Ashok Kumar Pandey

List of Publications by Year
in descending order

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Version: 2024-02-01

57	827	471061	525886
papers	citations	17	27
		h-index	g-index

60	60	60	633
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of flexural modes on squeeze film damping in MEMS cantilever resonators. Journal of Micromechanics and Microengineering, 2007, 17, 2475-2484.	1.5	102
2	Analytical solution of the modified Reynolds equation for squeeze film damping in perforated MEMS structures. Sensors and Actuators A: Physical, 2007, 135, 839-848.	2.0	53
3	Performance of an AuPd micromechanical resonator as a temperature sensor. Applied Physics Letters, 2010, 96, .	1.5	47
4	A comparative study of analytical squeeze film damping models in rigid rectangular perforated MEMS structures with experimental results. Microfluidics and Nanofluidics, 2008, 4, 205-218.	1.0	44
5	Effect of Pressure on Fluid Damping in MEMS Torsional Resonators with Flow Ranging from Continuum to Molecular Regime. Experimental Mechanics, 2008, 48, 91-106.	1.1	44
6	A semi-analytical model for squeeze-film damping including rarefaction in a MEMS torsion mirror with complex geometry. Journal of Micromechanics and Microengineering, 2008, 18, 105003.	1.5	38
7	Coupled nonlinear effects of surface roughness and rarefaction on squeeze film damping in MEMS structures. Journal of Micromechanics and Microengineering, 2004, 14, 1430-1437.	1.5	32
8	High speed silicon wet anisotropic etching for applications in bulk micromachining: a review. Micro and Nano Systems Letters, 2021, 9, .	1.7	29
9	Influence of Boundary Conditions on the Dynamic Characteristics of Squeeze Films in MEMS Devices. Journal of Microelectromechanical Systems, 2007, 16, 893-903.	1.7	27
10	Synthesis of Patterned Vertically Aligned Carbon Nanotubes by PECVD Using Different Growth Techniques: A Review. Journal of Nanoscience and Nanotechnology, 2017, 17, 2256-2273.	0.9	27
11	Coupling and tuning of modal frequencies in direct current biased microelectromechanical systems arrays. Applied Physics Letters, 2015, 107, 063104.	1.5	25
12	Surface and nonlocal effects on response of linear and nonlinear NEMS devices. Applied Mathematical Modelling, 2017, 43, 252-267.	2.2	23
13	Effect of metal coating and residual stress on the resonant frequency of MEMS resonators. Sadhana - Academy Proceedings in Engineering Sciences, 2009, 34, 651-661.	0.8	22
14	Capacitance and Force Computation Due to Direct and Fringing Effects in MEMS/NEMS Arrays. IEEE Sensors Journal, 2016, 16, 375-382.	2.4	21
15	Evaluation of Mode Dependent Fluid Damping in a High Frequency Drumhead Microresonator. Journal of Microelectromechanical Systems, 2014, 23, 334-346.	1.7	20
16	Achieving wideband micromechanical system using coupled non-uniform beams array. Sensors and Actuators A: Physical, 2018, 273, 12-18.	2.0	19
17	Pull-in analysis of non-uniform microcantilever beams under large deflection. Journal of Applied Physics, 2015, 118, .	1.1	18
18	Elastic and fracture characteristics of graphene-silicon nanosheet composites using nonlinear finite element method. International Journal of Mechanical Sciences, 2018, 142-143, 491-501.	3.6	18

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19	Effect of coupled modes on pull-in voltage and frequency tuning of a NEMS device. Journal of Micromechanics and Microengineering, 2013, 23, 085015.	1.5	15
20	Modeling of pinning phenomenon in Iwan model for bolted joint. Tribology International, 2021, 161, 107071.	3.0	15
21	An analysis of stepped trapezoidal-shaped microcantilever beams for MEMS-based devices. Journal of Micromechanics and Microengineering, 2018, 28, 075009.	1.5	12
22	Modelling transient response using PAC 2002-based tyre model. Vehicle System Dynamics, 2022, 60, 20-46.	2.2	12
23	Performance of non-uniform cantilever based piezoelectric energy harvester. ISSS Journal of Micro and Smart Systems, 2018, 7, 1-13.	1.0	11
24	Nonlinear Response of a Microbeam Under Combined Direct and Fringing Field Excitation. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	0.7	10
25	Nonlinear coupling of transverse modes of a fixedâ€“fixed microbeam under direct and parametric excitation. Nonlinear Dynamics, 2017, 87, 1271-1294.	2.7	10
26	Mass Sensitivity of Nonuniform Microcantilever Beams. Journal of Vibration and Acoustics, Transactions of the ASME, 2016, 138, .	1.0	9
27	Dynamic analysis of microbeams based on modified strain gradient theory using differential quadrature method. European Journal of Computational Mechanics, 2018, 27, 187-203.	0.6	9
28	Aging Effects of KOH+NH2OH Solution on the Etching Characteristics of Silicon. ECS Journal of Solid State Science and Technology, 2019, 8, P685-P692.	0.9	9
29	Etching Mechanism Behind the High-Speed Etching of Silicon in NH₂OH-added Alkaline Solutions. IEEJ Transactions on Sensors and Micromachines, 2020, 140, 24-30.	0.0	9
30	Modal Analysis of Monolithic and Jointed Type Cantilever Beams with Non-Uniform Section. Experimental Mechanics, 2016, 56, 1083-1094.	1.1	8
31	Design and characterization of in-plane MEMS yaw rate sensor. Sadhana - Academy Proceedings in Engineering Sciences, 2009, 34, 633-642.	0.8	7
32	Determination of precise crystallographic directions for mask alignment in wet bulk micromachining for MEMS. Micro and Nano Systems Letters, 2016, 4, .	1.7	7
33	Influence of van der Waals forces on elastic and buckling characteristics of vertically aligned carbon nanotubes. International Journal of Mechanical Sciences, 2018, 146-147, 191-199.	3.6	6
34	Experimental and Theoretical Analysis of Drag Forces in Micromechanical-Beam Arrays. Physical Review Applied, 2020, 13, .	1.5	6
35	Influence of fabrication tolerances on performance characteristics of a MEMS gyroscope. Microsystem Technologies, 2021, 27, 2679-2693.	1.2	6
36	Size modulated transition in the fluidâ€“structure interaction losses in nano mechanical beam resonators. Journal of Applied Physics, 2016, 119, .	1.1	5

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37	Determination of precise crystallographic directions on Si{111} wafers using self-aligning pre-etched pattern. Micro and Nano Systems Letters, 2018, 6, .	1.7	5
38	Frequency analysis of carbon and silicon nanosheet with surface effects. Applied Mathematical Modelling, 2019, 76, 741-758.	2.2	5
39	Frequency Analysis of Linearly Coupled Modes of MEMS Arrays. Journal of Vibration and Acoustics, Transactions of the ASME, 2016, 138, .	1.0	4
40	A measurement free pre-etched pattern to identify theÂ<110>Âdirections on Si{110} wafer. Microsystem Technologies, 2017, 23, 2131-2137.	1.2	4
41	Design and analysis of microcantilever beams based on arrow shape. Microsystem Technologies, 2019, 25, 4379-4390.	1.2	4
42	Systematic study of the etching characteristics of Si{111} in modified TMAH. Micro and Nano Letters, 2020, 15, 52-57.	0.6	4
43	High speed etching of silicon in KOH + NH 2 OH solution at lower temperatures for the fabrication of through holes in silicon wafer. Micro and Nano Letters, 2020, 15, 365-369.	0.6	4
44	Vibration Analysis of a Tire Under Static Loading Using Flexible Ring-Based Model. Journal of Vibration and Acoustics, Transactions of the ASME, 2021, 143, .	1.0	4
45	A Hybrid Approach to Model the Temperature Effect in Tire Forces and Moments. SAE International Journal of Passenger Cars - Mechanical Systems, 0, 10, 25-37.	0.4	3
46	Frequency tuning of weakly and strongly coupled micromechanical beams. ISSS Journal of Micro and Smart Systems, 2020, 9, 117-130.	1.0	3
47	Effect of concentration change of 0.1% triton added 25Âwt% TMAH during fabrication of deep cavities with mesa structures in SOI wafer. Microelectronic Engineering, 2020, 227, 111323.	1.1	3
48	An idea of oscillating alphabets through mechanical coupling. ISSS Journal of Micro and Smart Systems, 2018, 7, 145-150.	1.0	2
49	Influence of scalloping on electrostatic forces in comb drive microdevices. ISSS Journal of Micro and Smart Systems, 2019, 8, 127-134.	1.0	2
50	Arrow Shaped Microcantilever Beams for Enhancing Mass Sensitivity. , 2018, , .		1
51	Frequency analysis of hexagonal microbeam with 2D nanofiber mat. Materials Research Express, 2019, 6, 085631.	0.8	1
52	High Speed Silicon Wet Bulk Micromachining of Si{111} in KOH Based Solution. , 2020, , .		1
53	Compact modeling of inertial and rarefaction effects on quality factor of MEMS torsional structures in continuum to molecular flows under low operating frequencies. , 2008, , .		0
54	Electrostatic forces in fixed-fixed microbeams under direct and fringing field effects. , 2014, , .		0

#	Article	IF	Citations
55	Nonlinear Analysis of Shape Memory Devices With Duffing and Quadratic Oscillators. Journal of Computational and Nonlinear Dynamics, 2018, 13, .	0.7	0
56	Microstructures with Protected Convex Corners in Modified KOH Solution Exhibiting High-Speed Silicon Etching. , 2018, , .		0
57	Comparative study of perforated microcantilevers for MEMS applications. , 2021, , .		0