

Guo-Hua Feng

List of Publications by Year in descending order

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87
papers

976
citations

516710
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all docs

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docs citations

87
times ranked

866
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of ball screw preload variation based on dynamic modeling of a preload adjustable feed-drive system and spectrum analysis of ball-nuts sensed vibration signals. <i>International Journal of Machine Tools and Manufacture</i> , 2012, 52, 85-96.	13.4	118
2	Micropump based on PZT unimorph and one-way parylene valves. <i>Journal of Micromechanics and Microengineering</i> , 2004, 14, 429-435.	2.6	98
3	Piezoelectrically actuated dome-shaped diaphragm micropump. <i>Journal of Microelectromechanical Systems</i> , 2005, 14, 192-199.	2.5	58
4	Micromachined optical fiber enclosed 4-electrode IPMC actuator with multidirectional control ability for biomedical application. <i>Biomedical Microdevices</i> , 2011, 13, 169-177.	2.8	50
5	Acoustic emission sensor with structure-enhanced sensing mechanism based on micro-embossed piezoelectric polymer. <i>Sensors and Actuators A: Physical</i> , 2010, 162, 100-106.	4.1	45
6	Fabrication of MEMS ZnO dome-shaped-diaphragm transducers for high-frequency ultrasonic imaging. <i>Journal of Micromechanics and Microengineering</i> , 2005, 15, 586-590.	2.6	39
7	Establishing a cost-effective sensing system and signal processing method to diagnose preload levels of ball screws. <i>Mechanical Systems and Signal Processing</i> , 2012, 28, 78-88.	8.0	37
8	Fabrication and characterization of arbitrary shaped $\frac{1}{4}$ IPMC transducers for accurately controlled biomedical applications. <i>Sensors and Actuators A: Physical</i> , 2008, 143, 34-40.	4.1	35
9	Flexible meniscus/biconvex lens system with fluidic-controlled tunable-focus applications. <i>Applied Optics</i> , 2009, 48, 3284.	2.1	26
10	A self-strain feedback tuning-fork-shaped ionic polymer metal composite clamping actuator with soft matter elasticity-detecting capability for biomedical applications. <i>Materials Science and Engineering C</i> , 2014, 45, 241-249.	7.3	21
11	Investigation of tactile bump array actuated with ionic polymer-metal composite cantilever beams for refreshable braille display application. <i>Sensors and Actuators A: Physical</i> , 2018, 275, 137-147.	4.1	21
12	Development of wide frequency range-operated micromachined piezoelectric generators based on figure-of-merit analysis. <i>Microsystem Technologies</i> , 2008, 14, 419-425.	2.0	19
13	Piezoelectric-film-based acoustic emission sensor array with thermoactuator for monitoring knee joint conditions. <i>Sensors and Actuators A: Physical</i> , 2016, 246, 180-191.	4.1	18
14	PZT and PNIPAM Film-Based Flexible and Stretchable Electronics for Knee Health Monitoring and Enhanced Drug Delivery. <i>IEEE Sensors Journal</i> , 2018, 18, 9736-9743.	4.7	18
15	A Spherically-Shaped PZT Thin Film Ultrasonic Transducer with an Acoustic Impedance Gradient Matching Layer Based on a Micromachined Periodically Structured Flexible Substrate. <i>Sensors</i> , 2013, 13, 13543-13559.	3.8	16
16	Piezoelectric Micromachined Ultrasonic Transducers with a Cost-Effective Bottom-Up Fabrication Scheme for Millimeter-Scale Range Finding. <i>Sensors</i> , 2019, 19, 4696.	3.8	16
17	Improved cost-effective fabrication of arbitrarily shaped $\frac{1}{4}$ IPMC transducers. <i>Journal of Micromechanics and Microengineering</i> , 2008, 18, 015016.	2.6	15
18	Micromachined lead zirconium titanate thin-film-cantilever-based acoustic emission sensor with poly(N-isopropylacrylamide) actuator for increasing contact pressure. <i>Smart Materials and Structures</i> , 2016, 25, 055046.	3.5	15

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19	Hydrothermally synthesized PZT film grown in highly concentrated KOH solution with large electromechanical coupling coefficient for resonator. <i>Royal Society Open Science</i> , 2017, 4, 171363.	2.4	15
20	Fabrication and characterization of thermally driven fast turn-on microvalve with adjustable backpressure design. <i>Microelectronic Engineering</i> , 2011, 88, 187-194.	2.4	14
21	A micromachined, high signal-to-noise ratio, acoustic emission sensor and its application to monitor dynamic wear. <i>Sensors and Actuators A: Physical</i> , 2012, 188, 56-65.	4.1	14
22	Simple-structured capillary-force-dominated tunable-focus liquid lens based on the higher-order-harmonic resonance of a piezoelectric ring transducer. <i>Applied Optics</i> , 2013, 52, 829.	1.8	14
23	Fabrication and Characterization of a Micromachined Swirl-Shaped Ionic Polymer Metal Composite Actuator with Electrodes Exhibiting Asymmetric Resistance. <i>Sensors</i> , 2014, 14, 8380-8397.	3.8	14
24	An arc-shaped polyvinylidene fluoride/ionic polymer metal composite dynamic curvature sensor with contact detection and scanning ability. <i>Sensors and Actuators A: Physical</i> , 2014, 208, 130-140.	4.1	14
25	Numerical study on dynamic characteristics of micromachined ionic polymer metal composite devices based on molecular-scale modeling. <i>Computational Materials Science</i> , 2010, 50, 158-166.	3.0	13
26	A piezoelectric dome-shaped-diaphragm transducer for microgenerator applications. <i>Smart Materials and Structures</i> , 2007, 16, 2636-2644.	3.5	12
27	Optimal FOM Designed Piezoelectric Microgenerator with Energy Harvesting in a Wide Vibration Bandwidth. , 2007, , .		12
28	Investigation of electrical to mechanical energy conversion of a three-dimensional four-electrode multidirectional-controllable IPMC transducer with/without an optical fiber enclosed. <i>Smart Materials and Structures</i> , 2011, 20, 015027.	3.5	12
29	Three-dimensional multielectrode-controlled two orthogonal direction bendable IPMC actuator with an active clasp. <i>Polymer Engineering and Science</i> , 2013, 53, 2004-2017.	3.1	12
30	A PZT-driven atomizer based on a vibrating flexible membrane and a micro-machined trumpet-shaped nozzle array. <i>Microsystem Technologies</i> , 2009, 15, 865-873.	2.0	9
31	A room-temperature processed parylene-patterned helical ionic polymer-metal composite spring actuator with selectable active region. <i>Smart Materials and Structures</i> , 2014, 23, 045002.	3.5	9
32	Double-section curvature tunable functional actuator with micromachined buckle and grid wire for electricity delivery. <i>Smart Materials and Structures</i> , 2015, 24, 095010.	3.5	9
33	Examining the misalignment of a linear guideway pair on a feed drive system under different ball screw preload levels with a cost-effective MEMS vibration sensing system. <i>Precision Engineering</i> , 2017, 50, 467-481.	3.4	9
34	Fabrication and characterization of optofluidic flexible meniscus-biconvex lens system. <i>Sensors and Actuators A: Physical</i> , 2009, 156, 342-349.	4.1	8
35	PZT-based concave diaphragm transducer with compliant supporting layer for releasing residual stress. <i>Microelectronic Engineering</i> , 2011, 88, 3199-3206.	2.4	8
36	Investigation on the Mechanical and Electrical Behavior of a Tuning Fork-Shaped Ionic Polymer Metal Composite Actuator with a Continuous Water Supply Mechanism. <i>Sensors</i> , 2016, 16, 433.	3.8	8

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37	Magnetic-repulsion-coupled piezoelectric-film-based stretchable and flexible acoustic emission sensor. <i>Smart Materials and Structures</i> , 2020, 29, 035027.	3.5	7
38	PZT bimorph actuated atomizer based on higher order harmonic resonance and reduced operating pressure. <i>Sensors and Actuators A: Physical</i> , 2007, 136, 434-440.	4.1	6
39	3D omnidirectional controllable elastic IPMC tweezer with self-sensing and adjustable clamping force abilities for biomedical applications. , 2011, , .		6
40	Micromachined flexible diaphragm backed PZT ultrasonic transducer with a controllable self-focused acoustic beam. <i>Measurement Science and Technology</i> , 2011, 22, 125204.	2.6	6
41	Micromanipulation tool replaceable soft actuator with gripping force enhancing and output motion converting mechanisms. , 2015, , .		6
42	Arch-Shaped Ionic Polymer-Metal Composite Actuator Integratable With Micromachined Functional Tools for Micromanipulation. <i>IEEE Sensors Journal</i> , 2016, 16, 7109-7115.	4.7	6
43	Hand Gesture Detection and Recognition Using Spectrogram and Image Processing Technique with a Single Pair of Ultrasonic Transducers. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 5407.	2.5	6
44	Universal concept for fabricating micron to millimeter sized 3-D parylene structures on rigid and flexible substrates. , 0, , .		5
45	Barium titanate piezoelectric-film-based beam-array airflow sensor for wearable breath-monitoring application. <i>Journal of Micromechanics and Microengineering</i> , 2022, 32, 015009.	2.6	5
46	Quartz crystal microbalance biochip with ultrasonic standing wave enhancement. <i>Sensors and Actuators B: Chemical</i> , 2010, 150, 601-608.	7.8	4
47	Fabrication of piezoelectric components for a tunable and efficient device for DNA delivery into mammalian cells. <i>Ultrasonics Sonochemistry</i> , 2014, 21, 819-825.	8.2	4
48	A digital tactile actuator array with normal and shear contact force controllability for refreshable Braille display application. , 2015, , .		4
49	Universal Concept for Fabricating Arbitrary Shaped 1/4IPMC Transducers and Its Application on Developing Accurately Controlled Surgical Devices. , 2007, , .		3
50	Self-powered high signal-to-noise ratio acoustic emission sensor and its demonstration on detecting dynamic friction variation. , 2011, , .		3
51	Piezoelectric Micromachined Ultrasonic Transducer with a Universal Bottom-Up Fabrication Approach Implemented on a Foil as Doppler Radar for Gesture Recognition. , 2019, , .		3
52	Development of 3D 4-electrode IPMC actuator with accurate omnidirectional control ability for microendoscopic surgical application. , 2009, , .		2
53	An eyeball-like biconvex/meniscus lens optical system with fluidic-controlled focus for tunable lens applications. , 2009, , .		2
54	Nonspecific binding removal and specific binding regeneration using longitudinal acoustic waves. <i>RSC Advances</i> , 2013, 3, 16159.	3.6	2

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55	A droplet-based piezoelectric concave diaphragm biosensor with self-enhancing functionality for label-free detection of protein-ligand interactions. <i>Sensors and Actuators B: Chemical</i> , 2013, 182, 809-817.	7.8	2
56	A smart acoustic emission and mechanical impedance hybrid sensor with static force detecting and dynamic measuring capabilities. , 2013, , .		2
57	Electroactive polymer actuated gripper enhanced with iron oxide nanoparticles and water supply mechanism for millimeter-sized fish roe manipulation. , 2017, , .		2
58	Electroactive polymer-based inner vessel-wall pressure transducer capable of integration with a PTA balloon catheter for examining blood vessel health. <i>Materials Science and Engineering C</i> , 2020, 114, 111047.	7.3	2
59	Sound Pressure and Bandwidth Enhanced PMUT with Volume Controllable Helmholtz Resonator for Respiratory Monitoring. , 2021, , .		2
60	Development of Tuning Fork-shaped Clamps with Nickel-electroded Ionic Polymer Metal Composites. <i>International Journal of Automation and Smart Technology</i> , 2012, 2, 55-62.	0.4	2
61	Universal concept for fabricating arbitrary shaped μIPMC transducers and its application on developing accurately controlled surgical devices. , 2007, , .		1
62	Development of structure enhanced micromachined acoustic emission sensors with wide-bandwidth and improved sensitivity. , 2009, , .		1
63	Green vehicle shock absorber: Micromachined wavy shaped piezoelectric cushion energy harvester and its power generating demonstration based on real navigation. , 2011, , .		1
64	Lab on a soft robot: Electrically controlled tuning fork shaped IPMC clamping actuator with ultrasonic imaging and displacement self-detecting capabilities. , 2013, , .		1
65	A tactile function embedded flexible dynamic curvature sensor with rotational scanning detection ability. , 2013, , .		1
66	A biomimetic soft robotic arm for dynamic curvature/haptic sensing with self-power generation ability. , 2014, , .		1
67	Flexible acoustic emission sensor array with thermoresponsive actuator enhancing sensitivity for monitoring osteoarthritis. , 2015, , .		1
68	A tentacle-like double section curvature tunable actuator with light guiding/drug delivery ability for biomedical applications. , 2015, , .		1
69	Multisection bendable ring-buckle-type soft actuator with phase control ability for artificial esophagus applications. , 2017, , .		1
70	Stretchable smart patch: Serpentine network connected functional node array with enhanced acoustic emission detectability and thermo-activated drug delivery functions. , 2017, , .		1
71	An Out-of-Plane Operated Soft Engine Driving Stretchable Zone Plate for Adjusting Focal Point of an Ultrasonic Beam. <i>Sensors</i> , 2019, 19, 3819.	3.8	1
72	Built-in Temperature Detecting System for Diagnosing Ball-Screw Preload Variation of a Feed Drive System. <i>Sensor Letters</i> , 2012, 10, 1131-1136.	0.4	1

#	ARTICLE	IF	CITATIONS
73	Smart Tape For Monitoring Human Joint Motion and Sweat with Unique Stiffness Design of Piezoelectric Sensing Mechanism in Stretching and Bending Motion. , 2022, , .		1
74	Fabrication of MEMS ZnO dome-shaped-diaphragm transducers for high frequency ultrasonic imaging. , 0, , .		0
75	Frequency controlled ultrasonic microfluidic chip for rapid particle manipulation. , 2011, , .		0
76	Development of PZT-based ultrasonic concave diaphragm transducer with engineerable acoustic beam focal range. , 2011, , .		0
77	Gold nanoparticles immobilized quartz crystal microbalance biochip with ultrasonic standing wave enhancement for real-time sensing protein-ligand interaction. , 2011, , .		0
78	Acoustic energy driven focus-tunable liquid microlens array for Shack-Hartmann wavefront sensor application. , 2012, , .		0
79	Fabrication of arbitrary curvature focused PZT thin film ultrasonic transducer with tunable acoustic impedance based on micropatterned flexible substrate. , 2012, , .		0
80	Residual-stress-balanced piezoelectric film based direction sensitive flow shear-stress sensor for quadcopter navigation. , 2017, , .		0
81	PTA balloon catheter integrated electroactive polymer transducer for sensing vascular blockage and disturbing vessel plaques. , 2017, , .		0
82	Smart Material Constructed Flexible and Stretchable Electronics for Knee Joint Health Monitoring and Improved Drug Delivery. , 2018, , .		0
83	Double Functional Piezoelectric Film Based Stretchable and Flexible Acoustic Emission Sensor with Unique Magnetic Repulsion Sensing Enhancement and Contact Force Self-Detectability. , 2019, , .		0
84	Out-of-Plane Long-Range Operated Soft Engine with Driving Stretchable Zone Plate and Led Abilities for Tunable Focused Therapeutic Ultrasonic and Infrared Heating Applications. , 2019, , .		0
85	Piezoelectrically and Capacitively Integrated Wearable Device with Stretchable Ability for Monitoring Rapid Change in Gait and Precisely Step Counting. , 2021, , .		0
86	Micromachined Transformer-Type Tunable Inductor for RF/Microwave Applications. Advanced Science Letters, 2012, 8, 247-251.	0.2	0
87	Pressure Enhancing and Operating Frequency Tunable Pmut with Compressible Parylene Helmholtz Resonating Chamber and Active Backing Plate. , 2022, , .		0