

Dong F Wang

List of Publications by Year in descending order

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120
papers

988
citations

361413
20
h-index

552781
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all docs

120
docs citations

120
times ranked

371
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal treatments and gas adsorption influences on nanomechanics of ultra-thin silicon resonators for ultimate sensing. <i>Nanotechnology</i> , 2004, 15, 1851-1854.	2.6	54
2	Mode localization analysis and characterization in a 5-beam array of coupled nearly identical micromechanical resonators for ultra-sensitive mass detection and analyte identification. <i>Microsystem Technologies</i> , 2012, 18, 1923-1929.	2.0	39
3	Passive piezoelectric DC sensor applicable to one-wire or two-wire DC electric appliances for end-use monitoring of DC power supply. <i>Microsystem Technologies</i> , 2012, 18, 1897-1902.	2.0	37
4	Time dependence of energy dissipation in resonating silicon cantilevers in ultrahigh vacuum. <i>Applied Physics Letters</i> , 2003, 83, 1950-1952.	3.3	32
5	A mass multi-warning scheme based on one-to-three internal resonance. <i>Mechanical Systems and Signal Processing</i> , 2020, 142, 106784.	8.0	31
6	Passive piezoelectric single-side MEMS DC current sensor with five parallel PZT plates applicable to two-wire DC electric appliances without using cord separator. <i>Microsystem Technologies</i> , 2013, 19, 923-927.	2.0	29
7	Effect of coating thickness on friction for carbon nitride films in repeated sliding against a spherical diamond with nano-scale asperities. <i>Wear</i> , 2002, 252, 210-219.	3.1	28
8	Crystallographic influence on nanomechanics of (100)-oriented silicon resonators. <i>Applied Physics Letters</i> , 2003, 83, 3189-3191.	3.3	28
9	Integrated piezoelectric direct current sensor with actuating and sensing elements applicable to two-wire dc appliances. <i>Measurement Science and Technology</i> , 2013, 24, 125109.	2.6	27
10	Passive MEMS DC Electric Current Sensor: Part I – Theoretical Considerations. <i>IEEE Sensors Journal</i> , 2017, 17, 1230-1237.	4.7	27
11	A spring-assisted adaptive bistable energy harvester for high output in low-excitation. <i>Microsystem Technologies</i> , 2018, 24, 3579-3588.	2.0	27
12	Enhancing amplitude changes by mode localization in trio cantilevers with mass perturbation. <i>Journal of Micromechanics and Microengineering</i> , 2015, 25, 095017.	2.6	26
13	Developing integrated piezoelectric direct current sensor with actuating and sensing elements. <i>Micro and Nano Letters</i> , 2013, 8, 858-860.	1.3	25
14	Passive MEMS DC Electric Current Sensor: Part II – Experimental Verifications. <i>IEEE Sensors Journal</i> , 2017, 17, 1238-1245.	4.7	24
15	Internal resonance in coupled oscillators – Part I: A double amplification mass sensing scheme without Duffing nonlinearity. <i>Mechanical Systems and Signal Processing</i> , 2021, 159, 107886.	8.0	23
16	Improving picogram mass sensitivity via frequency doubling in coupled silicon micro-cantilevers. <i>Journal of Micromechanics and Microengineering</i> , 2016, 26, 015006.	2.6	21
17	A passive DC current sensing methodology. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	21
18	Analytical study on cantilever resonance type magnet-integrated sensor device for micro-magnetic field detection. <i>Microsystem Technologies</i> , 2015, 21, 1167-1172.	2.0	20

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19	Position and orientation correction scheme for current sensing based on magnetic piezoelectric cantilevers. Applied Physics Letters, 2017, 110, .	3.3	20
20	Internal Resonance Phenomena in Coupled Ductile Cantilevers With Triple Frequency Ratio“Part I: Experimental Observations. IEEE Sensors Journal, 2019, 19, 5475-5483.	4.7	20
21	Multiplication in Frequencies by Synchronized and Superharmonic Oscillations: Sensing Verification With Picogram Order Microspheres. IEEE Sensors Journal, 2015, 15, 4464-4471.	4.7	19
22	Internal Resonance Phenomena in Coupled Ductile Cantilevers With Triple Frequency Ratio-Part II: A Mass Sensitivity Amplification Schemes. IEEE Sensors Journal, 2019, 19, 5484-5492.	4.7	18
23	Quantitative Identification Scheme for Multiple Analytes With a Mode-Localized Cantilever Array. IEEE Sensors Journal, 2019, 19, 484-491.	4.7	17
24	Internal resonance in coupled oscillators “ Part II: A synchronous sensing scheme for both mass perturbation and driving force with duffing nonlinearity. Mechanical Systems and Signal Processing, 2021, 160, 107887.	8.0	16
25	Micromechanically-coupled resonated system for synchronized oscillation with improved phase noise. , 2010, , .		15
26	Development of a MEMS DC electric current sensor applicable to two-wire electrical appliance cord. , 2011, , .		15
27	Developing passive MEMS DC/AC current sensor applicable to two-wire appliances with high measurement accuracy. Journal of Applied Physics, 2016, 120, 164506.	2.5	15
28	Synchronous identification and successive detection of multiple traces with tunable coupling oscillators. Mechanical Systems and Signal Processing, 2022, 166, 108395.	8.0	15
29	A temperature compensation methodology for piezoelectric based sensor devices. Applied Physics Letters, 2017, 111, .	3.3	14
30	A mosquito-inspired self-adaptive energy harvester for multi-directional vibrations. Applied Energy, 2022, 315, 119040.	10.1	13
31	An adjustable pre-stress based sensitivity enhancement scheme for cantilever-based resonant sensors. Mechanical Systems and Signal Processing, 2021, 146, 107002.	8.0	12
32	Vibration mode localization in coupled beam-shaped resonator array. , 2012, , .		10
33	Electrical and mechanical performance difference on piezoelectric segmentation in a passive MEMS DC current sensor applicable to two-wire DC appliances. Measurement Science and Technology, 2017, 28, 015101.	2.6	10
34	Analytical study on effect of piezoelectric patterns on frequency shift and support loss in ring-shaped resonators for biomedical applications. Microsystem Technologies, 2017, 23, 2899-2909.	2.0	10
35	Tribological evaluation of carbon coatings with and without nitrogen incorporation applicable to MicroElectroMechanical systems. Sensors and Actuators A: Physical, 2001, 93, 251-257.	4.1	9
36	Synchronized oscillation in micro mechanically coupled opposite C-shaped cantilever-based oscillator system. , 2011, , .		9

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37	Analytical study on effect of ring geometry on frequency shift of piezoelectric ring-shaped resonator. <i>Microsystem Technologies</i> , 2012, 18, 773-778.	2.0	9
38	Analytical studies on amplitude change enhancement in coupled aluminium nitride coated single crystal silicon oscillator pair applicable to ultra-sensitive resonating microfluidic flowmeters. <i>Micro and Nano Letters</i> , 2013, 8, 609-613.	1.3	9
39	A Ball-Impact Piezoelectric Converter Wrapped by Copper Coils. <i>IEEE Nanotechnology Magazine</i> , 2018, 17, 723-726.	2.0	9
40	Synchronized Cu-Cantilever Structure for Kinetic Friction Characterization. <i>IEEE Sensors Journal</i> , 2018, 18, 7375-7382.	4.7	9
41	A black gauze cap-shaped bistable energy harvester with a movable design for broadening frequency bandwidth. <i>Smart Materials and Structures</i> , 2020, 29, 025015.	3.5	9
42	Magnetic mesa structures fabricated by reactive ion etching with CO/NH ₃ /Xe plasma chemistry for an all-silicon quantum computer. <i>Nanotechnology</i> , 2005, 16, 990-994.	2.6	8
43	An analytical study of the effect of a support geometry on frequency shift and support loss of piezoelectric ring-shaped resonators for healthcare and environmental applications. <i>Microsystem Technologies</i> , 2013, 19, 503-508.	2.0	8
44	Analytical study of coupling element effect on anchor-limited quality factor in double beam array based sensing devices. <i>Microsystem Technologies</i> , 2018, 24, 1615-1622.	2.0	8
45	A printable trapezoid-structured UWB micro-strip antenna applicable to MEMS wireless sensor networks. <i>Microsystem Technologies</i> , 2018, 24, 2499-2506.	2.0	7
46	A passive AC/DC current sensing methodology for diverse multiline cables. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	7
47	Noninvasive Passive Measurement of Multiphase Currents in IoT. <i>IEEE Transactions on Industrial Electronics</i> , 2021, 68, 12860-12870.	7.9	7
48	Autoparametric Internal Resonance in Coupled Oscillator: An Excitation Amplitude Insensitive Mass Sensing Scheme With a Roof Tilting. <i>IEEE Sensors Journal</i> , 2022, 22, 1998-2005.	4.7	7
49	Ring-shaped PZT Film Resonator for Bio-sensing Applications in Liquid Environment. <i>Procedia Engineering</i> , 2011, 25, 443-446.	1.2	6
50	Effect of nonlinear vibration on double region of synchronized frequency responses in mechanically coupled beam-shaped oscillator system. , 2012, , .		6
51	A Passive Field Conversion- Amplification Scheme: Demonstrated by Integrating a Magnetic Cantilever With a TMR for Current Monitoring. <i>IEEE Transactions on Industrial Electronics</i> , 2022, 69, 5295-5303.	7.9	6
52	A Low 1/f Noise Tunnel Magnetoresistance Accelerometer. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-11.	4.7	6
53	Wireless electric current sensing via integrating a magnetic- piezoelectric cantilever with a microstrip antenna. <i>Micro and Nano Letters</i> , 2017, 12, 871-874.	1.3	5
54	Localized trio cantilevers for identifying different mass perturbations. <i>Microsystem Technologies</i> , 2019, 25, 2993-3003.	2.0	5

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55	A Detection Error Correction Scheme Aiming at Gradient Nonlinear Problem in Cantilever-Based Sensors. IEEE Sensors Journal, 2019, 19, 11797-11804.	4.7	5
56	Integrated piezoelectric direct current sensor with actuating and sensing elements applicable to two-wire dc appliances: theoretical considerations. Measurement Science and Technology, 2019, 30, 025101.	2.6	5
57	Bistable Current Sensing Scheme Applicable to Two-Wire DC Appliances. IEEE Sensors Journal, 2019, 19, 2039-2046.	4.7	5
58	Effect of geometrical design of support on frequency shift and energy loss of piezoelectric ring resonator applicable to liquid circumstance. , 2012, , .		4
59	Synchronized oscillation in micro-mechanically coupled oscillator system: Part III - optimization of polymer-based structures applicable to gas molecule sensing. , 2016, , .		4
60	A Design Deviation Decreasing Methodology: Verified With a Piezoelectric Current Sensor. IEEE Sensors Journal, 2019, 19, 11120-11128.	4.7	4
61	Amplitude Difference Changes-Based Metrological Scheme for Force Detection in a Mode-Localized 5-Beam Array. IEEE Sensors Journal, 2020, 20, 2877-2884.	4.7	4
62	A Spider-Web Design for Decreasing Eigen-Frequency With Increasing Amplitude in a PE/ME Composite Energy Convertor. IEEE Transactions on Industrial Electronics, 2021, 68, 5396-5404.	7.9	4
63	A Virtual-Movement Scheme for Eliminating Spot-Positioning Errors Applicable to Quadrant Detectors. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	4.7	4
64	Optimization of Piezoelectric Pattern Design in Ring-shaped Resonators for Health-care and Environmental Applications. Procedia Engineering, 2015, 120, 528-531.	1.2	3
65	Developing Biometric Passive Recognition Sensor Applicable to Wearable Devices: Part I - A Novel Structural Design for Achieving Three Dimensional Images. Procedia Engineering, 2016, 168, 1747-1750.	1.2	3
66	Mode-localized cantilever array for picogram order mass sensing. , 2017, , .		3
67	Localization in coupled systems: Part II " Consideration on damping issue in a mode-localized cantilever array. , 2017, , .		3
68	Study of crescent shaped alignment marks applicable to self-alignment of micro-parts with and without positive and negative poles. Microsystem Technologies, 2012, 18, 1843-1848.	2.0	2
69	Resonating Characterization of Piezoelectric Fibers Applicable to Flexible Self-powered Fabric. Procedia Engineering, 2015, 120, 1028-1031.	1.2	2
70	Developing MEMS DC electric current sensor for end-use monitoring of DC power supply: Part V - corresponding relationship between polarization and output voltage. , 2015, , .		2
71	Precise current sensing using a piezoelectric cantilever based current sensor. , 2017, , .		2
72	Mode-localized trio cantilever array for picogram order mass sensing. , 2017, , .		2

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73	Developing Self-powered High Performance Sensors: Part II - Preliminary Study On PE-ME Coupling In A Vibration Energy Convertor. , 2020, , .		2
74	Widening frequency bandwidth with parametric coupling in a wings-inspired low frequency MEMS energy harvester. Energy Conversion and Management, 2022, 267, 115924.	9.2	2
75	Characterization of super-harmonic effect using piezoelectric film cantilever with a proof mass in the point. , 2012, , .		1
76	Fabrication of nanogap electrode using electromigration method during metal deposition. , 2012, , .		1
77	Mode localization in coupled AlN/SCS cantilevers for highly sensitive resonating flow meter. , 2013, , .		1
78	Crescent shaped patterns for self-alignment of micro-parts: Part II — Self-alignment demonstration and conductivity evaluation. , 2014, , .		1
79	A hybrid converter for scavenging low-frequency vibration energy. , 2017, , .		1
80	A passive position- and pose-free current sensor. , 2017, , .		1
81	Developing biometric passive recognition sensor applicable to wearable devices: Part II “ Preliminary verification with a shuttle roller coaster structure. , 2017, , .		1
82	Developing MEMS DC electric current sensor for end-use monitoring of DC power supply: Part VI “ Corresponding relationship between sensitivity and magnetic induction. , 2017, , .		1
83	Excitation Circuit Design and Theoretical Model for Self-Oscillating Fluxgate Current Sensors Considering Mutual Inductance Effect. , 2018, , .		1
84	A Bistable Piezoelectric Energy Harvester for Broadening Frequency Bandwidth. , 2018, , .		1
85	Manufacture of microfluidic chips using a gap-control method based on traditional 3D printing technique. Microsystem Technologies, 2019, 25, 1043-1050.	2.0	1
86	An economic and concise method to solve nozzle clogging issue during electro hydrodynamic printing. International Journal of Modern Physics B, 2019, 33, 1950260.	2.0	1
87	A high accuracy fluxgate DC current sensor applicable to two-wire electric appliances. Microsystem Technologies, 2019, 25, 877-885.	2.0	1
88	505 Fabrication of micro and nanostructures using self-assembly. The Proceedings of Ibaraki District Conference, 2009, 2009, 127-128.	0.0	1
89	712 A Novel Design of Two-dimensional Modified Patterns for Self-alignment Based on A Capillary Effect. The Proceedings of Ibaraki District Conference, 2010, 2010.18, 199-200.	0.0	1
90	Coupling element effect on anchor-limited Q in a synchronized oscillator with a Î€-shaped cantilever design. Microsystem Technologies, 2022, 28, 985-993.	2.0	1

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91	716 Design and Theoretical Study of Piezoelectric Fabric Made up of Coil Fibers with Core-shell Structure. The Proceedings of Ibaraki District Conference, 2010, 2010.18, 207-208.	0.0	0
92	Analysis and design of magnetic mesa-structure array for ensemble detection applications of nuclear spins. , 2011, , .		0
93	Self-alignment observation and conductivity evaluation in micro chips integration with square binding pattern. Microsystem Technologies, 2015, 21, 1203-1208.	2.0	0
94	Passive MEMS DC Electric Current Sensors. Toxinology, 2018, , 1-31.	0.2	0
95	A Shuttle Roller Coaster Design for Three-Dimensional Imaging With High Spatial Resolution Applicable to Vein Recognition. IEEE Sensors Journal, 2018, 18, 4286-4292.	4.7	0
96	Passive MEMS DC Electric Current Sensors. Micro/Nano Technologies, 2018, , 625-655.	0.1	0
97	Oscillation in Coupled Resonator Systems: Part V â€œ Exploratory Study on Separate Detection of Two Kinds of Perturbations. , 2019, , .		0
98	Developing MEMS Electric Current Sensors for End-use Monitoring of Power Supply: Part IX â€œ Threshold-Triggered Current Sensing. , 2019, , .		0
99	THE STUDY ON THE O2 PLASMA TREATMENT FOR BONDING OF SU-8 LAYERS. Surface Review and Letters, 2020, 27, 1950119.	1.1	0
100	A high-frequency narrow-band filtering mechanism based on auto-parametric internal resonance. , 2021, , .		0
101	Internal Resonant Oscillation in Coupled Resonators for High-resolution Mass Sensing with A Wider Coupling Range. , 2021, , .		0
102	Developing MEMS Electric Current Sensors for End-use Monitoring of Power Supply: Part X â€œ An IEEE802.11g Protocol Compliant Integratable Dual-frequency Coaxial Microstrip Antenna. , 2021, , .		0
103	Developing MEMS Electric Current Sensors for End-use Monitoring of Power Supply: Part XI - A Nonlinear Error Correction Scheme. , 2021, , .		0
104	504 Crystallographic orientations and thermal treatments influences on nanomechanics of ultra-thin single crystal silicon (SCS) resonators for ultimate sensing. The Proceedings of Ibaraki District Conference, 2009, 2009, 125-126.	0.0	0
105	503 Micro fabrication of magnetic materials by pattern transfer of hard Films. The Proceedings of Ibaraki District Conference, 2009, 2009, 123-124.	0.0	0
106	708 A Micromechanically-coupled Opposite C Type Synchronized Oscillator : Structural Design and Micro-fabrication. The Proceedings of Ibaraki District Conference, 2010, 2010.18, 189-190.	0.0	0
107	713 Gas Adsorption Influence on Nano-mechanical Properties of Ultra-thin Silicon Resonators for Ultimate Sensing. The Proceedings of Ibaraki District Conference, 2010, 2010.18, 201-202.	0.0	0
108	714 Development of A MEMS DC Sensor for Electricity Eng-use Monitoring. The Proceedings of Ibaraki District Conference, 2010, 2010.18, 203-204.	0.0	0

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109	805 Investigation of Vibration Mode Localization Using Micro-mechanically Coupled Beam-shaped Resonator Array. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 213-214.	0.0	0
110	808 Design and Fabrication of Prototype Polymeric-generator Applicable to Flexible Self-powered Fabric. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 219-220.	0.0	0
111	803 Development of Cantilever Resonance Type Magnetic Sensor with Micro Magnet. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 209-210.	0.0	0
112	802 Development of A Ring-shaped PZT Film Resonator for Health Care and Environmental Applications. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 207-208.	0.0	0
113	806 Investigation of Super-harmonic Effect Using Piezoelectric Film Cantilever. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 215-216.	0.0	0
114	804 Development of A MEMS DC Sensor for Electricity End-use Monitoring (Part II). The Proceedings of Ibaraki District Conference, 2011, 2011.19, 211-212.	0.0	0
115	807 Fabrication of Nanogap Electrode using Low-Current Electromigration Method. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 217-218.	0.0	0
116	801 Structural Design and Micro Fabrication of A Coupled Beam-shaped Synchronized Oscillator. The Proceedings of Ibaraki District Conference, 2011, 2011.19, 205-206.	0.0	0
117	1019 Development of Glass Micro-channel Reactor with Catalytic Packed-beds for On-site Chemical Process Using. The Proceedings of Ibaraki District Conference, 2012, 2012.20, 307-308.	0.0	0
118	1017 Deposition of Micro-scale SnO ₂ Particles Association of Nanoparticles by Electro spray Method. The Proceedings of Ibaraki District Conference, 2012, 2012.20, 303-304.	0.0	0
119	Displacement Visualization at Flexible Interface: A Coordinate Correction Scheme Applicable to High-Accuracy Pressure Distribution Mapping. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-8.	4.7	0
120	Coupling element effect on support loss of coupled oscillators for mass and analyte sensing applications. Microsystem Technologies, 2022, 28, 1663-1671.	2.0	0