## Libo Zhao

## List of Publications by Year in descending order

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		331670	434195
148	1,496	21	31
papers	citations	h-index	g-index
148	148	148	1237
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	A high-resolution electric field sensor based on piezoelectric bimorph composite. Smart Materials and Structures, 2022, 31, 025008.	3.5	5
2	Coupling Effects of Crosstalk and Parasitic Loss on Capacitive Micromachined Ultrasonic Transducers. IEEE Sensors Journal, 2022, 22, 3281-3297.	4.7	4
3	Research on the High Temperature and High Pressure Gold-Plated Fiber Grating Dual-Parameter Sensing Measurement System. Micromachines, 2022, 13, 195.	2.9	3
4	In-situ synthesized N-doped ZnO for enhanced CO2 sensing: Experiments and DFT calculations. Sensors and Actuators B: Chemical, 2022, 357, 131359.	7.8	15
5	Influences of RF Magnetron Sputtering Power and Gas Flow Rate on a High Conductivity and Low Drift Rate of Tungsten-Rhenium Thin-Film Thermocouples. Nanomaterials, 2022, 12, 1120.	4.1	6
6	Large-Area and Clean Graphene Transfer on Gold-Nanopyramid-Structured Substrates: Implications for Surface-Enhanced Raman Scattering Detection. ACS Applied Nano Materials, 2022, 5, 3878-3888.	5.0	2
7	Piezoelectric-AlN resonators at two-dimensional flexural modes for the density and viscosity decoupled determination of liquids. Microsystems and Nanoengineering, 2022, 8, 38.	7.0	7
8	A flexible and wearable NO2 gas detection and early warning device based on a spraying process and an interdigital electrode at room temperature. Microsystems and Nanoengineering, 2022, 8, 40.	7.0	15
9	Advanced tools and methods for single-cell surgery. Microsystems and Nanoengineering, 2022, 8, 47.	7.0	27
10	Uniform Stress Distribution of Bimorph by Arc Mechanical Stopper for Maximum Piezoelectric Vibration Energy Harvesting. Energies, 2022, 15, 3268.	3.1	2
11	High Sensitivity Optical Fiber Mach–Zehnder Refractive Index Sensor Based on Waist-Enlarged Bitaper. Micromachines, 2022, 13, 689.	2.9	10
12	Simultaneous Measurement of Temperature and Refractive Index Using Michelson Interferometer Based on Waist-Enlarged Fiber Bitaper. Micromachines, 2022, 13, 658.	2.9	5
13	Finger Bending Sensing Based on Series-Connected Fiber Bragg Gratings. Materials, 2022, 15, 3472.	2.9	1
14	A Flexible and Wearable Nylon Fiber Sensor Modified by Reduced Graphene Oxide and ZnO Quantum Dots for Wide-Range NO2 Gas Detection at Room Temperature. Materials, 2022, 15, 3772.	2.9	7
15	Overview of Human Kinetic Energy Harvesting and Application. ACS Applied Energy Materials, 2022, 5, 7091-7114.	5.1	18
16	Thermoelectricity and antivibration properties of screen-printed nanodoped In1.35ZnO2.11/In2O3 thin-film thermocouples on alumina substrates. Ceramics International, 2022, 48, 25747-25755.	4.8	7
17	Simulation, fabrication, and characteristics of high-temperature, quick-response tungsten–rhenium thin-film thermocouples probe sensor. Measurement Science and Technology, 2022, 33, 105105.	2.6	4
18	Highly heterogeneous epitaxy of flexoelectric BaTiO3- $\hat{l}$ membrane on Ge. Nature Communications, 2022, 13, .	12.8	22

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19	Self-sustained autonomous wireless sensing based on a hybridized TENG and PEG vibration mechanism. Nano Energy, 2021, 80, 105555.	16.0	80
20	Equivalent Circuit Model for a Large Array of Coupled Piezoelectric Micromachined Ultrasonic Transducers With High Emission Performance. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 718-733.	3.0	10
21	Modeling and design of V-shaped piezoelectric vibration energy harvester with stopper for low-frequency broadband and shock excitation. Sensors and Actuators A: Physical, 2021, 317, 112458.	4.1	23
22	A PMUT-based Ultrasonic Probe Used for Contact Force Sensing. , 2021, , .		2
23	Characterization of the Electrical Properties of a Double Heterostructure GaN/AlGaN Epitaxial Layer with an AlGaN Interlayer. Journal of Electronic Materials, 2021, 50, 2521-2529.	2.2	3
24	High-accuracy differential resonant pressure sensor with linear fitting method. Journal of Micromechanics and Microengineering, 2021, 31, 045006.	2.6	7
25	Contribution discrimination of auxetic cantilever for increased piezoelectric output in vibration energy harvesting., 2021,,.		3
26	Design and Simulation of a Wide-Bandwidth CMUTs Array with Dual-Mixed radii and Multi Operating Modes. , $2021$ , , .		0
27	A Flexible Tactile Sensor for Three-dimensional Force Detection Based on Piezoelectric Sensing. , 2021, , .		2
28	A Wearable Strain Sensor Based on Fiber-structured PU/MXene/CNT Composite with Ultra-high Sensitivity and Broad Sensing Range. , 2021, , .		1
29	Temperature and pressure dual-parameter sensing based on Fiber Bragg Grating. , 2021, , .		0
30	Micro-fabricated alkali vapor cells for atomic spin gyroscope study., 2021,,.		1
31	A Tunable Quasi-Zero Stiffness Mechanism for Thermal Compensation of a MEMS Gravimeter. , 2021, , .		1
32	Closed-Form Expressions on CMUTs With Layered Anisotropic Microplates Under Residual Stress and Pressure. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 1828-1843.	3.0	4
33	A thin-film temperature sensor based on a flexible electrode and substrate. Microsystems and Nanoengineering, 2021, 7, 42.	7.0	35
34	Equivalent Circuit Analysis of CMUTs-based Device for Measurement in Liquid Samples., 2021,,.		2
35	A flexible electrostatic nanogenerator and self-powered capacitive sensor based on electrospun polystyrene mats and graphene oxide films. Nanotechnology, 2021, 32, 405402.	2.6	22
36	Au-assisted Polymerization of Conductive Poly(N-phenylglycine) as High-performance Positive Electrodes for Asymmetric Supercapacitors. Nanotechnology, 2021, 33, .	2.6	1

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37	High-Performance Temperature Sensor by Employing Screen Printing Technology. Micromachines, 2021, 12, 924.	2.9	8
38	Well-connected ZnO nanoparticle network fabricated by in-situ annealing of ZIF-8 for enhanced sensitivity in gas sensing application. Sensors and Actuators B: Chemical, 2021, 344, 130180.	7.8	12
39	Optimization on thermoelectric characteristics of indium tin oxide/indium oxide thin film thermocouples based on screen printing technology. Review of Scientific Instruments, 2021, 92, 105001.	1.3	6
40	A High-Frequency Acceleration Sensor Based on Fiber Grating. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.	4.7	5
41	Design and analysis of high-frequency fiber Bragg grating vibration sensor. Measurement Science and Technology, 2021, 32, 025108.	2.6	13
42	Array Design of Piezoelectric Micromachined Ultrasonic Transducers With Low-Crosstalk and High-Emission Performance. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 789-800.	3.0	21
43	Structural multi-objective optimization on a MUAV-based pan–tilt for aerial remote sensing applications. ISA Transactions, 2020, 100, 405-421.	5.7	5
44	A temperature sensor based on flexible substrate with ultra-high sensitivity for low temperature measurement. Sensors and Actuators A: Physical, 2020, 315, 112341.	4.1	30
45	WRe26–In2O3 probe-type thin film thermocouples applied to high temperature measurement. Review of Scientific Instruments, 2020, 91, 074901.	1.3	8
46	Effect of Annealing on the Thermoelectricity Properties of the WRe26-In2O3 Thin Film Thermocouples. Micromachines, 2020, 11, 664.	2.9	4
47	Wearable Tactile Sensors: Gelatin Methacryloylâ€Based Tactile Sensors for Medical Wearables (Adv.) Tj ETQq1 1	0.784314	rgBT /Overlo
48	A Novel Micro-Displacement Sensor Based on Double Optical Fiber Probes Made through Photopolymer Materials. Materials, 2020, 13, 5475.	2.9	5
49	Novel high-performance piezoresistive shock accelerometer for ultra-high-g measurement utilizing self-support sensing beams. Review of Scientific Instruments, 2020, 91, 085001.	1.3	11
50	Gelatin Methacryloylâ€Based Tactile Sensors for Medical Wearables. Advanced Functional Materials, 2020, 30, 2003601.	14.9	112
51	Novel resonant pressure sensor based on piezoresistive detection and symmetrical in-plane mode vibration. Microsystems and Nanoengineering, 2020, 6, 95.	7.0	27
52	Advanced Biological Imaging for Intracellular Micromanipulation: Methods and Applications. Applied Sciences (Switzerland), 2020, 10, 7308.	2.5	6
53	System level design of wireless sensor node powered by piezoelectric vibration energy harvesting. Sensors and Actuators A: Physical, 2020, 310, 112039.	4.1	41
54	Precise Automated Intracellular Delivery Using a Robotic Cell Microscope System With Three-Dimensional Image Reconstruction Information. IEEE/ASME Transactions on Mechatronics, 2020, 25, 2870-2881.	5.8	16

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55	Equivalent Circuit Models of Cell and Array for Resonant Cavity-Based Piezoelectric Micromachined Ultrasonic Transducer. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 2103-2118.	3.0	13
56	The Radial Piezoelectric Response from Three-Dimensional Electrospun PVDF Micro Wall Structure. Materials, 2020, 13, 1368.	2.9	6
57	Optimal design of SiC piezoresistive pressure sensor considering material anisotropy. Review of Scientific Instruments, 2020, 91, 015004.	1.3	11
58	A High Precision Compound Control Scheme Based on Non-singular Terminal Sliding Mode and Extended State Observer for an Aerial Inertially Stabilized Platform. International Journal of Control, Automation and Systems, 2020, 18, 1498-1509.	2.7	16
59	Shielding Effectiveness Simulation of Rectangular Enclosures Using FIT. , 2020, , .		1
60	A Novel Piezoelectric Resonator for Liquid Density and Viscosity Measurement., 2020,,.		0
61	Flexible carbon monoxide sensor for environmental detection of smallâ€scale robot. Micro and Nano Letters, 2020, 15, 949-953.	1.3	1
62	Ultrasonic wireless communication using capacitive micromachined ultrasonic transducers in liquid with OOK digital modulation. Journal of Micromechanics and Microengineering, 2020, 30, 125016.	2.6	0
63	A Novel Peninsula-island Structure for Sensing Ultra-low Pressure Based on Dry-wet Combination Etching Process., 2020,,.		0
64	An Analytical Equivalent Circuit Model for Optimization Design of a Broadband Piezoelectric Micromachined Ultrasonic Transducer With an Annular Diaphragm. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1760-1776.	3.0	21
65	A wearable and sensitive graphene-cotton based pressure sensor for human physiological signals monitoring. Scientific Reports, 2019, 9, 14457.	3.3	34
66	High accuracy comsol simulation method of bimorph cantilever for piezoelectric vibration energy harvesting. AIP Advances, 2019, 9, .	1.3	44
67	Capacitive micromachined ultrasonic transducers for transmitting and receiving ultrasound in air. Journal of Micromechanics and Microengineering, 2019, 29, 125015.	2.6	3
68	Selfâ€Powered Flexible Sensor Based on the Graphene Modified P(VDFâ€TrFE) Electrospun Fibers for Pressure Detection. Macromolecular Materials and Engineering, 2019, 304, 1900504.	3.6	19
69	A CMUT-based gas density sensor with high sensitivity. Journal of Micromechanics and Microengineering, 2019, 29, 115012.	2.6	0
70	The Gas Leak Detection Based on a Wireless Monitoring System. IEEE Transactions on Industrial Informatics, 2019, 15, 6240-6251.	11.3	35
71	Density Measurement Performance in Flowing Liquid Using Microcantilever-Based Resonators under Bending and Torsion Vibrations. , 2019, , .		1
72	A packaged piezoelectric vibration energy harvester with high power and broadband characteristics. Sensors and Actuators A: Physical, 2019, 295, 629-636.	4.1	29

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73	Parameter Optimization on FNN/PID Compound Controller for a Three-Axis Inertially Stabilized Platform for Aerial Remote Sensing Applications. Journal of Sensors, 2019, 2019, 1-15.	1.1	4
74	A resonant microcantilever sensor for in-plane multi-axis magnetic field measurements. Journal of Micromechanics and Microengineering, 2019, 29, 065010.	2.6	7
75	The Design and Analysis of a Novel Micro Force Sensor Based on Depletion Type Movable Gate Field Effect Transistor. Journal of Microelectromechanical Systems, 2019, 28, 298-310.	2.5	12
76	A High Accuracy Resonant Pressure Sensor with Lateral Driven and Piezoresistive Detection., 2019,,.		0
77	Smith Matching for CMUTs-based Biochemical Resonant Sensor. , 2019, , .		0
78	A Novel Resonator Based on In-plane Mode for Fluid Density and Viscosity Measurements. , 2019, , .		0
79	The Design of a High Precision Capacitive Pressure Sensor Based on Comb Electrode. , 2019, , .		0
80	Study on the Enhancement of Diamond Fluorescence Characteristics by Multi-layer Anti-reflection Coating. , 2019, , .		0
81	Lumped Element Model for CMUTsÂBased Biochemical Resonant Sensor. , 2019, , .		0
82	One kind of wide bandwidth and high radiation efficiency antenna for microwave manipulation of NV color centers. , 2019, , .		1
83	Development of a 4H-SiC Piezoresistive Pressure Sensor for High Temperature Applications. , 2019, , .		0
84	A High-g Triaxial Piezoresistive Accelerometer with Sensing Beams in Pure Axial Deformation. , 2019, , .		3
85	MEMS Piezoelectric Vibration Energy Harvester with In-Plane PZT Bimorph. , 2019, , .		0
86	Broadband vibration energy harvesting for wireless sensor node power supply in train container. Review of Scientific Instruments, 2019, 90, 125003.	1.3	17
87	3-D Image Reconstruction of Biological Organelles With a Robot-Aided Microscopy System for Intracellular Surgery. IEEE Robotics and Automation Letters, 2019, 4, 231-238.	5.1	17
88	A novel microsensor for measuring thermal conductivity of fluid based on three omega method. Review of Scientific Instruments, 2019, 90, 015002.	1.3	1
89	A Novel CMUT-Based Resonant Biochemical Sensor Using Electrospinning Technology. IEEE Transactions on Industrial Electronics, 2019, 66, 7356-7365.	7.9	16
90	A novel three-dimensional spiral CoNi LDHs on Au@ErGO wire for high performance fiber supercapacitor electrodes. Materials Letters, 2019, 236, 728-731.	2.6	26

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91	Optimizing electrospinning-hydrothermal hybrid process based on Taguchi method for modulation of point defects in ZnO micro/nano arrays towards photoelectronic application. Journal of Alloys and Compounds, 2019, 779, 167-174.	5.5	7
92	Evaluation of width and width uniformity of near-field electrospinning printed micro and sub-micrometer lines based on optical image processing. Journal of Micromechanics and Microengineering, 2018, 28, 035010.	2.6	6
93	Impact experiment analysis of MEMS ultra-high G piezoresistive shock accelerometer. , 2018, , .		5
94	Coupled Piezoelectric Micromachined Ultrasonic Transducers Array with High Ultrasonic Emission Performance. , $2018,  ,  .$		2
95	Novel Mechanical Coupling Piezoelectric Micromachined Ultrasonic Transducers Based on Base Excitation System. , 2018, , .		1
96	A Novel Air-Coupled Piezoelectric Micromachined Ultrasonic Transducers Based on Parametric Excitation Method. , $2018,  \ldots$		0
97	A piezoelectric cantilever with novel large mass for harvesting energy from low frequency vibrations. AIP Advances, 2018, 8, .	1.3	10
98	High Precision Control of an Inertially Stabilized Platform for Aerial Remote Sensing Applications. , 2018, , .		3
99	Temperature compensation in fluid density measurement using micro-electromechanical resonant sensor. Review of Scientific Instruments, 2018, 89, 125001.	1.3	6
100	A High-Precision Control Scheme Based on Active Disturbance Rejection Control for a Three-Axis Inertially Stabilized Platform for Aerial Remote Sensing Applications. Journal of Sensors, 2018, 2018, 1-9.	1.1	12
101	Giant enhancement on response-speed of electrospun-based UV photodetector via polydimethylsiloxane coating. , 2018, , .		3
102	An Improved Fuzzy Neural Network Compound Control Scheme for Inertially Stabilized Platform for Aerial Remote Sensing Applications. International Journal of Aerospace Engineering, 2018, 2018, 1-15.	0.9	7
103	Theoretical modeling and experimental verification of circular Halbach electromagnetic energy harvesters for performance enhancement. Smart Materials and Structures, 2018, 27, 095019.	3.5	18
104	Construction of NiCo2O4@NiFe LDHs core/shell nanowires array on carbon cloth for flexible, high-performance pseudocapacitor electrodes. Journal of Alloys and Compounds, 2018, 767, 1126-1132.	<b>5.</b> 5	26
105	A closed-form approach for the resonant frequency analysis of clamped rectangular microplates under distributed electrostatic force. Sensors and Actuators A: Physical, 2018, 280, 447-458.	4.1	3
106	A GA-based parameters tuning method for an ADRC controller of ISP for aerial remote sensing applications. ISA Transactions, 2018, 81, 318-328.	5 <b>.</b> 7	62
107	Liquid packaging effects on piezoresistive MEMS accelerometer. , 2018, , .		1
108	Capacitive micromachined ultrasonic transducers for biochemical detection with flexible high sensitivity. , $2018,  ,  .$		3

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109	Fabrication of capacitive micromachined ultrasonic transducers with low-temperature direct wafer-Bonding technology. Sensors and Actuators A: Physical, 2017, 264, 63-75.	4.1	18
110	Piezoresistive pressure sensor with high sensitivity for medical application using peninsula-island structure. Frontiers of Mechanical Engineering, 2017, 12, 546-553.	4.3	25
111	A novel piezoresistive sensitive structure for micromachined high-pressure sensors. , 2017, , .		5
112	A novel MEMS force sensor based on Laterally Movable Gate Array Field Effect Transistor(LMGAFET). , 2017, , .		6
113	Application and Optimization of Stiffness Abruption Structures for Pressure Sensors with High Sensitivity and Anti-Overload Ability. Sensors, 2017, 17, 1965.	3.8	19
114	A Novel Piezoresistive Accelerometer with SPBs to Improve the Tradeoff between the Sensitivity and the Resonant Frequency. Sensors, 2016, 16, 210.	3.8	20
115	A MEMS Resonant Sensor to Measure Fluid Density and Viscosity under Flexural and Torsional Vibrating Modes. Sensors, 2016, 16, 830.	3.8	24
116	A Novel Slope Method for Measurement of Fluid Density with a Micro-cantilever under Flexural and Torsional Vibrations. Sensors, 2016, 16, 1471.	3.8	7
117	Analysis of the 3ω method for the measurement of fluid thermal properties. , 2016, , .		0
118	Vibration and large deformation simulation analysis of graphene membrane for nanomechanical applications. , $2016,  ,  .$		0
119	Analysis and design of a novel piezoresistive accelerometer with axially stressed self-supporting sensing beams. Sensors and Actuators A: Physical, 2016, 247, 1-11.	4.1	17
120	The fluid viscosity measurement based on variable cross-section MEMS cantilever under torsional excitation. , $2015,  ,  .$		1
121	Capacitive micromachined ultrasonic transducer for ultra-low pressure measurement: Theoretical study. AIP Advances, 2015, 5, .	1.3	7
122	Synthetic preparation of novel 3D Si/TiO2–Ti2O3 composite nanorod arrays as anodes in lithium ion batteries. RSC Advances, 2015, 5, 37399-37404.	3.6	8
123	A novel capacitive micromachined transducer for micro-pressure measurement. , 2015, , .		0
124	Fabrication of CMUTs with a low temperature wafer bonding technology. , 2015, , .		1
125	Mechanical behavior analysis on electrostatically actuated rectangular microplates. Journal of Micromechanics and Microengineering, 2015, 25, 035007.	2.6	13
126	An Improved Method for the Mechanical Behavior Analysis of Electrostatically Actuated Microplates Under Uniform Hydrostatic Pressure. Journal of Microelectromechanical Systems, 2015, 24, 474-485.	2.5	13

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127	Capacitive micromachined ultrasonic transducer for ultra-low pressure detection., 2014,,.		4
128	A novel piezoresistive accelerometer featuring in-plane vibration. , 2014, , .		2
129	Sensitivity enhancement of a microcantilever based DC current sensor by using its torsional modes. Measurement Science and Technology, 2014, 25, 125108.	2.6	1
130	In-Situ Measurement of Fluid Density Rapidly Using a Vibrating Piezoresistive Microcantilever Sensor Without Resonance Occurring. IEEE Sensors Journal, 2014, 14, 645-650.	4.7	8
131	A trapezoidal cantilever density sensor based on MEMS technology. Journal of Zhejiang University: Science C, 2013, 14, 274-278.	0.7	3
132	An ultra-high pressure sensor with cylinder structure. Journal of Mechanical Science and Technology, 2013, 27, 2383-2389.	1.5	6
133	A fluid viscosity sensor with resonant trapezoidal micro cantilever. , 2013, , .		2
134	Capacitive micromachined ultrasonic transducer as a resonant temperature sensor., 2013,,.		0
135	MEMS fluid density sensor based on oscillating piezoresistive microcantilever. , 2013, , .		0
136	Magnetically actuated resonant piezoresistive microcantilever operating in fluid for dc current measurement. , 2013, , .		0
137	Resonant frequency analysis on an electrostatically actuated microplate under uniform hydrostatic pressure. Journal Physics D: Applied Physics, 2013, 46, 195108.	2.8	20
138	DC current measurement utilizing a resonant magnetically actuated piezoresistive microcantilever. Measurement Science and Technology, 2013, 24, 125102.	2.6	2
139	Active Frequency Tuning for Magnetically Actuated and Piezoresistively Sensed MEMS Resonators. IEEE Electron Device Letters, 2013, 34, 921-923.	3.9	12
140	Multilayer graphene sheets assembled by Langmuir-Blodgett fro tribology application. , 2012, , .		0
141	Design and characterization of an integrated multifunction micro sensor. Microsystem Technologies, 2012, 18, 283-294.	2.0	3
142	Surface stress-induced deflection of a microcantilever with various widths and overall microcantilever sensitivity enhancement via geometry modification. Journal Physics D: Applied Physics, 2011, 44, 425402.	2.8	24
143	Development of a Piezoresistive Force Transmitter for Gauging Yarn's Linear Density in High-Speed Textile Machinery. IEEE Sensors Journal, 2011, 11, 2279-2285.	4.7	0
144	An ultra-high pressure sensor based on SOI piezoresistive material. Journal of Mechanical Science and Technology, 2010, 24, 1655-1660.	1.5	15

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145	A MEMS density sensor based on mircro-rectangular cantilever. , 2010, , .		1
146	A MEMS resonator-type viscosity sensor based on triangular cantilever. , 2010, , .		1
147	Research and evaluation of a high temperature pressure sensor chip., 2009,,.		2
148	High-precision and long-range optical fiber Fabry-Perot interferometer for high temperature measurement. Measurement Science and Technology, 0, , .	2.6	0