

Nizar Jaber

List of Publications by Year in descending order

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papers

787
citations

430754

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56
all docs

56
docs citations

56
times ranked

522
citing authors

#	ARTICLE	IF	CITATIONS
1	Linear and nonlinear dynamics of micro and nano-resonators: Review of recent advances. International Journal of Non-Linear Mechanics, 2020, 119, 103328.	1.4	97
2	Nonlinear-Based MEMS Sensors and Active Switches for Gas Detection. Sensors, 2016, 16, 758.	2.1	46
3	Multiple internal resonances in MEMS arch resonators. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 3393-3398.	0.9	41
4	A smart microelectromechanical sensor and switch triggered by gas. Applied Physics Letters, 2016, 109, .	1.5	39
5	Higher order modes excitation of electrostatically actuated clamped-clamped microbeams: experimental and analytical investigation. Journal of Micromechanics and Microengineering, 2016, 26, 025008.	1.5	38
6	Theoretical and experimental investigations of the crossover phenomenon in micromachined arch resonator: part II—simultaneous 1:1 and 2:1 internal resonances. Nonlinear Dynamics, 2020, 99, 407-432.	2.7	32
7	A Resonant Gas Sensor Based on Multimode Excitation of a Buckled Microbeam. IEEE Sensors Journal, 2020, 20, 1778-1785.	2.4	31
8	Multimode MEMS Resonator for Simultaneous Sensing of Vapor Concentration and Temperature. IEEE Sensors Journal, 2018, 18, 10145-10153.	2.4	30
9	Mass and position determination in MEMS mass sensors: a theoretical and an experimental investigation. Journal of Micromechanics and Microengineering, 2016, 26, 105009.	1.5	29
10	Resonant Gas Sensor and Switch Operating in Air With Metal-Organic Frameworks Coating. Journal of Microelectromechanical Systems, 2018, 27, 156-163.	1.7	29
11	Multifrequency excitation of a clamped-clamped microbeam: Analytical and experimental investigation. Microsystems and Nanoengineering, 2016, 2, 16002.	3.4	28
12	Humidity Detection Using Metal Organic Framework Coated on QCM. Journal of Sensors, 2016, 2016, 1-8.	0.6	25
13	Static and Dynamic Amplification Using Strong Mechanical Coupling. Journal of Microelectromechanical Systems, 2016, 25, 916-921.	1.7	25
14	Theoretical and experimental investigations of the crossover phenomenon in micromachined arch resonator: part I—linear problem. Nonlinear Dynamics, 2020, 99, 393-405.	2.7	25
15	Multimode excitation of a metal organics frameworks coated microbeam for smart gas sensing and actuation. Sensors and Actuators A: Physical, 2018, 283, 254-262.	2.0	24
16	MEMS Logic Using Mixed-Frequency Excitation. Journal of Microelectromechanical Systems, 2017, 26, 1140-1146.	1.7	21
17	Wideband MEMS resonator using multifrequency excitation. Sensors and Actuators A: Physical, 2016, 242, 140-145.	2.0	20
18	A Compact Adder and Reprogrammable Logic Gate Using Micro-Electromechanical Resonators With Partial Electrodes. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 2057-2061.	2.2	19

#	ARTICLE	IF	CITATIONS
19	Two-to-one internal resonance in the higher-order modes of a MEMS beam: Experimental investigation and theoretical analysis via local stability theory. International Journal of Non-Linear Mechanics, 2021, 129, 103664.	1.4	18
20	A Coupled Resonator for Highly Tunable and Amplified Mixer/Filter. IEEE Transactions on Electron Devices, 2017, 64, 2659-2664.	1.6	16
21	Efficient Excitation of Micro/Nano Resonators and Their Higher Order Modes. Scientific Reports, 2019, 9, 319.	1.6	15
22	Simultaneous electrical and mechanical resonance drive for large signal amplification of micro resonators. AIP Advances, 2018, 8, .	0.6	13
23	Electrothermally actuated tunable clamped-guided resonant microbeams. Mechanical Systems and Signal Processing, 2018, 98, 1069-1076.	4.4	13
24	Experimental and theoretical investigation of the 2:1 internal resonance in the higher-order modes of a MEMS microbeam at elevated excitations. Journal of Sound and Vibration, 2021, 499, 115983.	2.1	13
25	Influence of squeeze film damping on the higher-order modes of clamped-clamped microbeams. Journal of Micromechanics and Microengineering, 2016, 26, 065014.	1.5	12
26	Selective multiple analyte detection using multi-mode excitation of a MEMS resonator. Scientific Reports, 2022, 12, 5297.	1.6	12
27	Internal resonance in the higher-order modes of a MEMS beam: experiments and global analysis. Nonlinear Dynamics, 2021, 103, 2197-2226.	2.7	11
28	A Low Power Micro-Electromechanical Resonator-Based Digital to Analog Converter. Journal of Microelectromechanical Systems, 2020, 29, 320-328.	1.7	10
29	Dynamics of Microbeams under Multi-Frequency Excitations. Micromachines, 2017, 8, 32.	1.4	9
30	Towards a digital sound reconstruction MEMS device: Characterization of a single PZT based piezoelectric actuator. , 2015, , .		7
31	A MEMS coupled resonator for frequency filtering in air. Mechatronics, 2018, 56, 261-267.	2.0	7
32	On the double resonance activation of electrostatically actuated microbeam based resonators. International Journal of Non-Linear Mechanics, 2020, 121, 103437.	1.4	7
33	An Experimental and Theoretical Investigation of the Mechanical Behavior of Multilayer Initially Curved Microplates Under Electrostatic Actuation. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.0	6
34	Design and Demonstration of A Compact Full Adder Using Micro-beam Resonators. , 2018, , .		5
35	Multi-function and cascable MEMS logic device. , 2017, , .		4
36	A Compact High-Sensitivity Temperature Sensor using an Encapsulated Clamped-Clamped Mems Beam Resonator. , 2021, , .		3

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37	Simultaneous Sensing of Vapor Concentration and Temperature Utilizing Multimode of a MEMS Resonator. , 2018, , .		2
38	A Sensitive Resonant Gas Sensor Based on Multimode Excitation of a Buckled Beam. , 2019, , .		2
39	Efficient Activation of Nanomechanical Resonators. Advanced Electronic Materials, 2019, 5, 1800356.	2.6	2
40	Smart Gas Sensing and Actuation Using Multimode of a MOFs Coated Microbeam. , 2018, , .		1
41	Multifrequency Excitation of a Clamped-Clamped Microbeam. , 2015, , .		0
42	The Dynamics of a Doubly Clamped Microbeam Near the Primary Resonance: Experimental and Analytical Investigation. , 2015, , .		0
43	Static and Dynamic Amplification Using Strong Mechanical Coupling. , 2016, , .		0
44	Mass and Position Determination in MEMS Resonant Mass Sensors: Theoretical and Experimental Investigation. , 2016, , .		0
45	Nonlinear-Based Switch Triggered by Gas Using Electrostatically Actuated Microbeams. , 2016, , .		0
46	On the Nonlinear Dynamics of a Doubly Clamped Microbeam Near Primary Resonance. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.0	0
47	Sensitive resonant gas sensor operating in air with metal organic frameworks coating. , 2017, , .		0
48	Smart Resonant Gas Sensor and Switch Operating in Air With Metal-Organic Frameworks Coating. , 2017, , .		0
49	MEMS Coupled Resonator for Filter Application in Air. , 2017, , .		0
50	An Electrically Actuated Microbeam-Based MEMS Device: Experimental and Theoretical Investigation. , 2017, , .		0
51	An Experimental and Theoretical Investigation of Double Resonance Activation in Electrostatic MEMS Resonators. , 2018, , .		0
52	Parallel Logics Using Multimode Excitation of a Single MEMS Resonator. , 2019, , .		0
53	A Sensitive Resonant Gas Sensor Based on Multimode Excitation of a Buckled Beam. , 2019, , .		0
54	Controlling Resonator Nonlinearities and Modes through Geometry Optimization. Micromachines, 2021, 12, 1381.	1.4	0

#	ARTICLE	IF	CITATIONS
55	High-Sensitivity Thermal Sensing Based on a Single Strain-Assisted Resonator. IEEE Sensors Journal, 2022, 22, 13921-13929.	2.4	0