, , .		5
44	A new method of probing mechanical losses of coatings at cryogenic temperatures. Review of Scientific Instruments, 2016, 87, 123906.	0.6	5
45	Noise measurements of 10 MHz LGT crystal Oscillators. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	4
46	Parametric model of the BAW resonator phase-noise. Ultrasonics, 2011, 51, 966-973.	2.1	4
47	Influence of flicker noise and nonlinearity on the frequency spectrum of spin torque nano-oscillators. Scientific Reports, 2020, 10, 13116.	1.6	4
48	Jump chaotic behaviour of ultra low loss bulk acoustic wave cavities. Applied Physics Letters, 2014, 105, .	1.5	3
49	Properties related to Q-factors and noise of quartz resonator-based systems at 4K. , 2014, , .		3
50	Electro-thermal simulation of an ultra stable quartz oscillator. International Journal of Thermal Sciences, 2002, 41, 173-181.	2.6	2
51	Measurements of ultra-stable langatate crystal oscillators. , 2009, , .		2
52	Oscillator frequency stability improvement by means of negative feedback. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 2297-2304.	1.7	2
53	Microfabrication and thermal behavior of miniature cesium-vapor cells for atomic clock operations. , 2011, , .		2
54	Quartz resonators at cryogenic temperatures: Noise and quality factor. , 2013, , .		2

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55	Measurements of elastic properties of langatate at liquid helium temperatures for design of ultra low loss mechanical systems. Applied Physics Letters, 2014, 104, 261904.	1.5	2
56	Extremely high Q-factor mechanical modes in quartz bulk acoustic wave resonators at millikelvin temperature. , 2014, , .		2
57	Frequencyâ€“Temperature Compensated Cuts of Crystalline-Quartz Acoustic Cavity Within the Cryogenic Range [4 K, 15 K]. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1738-1740.	1.7	2
58	Observation of low-temperature magnetomechanic effects in crystalline resonant phonon cavities. Physical Review B, 2019, 100, .	1.1	2
59	Generation of coherent phonons via a cavity enhanced photonic lambda scheme. Applied Physics Letters, 2020, 117, .	1.5	2
60	Measurement of the refractive index at cryogenic temperature of absorptive silver thin films used as reflectors in a Fabryâ€“Perot cavity. Applied Optics, 2021, 60, 10945.	0.9	2
61	Frequency overshoot in quartz crystal oscillators during the warm-up time. Application to the BVA resonator. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1983, 2, 1163-1174.	0.4	1
62	Low noise parametric quartz crystal oscillator. , 0, , .		1
63	Towards Cryogenic Quartz Oscillators: Coupling of a Bulk Acoustic Wave quartz resonator to a SQUID. , 2016, , .		1
64	Impact of coatings on the quality factor of a quartz crystal resonator at liquid helium temperature. , 2016, , .		1
65	Inducing Strong Non-Linearities in a Phonon Trapping Quartz Bulk Acoustic Wave Resonator Coupled to a Superconducting Quantum Interference Device. Applied Sciences (Switzerland), 2018, 8, 602.	1.3	1
66	Phase noise resonator measurement bench using DDS as excitation source. , 2004, , .		0
67	Phase correction of reference frequency signals transmitted by optical fiber link. , 2004, , .		0
68	Simple analysis of direct digital synthesiser phase spectrum. Electronics Letters, 2004, 40, 1469.	0.5	0
69	Dark line resonances in Cs-Ne vapor microcells for chip scale atomic clocks. , 2011, , .		0
70	Measurement of temperature sensitivity of LGT elastic coefficients over [4K, 15K] cryogenic range. , 2012, , .		0
71	Cryogenic quartz frequency sources: Problems and perspectives. , 2012, , .		0
72	Characterization of compact CPT clocks based on a Cs-Ne microcell. , 2012, , .		0

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73	Some future applications of cryogenic high-Q resonant cavities. , 2012, , .		0
74	Recent progress and perspectives of extremely low loss acoustic cavities: From frequency sources to artificial atoms. , 2013, , .		0
75	Bulk acoustic wave resonator thermal noise measurements. , 2014, , .		0
76	Quality factors of quartz crystal resonators operating at 4 Kelvins. , 2015, , .		0
77	Behavior of quartz crystal resonators at liquid helium temperature. , 2016, , .		0
78	Bulk Acoustic Wave Resonator-Oscillators and Tests of Fundamental Physics. , 2019, , .		0
79	Quartz Crystal Resonator Used as an Optical Fabry-Perot Cavity. , 2019, , .		0
80	Quartz resonators thermal modelization using located constants networks. Revue De Physique AppliquÃ©e, 1987, 22, 235-240.	0.4	0
81	Advanced microfabrication technologies for miniature caesium vapor cells for atomic clocks. , 2019, , .		0