

SÃ©bastien Hentz

List of Publications by Year in descending order

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67
papers

3,025
citations

279487

23
h-index

315357

38
g-index

67
all docs

67
docs citations

67
times ranked

2563
citing authors

#	ARTICLE	IF	CITATIONS
1	Real-Time Sensing with Multiplexed Optomechanical Resonators. Nano Letters, 2022, 22, 1866-1873.	4.5	3
2	Loss mechanisms in TiN high impedance superconducting microwave circuits. Applied Physics Letters, 2022, 120, .	1.5	9
3	Amplitude stabilization in a synchronized nonlinear nanomechanical oscillator. Communications Physics, 2022, 5, .	2.0	5
4	A Nonlinear Model for Nano-Electro Mechanical Mass Sensing Signals Processing. IEEE Sensors Journal, 2021, 21, 21852-21861.	2.4	1
5	The emerging landscape of single-molecule protein sequencing technologies. Nature Methods, 2021, 18, 604-617.	9.0	198
6	Requirements and attributes of nano-resonator mass spectrometry for the analysis of intact viral particles. Analytical and Bioanalytical Chemistry, 2021, 413, 7147-7156.	1.9	2
7	Optomechanical mass spectrometry. Nature Communications, 2020, 11, 3781.	5.8	56
8	Compact Modeling and Behavioral Simulation of an Optomechanical Sensor in Verilog A. IEEE Transactions on Electron Devices, 2020, 67, 4677-4681.	1.6	2
9	Optomechanical resonating probe for very high frequency sensing of atomic forces. Nanoscale, 2020, 12, 2939-2945.	2.8	28
10	Analytical Compact Model for Opto-Mechanical Sensor. , 2020, , .		3
11	Very Large Scale Integration Optomechanics: a cure for loneliness of NEMS resonators?. , 2018, , .		0
12	Neutral mass spectrometry of virus capsids above 100 megadaltons with nanomechanical resonators. Science, 2018, 362, 918-922.	6.0	92
13	Ultra sensitive optomechanical microdisk resonators with very large scale integration process. , 2018, , .		3
14	Single-particle mass spectrometry with arrays of frequency-addressed nanomechanical resonators. Nature Communications, 2018, 9, 3283.	5.8	79
15	1 million-Q optomechanical microdisk resonators for sensing with very large scale integration. , 2018, , .		0
16	15.6 A 30-to-80MHz simultaneous dual-mode heterodyne oscillator targeting NEMS array gravimetric sensing applications with a 300zg mass resolution. , 2017, , .		4
17	Frequency fluctuations in mono- and polysilicon resonators: A new limit of detection. , 2017, , .		1
18	Simultaneous mode tracking for sensing applications with dual-mode heterodyne NEMS oscillator. , 2016, , .		0

#	ARTICLE	IF	CITATIONS
19	Compact heterodyne NEMS oscillator for sensing applications. Solid-State Electronics, 2016, 125, 214-219.	0.8	4
20	Optomechanical nanoresonator readout with optical downmixing. , 2016, , .		0
21	Emerging nano-devices for IOT applications. , 2016, , .		1
22	Frequency fluctuations in silicon nanoresonators. Nature Nanotechnology, 2016, 11, 552-558.	15.6	183
23	Real time sensing in the non linear regime of nems resonators. , 2016, , .		4
24	Compact heterodyne NEMS oscillator for sensing applications. , 2015, , .		0
25	A nanowire gauge factor extraction method for material comparison and in-line monitoring. , 2015, , .		3
26	Neutral particle mass spectrometry with nanomechanical systems. Nature Communications, 2015, 6, 6482.	5.8	120
27	Dual-mode NEMS self-oscillator for mass sensing. , 2015, , .		1
28	An Etch Stop and Sacrificial Materials Study for 3D NEMS-CMOS Co-Integration. ECS Transactions, 2014, 61, 395-400.	0.3	2
29	Nanosystems monolithically integrated with CMOS: emerging applications and technologies. , 2014, , .		5
30	VHF NEMS-CMOS piezoresistive resonators for advanced sensing applications. Nanotechnology, 2014, 25, 435501.	1.3	13
31	Impact of process variability on a frequency-addressed NEMS array sensor used for gravimetric detection. , 2013, , .		0
32	High frequency top-down junction-less silicon nanowire resonators. Nanotechnology, 2013, 24, 435203.	1.3	17
33	MCMC-based inversion algorithm dedicated to NEMS mass Spectrometry. , 2013, , .		0
34	Frequency-addressed NEMS arrays for mass and gas sensing applications. , 2013, , .		10
35	Pull-In Retarding in Nonlinear Nanoelectromechanical Resonators Under Superharmonic Excitation. Journal of Computational and Nonlinear Dynamics, 2012, 7, .	0.7	24
36	Ultra-scaled high-frequency single-crystal Si NEMS resonators and their front-end co-integration with CMOS for high sensitivity applications. , 2012, , .		12

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37	Single-protein nanomechanical mass spectrometry in real time. <i>Nature Nanotechnology</i> , 2012, 7, 602-608.	15.6	434
38	Large-Scale Integration of Nanoelectromechanical Systems for Gas Sensing Applications. <i>Nano Letters</i> , 2012, 12, 1269-1274.	4.5	133
39	Nonlinear dynamics of nanoelectromechanical cantilevers based on nanowire piezoresistive detection. <i>MATEC Web of Conferences</i> , 2012, 1, 04007.	0.1	0
40	DMMP vapor detection with 50NM thick AlN films based microcantilevers. , 2011, , .		1
41	VLSI silicon multi-gas analyzer coupling gas chromatography and NEMS detectors. , 2011, , .		17
42	Gas sensors based on gravimetric detectionâ€™A review. <i>Sensors and Actuators B: Chemical</i> , 2011, 160, 804-821.	4.0	162
43	Forced large amplitude periodic vibrations of non-linear Mathieu resonators for microgyroscope applications. <i>International Journal of Non-Linear Mechanics</i> , 2011, 46, 1347-1355.	1.4	30
44	Computational and quasi-analytical models for non-linear vibrations of resonant MEMS and NEMS sensors. <i>International Journal of Non-Linear Mechanics</i> , 2011, 46, 532-542.	1.4	72
45	Stability control of nonlinear micromechanical resonators under simultaneous primary and superharmonic resonances. <i>Applied Physics Letters</i> , 2011, 98, 193507.	1.5	32
46	50 nm thick AlN film-based piezoelectric cantilevers for gravimetric detection. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 085023.	1.5	58
47	High Order Nonlinearities and Mixed Behavior in Micromechanical Resonators. <i>Springer Proceedings in Physics</i> , 2011, , 167-172.	0.1	0
48	Nonlinear phenomena in nanomechanical resonators: mechanical behaviors and physical limitations. <i>Mecanique Et Industries</i> , 2010, 11, 521-529.	0.2	20
49	100 MHz oscillator based on a low polarization voltage capacitive Lamé-mode MEMS resonator. , 2010, , .		4
50	Modal control of mechanically coupled NEMS arrays for tunable RF filters. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2010, 57, 1285-1295.	1.7	9
51	Large amplitude dynamics of micro-/nanomechanical resonators actuated with electrostatic pulses. <i>Journal of Applied Physics</i> , 2010, 107, 014907.	1.1	14
52	In-plane nanoelectromechanical resonators based on silicon nanowire piezoresistive detection. <i>Nanotechnology</i> , 2010, 21, 165504.	1.3	113
53	Dynamic range enhancement of nonlinear nanomechanical resonant cantilevers for highly sensitive NEMS gas/mass sensor applications. <i>Journal of Micromechanics and Microengineering</i> , 2010, 20, 045023.	1.5	116
54	50 nm thick AlN resonant micro-cantilever for gas sensing application. , 2010, , .		3

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55	Hysteresis Suppression in Nonlinear Mathieu M/NEMS Resonators. , 2009, , .		1
56	M&NEMS: A new approach for ultra-low cost 3D inertial sensor. , 2009, , .		62
57	Piezoelectric nanoelectromechanical resonators based on aluminum nitride thin films. Applied Physics Letters, 2009, 95, .	1.5	148
58	Bifurcation topology tuning of a mixed behavior in nonlinear micromechanical resonators. Applied Physics Letters, 2009, 95, 183104.	1.5	79
59	A Small and High Sensitivity Resonant Accelerometer. Procedia Chemistry, 2009, 1, 536-539.	0.7	27
60	Self-oscillation conditions of a resonant nanoelectromechanical mass sensor. Journal of Applied Physics, 2009, 105, .	1.1	20
61	Nonlinear dynamics of nanomechanical beam resonators: improving the performance of NEMS-based sensors. Nanotechnology, 2009, 20, 275501.	1.3	178
62	From MEMS to NEMS: Closed-loop actuation of resonant beams beyond the critical Duffing amplitude. , 2008, , .		13
63	Compact and explicit physical model for lateral metal-oxide-semiconductor field-effect transistor with nanoelectromechanical system based resonant gate. Applied Physics Letters, 2008, 92, .	1.5	15
64	NEMS based on top-down technologies: from stand-alone NEMS to VLSI NEMS & NEMS-CMOS integration. , 2008, , .		3
65	Modeling and Test of Nanostructure Fabricated on 160 nm Thin SOI Wafer for In-Ic Integration. , 2007, , .		0
66	Discrete element modelling of concrete submitted to dynamic loading at high strain rates. Computers and Structures, 2004, 82, 2509-2524.	2.4	219
67	Identification and Validation of a Discrete Element Model for Concrete. Journal of Engineering Mechanics - ASCE, 2004, 130, 709-719.	1.6	157