

# Siavash Pourkamali

## List of Publications by Year in descending order

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97  
papers

1,394  
citations

430874

18  
h-index

414414

32  
g-index

98  
all docs

98  
docs citations

98  
times ranked

866  
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-Impedance VHF and UHF Capacitive Silicon Bulk Acoustic Wave Resonatorsâ€™ Part I: Concept and Fabrication. IEEE Transactions on Electron Devices, 2007, 54, 2017-2023.	3.0	138
2	Electronically Temperature Compensated Silicon Bulk Acoustic Resonator Reference Oscillators. IEEE Journal of Solid-State Circuits, 2007, 42, 1425-1434.	5.4	102
3	High-Frequency Thermally Actuated Electromechanical Resonators With Piezoresistive Readout. IEEE Transactions on Electron Devices, 2011, 58, 1205-1214.	3.0	96
4	Individual Air-Borne Particle Mass Measurement Using High-Frequency Micromechanical Resonators. IEEE Sensors Journal, 2011, 11, 2883-2890.	4.7	69
5	Micromechanical IBARs: Tunable High-Q Resonators for Temperature-Compensated Reference Oscillators. Journal of Microelectromechanical Systems, 2010, 19, 503-515.	2.5	62
6	Low-Impedance VHF and UHF Capacitive Silicon Bulk Acoustic-Wave Resonatorsâ€™ Part II: Measurement and Characterization. IEEE Transactions on Electron Devices, 2007, 54, 2024-2030.	3.0	51
7	Fabrication and characterization of thermally actuated micromechanical resonators for airborne particle mass sensing: II. Device fabrication and characterization. Journal of Micromechanics and Microengineering, 2010, 20, 125019.	2.6	47
8	Thermal-Piezoresistive Energy Pumps in Micromechanical Resonant Structures. IEEE Transactions on Electron Devices, 2012, 59, 3587-3593.	3.0	41
9	Fabrication and Characterization of MEMS-Based Resonant Organic Gas Sensors. IEEE Sensors Journal, 2012, 12, 1958-1964.	4.7	38
10	Doping-Induced Temperature Compensation of Thermally Actuated High-Frequency Silicon Micromechanical Resonators. Journal of Microelectromechanical Systems, 2012, 21, 681-687.	2.5	35
11	A Low Phase Noise 100MHz Silicon BAW Reference Oscillator. , 2006, , .		34
12	Thermal actuation, a suitable mechanism for high frequency electromechanical resonators. , 2010, , .		34
13	Sensitivity Enhancement of Lorentz Force MEMS Resonant Magnetometers via Internal Thermal-Piezoresistive Amplification. IEEE Electron Device Letters, 2014, 35, 268-270.	3.9	34
14	Fully micromechanical piezo-thermal oscillators. , 2010, , .		30
15	Amplitude modulated Lorentz force MEMS magnetometer with picotesla sensitivity. Journal of Micromechanics and Microengineering, 2016, 26, 105021.	2.6	28
16	Sub-100ppb/&#x00B0;C temperature stability in thermally actuated high frequency silicon resonators via degenerate phosphorous doping and bias current optimization. , 2010, , .		26
17	Microelectromechanical disk resonators for direct detection of liquid-phase analytes. Sensors and Actuators A: Physical, 2014, 216, 136-141.	4.1	25
18	Nanoelectromechanical resonant narrow-band amplifiers. Microsystems and Nanoengineering, 2016, 2, 16004.	7.0	25

#	ARTICLE	IF	CITATIONS
19	Rotational mode disk resonators for high-Q operation in liquid. , 2010, , .		24
20	Inertial Impaction on MEMS Balance Chips for Real-Time Air Quality Monitoring. IEEE Sensors Journal, 2017, 17, 2329-2337.	4.7	24
21	Ultra-Low Power Digitally Operated Tunable MEMS Accelerometer. IEEE Sensors Journal, 2016, 16, 8715-8721.	4.7	21
22	Ultrahigh Frequency Nanomechanical Piezoresistive Amplifiers for Direct Channel-Selective Receiver Front-Ends. Nano Letters, 2018, 18, 2551-2556.	9.1	20
23	Thermal-Piezoresistive Resonators and Self-Sustained Oscillators for Gas Recognition and Pressure Sensing. IEEE Sensors Journal, 2013, 13, 2863-2872.	4.7	19
24	Chip-Scale Implementation and Cascade Assembly of Particulate Matter Collectors With Embedded Resonant Mass Balances. IEEE Sensors Journal, 2017, 17, 1617-1625.	4.7	19
25	Thin-film piezoelectric-on-silicon particle mass sensors. , 2010, , .		17
26	Fabrication and characterization of thermally actuated micromechanical resonators for airborne particle mass sensing: I. Resonator design and modeling. Journal of Micromechanics and Microengineering, 2010, 20, 125018.	2.6	17
27	Thermally actuated MEMS resonant sensors for mass measurement of micro/nanoscale aerosol particles. , 2009, , .		16
28	Piezoelectric MEMS resonant dew point meters. Sensors and Actuators A: Physical, 2018, 276, 52-61.	4.1	15
29	Fabrication and characterization of resonant aerosol particle mass sensors. , 2010, , .		14
30	Characterization of rotational mode disk resonator quality factors in liquid. , 2011, , .		14
31	A two-stage aerosol impactor with embedded MEMS resonant mass balances for particulate size segregation and mass concentration monitoring. , 2013, , .		12
32	Exploiting Pull-In/Pull-Out Hysteresis in Electrostatic MEMS Sensor Networks to Realize a Novel Sensing Continuous-Time Recurrent Neural Network. Micromachines, 2021, 12, 268.	2.9	12
33	Self-sustained micromechanical resonant particulate microbalance/counters. , 2011, , .		11
34	Active self-Q-enhancement in high frequency thermally actuated M/NEMS resonators. , 2011, , .		11
35	Wafer-Level Encapsulation and Sealing of Electrostatic HARPSS Transducers. , 2007, , .		10
36	Atomic Resolution Disk Resonant Force and Displacement Sensors for Measurements in Liquid. IEEE Electron Device Letters, 2014, 35, 874-876.	3.9	10

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37	Sensitivity Enhancement of a Lorentz Force MEMS Magnetometer With Frequency Modulated Output. Journal of Microelectromechanical Systems, 2017, 26, 870-878.	2.5	10
38	Thin Film Piezoelectric-on-Silicon Elliptical Resonators With Low Liquid Phase Motional Resistances. IEEE Sensors Journal, 2019, 19, 113-120.	4.7	9
39	MEMS resonant sensors for detection of gasoline vapor. , 2010, , .		8
40	Temperature compensated single-device electromechanical oscillators. , 2011, , .		8
41	Piezoelectric resonant MEMS balances with high liquid phase Q. , 2014, , .		7
42	Ultra sensitive lorentz force MEMS magnetometer with pico-tesla limit of detection. , 2015, , .		7
43	Single-mask field emission based tunable MEMS tunneling accelerometer. , 2015, , .		7
44	An 8-Bit Digitally Operated Micromachined Accelerometer. Journal of Microelectromechanical Systems, 2020, 29, 1132-1136.	2.5	7
45	Detection of sub-ppm traces of aqueous heavy-metal ions using micro-electro-mechanical beam resonators. Journal of Micromechanics and Microengineering, 2009, 19, 115003.	2.6	6
46	Detection and mass measurement of individual air-borne particles using high frequency micromechanical resonators. , 2010, , .		6
47	Real-time bio-sensing using micro-channel encapsulated thermal-piezoresistive rotational mode disk resonators. , 2012, , .		5
48	Deep submicron parallel scanning probe lithography using two-degree-of-freedom microelectromechanical systems actuators with integrated nanotips. Micro and Nano Letters, 2014, 9, 673-675.	1.3	5
49	Lorentz force MEMS magnetometer with frequency modulated output. , 2016, , .		5
50	High frequency thermal-piezoresistive MEMS resonators for detection of organic gases. , 2011, , .		4
51	Fabrication and characterization of MEMS-based resonant organic gas sniffers. , 2011, , .		4
52	Localized thermal oxidation for frequency trimming and temperature compensation of micromechanical resonators. , 2012, , .		4
53	Nano-precision force and displacement measurements using MEMS resonant structures. , 2013, , .		4
54	High-Q Lorentz force MEMS magnetometer with internal self-amplification. , 2014, , .		4

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55	An ultra high-Q micromechanical in-plane tuning fork. , 2014, , .		4
56	A tunable digitally operated MEMS accelerometer. , 2015, , .		4
57	SNR improvement in amplitude modulated resonant MEMS sensors via thermal-piezoresistive internal amplification. , 2015, , .		4
58	Microresonator-on-Membrane for Real-Time Mass Sensing in Liquid Phase. , 2018, 2, 1-4.		4
59	High-Energy Density Micro-Machined Cellular Arrays of Electrostatic Actuators. , 2019, , .		4
60	Resonant MEMS sensors for detection of aqueous heavy metal ions with Sub-ppm resolution. , 2008, , .		3
61	Thermal actuation of high frequency micromechanical resonators. , 2009, , .		3
62	High frequency dual-mode thermal-piezoresistive oscillators. , 2011, , .		3
63	MEMS resonant human breath sensors for survivor detection in disaster areas. , 2012, , .		3
64	Input-output insulation in thermal-piezoresistive resonant microstructures using embedded oxide beams. , 2012, , .		3
65	Self-Contained Frequency Trimming of Micromachined Silicon Resonators via Localized Thermal Oxidation. Journal of Microelectromechanical Systems, 2013, 22, 1066-1072.	2.5	3
66	Nano-precision micromachined frequency output profilometer. , 2016, , .		3
67	Frequency modulated electrostatically coupled resonators for sensing applications. , 2016, , .		3
68	Frequency output MEMS resonator on membrane pressure sensors. , 2016, , .		3
69	Ultra-low power self-computing binary output digital MEMS accelerometer. , 2016, , .		3
70	MEMS resonant sensors for real-time thin film shear stress monitoring. , 2016, , .		3
71	Micromachined Frequency-Output Force Probes. IEEE Sensors Journal, 2016, 16, 5520-5521.	4.7	3
72	Resonant piezoresistive amplifiers: Towards single element nano-mechanical RF front ends. , 2017, , .		3

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73	Signal Classification Using a Mechanically Coupled MEMS Neural Network. , 2021, , .		3
74	Characterization of a very low-cost silicon cathode-zinc electrolyte solar cell. , 2010, , .		2
75	Self-sustained micromechanical resonant pressure sensors. , 2012, , .		2
76	Electrostatic frequency tuning of thermal piezoresistive MEMS resonators. , 2012, , .		2
77	Self-controlled fabrication of single-crystalline silicon nanobeams using conventional micromachining. Nanotechnology, 2014, 25, 315303.	2.6	2
78	Microelectromechanical Parallel Scanning Nanoprobes for Nanolithography. IEEE Nanotechnology Magazine, 2016, 15, 457-464.	2.0	2
79	Controlled batch fabrication of crystalline silicon nanobeam-based resonant structures. , 2011, , .		1
80	Developing a full cycled silicon cathode-zinc electrolyte based solar cell using copper recovery electrodes. , 2011, , .		1
81	Gas sensing using thermally actuated dual plate resonators and self-sustained oscillators. , 2012, , .		1
82	Jitter characterization of fully-micromechanical thermal-piezoresistive oscillators. , 2012, , .		1
83	Thermal Actuators. , 2012, , 2680-2697.		1
84	Optical control and tuning of thermal-piezoresistive self-sustained oscillators. , 2014, , .		1
85	Single-mask field emission based tunable MEMS tunneling accelerometer. , 2015, , .		1
86	A Low-Power CMOS-MEMS Vibration Spectrum Analyzer. , 2018, , .		1
87	Hydrogen detection using thermally actuated MEMS resonators. , 2011, , .		0
88	Thermoelectric Heat Pump. , 2012, , 2741-2741.		0
89	Fabrication and characterization of miniaturized photo-electro-chemical solar cells. , 2012, , .		0
90	Theoretical Elasticity. , 2012, , 2667-2667.		0

#	ARTICLE	IF	CITATIONS
91	Integrated MEMS actuators for sub-Micron patterning on thin polymer films. , 2014, , .		0
92	A 3-bit digitally operated MEMS rotational accelerometer. , 2017, , .		0
93	Micro-Resonator-on-Membrane for Real-Time Biosensing. , 2018, , .		0
94	Thermal Piezoresistive Resonant Mass Balance Implemented in a Standard CMOS Process. , 2018, , .		0
95	Thermally Actuated Silicon Resonators. , 2015, , 1-15.		0
96	Thermally Actuated Silicon Resonators. , 2016, , 4154-4168.		0
97	Sensors as Neural Computing Units. , 2022, , .		0