Vincent Ch Lee

List of Publications by Year
in descending order

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617 papers	25,411 citations	4955 84 h-index	14197 128 g-index
619 all docs	619 docs citations	619 times ranked	13726 citing authors

#	Article	IF	Citations
1	A comprehensive review on piezoelectric energy harvesting technology: Materials, mechanisms, and applications. Applied Physics Reviews, 2018, 5, .	5.5	565
2	Haptic-feedback smart glove as a creative human-machine interface (HMI) for virtual/augmented reality applications. Science Advances, 2020, 6, eaaz8693.	4.7	419
3	Triboelectric nanogenerator sensors for soft robotics aiming at digital twin applications. Nature Communications, 2020, 11, 5381.	5.8	363
4	Progress in wearable electronics/photonicsâ€"Moving toward the era of artificial intelligence and internet of things. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 1131-1162.	8.5	343
5	Piezoelectric MEMS Energy Harvester for Low-Frequency Vibrations With Wideband Operation Range and Steadily Increased Output Power. Journal of Microelectromechanical Systems, 2011, 20, 1131-1142.	1.7	327
6	Electromagnetic energy harvesting from vibrations of multiple frequencies. Journal of Micromechanics and Microengineering, 2009, 19, 035001.	1.5	294
7	Machine Learning Glove Using Selfâ€Powered Conductive Superhydrophobic Triboelectric Textile for Gesture Recognition in VR/AR Applications. Advanced Science, 2020, 7, 2000261.	5.6	290
8	More than energy harvesting â€“ Combining triboelectric nanogenerator and flexible electronics technology for enabling novel micro-/nano-systems. Nano Energy, 2019, 57, 851-871.	8.2	255
9	Silicon photonic platforms for mid-infrared applications [Invited]. Photonics Research, 2017, 5, 417.	3.4	229
10	Highâ€Performance, Room Temperature, Ultraâ€Broadband Photodetectors Based on Airâ€Stable PdSe₂. Advanced Materials, 2019, 31, e1807609.	11.1	223
11	Self-Powered and Self-Functional Cotton Sock Using Piezoelectric and Triboelectric Hybrid Mechanism for Healthcare and Sports Monitoring. ACS Nano, 2019, 13, 1940-1952.	7.3	221
12	Development Trends and Perspectives of Future Sensors and MEMS/NEMS. Micromachines, 2020, 11, 7.	1.4	216
13	Deep learning-enabled triboelectric smart socks for IoT-based gait analysis and VR applications. Npj Flexible Electronics, 2020, 4, .	5.1	213
14	AI enabled sign language recognition and VR space bidirectional communication using triboelectric smart glove. Nature Communications, 2021, 12, 5378.	5.8	208
15	Investigation of a MEMS piezoelectric energy harvester system with a frequency-widened-bandwidth mechanism introduced by mechanical stoppers. Smart Materials and Structures, 2012, 21, 035005.	1.8	202
16	Reconfigurable MEMS Fano metasurfaces with multiple-inputâ€"output states for logic operations at terahertz frequencies. Nature Communications, 2018, 9, 4056.	5.8	200
17	Active Control of Electromagnetically Induced Transparency Analog in Terahertz MEMS Metamaterial. Advanced Optical Materials, 2016, 4, 541-547.	3.6	198
18	Design, Fabrication, and Characterization of CMOS MEMS-Based Thermoelectric Power Generators. Journal of Microelectromechanical Systems, 2010, 19, 317-324.	1.7	195

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19	Deep learning enabled smart mats as a scalable floor monitoring system. Nature Communications, 2020, 11, 4609.	5.8	195
20	Progress in<scp>TENG</scp>technologyâ€"A journey from energy harvesting to nanoenergy and nanosystem. EcoMat, 2020, 2, e12058.	6.8	194
21	Technologies toward next generation human machine interfaces: From machine learning enhanced tactile sensing to neuromorphic sensory systems. Applied Physics Reviews, 2020, 7, .	5.5	194
22	Piezoelectric MEMS-based wideband energy harvesting systems using a frequency-up-conversion cantilever stopper. Sensors and Actuators A: Physical, 2012, 186, 242-248.	2.0	191
23	Hybrid energy harvesting technology: From materials, structural design, system integration to applications. Renewable and Sustainable Energy Reviews, 2021, 137, 110473.	8.2	185
24	Promoting smart cities into the 5G era with multi-field Internet of Things (IoT) applications powered with advanced mechanical energy harvesters. Nano Energy, 2021, 88, 106304.	8.2	185
25	Making use of nanoenergy from human â€“ Nanogenerator and self-powered sensor enabled sustainable wireless IoT sensory systems. Nano Today, 2021, 36, 101016.	6.2	180
26	Triboelectric Self-Powered Wearable Flexible Patch as 3D Motion Control Interface for Robotic Manipulator. ACS Nano, 2018, 12, 11561-11571.	7.3	179
27	Selfâ€Sustainable Wearable Textile Nanoâ€Energy Nanoâ€System (NENS) for Nextâ€Generation Healthcare Applications. Advanced Science, 2019, 6, 1901437.	5.6	179
28	An intelligent skin based self-powered finger motion sensor integrated with triboelectric nanogenerator. Nano Energy, 2016, 19, 532-540.	8.2	178
29	Technology evolution from self-powered sensors to AIoT enabled smart homes. Nano Energy, 2021, 79, 105414.	8.2	177
30	Beyond energy harvesting - multi-functional triboelectric nanosensors on a textile. Nano Energy, 2019, 57, 338-352.	8.2	173
31	Minimalist and multi-functional human machine interface (HMI) using a flexible wearable triboelectric patch. Nano Energy, 2019, 62, 355-366.	8.2	164
32	Waveguide-Integrated Black Phosphorus Photodetector for Mid-Infrared Applications. ACS Nano, 2019, 13, 913-921.	7.3	164
33	Self-powered liquid triboelectric microfluidic sensor for pressure sensing and finger motion monitoring applications. Nano Energy, 2016, 30, 450-459.	8.2	157
34	Self-powered triboelectric nanogenerator buoy ball for applications ranging from environment monitoring to water wave energy farm. Nano Energy, 2017, 40, 203-213.	8.2	153
35	Artificial Intelligenceâ€Enabled Sensing Technologies in the 5G/Internet of Things Era: From Virtual Reality/Augmented Reality to the Digital Twin. Advanced Intelligent Systems, 2022, 4, .	3.3	146
36	MEMS Based Broadband Piezoelectric Ultrasonic Energy Harvester (PUEH) for Enabling Self-Powered Implantable Biomedical Devices. Scientific Reports, 2016, 6, 24946.	1.6	145

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37	Leveraging of MEMS Technologies for Optical Metamaterials Applications. Advanced Optical Materials, 2020, 8, 1900653.	3.6	144
38	Tunable multiband terahertz metamaterials using a reconfigurable electric split-ring resonator array. Light: Science and Applications, 2014, 3, e171-e171.	7.7	143
39	Wearable Triboelectric Sensors Enabled Gait Analysis and Waist Motion Capture for IoTâ€Based Smart Healthcare Applications. Advanced Science, 2022, 9, e2103694.	5.6	143
40	A rotational pendulum based electromagnetic/triboelectric hybrid-generator for ultra-low-frequency vibrations aiming at human motion and blue energy applications. Nano Energy, 2019, 63, 103871.	8.2	142
41	Self-powered glove-based intuitive interface for diversified control applications in real/cyber space. Nano Energy, 2019, 58, 641-651.	8.2	140
42	Artificial Intelligence of Things (AIoT) Enabled Virtual Shop Applications Using Selfâ€Powered Sensor Enhanced Soft Robotic Manipulator. Advanced Science, 2021, 8, e2100230.	5.6	138
43	A non-resonant rotational electromagnetic energy harvester for low-frequency and irregular human motion. Applied Physics Letters, 2018, 113, .	1.5	137
44	A new energy harvester design for high power output at low frequencies. Sensors and Actuators A: Physical, 2013, 199, 344-352.	2.0	135
45	Selfâ€Powered Bioâ€Inspired Spiderâ€Netâ€Coding Interface Using Singleâ€Electrode Triboelectric Nanogenerator. Advanced Science, 2019, 6, 1900617.	5.6	134
46	Hybrid Metamaterial Absorber Platform for Sensing of CO₂ Gas at Midâ€IR. Advanced Science, 2018, 5, 1700581.	5.6	132
47	A new S-shaped MEMS PZT cantilever for energy harvesting from low frequency vibrations below 30ÂHz. Microsystem Technologies, 2012, 18, 497-506.	1.2	130
48	Self-Powered Direct Muscle Stimulation Using a Triboelectric Nanogenerator (TENG) Integrated with a Flexible Multiple-Channel Intramuscular Electrode. ACS Nano, 2019, 13, 3589-3599.	7.3	130
49	Ultra-thin flexible polyimide neural probe embedded in a dissolvable maltose-coated microneedle. Journal of Micromechanics and Microengineering, 2014, 24, 065015.	1.5	129
50	Active Phase Transition via Loss Engineering in a Terahertz MEMS Metamaterial. Advanced Materials, 2017, 29, 1700733.	11.1	125
51	Development of battery-free neural interface and modulated control of tibialis anterior muscle via common peroneal nerve based on triboelectric nanogenerators (TENGs). Nano Energy, 2017, 33, 1-11.	8.2	124
52	Self-excited piezoelectric PZT microcantilevers for dynamic SFMâ€”with inherent sensing and actuating capabilities. Sensors and Actuators A: Physical, 1999, 72, 179-188.	2.0	122
53	Wearable Triboelectricâ€“Humanâ€“Machine Interface (THMI) Using Robust Nanophotonic Readout. ACS Nano, 2020, 14, 8915-8930.	7.3	121
54	Controlling Surface Charge Generated by Contact Electrification: Strategies and Applications. Advanced Materials, 2018, 30, e1802405.	11.1	117

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55	Study of thin film blue energy harvester based on triboelectric nanogenerator and seashore IoT applications. Nano Energy, 2019, 66, 104167.	8.2	117
56	Development of piezoelectric microcantilever flow sensor with wind-driven energy harvesting capability. Applied Physics Letters, 2012, 100, .	1.5	116
57	Active Multifunctional Microelectromechanical System Metadevices: Applications in Polarization Control, Wavefront Deflection, and Holograms. Advanced Optical Materials, 2017, 5, 1600716.	3.6	116
58	From flexible electronics technology in the era of IoT and artificial intelligence toward future implanted body sensor networks. APL Materials, 2019, 7, .	2.2	116
59	Large Scale Triboelectric Nanogenerator and Self-Powered Pressure Sensor Array Using Low Cost Roll-to-Roll UV Embossing. Scientific Reports, 2016, 6, 22253.	1.6	111
60	Zero-bias mid-infrared graphene photodetectors with bulk photoresponse and calibration-free polarization detection. Nature Communications, 2020, 11, 6404.	5.8	111
61	Self-powered control interface based on Gray code with hybrid triboelectric and photovoltaics energy harvesting for IoT smart home and access control applications. Nano Energy, 2020, 70, 104456.	8.2	110
62	Self-Powered Dual-Mode Amenity Sensor Based on the Waterâ€“Air Triboelectric Nanogenerator. ACS Nano, 2017, 11, 10337-10346.	7.3	108
63	Computational Study of Photonic Crystals Nano-Ring Resonator for Biochemical Sensing. IEEE Sensors Journal, 2010, 10, 1185-1191.	2.4	107
64	Hybrid energy harvester based on piezoelectric and electromagnetic mechanisms. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2010, 9, 023002.	1.0	107
65	Low cost exoskeleton manipulator using bidirectional triboelectric sensors enhanced multiple degree of freedom sensory system. Nature Communications, 2021, 12, 2692.	5.8	107
66	Toward Selfâ€Powered Wearable Adhesive Skin Patch with Bendable Microneedle Array for Transdermal Drug Delivery. Advanced Science, 2016, 3, 1500441.	5.6	105
67	Advances in chemical sensing technology for enabling the next-generation self-sustainable integrated wearable system in the IoT era. Nano Energy, 2020, 78, 105155.	8.2	105
68	A comprehensive study of non-linear air damping and â€œpull-inâ€•effects on the electrostatic energy harvesters. Energy Conversion and Management, 2020, 203, 112264.	4.4	102
69	Triboelectric liquid volume sensor for self-powered lab-on-chip applications. Nano Energy, 2016, 23, 80-88.	8.2	101
70	Development of neural interfaces and energy harvesters towards self-powered implantable systems for healthcare monitoring and rehabilitation purposes. Nano Energy, 2019, 65, 104039.	8.2	101
71	Battery-free short-range self-powered wireless sensor network (SS-WSN) using TENG based direct sensory transmission (TDST) mechanism. Nano Energy, 2020, 67, 104266.	8.2	101
72	Study of electrothermal V-beam actuators and latched mechanism for optical switch. Journal of Micromechanics and Microengineering, 2005, 15, 11-19.	1.5	99

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73	Artificial Intelligence-Enabled Caregiving Walking Stick Powered by Ultra-Low-Frequency Human Motion. ACS Nano, 2021, 15, 19054-19069.	7.3	98
74	Nanofluidic terahertz metasensor for sensing in aqueous environment. Applied Physics Letters, 2018, 113, .	1.5	97
75	Investigation of Lowâ€Current Direct Stimulation for Rehabilitation Treatment Related to Muscle Function Loss Using Selfâ€Powered TENG System. Advanced Science, 2019, 6, 1900149.	5.6	97
76	Mid-infrared semimetal polarization detectors with configurable polarity transition. Nature Photonics, 2021, 15, 614-621.	15.6	97
77	Progress of Flexible Electronics in Neural Interfacing â€“ A Selfâ€Adaptive Nonâ€Invasive Neural Ribbon Electrode for Small Nerves Recording. Advanced Materials, 2016, 28, 4472-4479.	11.1	96
78	Toward Self-Control Systems for Neurogenic Underactive Bladder: A Triboelectric Nanogenerator Sensor Integrated with a Bistable Micro-Actuator. ACS Nano, 2018, 12, 3487-3501.	7.3	96
79	Broadband Energy Harvester Using Non-linear Polymer Spring and Electromagnetic/Triboelectric Hybrid Mechanism. Scientific Reports, 2017, 7, 41396.	1.6	95
80	Selfâ€Powered Gyroscope Ball Using a Triboelectric Mechanism. Advanced Energy Materials, 2017, 7, 1701300.	10.2	95
81	A Black Phosphorus Carbide Infrared Phototransistor. Advanced Materials, 2018, 30, 1705039.	11.1	95
82	Application of solâ€“gel deposited thin PZT film for actuation of 1D and 2D scanners. Sensors and Actuators A: Physical, 1999, 73, 144-152.	2.0	94
83	A multi-frequency vibration-based MEMS electromagnetic energy harvesting device. Sensors and Actuators A: Physical, 2013, 204, 37-43.	2.0	93
84	Development of stress-induced curved actuators for a tunable THz filter based on double split-ring resonators. Applied Physics Letters, 2013, 102, .	1.5	89
85	All-Dielectric Surface-Enhanced Infrared Absorption-Based Gas Sensor Using Guided Resonance. ACS Applied Materials & Interfaces, 2018, 10, 38272-38279.	4.0	89
86	Battery-free neuromodulator for peripheral nerve direct stimulation. Nano Energy, 2018, 50, 148-158.	8.2	88
87	Self-powered eye motion sensor based on triboelectric interaction and near-field electrostatic induction for wearable assistive technologies. Nano Energy, 2020, 72, 104675.	8.2	87
88	A novel hybridized blue energy harvester aiming at all-weather IoT applications. Nano Energy, 2020, 76, 105052.	8.2	86
89	Smart materials for smart healthcareâ€“ moving from sensors and actuators to self-sustained nanoenergy nanosystems. Smart Materials in Medicine, 2020, 1, 92-124.	3.7	85
90	Direct muscle stimulation using diode-amplified triboelectric nanogenerators (TENGs). Nano Energy, 2019, 63, 103844.	8.2	84

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91	An epidermal sEMG tattoo-like patch as a new humanâ€“machine interface for patients with loss of voice. Microsystems and Nanoengineering, 2020, 6, 16.	3.4	84
92	Characterization of heavily doped polysilicon films for CMOS-MEMS thermoelectric power generators. Journal of Micromechanics and Microengineering, 2009, 19, 125029.	1.5	83
93	Optimization and comparison of photonic crystal resonators for silicon microcantilever sensors. Sensors and Actuators A: Physical, 2011, 165, 16-25.	2.0	83
94	Self-powered multifunctional monitoring system using hybrid integrated triboelectric nanogenerators and piezoelectric microsensors. Nano Energy, 2019, 58, 612-623.	8.2	83
95	Mechano-neuromodulation of autonomic pelvic nerve for underactive bladder: A triboelectric neurostimulator integrated with flexible neural clip interface. Nano Energy, 2019, 60, 449-456.	8.2	81
96	Toward Healthcare Diagnoses by Machine-Learning-Enabled Volatile Organic Compound Identification. ACS Nano, 2021, 15, 894-903.	7.3	81
97	Microfluidic metamaterial sensor: Selective trapping and remote sensing of microparticles. Journal of Applied Physics, 2017, 121, .	1.1	80
98	Self-sustained autonomous wireless sensing based on a hybridized TENG and PEG vibration mechanism. Nano Energy, 2021, 80, 105555.	8.2	80
99	Artificial Intelligence of Things (AIoT) Enabled Floor Monitoring System for Smart Home Applications. ACS Nano, 2021, 15, 18312-18326.	7.3	80
100	Progress of infrared guided-wave nanophotonic sensors and devices. Nano Convergence, 2020, 7, 12.	6.3	79
101	Micromachined piezoelectric force sensors based on PZT thin films. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1996, 43, 553-559.	1.7	77
102	Development of a Broadband Triboelectric Energy Harvester With SU-8 Micropillars. Journal of Microelectromechanical Systems, 2015, 24, 91-99.	1.7	77
103	A MEMS rotary comb mechanism for harvesting the kinetic energy of planar vibrations. Journal of Micromechanics and Microengineering, 2010, 20, 065017.	1.5	76
104	Electrothermally actuated microelectromechanical systems based omega-ring terahertz metamaterial with polarization dependent characteristics. Applied Physics Letters, 2014, 104, .	1.5	76
105	Micro-electro-mechanically switchable near infrared complementary metamaterial absorber. Applied Physics Letters, 2014, 104, .	1.5	76
106	Toward Bioelectronic Medicineâ€”Neuromodulation of Small Peripheral Nerves Using Flexible Neural Clip. Advanced Science, 2017, 4, 1700149.	5.6	76
107	Highâ€Responsivity Midâ€Infrared Black Phosphorus Slow Light Waveguide Photodetector. Advanced Optical Materials, 2020, 8, 2000337.	3.6	75
108	Triboelectric Nanogenerators and Hybridized Systems for Enabling Next-Generation IoT Applications. Research, 2021, 2021, 6849171.	2.8	75

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109	Novel augmented reality interface using a self-powered triboelectric based virtual reality 3D-control sensor. Nano Energy, 2018, 51, 162-172.	8.2	74
110	Artificial intelligence of toilet (AI-Toilet) for an integrated health monitoring system (IHMS) using smart triboelectric pressure sensors and image sensor. Nano Energy, 2021, 90, 106517.	8.2	74
111	Characterization of micromachined piezoelectric PZT force sensors for dynamic scanning force microscopy. Review of Scientific Instruments, 1997, 68, 2091-2100.	0.6	73
112	Zero-Bending Piezoelectric Micromachined Ultrasonic Transducer (pMUT) With Enhanced Transmitting Performance. Journal of Microelectromechanical Systems, 2015, 24, 2083-2091.	1.7	73
113	Infrared Black Phosphorus Phototransistor with Tunable Responsivity and Low Noise Equivalent Power. ACS Applied Materials & Interfaces, 2017, 9, 36130-36136.	4.0	73
114	Flourishing energy harvesters for future body sensor network: from single to multiple energy sources. IScience, 2021, 24, 101934.	1.9	73
115	A Motion Capturing and Energy Harvesting Hybridized Lowerâ€Limb System for Rehabilitation and Sports Applications. Advanced Science, 2021, 8, e2101834.	5.6	72
116	An underwater flag-like triboelectric nanogenerator for harvesting ocean current energy under extremely low velocity condition. Nano Energy, 2021, 90, 106503.	8.2	72
117	Triboelectric single-electrode-output control interface using patterned grid electrode. Nano Energy, 2019, 60, 545-556.	8.2	71
118	Metalâ€“Organic Frameworkâ€Surfaceâ€Enhanced Infrared Absorption Platform Enables Simultaneous Onâ€Chip Sensing of Greenhouse Gases. Advanced Science, 2020, 7, 2001173.	5.6	71
119	Feasibility study of a 3D vibration-driven electromagnetic MEMS energy harvester with multiple vibration modes. Journal of Micromechanics and Microengineering, 2012, 22, 125020.	1.5	70
120	Machine learning-enabled textile-based graphene gas sensing with energy harvesting-assisted IoT application. Nano Energy, 2021, 86, 106035.	8.2	70
121	Non-resonant electromagnetic wideband energy harvesting mechanism for low frequency vibrations. Microsystem Technologies, 2010, 16, 961-966.	1.2	69
122	Electret-material enhanced triboelectric energy harvesting from air flow for self-powered wireless temperature sensor network. Sensors and Actuators A: Physical, 2018, 271, 364-372.	2.0	69
123	Shadow enhanced self-charging power system for wave and solar energy harvesting from the ocean. Nature Communications, 2021, 12, 616.	5.8	69
124	A flexible three-dimensional electrode mesh: An enabling technology for wireless brainâ€“computer interface prostheses. Microsystems and Nanoengineering, 2016, 2, 16012.	3.4	68
125	Active control of near-field coupling in conductively coupled microelectromechanical system metamaterial devices. Applied Physics Letters, 2016, 108, .	1.5	67
126	Active Control of Resonant Cloaking in a Terahertz MEMS Metamaterial. Advanced Optical Materials, 2018, 6, 1800141.	3.6	67

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127	Design and Modeling of a Nanomechanical Sensor Using Silicon Photonic Crystals. Journal of Lightwave Technology, 2008, 26, 839-846.	2.7	66
128	Wearable Triboelectric/Aluminum Nitride Nanoâ€Energyâ€Nanoâ€System with Selfâ€Sustainable Photonic Modulation and Continuous Force Sensing. Advanced Science, 2020, 7, 1903636.	5.6	66
129	Hybridized wearable patch as a multi-parameter and multi-functional human-machine interface. Nano Energy, 2021, 81, 105582.	8.2	66
130	Dual band complementary metamaterial absorber in near infrared region. Journal of Applied Physics, 2014, 115, .	1.1	65
131	Optical nanomechanical sensor using a silicon photonic crystal cantilever embedded with a nanocavity resonator. Applied Optics, 2009, 48, 1797.	2.1	64
132	A Junctionless Gate-All-Around Silicon Nanowire FET of High Linearity and Its Potential Applications. IEEE Electron Device Letters, 2013, 34, 478-480.	2.2	64
133	Selective stimulation and neural recording on peripheral nerves using flexible split ring electrodes. Sensors and Actuators B: Chemical, 2017, 242, 1165-1170.	4.0	62
134	Continuous direct current by charge transportation for next-generation IoT and real-time virtual reality applications. Nano Energy, 2020, 73, 104760.	8.2	61
135	Characterization of piezoelectric PZT beam actuators for driving 2D scanning micromirrors. Sensors and Actuators A: Physical, 2010, 162, 336-347.	2.0	60
136	Micromachined piezoelectric ultrasonic transducer with ultra-wide frequency bandwidth. Applied Physics Letters, 2015, 106, .	1.5	60
137	Reconfigurable Digital Metamaterial for Dynamic Switching of Terahertz Anisotropy. Advanced Optical Materials, 2016, 4, 391-398.	3.6	60
138	Recent Progress in the Energy Harvesting Technologyâ€"From Self-Powered Sensors to Self-Sustained IoT, and New Applications. Nanomaterials, 2021, 11, 2975.	1.9	60
139	Investigation of the Nonlinear Electromagnetic Energy Harvesters From Hand Shaking. IEEE Sensors Journal, 2015, 15, 2356-2364.	2.4	59
140	Autonomously Adhesive, Stretchable, and Transparent Solidâ€State Polyionic Triboelectric Patch for Wearable Power Source and Tactile Sensor. Advanced Functional Materials, 2021, 31, 2104365.	7.8	59
141	Progress in the Triboelectric Humanâ€"Machine Interfaces (HMIs)-Moving from Smart Gloves to AI/Haptic Enabled HMI in the 5G/IoT Era. Nanoenergy Advances, 2021, 1, 81-121.	3.6	59
142	Optimization of NEMS pressure sensors with a multilayered diaphragm using silicon nanowires as piezoresistive sensing elements. Journal of Micromechanics and Microengineering, 2012, 22, 055012.	1.5	58
143	Ultra-wide frequency broadening mechanism for micro-scale electromagnetic energy harvester. Applied Physics Letters, 2014, 104, .	1.5	58
144	Black Phosphorus Carbide as a Tunable Anisotropic Plasmonic Metasurface. ACS Photonics, 2018, 5, 3116-3123.	3.2	58

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145	Progress of optomechanical micro/nano sensors: a review. International Journal of Optomechatronics, 2021, 15, 120-159.	3.3	58
146	A MEMS-based piezoelectric cantilever patterned with PZT thin film array for harvesting energy from low frequency vibrations. Physics Procedia, 2011, 19, 129-133.	1.2	57
147	A scrape-through piezoelectric MEMS energy harvester with frequency broadband and up-conversion behaviors. Microsystem Technologies, 2011, 17, 1747-1754.	1.2	57
148	Dynamics of Wicking in Silicon Nanopillars Fabricated with Interference Lithography and Metal-Assisted Chemical Etching. Langmuir, 2012, 28, 11465-11471.	1.6	56
149	Theoretical comparison of the energy harvesting capability among various electrostatic mechanisms from structure aspect. Sensors and Actuators A: Physical, 2009, 156, 208-216.	2.0	55
150	Optical Nanofilters Based on Meta-Atom Side-Coupled Plasmonics Metal- Insulator-Metal Waveguides. Journal of Lightwave Technology, 2013, 31, 2876-2880.	2.7	55
151	Investigation of contact electrification based broadband energy harvesting mechanism using elastic PDMS microstructures. Journal of Micromechanics and Microengineering, 2014, 24, 104002.	1.5	55
152	Bilayer graphene nanoribbon nanoelectromechanical system device: A computational study. Applied Physics Letters, 2009, 95, .	1.5	54
153	Resonance enhancement of terahertz metamaterials by liquid crystals/indium tin oxide interfaces. Optics Express, 2013, 21, 6519.	1.7	54
154	Active control of electromagnetically induced transparency with dual dark mode excitation pathways using MEMS based tri-atomic metamolecules. Applied Physics Letters, 2016, 109, .	1.5	54
155	Applications of Photonic Crystal Nanobeam Cavities for Sensing. Micromachines, 2018, 9, 541.	1.4	54
156	Sensors and Control Interface Methods Based on Triboelectric Nanogenerator in IoT Applications. IEEE Access, 2019, 7, 92745-92757.	2.6	54
157	Nanometer-Scale Heterogeneous Interfacial Sapphire Wafer Bonding for Enabling Plasmonic-Enhanced Nanofluidic Mid-Infrared Spectroscopy. ACS Nano, 2020, 14, 12159-12172.	7.3	54
158	Triboelectric nanogenerator as next-generation self-powered sensor for cooperative vehicle-infrastructure system. Nano Energy, 2022, 97, 107219.	8.2	54
159	Development of a piezoelectric self-excitation and self-detection mechanism in PZT microcantilevers for dynamic scanning force microscopy in liquid. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 1559.	1.6	53
160	Polarization-sensitive microelectromechanical systems based tunable terahertz metamaterials using three dimensional electric split-ring resonator arrays. Applied Physics Letters, 2013, 102, .	1.5	53
161	A high-performance triboelectric-electromagnetic hybrid wind energy harvester based on rotational tapered rollers aiming at outdoor IoT applications. IScience, 2021, 24, 102300.	1.9	53
162	Technology evolution from micro-scale energy harvesters to nanogenerators. Journal of Micromechanics and Microengineering, 2021, 31, 093002.	1.5	53

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163	A Piezoelectric Micromachined Ultrasonic Transducer Using Piston-Like Membrane Motion. IEEE Electron Device Letters, 2015, 36, 957-959.	2.2	52
164	Silicon-on-Insulator Waveguide Devices for Broadband Mid-Infrared Photonics. IEEE Photonics Journal, 2017, 9, 1-10.	1.0	52
165	Ultrasensitive Transmissive Infrared Spectroscopy via Loss Engineering of Metallic Nanoantennas for Compact Devices. ACS Applied Materials & Interfaces, 2019, 11, 47270-47278.	4.0	52
166	Novel CMOS-Compatible Moâ€“AlNâ€“Mo Platform for Metamaterial-Based Mid-IR Absorber. ACS Photonics, 2017, 4, 302-315.	3.2	51
167	Metamaterials â€“ from fundamentals and MEMS tuning mechanisms to applications. Nanophotonics, 2020, 9, 3049-3070.	2.9	51
168	A self-powered 3D activity inertial sensor using hybrid sensing mechanisms. Nano Energy, 2019, 56, 651-661.	8.2	50
169	Progress in micro/nano sensors and nanoenergy for future AIoT-based smart home applications. Nano Express, 2021, 2, 022005.	1.2	50
170	Volatile organic compounds sensing based on Bennet doubler-inspired triboelectric nanogenerator and machine learning-assisted ion mobility analysis. Science Bulletin, 2021, 66, 1176-1185.	4.3	50
171	Advances in nanomaterials and their applications in point of care (POC) devices for the diagnosis of infectious diseases. Biotechnology Advances, 2016, 34, 1275-1288.	6.0	49
172	Wafer bonding by low-temperature soldering. Sensors and Actuators A: Physical, 2000, 85, 330-334.	2.0	48
173	Study of Low-Temperature Thermocompression Bonding in Ag-In Solder for Packaging Applications. Journal of Electronic Materials, 2009, 38, 365-371.	1.0	47
174	A dual-silicon-nanowires based U-shape nanoelectromechanical switch with low pull-in voltage. Applied Physics Letters, 2012, 100, .	1.5	47
175	Intuitive-augmented human-machine multidimensional nano-manipulation terminal using triboelectric stretchable strip sensors based on minimalist design. Nano Energy, 2019, 60, 440-448.	8.2	47
176	An Intermittent Self-Powered Energy Harvesting System From Low-Frequency Hand Shaking. IEEE Sensors Journal, 2015, 15, 4782-4790.	2.4	46
177	Microelectromechanically reconfigurable interpixelated metamaterial for independent tuning of multiple resonances at terahertz spectral region. Optica, 2015, 2, 571.	4.8	46
178	Controllability of Non-Contact Cell Manipulation by Image Dielectrophoresis (iDEP). Optical and Quantum Electronics, 2005, 37, 1385-1395.	1.5	45
179	Investigation of geometric design in piezoelectric microelectromechanical systems diaphragms for ultrasonic energy harvesting. Applied Physics Letters, 2016, 108, .	1.5	45
180	Magnetic-interaction assisted hybridized triboelectric-electromagnetic nanogenerator for advanced human-machine interfaces. Nano Energy, 2021, 86, 106154.	8.2	45

#	Article	IF	Citations
181	Novel voa using in-plane reflective micromirror and off-axis light attenuation. , 2003, 41, S16-S20.		44
182	Design and modeling for comb drive actuator with enlarged static displacement. Sensors and Actuators A: Physical, 2004, 115, 530-539.	2.0	44
183	Diaphragm shape effect on the sensitivity of surface acoustic wave based pressure sensor for harsh environment. Applied Physics Letters, 2015, 107, .	1.5	44
184	Dispersion engineering and thermo-optic tuning in mid-infrared photonic crystal slow light waveguides on silicon-on-insulator. Optics Letters, 2018, 43, 5504.	1.7	44
185	Reconfigurable terahertz metamaterials: From fundamental principles to advanced 6G applications. IScience, 2022, 25, 103799.	1.9	44
186	NEMS diaphragm sensors integrated with triple-nano-ring resonator. Sensors and Actuators A: Physical, 2011, 172, 61-68.	2.0	43
187	Investigation of Broadband Characteristics of Multi-Frequency Piezoelectric Micromachined Ultrasonic Transducer (MF-pMUT). IEEE Sensors Journal, 2019, 19, 860-867.	2.4	43
188	Suspended silicon waveguide platform with subwavelength grating metamaterial cladding for long-wave infrared sensing applications. Nanophotonics, 2021, 10, 1861-1870.	2.9	43
189	Infrared Plasmonic Biosensor with Tetrahedral DNA Nanostructure as Carriers for Labelâ€Free and Ultrasensitive Detection of miRâ€155. Advanced Science, 2021, 8, e2100583.	5.6	43
190	Wavelength-multiplexed hook nanoantennas for machine learning enabled mid-infrared spectroscopy. Nature Communications, 2022, 13, .	5.8	43
191	A 2-D MEMS scanning mirror based on dynamic mixed mode excitation of a piezoelectric PZT thin film S-shaped actuator. Optics Express, 2011, 19, 13812.	1.7	42
192	An In-Plane Approximated Nonlinear MEMS Electromagnetic Energy Harvester. Journal of Microelectromechanical Systems, 2014, 23, 740-749.	1.7	42
193	A Hybrid Flapping-Blade Wind Energy Harvester Based on Vortex Shedding Effect. Journal of Microelectromechanical Systems, 2016, 25, 845-847.	1.7	42
194	Wavelength-Flattened Directional Coupler Based Mid-Infrared Chemical Sensor Using Bragg Wavelength in Subwavelength Grating Structure. Nanomaterials, 2018, 8, 893.	1.9	42
195	Programmed-triboelectric nanogeneratorsâ€”A multi-switch regulation methodology for energy manipulation. Nano Energy, 2020, 78, 105241.	8.2	42
196	Piezoelectric MEMSâ€”evolution from sensing technology to diversified applications in the 5G/Internet of Things (IoT) era. Journal of Micromechanics and Microengineering, 2022, 32, 014005.	1.5	42
197	Biometrics-protected optical communication enabled by deep learningâ€“enhanced triboelectric/photonic synergistic interface. Science Advances, 2022, 8, eabl9874.	4.7	42
198	Analytical solutions of sensitivity for pressure microsensors. IEEE Sensors Journal, 2001, 1, 340-344.	2.4	41

#	Article	IF	Citations
199	Recent progress on peripheral neural interface technology towards bioelectronic medicine. Bioelectronic Medicine, 2020, 6, 23.	1.0	41
200	Recent progress in nanoplasmonics-based integrated optical micro/nano-systems. Journal Physics D: Applied Physics, 2020, 53, 213001.	1.3	41
201	Aluminum nitride on insulator (AlNOI) platform for mid-infrared photonics. Optics Letters, 2019, 44, 73.	1.7	41
202	Si nanophotonics based cantilever sensor. Applied Physics Letters, 2008, 93, .	1.5	40
203	Characterization of intermediate In/Ag layers of low temperature fluxless solder based wafer bonding for MEMS packaging. Sensors and Actuators A: Physical, 2009, 154, 85-91.	2.0	40
204	Three-dimensional movable metamaterial using electric split-ring resonators. Optics Letters, 2013, 38, 3126.	1.7	40
205	An Electromagnetic MEMS Energy Harvester Array with Multiple Vibration Modes. Micromachines, 2015, 6, 984-992.	1.4	40
206	Heterogeneously Integrated Graphene/Silicon/Halide Waveguide Photodetectors toward Chip-Scale Zero-Bias Long-Wave Infrared Spectroscopic Sensing. ACS Nano, 2021, 15, 10084-10094.	7.3	40
207	Piezoresistive silicon nanowire based nanoelectromechanical system cantilever air flow sensor. Applied Physics Letters, 2012, 100, .	1.5	39
208	A 3D Printed Implantable Device for Voiding the Bladder Using Shape Memory Alloy (SMA) Actuators. Advanced Science, 2017, 4, 1700143.	5.6	39
209	Heterogeneous Wafer Bonding Technology and Thin-Film Transfer Technology-Enabling Platform for the Next Generation Applications beyond 5G. Micromachines, 2021, 12, 946.	1.4	39
210	Self-sustainable flow-velocity detection via electromagnetic/triboelectric hybrid generator aiming at IoT-based environment monitoring. Nano Energy, 2021, 90, 106501.	8.2	39
211	Computational Characterization of a Photonic Crystal Cantilever Sensor Using a Hexagonal Dual-Nanoring-Based Channel Drop Filter. IEEE Nanotechnology Magazine, 2011, 10, 789-796.	1.1	38
212	Tuning characteristics of mirrorlike T-shape terahertz metamaterial using out-of-plane actuated cantilevers. Applied Physics Letters, 2014, 104, .	1.5	38
213	Micro-electro-mechanically tunable metamaterial with enhanced electro-optic performance. Applied Physics Letters, 2014, 104, .	1.5	38
214	Annularly Grooved Diaphragm Pressure Sensor With Embedded Silicon Nanowires for Low Pressure Application. Journal of Microelectromechanical Systems, 2014, 23, 1396-1407.	1.7	38
215	Contactless tracking of humans using non-contact triboelectric sensing technology: Enabling new assistive applications for the elderly and the visually impaired. Nano Energy, 2021, 90, 106486.	8.2	38
216	A 1-V Operated MEMS Variable Optical Attenuator Using Piezoelectric PZT Thin-Film Actuators. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 1529-1536.	1.9	37

#	Article	IF	Citations
217	Liquid-metal-elastomer foam for moldable multi-functional triboelectric energy harvesting and force sensing. Nano Energy, 2019, 64, 103912.	8.2	37
218	MOEMS variable optical attenuators using rotary comb drive actuators. IEEE Photonics Technology Letters, 2006, 18, 1170-1172.	1.3	36
219	Nanoelectromechanical torsion switch of low operation voltage for nonvolatile memory application. Applied Physics Letters, 2010, 96, .	1.5	36
220	Microelectromechanically tunable multiband metamaterial with preserved isotropy. Scientific Reports, 2015, 5, 11678.	1.6	36
221	Periodic Array of Subwavelength MEMS Cantilevers for Dynamic Manipulation of Terahertz Waves. Journal of Microelectromechanical Systems, 2015, 24, 525-527.	1.7	36
222	A Highly Selective 3D Spiked Ultraflexible Neural (SUN) Interface for Decoding Peripheral Nerve Sensory Information. Advanced Healthcare Materials, 2018, 7, 1700987.	3.9	36
223	Development of a Highly Sensitive Humidity Sensor Based on a Piezoelectric Micromachined Ultrasonic Transducer Array Functionalized with Graphene Oxide Thin Film. Sensors, 2018, 18, 4352.	2.1	36
224	Constructing highly tribopositive elastic yarn through interfacial design and assembly for efficient energy harvesting and human-interactive sensing. Nano Energy, 2022, 94, 106956.	8.2	36
225	Noncontact Humanâ€“Machine Interface Using Complementary Information Fusion Based on MEMS and Triboelectric Sensors. Advanced Science, 2022, 9, e2201056.	5.6	36
226	A MEMS VOA Using Electrothermal Actuators. Journal of Lightwave Technology, 2007, 25, 490-498.	2.7	35
227	Active MEMS metamaterials for THz bandwidth control. Applied Physics Letters, 2017, 110, .	1.5	35
228	Novel Biosensor Based on Photonic Crystal Nano-Ring Resonator. Procedia Chemistry, 2009, 1, 417-420.	0.7	34
229	Development of vertical SU-8 microtubes integrated with dissolvable tips for transdermal drug delivery. Biomicrofluidics, 2013, 7, 026502.	1.2	34
230	Toward advanced neural interfaces for the peripheral nervous system (PNS) and their future applications. Current Opinion in Biomedical Engineering, 2018, 6, 130-137.	1.8	34
231	Switchable textile-triboelectric nanogenerators (S-TENGs) for continuous profile sensing application without environmental interferences. Nano Energy, 2020, 69, 104462.	8.2	34
232	Evolving Flexible Sensors, Wearable and Implantable Technologies Towards BodyNET for Advanced Healthcare and Reinforced Life Quality. IEEE Open Journal of Circuits and Systems, 2021, 2, 702-720.	1.4	34
233	Evolution of Microstructure and V-Shaped Positive Temperature Coefficient of Resistivity of (Pb0.6Sr0.4)TiO3 Materials. Journal of the American Ceramic Society, 1994, 77, 1340-1344.	1.9	33
234	Characterization of Thermopile Based on Complementary Metal-Oxide-Semiconductor (CMOS) Materials and Post CMOS Micromachining. Japanese Journal of Applied Physics, 2002, 41, 4340-4345.	0.8	33

#	Article	IF	Citations
235	Experimental Investigation of a Cavity-Mode Resonator Using a Micromachined Two-Dimensional Silicon Phononic Crystal in a Square Lattice. IEEE Electron Device Letters, 2011, 32, 821-823.	2.2	33
236	Advanced Implantable Biomedical Devices Enabled by Triboelectric Nanogenerators. Nanomaterials, 2022, 12, 1366.	1.9	33
237	Larger-Than-Unity External Optical Field Confinement Enabled by Metamaterial-Assisted Comb Waveguide for Ultrasensitive Long-Wave Infrared Gas Spectroscopy. Nano Letters, 2022, 22, 6112-6120.	4.5	33
238	Development and evolution of MOEMS technology in variable optical attenuators. Journal of Micro/Nanolithography, MEMS, and MOEMS, 2008, 7, 021003.	1.0	32
239	A convection-driven long-range linear gradient generator with dynamic control. Lab on A Chip, 2015, 15, 1445-1450.	3.1	32
240	Mapping of Small Nerve Trunks and Branches Using Adaptive Flexible Electrodes. Advanced Science, 2016, 3, 1500386.	5.6	32
241	Frequencyâ€Agile Temporal Terahertz Metamaterials. Advanced Optical Materials, 2020, 8, 2000101.	3.6	32
242	Integration of MEMS IR detectors with MIR waveguides for sensing applications. Optics Express, 2020, 28, 11524.	1.7	32
243	A humidity resistant and high performance triboelectric nanogenerator enabled by vortex-induced vibration for scavenging wind energy. Nano Research, 2022, 15, 3246-3253.	5.8	32
244	The Comparison Between the Graded Photonic Crystal Coupler and Various Couplers. Journal of Lightwave Technology, 2009, 27, 2570-2574.	2.7	31
245	Compact highly-efficient polarization splitter and rotator based on 90Â° bends. Optics Express, 2016, 24, 14506.	1.7	31
246	Progress of Advanced Devices and Internet of Things Systems as Enabling Technologies for Smart Homes and Health Care. ACS Materials Au, 2022, 2, 394-435.	2.6	31
247	Sol-gel derived PZT force sensor for scanning force microscopy. Materials Chemistry and Physics, 1996, 44, 25-29.	2.0	30
248	The role of Ni buffer layer on high yield low temperature hermetic wafer bonding using In/Sn/Cu metallization. Applied Physics Letters, 2009, 94, 034105.	1.5	30
249	Characterization and reliability study of low temperature hermetic wafer level bonding using In/Sn interlayer and Cu/Ni/Au metallization. Journal of Alloys and Compounds, 2009, 485, 444-450.	2.8	30
250	Configuration analysis of sensing element for photonic crystal based NEMS cantilever using dual nano-ring resonator. Sensors and Actuators A: Physical, 2011, 169, 352-361.	2.0	30
251	Viscosity and density decoupling method using a higher order Lamb wave sensor. Journal of Micromechanics and Microengineering, 2014, 24, 075002.	1.5	30
252	Flow sensing and energy harvesting characteristics of a windâ€driven piezoelectric Pb(Zr0.52,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62	0.6	30

#	Article	IF	Citations
253	A Triboelectric Energy Harvester Using Low-Cost, Flexible, and Biocompatible Ethylene Vinyl Acetate (EVA). Journal of Microelectromechanical Systems, 2015, 24, 1338-1345.	1.7	30
254	Bidirectional reconfiguration and thermal tuning of microcantilever metamaterial device operating from 77â€‰K to 400â€‰K. Applied Physics Letters, 2017, 111, .	1.5	30
255	Efficient and broadband subwavelength grating coupler for 37 Î¼m mid-infrared silicon photonics integration. Optics Express, 2018, 26, 26242.	1.7	30
256	Vernier effect-based tunable mid-infrared sensor using silicon-on-insulator cascaded rings. Optics Express, 2020, 28, 6251.	1.7	30
257	Retro-Reflection Type MOEMS VOA. IEEE Photonics Technology Letters, 2004, 16, 2290-2292.	1.3	29
258	A new latched 2Ã—2 optical switch using bi-directional movable electrothermal H-beam actuators. Sensors and Actuators A: Physical, 2005, 123-124, 563-569.	2.0	29
259	A Two-Dimensional MEMS Scanning Mirror Using Hybrid Actuation Mechanisms With Low Operation Voltage. Journal of Microelectromechanical Systems, 2012, 21, 1124-1135.	1.7	29
260	Development of a thermopile infrared sensor using stacked double polycrystalline silicon layers based on the CMOS process. Journal of Micromechanics and Microengineering, 2013, 23, 065026.	1.5	29
261	Development of vertical SU-8 microneedles for transdermal drug delivery by double drawing lithography technology. Biomicrofluidics, 2013, 7, 066501.	1.2	29
262	Investigation of Position Sensing and Energy Harvesting of a Flexible Triboelectric Touch Pad. Nanomaterials, 2018, 8, 613.	1.9	29
263	A hybridized electromagnetic-triboelectric nanogenerator designed for scavenging biomechanical energy in human balance control. Nano Research, 2021, 14, 4227-4235.	5.8	29
264	Multifunctional Chemical Sensing Platform Based on Dualâ€Resonant Infrared Plasmonic Perfect Absorber for Onâ€Chip Detection of Poly(ethyl cyanoacrylate). Advanced Science, 2021, 8, e2101879.	5.6	29
265	Deterministic aperiodic photonic crystal nanobeam supporting adjustable multiple mode-matched resonances. Optics Letters, 2018, 43, 5407.	1.7	29
266	Enhancing the tensile modulus and strength of an aluminum alloy using interconnected reinforcement methodology. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 333, 193-198.	2.6	28
267	Design and fabrication of epitaxial silicon micromirror devices. Sensors and Actuators A: Physical, 2004, 115, 581-590.	2.0	28
268	Nanophotonics Sensor Based on Microcantilever for Chemical Analysis. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 1323-1326.	1.9	28
269	Nanophotonic biosensors using hexagonal nanoring resonators: computational study. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2011, 10, 013001.	1.0	28
270	Characterization of Piezoresistive-Si-Nanowire-Based Pressure Sensors by Dynamic Cycling Test With Extralarge Compressive Strain. IEEE Transactions on Electron Devices, 2012, 59, 3097-3103.	1.6	28

#	Article	IF	Citations
271	A Review and Perspective for the Development of Triboelectric Nanogenerator (TENG)-Based Self-Powered Neuroprosthetics. Micromachines, 2020, 11, 865.	1.4	28
272	Terahertz MEMS metadevices. Journal of Micromechanics and Microengineering, 2021, 31, 113001.	1.5	28
273	A Hermetic Seal Using Composite Thin-Film In/Sn Solder as an Intermediate Layer and Its Interdiffusion Reaction with Cu. Journal of Electronic Materials, 2009, 38, 200-207.	1.0	27
274	A Piezoelectric-Driven Three-Dimensional MEMS VOA Using Attenuation Mechanism With Combination of Rotational and Translational Effects. Journal of Microelectromechanical Systems, 2010, 19, 1370-1379.	1.7	27
275	Design and modeling of 2-D photonic crystals based hexagonal triple-nano-ring resonators as biosensors. Microsystem Technologies, 2013, 19, 53-60.	1.2	27
276	Reconfiguration of Resonance Characteristics for Terahertz U-Shape Metamaterial Using MEMS Mechanism. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 93-99.	1.9	27
277	Flexible Epineural Strip Electrode for Recording in Fine Nerves. IEEE Transactions on Biomedical Engineering, 2016, 63, 581-587.	2.5	27
278	Experimental realization of an O-band compact polarization splitter and rotator. Optics Express, 2017, 25, 3234.	1.7	27
279	All in One, Selfâ€Powered Bionic Artificial Nerve Based on a Triboelectric Nanogenerator. Advanced Science, 2021, 8, 2004727.	5.6	26
280	MEMS-Enabled On-Chip Computational Mid-Infrared Spectrometer Using Silicon Photonics. ACS Photonics, 2022, 9, 2367-2377.	3.2	26
281	Ultrasensitive nanowire pressure sensor makes its debut. Procedia Engineering, 2010, 5, 1127-1130.	1.2	25
282	Novel piezoelectric actuation mechanism for a gimbal-less mirror in 2D raster scanning applications. Journal of Micromechanics and Microengineering, 2011, 21, 075001.	1.5	25
283	Investigation of piezoelectric driven MEMS mirrors based on single and double S-shaped PZT actuator for 2-D scanning applications. Sensors and Actuators A: Physical, 2012, 184, 149-159.	2.0	25
284	MEMS tri-axial force sensor with an integrated mechanical stopper for guidewire applications. Microsystem Technologies, 2013, 19, 1005-1015.	1.2	25
285	Dense vertical SU-8 microneedles drawn from a heated mold with precisely controlled volume. Journal of Micromechanics and Microengineering, 2015, 25, 025013.	1.5	25
286	Graphene Tunable Plasmonâ€“Phonon Coupling in Midâ€IR Complementary Metamaterial. Advanced Materials Technologies, 2018, 3, 1800014.	3.0	25
287	Compact Low Loss Mid-Infrared Wavelength-Flattened Directional Coupler (WFDC) for Arbitrary Power Splitting Ratio Enabled by Rib Waveguide Dispersion Engineering. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-8.	1.9	25
288	Development of triboelectric-enabled tunable Fabry-PÃ©rot photonic-crystal-slab filter towards wearable mid-infrared computational spectrometer. Nano Energy, 2021, 89, 106446.	8.2	25

#	Article	IF	Citations
289	Metamaterial technologies for miniaturized infrared spectroscopy: Light sources, sensors, filters, detectors, and integration. Journal of Applied Physics, 2020, 128, .	1.1	25
290	Dipolar Resonance Enhancement and Magnetic Resonance in Cross-Coupled Bow-Tie Nanoantenna Array by Plasmonic Cavity. ACS Photonics, 2015, 2, 890-898.	3.2	24
291	CMOS Compatible Midinfrared Wavelength-Selective Thermopile for High Temperature Applications. Journal of Microelectromechanical Systems, 2015, 24, 144-154.	1.7	24
292	Polarization controllable multispectral symmetry-breaking absorberin mid-infrared. Journal of Applied Physics, 2016, 120, 063105.	1.1	24
293	A multiband flexible terahertz metamaterial with curvature sensing functionality. Journal of Optics (United Kingdom), 2016, 18, 075101.	1.0	24
294	Electrochemically Exfoliated Platinum Dichalcogenide Atomic Layers for High-Performance Air-Stable Infrared Photodetectors. ACS Applied Materials & Interfaces, 2021, 13, 8518-8527.	4.0	23
295	All metal nanoelectromechanical switch working at 300 Â°C for rugged electronics applications. Nanoscale, 2014, 6, 5606.	2.8	22
296	Coexistence of air and dielectric modes in single nanocavity. Optics Express, 2019, 27, 14085.	1.7	22
297	Deep Learning-Assisted Triboelectric Smart Mats for Personnel Comprehensive Monitoring toward Maritime Safety. ACS Applied Materials & Interfaces, 2022, 14, 24832-24839.	4.0	22
298	Monolithic-integrated 8CH MEMS variable optical attenuators. Sensors and Actuators A: Physical, 2005, 123-124, 596-601.	2.0	21
299	PDMS-Coated Piezoresistive NEMS Diaphragm for Chloroform Vapor Detection. IEEE Electron Device Letters, 2012, 33, 1078-1080.	2.2	21
300	Digitally reconfigurable binary coded terahertz metamaterial with output analogous to NOR and AND. Journal of Applied Physics, 2016, 119, .	1.1	21
301	Piezoelectric micromachined ultrasonic transducers with low thermoelastic dissipation and high quality factor. Journal of Micromechanics and Microengineering, 2018, 28, 057001.	1.5	21
302	Mid-Infrared Slow Light Engineering and Tuning in 1-D Grating Waveguide. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-8.	1.9	21
303	Selfâ€Powered Cursor Using a Triboelectric Mechanism. Small Methods, 2018, 2, 1800078.	4.6	21
304	Multifunctional mid-infrared photonic switch using a MEMS-based tunable waveguide coupler. Optics Letters, 2020, 45, 5620.	1.7	21
305	Scalable self-attaching/assembling robotic cluster (S2A2RC) system enabled by triboelectric sensors for in-orbit spacecraft application. Nano Energy, 2022, 93, 106894.	8.2	21
306	Novel high vacuum scanning force microscope using a piezoelectric cantilever and the phase detection method. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 1551.	1.6	20

#	Article	IF	Citations
307	Investigation of TMAH for front-side bulk micromachining process from manufacturing aspect. Sensors and Actuators A: Physical, 2001, 92, 375-383.	2.0	20
308	Characterization of nanometer-thick polycrystalline silicon with phonon-boundary scattering enhanced thermoelectric properties and its application in infrared sensors. Nanoscale, 2015, 7, 532-541.	2.8	20
309	Thermally Tunable Absorptionâ€induced Transparency by a Quasi 3D Bowâ€tie Nanostructure for Nonplasmonic and Volumetric Refractive Index Sensing at Midâ€IR. Advanced Optical Materials, 2016, 4, 943-952.	3.6	20
310	Thermoplasmonic Study of a Triple Band Optical Nanoantenna Strongly Coupled to Mid IR Molecular Mode. Scientific Reports, 2016, 6, 22227.	1.6	20
311	MIR plasmonic liquid sensing in nano-metric space driven by capillary force. Journal Physics D: Applied Physics, 2019, 52, 394001.	1.3	20
312	Design and optimization of wafer bonding packaged microelectromechanical systems thermoelectric power generators with heat dissipation path. Journal of Vacuum Science & Technology B, 2009, 27, 1267.	1.3	19
313	Two-dimensional photonic-crystal-based Fabryâ€“Perot etalon. Optics Letters, 2015, 40, 2743.	1.7	19
314	Design and Anchorage Dependence of Shape Memory Alloy Actuators on Enhanced Voiding of a Bladder. Advanced Materials Technologies, 2018, 3, 1700184.	3.0	19
315	Thermal annealing study of the mid-infrared aluminum nitride on insulator (AlNOI) photonics platform. Optics Express, 2019, 27, 19815.	1.7	19
316	Demonstration of mid-infrared slow light one-dimensional photonic crystal ring resonator with high-order photonic bandgap. Optics Express, 2020, 28, 30736.	1.7	19
317	Subwavelength onâ€chip light focusing with bigradient allâ€dielectric metamaterials for dense photonic integration. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	19
318	Four-channel display and encryption by near-field reflection on nanoprinting metasurface. Nanophotonics, 2022, 11, 3365-3374.	2.9	19
319	Suspended 2-D photonic crystal aluminum nitride membrane reflector. Optics Express, 2015, 23, 10598.	1.7	18
320	Lossâ€induced phase transition in midâ€infrared plasmonic metamaterials for ultrasensitive vibrational spectroscopy. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	18
321	Modeling and Experimental Study of a Low-Frequency-Vibration-Based Power Generator Using ZnO Nanowire Arrays. Journal of Microelectromechanical Systems, 2012, 21, 776-778.	1.7	17
322	Characterization of a silicon nanowire-based cantilever air-flow sensor. Journal of Micromechanics and Microengineering, 2012, 22, 095008.	1.5	17
323	Microneedle Array Integrated With CNT Nanofilters for Controlled and Selective Drug Delivery. Journal of Microelectromechanical Systems, 2014, 23, 1036-1044.	1.7	17
324	Development of Polycrystalline Silicon Based Photonic Crystal Membrane for Mid-Infrared Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 94-100.	1.9	17

#	Article	IF	Citations
325	Development of a Flexible and Disposable Microneedle-Fluidic-System With Finger-Driven Drug Loading and Delivery Functions for Inflammation Treatment. Journal of Microelectromechanical Systems, 2015, 24, 565-574.	1.7	17
326	Electrically switchable multi-frequency piezoelectric micromachined ultrasonic transducer (pMUT). , 2016, , .		17
327	Mid-infrared modulators integrating silicon and black phosphorus photonics. Materials Today Advances, 2021, 12, 100170.	2.5	17
328	Development of Electrothermal Actuator with Optimized Motion Characteristics. Japanese Journal of Applied Physics, 2003, 42, 4067-4073.	0.8	16
329	A New Micromechanism for Transformation of Small Displacements to Large Rotations for a VOA. IEEE Sensors Journal, 2004, 4, 503-509.	2.4	16
330	3-V Driven Pop-Up Micromirror for Reflecting Light Toward Out-of-Plane Direction for VOA Applications. IEEE Photonics Technology Letters, 2004, 16, 1044-1046.	1.3	16
331	Development of low temperature bonding using in-based solders. , 2008, , .		16
332	Wafer-Level Hermetic Bonding Using Sn/In and Cu/Ti/Au Metallization. IEEE Transactions on Components and Packaging Technologies, 2009, 32, 926-934.	1.4	16
333	A 2-D MEMS Scanning Mirror Using Piezoelectric PZT Beam Actuators. Procedia Chemistry, 2009, 1, 1303-1306.	0.7	16
334	Micromechanical Resonators Based on Silicon Two-Dimensional Phononic Crystals of Square Lattice. Journal of Microelectromechanical Systems, 2012, 21, 801-810.	1.7	16
335	Tantalum-Nitride Antifuse Electromechanical OTP for Embedded Memory Applications. IEEE Electron Device Letters, 2013, 34, 987-989.	2.2	16
336	A bi-stable nanoelectromechanical non-volatile memory based on van der Waals force. Applied Physics Letters, 2013, 103, .	1.5	16
337	Fabrication and Characterization of a Vacuum Encapsulated Curved Beam Switch for Harsh Environment Application. Journal of Microelectromechanical Systems, 2014, 23, 1121-1130.	1.7	16
338	In vitro controlled release of cisplatin from gold-carbon nanobottles via cleavable linkages. International Journal of Nanomedicine, 2015, 10, 7425.	3.3	16
339	Realization of Fractal-Inspired Thermoresponsive Quasi-3D Plasmonic Metasurfaces with EOT-Like Transmission for Volumetric and Multispectral Detection in the Mid-IR Region. ACS Omega, 2016, 1, 818-831.	1.6	16
340	High Temperature Coupling of IR Inactive Cï£¾C Mode in Complementary Metal Oxide Semiconductor Metamaterial Structure. Advanced Optical Materials, 2017, 5, 1600778.	3.6	16
341	Towards low-loss waveguides in SOI and Ge-on-SOI for mid-IR sensing. Journal of Physics Communications, 2018, 2, 045029.	0.5	16
342	A Self-Powered Six-Axis Tactile Sensor by Using Triboelectric Mechanism. Nanomaterials, 2018, 8, 503.	1.9	16

#	Article	IF	Citations
343	Independent and grouped 3D cell rotation in a microfluidic device for bioimaging applications. Biosensors and Bioelectronics, 2020, 170, 112661.	5.3	16
344	Inkjet 3D Printed MEMS Vibrational Electromagnetic Energy Harvester. Energies, 2020, 13, 2800.	1.6	16
345	Development and Application of Lateral Comb-Drive Actuator. Japanese Journal of Applied Physics, 2003, 42, 4059-4062.	0.8	15
346	A nano-ring resonator based on 2-D hexagonal-lattice photonic crystals. , 2009, , .		15
347	Characterization of Silicon Nanowire Embedded in a MEMS Diaphragm Structure Within Large Compressive Strain Range. IEEE Electron Device Letters, 2011, 32, 1764-1766.	2.2	15
348	Silicon two-dimensional phononic crystal resonators using alternate defects. Applied Physics Letters, 2011, 99, 234102.	1.5	15
349	Numerical and experimental study on silicon microresonators based on phononic crystal slabs with reduced central-hole radii. Journal of Micromechanics and Microengineering, 2013, 23, 065030.	1.5	15
350	Characterization of polycrystalline silicon-based photonic crystal-suspended membrane for high temperature applications. Journal of Nanophotonics, 2014, 8, 084096.	0.4	15
351	Mitochondria-acting hexokinase II peptides carried by short-length carbon nanotubes with increased cellular uptake, endosomal evasion, and enhanced bioactivity against cancer cells. Nanoscale, 2015, 7, 13907-13917.	2.8	15
352	Fabryâ€“Perot filter using grating structures. Optics Letters, 2013, 38, 902.	1.7	14
353	Development of silicon electrode enhanced by carbon nanotube and gold nanoparticle composites on silicon neural probe fabricated with complementary metal-oxide-semiconductor process. Applied Physics Letters, 2014, 104, 193105.	1.5	14
354	Mechanism and Applications of Electrical Stimulation Disturbance on Motoneuron Excitability Studied Using Flexible Intramuscular Electrode. Advanced Biology, 2019, 3, e1800281.	3.0	14
355	Optimization of MEMS Vibration Energy Harvester With Perforated Electrode. Journal of Microelectromechanical Systems, 2021, 30, 299-308.	1.7	14
356	Low-Voltage Driven MEMS VOA Using Torsional Attenuation Mechanism Based on Piezoelectric Beam Actuators. IEEE Photonics Technology Letters, 2010, 22, 1355-1357.	1.3	13
357	Coupling effect combined with incident polarization to modulate double split-ring-resonator in terahertz frequency range. Journal of Applied Physics, 2014, 116, .	1.1	13
358	Highly sensitive piezoelectric micromachined ultrasonic transducer (pMUT) operated in air. , 2016, , .		13
359	Development of a Thermoelectric and Electromagnetic Hybrid Energy Harvester from Water Flow in an Irrigation System. Micromachines, 2018, 9, 395.	1.4	13
360	Versatile microfluidic platform embedded with sidewall three-dimensional electrodes for cell manipulation. Biomedical Physics and Engineering Express, 2019, 5, 055003.	0.6	13

#	Article	IF	Citations
361	Anomalous plasmon hybridization in nanoantennas near interfaces. Optics Letters, 2019, 44, 6041.	1.7	13
362	A Non-Resonant Piezoelectricâ€“Electromagneticâ€“Triboelectric Hybrid Energy Harvester for Low-Frequency Human Motions. Nanomaterials, 2022, 12, 1168.	1.9	13
363	Feasibility study of self-assembly mechanism for variable optical attenuator. Journal of Micromechanics and Microengineering, 2005, 15, 55-62.	1.5	12
364	Microstructures for characterization of seebeck coefficient of doped polysilicon films. Microsystem Technologies, 2011, 17, 77-83.	1.2	12
365	Design and characterization of a 3D MEMS VOA driven by hybrid electromagnetic and electrothermal actuation mechanisms. Journal of Micromechanics and Microengineering, 2012, 22, 105031.	1.5	12
366	Droplet spreading on a two-dimensional wicking surface. Physical Review E, 2013, 88, 062406.	0.8	12
367	Lateral lattice shift engineered slow light in elliptical photonics crystal waveguides. Journal of Nanophotonics, 2014, 8, 084090.	0.4	12
368	Influence of nanoscale geometry on the dynamics of wicking into a rough surface. Applied Physics Letters, 2013, 102, 053104.	1.5	11
369	Highly sensitive piezoelectric micromachined ultrasonic transducer operated in air. Micro and Nano Letters, 2016, 11, 558-562.	0.6	11
370	Dielectric-elastomer-enhanced triboelectric nanogenerator with amplified outputs. Sensors and Actuators A: Physical, 2022, 333, 113270.	2.0	11
371	3D Thermoelectric Structures Derived from a New Mixed Micromachining Process. Japanese Journal of Applied Physics, 2000, 39, 7125-7129.	0.8	10
372	MOEMS variable optical attenuator with improved dynamic characteristics based on robust design. IEEE Photonics Technology Letters, 2006, 18, 773-775.	1.3	10
373	Variable optical attenuator using planar light attenuation scheme based on rotational and translational misalignment. Microsystem Technologies, 2006, 13, 41-48.	1.2	10
374	Investigation of Piezoelectric MEMS-based Wideband Energy Harvesting System with Assembled Frequency-up- conversion Mechanism. Procedia Engineering, 2011, 25, 725-728.	1.2	10
375	Investigation on the optimized design of alternate-hole-defect for 2D phononic crystal based silicon microresonators. Journal of Applied Physics, 2012, 112, 024910.	1.1	10
376	Tunable Fabry-Perot Filter Using Hybrid Integrated Grating and Slot Microstructures. Journal of Microelectromechanical Systems, 2014, 23, 1009-1011.	1.7	10
377	Development of Silicon Probe With Acute Study on <italic>In Vivo</italic> Neural Recording and Implantation Behavior Monitored by Integrated Si-Nanowire Strain Sensors. Journal of Microelectromechanical Systems, 2015, 24, 1303-1313.	1.7	10
378	A modified abstraction of SierpiÅ„ski fractals towards enhanced sensitivity of a cross-coupled bow-tie nanostructure. Nano Futures, 2018, 2, 025005.	1.0	10

#	Article	IF	Citations
379	Ultra-small photonic crystal (PhC)-based test tool for gas permeability of polymers. Optics Express, 2019, 27, 35600.	1.7	10
380	Frequency modulation detection high vacuum scanning force microscope with a self-oscillating piezoelectric cantilever. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 1647.	1.6	9
381	Computational study of NEMS diaphragm sensor using triple nano-ring resonator. Procedia Engineering, 2010, 5, 1418-1421.	1.2	9
382	The effects of interlayer mismatch on electronic properties of bilayer armchair graphene nanoribbons. Carbon, 2012, 50, 1659-1666.	5.4	9
383	Development of stretchable membrane based nanofilters using patterned arrays of vertically grown carbon nanotubes. Nanoscale, 2013, 5, 8488.	2.8	9
384	A Wideband Triboelectric Energy Harvester. Journal of Physics: Conference Series, 2013, 476, 012128.	0.3	9
385	Evidence on simultaneous improvement of motional impedance and Q-factor of silicon phononic crystal micromechanical resonators by variously engineering the cavity defects. Journal of Applied Physics, 2014, 115, 094904.	1.1	9
386	A Design of Terahertz Broadband Filters and its Effect in Eliminating Asymmetric Characteristics in Device Structures. Journal of Lightwave Technology, 2015, 33, 3280-3285.	2.7	9
387	A Motion-Balanced Sensor Based on the Triboelectricity of Nano-Iron Suspension and Flexible Polymer. Nanomaterials, 2019, 9, 690.	1.9	9
388	Arrayed variable optical attenuator using retro-reflective MEMS mirrors. IEEE Photonics Technology Letters, 2005, 17, 2640-2642.	1.3	8
389	Characteristics of NEMS Piezoresistive Silicon Nanowires Pressure Sensors With various Diaphragm Layers. Procedia Engineering, 2011, 25, 1433-1436.	1.2	8
390	Seal and encapsulate cavities for complementary metal-oxide-semiconductor microelectromechanical system thermoelectric power generators. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 021401.	0.6	8
391	Study of hybrid driven micromirrors for 3-D variable optical attenuator applications. Optics Express, 2012, 20, 21598.	1.7	8
392	Investigation of a Vacuum Encapsulated Si-to-Si Contact Microswitch Operated From â˜'60 Â°C to 400 Â°C. Journal of Microelectromechanical Systems, 2015, 24, 1906-1915.	1.7	8
393	Investigation of the Temperature Fluctuation of Single-Phase Fluid Based Microchannel Heat Sink. Sensors, 2018, 18, 1498.	2.1	8
394	Cascaded, self-calibrated, single-pixel mid-infrared Hadamard transform spectrometer. Optics Express, 2021, 29, 34600.	1.7	8
395	Progress in Wafer Level MEMS Packaging. Journal of Japan Institute of Electronics Packaging, 2007, 10, 42-51.	0.0	8
396	Suspended Silicon Waveguide with Sub-Wavelength Grating Cladding for Optical MEMS in Mid-Infrared. Micromachines, 2021, 12, 1311.	1.4	8

#	Article	IF	Citations
397	Solâ€“gel derived PNNZT thin films for micromachined piezoelectric force sensors. Thin Solid Films, 1997, 299, 88-93.	0.8	7
398	<title>Investigation of thermopile using CMOS compatible process and front-side Si bulk etching</title>. , 2000, , .		7
399	Scratch Drive Actuator Driven Self-assembled Variable Optical Attenuator. Japanese Journal of Applied Physics, 2004, 43, 3906-3909.	0.8	7
400	Novel H-beam electrothermal actuators with capability of generating bi-directional static displacement. Microsystem Technologies, 2006, 12, 717-722.	1.2	7
401	A Wideband Electromagnetic Energy Harvester for Random Vibration Sources. Advanced Materials Research, 0, 74, 165-168.	0.3	7
402	Development of CMOS MEMS thermal bimorph actuator for driving microlens. , 2011, , .		7
403	Pull-In Voltage and Fabrication Yield Analysis of All-Metal-Based Nanoelectromechanical Switches. Journal of Microelectromechanical Systems, 2015, 24, 1878-1886.	1.7	7
404	Direct Stimulation of Bladder Pelvic Nerve using Battery-Free Neural Clip Interface. , 2019, , .		7
405	Unveiling Stimulation Secrets of Electrical Excitation of Neural Tissue Using a Circuit Probability Theory. Frontiers in Computational Neuroscience, 2020, 14, 50.	1.2	7
406	Sensorized guidewires with MEMS tri-axial force sensor for minimally invasive surgical applications. , 2010, 2010, 6461-4.		6
407	Facile metal transfer method for fabricating unconventional metamaterial devices. Optical Materials Express, 2015, 5, 733.	1.6	6
408	Development of flexible multi-channel muscle interfaces with advanced sensing function. Sensors and Actuators A: Physical, 2016, 249, 269-275.	2.0	6
409	Study of the vortex based virtual valve micropump. Journal of Micromechanics and Microengineering, 2018, 28, 125007.	1.5	6
410	Triboelectric Sensors for IoT and Wearable Applications. , 2023, , 235-257.		6
411	Doped Silicon Temperature Compensation of Surface Acoustic Wave Devices. , 2020, , .		6
412	Image driven cell manipulation using optical dielectrophoresis (ODEP). , 0, , .		5
413	Biomicrofluidic lab-on-chip device for cancer cell detection. Applied Physics Letters, 2008, 93, 223905.	1.5	5
414	Investigation of a Piezoelectric Driven MEMS Mirror based on Single S-shaped PZT Actuator. Procedia Engineering, 2011, 25, 701-704.	1.2	5

#	Article	IF	Citations
415	Design of narrow band photonic filter with compact MEMS for tunable resonant wavelength ranging 100 nm. AIP Advances, 2011, 1, 042171.	0.6	5
416	Study of the Thermoelectric Properties of Heavily Doped Poly-Si in High Temperature. Procedia Engineering, 2014, 94, 18-24.	1.2	5
417	Skin based flexible triboelectric nanogenerators with motion sensing capability. , 2015, , .		5
418	An AlN-based piezoelectric micro-machined ultrasonic transducer (pMUT) array. , 2016, , .		5
419	Deposited poly-Si as on-demand linewidth compensator for on-chip Fabryâ€“Perot interferometer and vertical linear variable optical filter bandpass and passband manipulation. Journal of Micromechanics and Microengineering, 2019, 29, 047001.	1.5	5
420	A flexible self-perceiving/repairing parachute (FSPRP) system adapted to the Martian dust storm environment. Nano Energy, 2022, 99, 107358.	8.2	5
421	Development of X-beam electrothermal actuators. Microsystem Technologies, 2005, 11, 550-555.	1.2	4
422	Development of wafer level packaged scanning micromirrors. Proceedings of SPIE, 2008, , .	0.8	4
423	A hermetic chip to chip bonding at low temperature with Cu/In/Sn/Cu joint. , 2008, , .		4
424	Study of Ag-In solder as low temperature wafer bonding intermediate layer. Proceedings of SPIE, 2008, , .	0.8	4
425	Development of microfluidic device and system for breast cancer cell fluorescence detection. Journal of Vacuum Science & Technology B, 2009, 27, 1295.	1.3	4
426	Wafer-level vacuum sealing and encapsulation for fabrication of CMOS MEMS thermoelectric power generators. , 2010, , .		4
427	Design and Characterization of Microelectromechanical System Flow Sensors Using Silicon Nanowires. Nanoscience and Nanotechnology Letters, 2011, 3, 230-234.	0.4	4
428	Design of curved photonic cavities for a narrow-band widely tunable resonance ranging 200 nm. Optics Express, 2012, 20, 18937.	1.7	4
429	Transparent force sensing arrays with low power consumption using liquid crystal arrays. Sensors and Actuators A: Physical, 2013, 190, 136-140.	2.0	4
430	Integration of RF MEMS resonators and phononic crystals for high frequency applications with frequency-selective heat management and efficient power handling. , 2014, , .		4
431	Silicon Nanowires embedded pressure sensor with annularly grooved diaphragm for sensitivity improvement. , 2014, , .		4
432	Effects of structural and chemical anisotropy of nanostructures on droplet spreading on a two dimensional wicking surface. Journal of Applied Physics, 2014, 116, .	1.1	4

#	Article	IF	Citations
433	Plasmonic cavity assisted dipolar resonance enhancement and optical magnetism at mid IR. , 2015, , .		4
434	Nanowire Electrodes Integrated on Tip of Microwire for Peripheral Nerve Stimulation. Journal of Microelectromechanical Systems, 2017, 26, 921-925.	1.7	4
435	ZnO Nano-Rod Devices for Intradermal Delivery and Immunization. Nanomaterials, 2017, 7, 147.	1.9	4
436	Batteryless neural interface using triboelectric nanogenerators (TENGs) to enable a self-sustainable platform for neuromodulation. Journal of Physics: Conference Series, 2018, 1052, 012007.	0.3	4
437	Highly Compact Linear Variable Filter in the Mid Infrared Region for Acetone Level Monitoring. IEEE Sensors Journal, 2020, 20, 4171-4178.	2.4	4
438	Assembly of Single Cells Array using Image Dielectrophoresis. , 2007, , .		3
439	Theoretical study of the output energy for various MEMS based electrostatic mechanisms. , 2008, , .		3
440	Wafer Level Hermetic Bonding Using Sn/In and Cu/Ti/Au Metallization. , 2008, , .		3
441	The role of Ni buffer layer between InSn solder and Cu metallization for hermetic wafer bonding. , 2008, , .		3
442	Development of vacuum packaged CMOS thermoelectric energy harvester. , 2009, , .		3
443	Configuration analysis of sensing element for micro-cantilever sensor using dual nano-ring resonator. , 2010, , .		3
444	Ultra-broadband electromagnetic MEMS vibration energy harvesting. Journal of Physics: Conference Series, 2013, 476, 012049.	0.3	3
445	Flexible and self-adaptive neural ribbon with three-dimensional electrodes for sciatic nerve recording. , 2015, 2015, 3157-60.		3
446	Piezoelectric micromachined ultrasonic transducer of flat membrane with boosted transmitting performance. , 2015, , .		3
447	Reliability and failure analysis of MEMS/NEMS switches. , 2016, , .		3
448	Metamaterials: Active Control of Electromagnetically Induced Transparency Analog in Terahertz MEMS Metamaterial (Advanced Optical Materials 4/2016). Advanced Optical Materials, 2016, 4, 540-540.	3.6	3
449	MEMS based piezoelectric ultrasonic energy harvester for self-powered under-water applications. , 2016, , .		3
450	Using water as a self-generated triboelectric sensor for pressure and flow rate measurement. , 2017, , .		3

#	Article	IF	Citations
451	Hydrogel as a Nerve Guide and Biocompatible Glue for Neural Applications. , 2018, , .		3
452	Batteryless Pelvic Nerve Direct Modulation for Bladder Voding Using an Active Neural Clip. , 2018, , .		3
453	Nanoplasmonics Enhanced Broadband Ultra-Sensitive Mid-Ir Sensor Array Integrated with Microfluidics. , 2019, , .		3
454	Black Phosphorus Based Photodetectors. ACS Symposium Series, 2019, , 135-153.	0.5	3
455	Multi-Band Mid-IR Molecules Identification Using Plasmonic Metamaterials Induced by Bright-Dark Coupling. , 2020, , .		3
456	Corner-Promoted Focus Enhancement of Light in Conical Holes for Extraordinary Optical Transmission. IEEE Sensors Journal, 2021, 21, 9081-9089.	2.4	3
457	Haptic-Feedback Ring Enabled Human-Machine Interface (HMI) Aiming at Immersive Virtual Reality Experience. , 2021, , .		3
458	Inkjet 3D Printed MEMS Electromagnetic Multi-Frequency Energy Harvester. Energies, 2022, 15, 4468.	1.6	3
459	Bi-directional movable latching structure using electrothermal V-beam actuators for optical switch application. , 0, , .		2
460	Characterization of Bi-Stable Micromechanism Based on Buckle Spring and Electrothermal V-Beam Actuators. Japanese Journal of Applied Physics, 2004, 43, 3892-3895.	0.8	2
461	Development of electrothermal actuation based planar variable optical attenuators (VOAs). Journal of Physics: Conference Series, 2006, 34, 1026-1031.	0.3	2
462	Design and modeling of vacuum packaged MEMS thermoelectric power generator using heat dissipation path. , 2008, , .		2
463	Analysis of Racetrack Resonators in Surface Sensing Applications. , 2008, , .		2
464	A 3-D MEMS VOA using translational attenuation mechanism based on piezoelectric PZT thin film actuators. Procedia Engineering, 2010, 5, 613-616.	1.2	2
465	Design evaluation of graphene nanoribbon nanoelectromechanical devices. Journal of Applied Physics, 2011, 110, 024302.	1.1	2
466	A low power 2-D raster scanning MEMS mirror driven by hybrid electrothermal and electromagnetic actuation mechanisms. , 2012, , .		2
467	CMOS-based thermopiles using vertically integrated double polycrystalline silicon layers. , 2013, , .		2
468	Study of the wideband behavior of an in-plane electromagnetic MEMS energy harvester. , 2013, , .		2

#	Article	IF	Citations
469	Experimental demonstration of Fano resonance in microfabricated phononic crystal resonators based on two-dimensional silicon slab. , 2013, , .		2
470	Development of flexible neural probes using SU-8/parylene. , 2013, , .		2
471	A Bistable Silicon Nanofin: An Ideal Device for Nonvolatile Memory Applications. IEEE Nanotechnology Magazine, 2013, 7, 24-28.	0.9	2
472	Broadband piezoelectric micromachined ultrasonic transducer (pMUT) using mode-merged design. , 2015, , .		2
473	Broadband vibration energy harvesting using triboelectric mechanism. Proceedings of SPIE, 2015, , .	0.8	2
474	Digitally reconfigurable binary coded terahertz metamaterial with output analogous to NOR and AND. , 2016, , .		2
475	Triboelectric Balls as Three-Dimensional Vibrational Energy Harvesters and Self-Powered Sensors. , 2018, , .		2
476	Integration of 2D Black Phosphorus Phototransistor and Silicon Photonics Waveguide System Towards Mid-Infrared On-Chip Sensing Applications. , 2018, , .		2
477	Mid-Infrared Slow Light Engineered One-Dimensional Grating Waveguide. , 2018, , .		2
478	Surface-Enhanced Infrared Absorption-Based CO2 Sensor using Photonic Crystal Slab. , 2019, , .		2
479	First Demonstration of Waveguide-Integrated Black Phosphorus Electro-Optic Modulator for Mid-Infrared Beyond 4 Î¼m. , 2019, , .		2
480	Smart Soft Robotic Manipulator for Artificial Intelligence of Things (AIOT) Based Unmanned Shop Applications. , 2021, , .		2
481	Machine Learning Augmented VOC Identification by Mid-Infrared Nanoantennas with Microfluidics Chambers. , 2021, , .		2
482	System Packaging and Assembly in IoT Nodes. , 2017, , 441-482.		2
483	Smart force sensors for scanning force microscope using the micromachined piezoelectric PZT cantilevers. , 0, , .		1
484	Challenges in optical MEMS commercialization and MEMS foundry. , 0, , .		1
485	Characteristics of 1D and 2D optical scanning epi-Si-mirror devices. , 0, , .		1
486	Development of Surface Micromachined Mechanism for Movement Translation and Displacement Amplification. Japanese Journal of Applied Physics, 2004, 43, 3887-3891.	0.8	1

#	Article	IF	Citations
487	Continuous cell sorting and interactive cell handling on channel-less chips using image dielectrophoresis. , 0, , .		1
488	Design and Modeling of Nanomechanical Sensors Using Silicon 2-D Photonic Crystals. , 2007, , .		1
489	Design of nanobiophotonics resonators for biomolecules detection. , 2008, , .		1
490	Bonding interface materials evolution of intermediate In/Ag layers for low temperature fluxless solder based MEMS wafer level packaging. , 2008, , .		1
491	A MEMS-based wideband piezoelectric energy harvester system using mechanical stoppers. , 2011, , .		1
492	Vacuum based wafer level encapsulation (WLE) of MEMS using physical vapor deposition (PVD). , 2012, , .		1
493	Characterization of Si nanowires-based piezoresistive pressure sensor by dynamic cycling test. , 2012, , .		1
494	3-D MEMS VOA using electromagnetic and electrothermal actuations. , 2012, , .		1
495	Packaging Technology for Devices in Autonomous Sensor Networks. Springer Series on Chemical Sensors and Biosensors, 2012, , 265-305.	0.5	1
496	Complementary metamaterial infrared absorber. , 2013, , .		1
497	A dual-silicon-nanowire based nanoelectromechanical switch. , 2013, , .		1
498	High sensitive silicon optical index sensor based on Ring-assisted Mach-Zehnder interferometer. , 2013, , .		1
499	A bi-stable silicon nanofin nanoelectromechanical switch based on van der Waals force for non-volatile memory applications. , 2013, , .		1
500	Low-frequency vibration-based energy harvester using a piezoelectric composite beam. , 2013, , .		1
501	Characterizations of silicon nanowires (SiNWs) embedded NEMS sensors and for potential biomedical applications. , 2013, , .		1
502	A CMOS-compatible lamb wave resonator for liquid properties sensing. , 2014, , .		1
503	Development of silicon electrode neural probe and acute study on implantation mechanics. , 2015, , .		1
504	Silicon-to-silicon microswitch with wide operation temperature range. , 2015, , .		1

#	Article	IF	Citations
505	Electrostatically switchable MEMS terahertz metamaterial with polarization-insensitive characteristics. , 2015, , .		1
506	Pull-in voltage and fabrication yield analysis for fixed-fixed beam nanoelectromechanical switches. , 2015, , .		1
507	MEMS switchable infrared metamaterial absorber. , 2015, , .		1
508	Enhanced controllability in MEMS metamaterial. , 2015, , .		1
509	Selective stimulation of peripheral motor nerve using a flexible split-ring electrode. , 2015, , .		1
510	Fractal engineered voids for non-resonant nano-plasmonic detection of weak molecular fingerprint at Mid IR. , 2016, , .		1
511	Electroceuticals: Mapping of Small Nerve Trunks and Branches Using Adaptive Flexible Electrodes (Adv. Sci. 9/2016). Advanced Science, 2016, 3, .	5.6	1
512	Vibration-excitation method for measuring the mass sensitivity of a macro-scale PZT bimorph cantilever. , 2016, , .		1
513	Triboelectric and microfluidic integrated self-generated tactile sensor. , 2017, , .		1
514	High Quality Factor PMUTs with Optimized Thermo-Elastic Dissipation through Etching Holes. , 2018, , .		1
515	A Clear, Delicate, Biocompatible Optical Window for Brain Imaging. , 2018, , .		1
516	Multifunctional Hybrid Silk-Metamaterial Absorber Operating at Mid Infrared for Biocomputable Sensing on CMOS Platform. , 2018, , .		1
517	(Invited) Mid-IR Metamaterial Absorber Platform for Gas and Chemical Sensing Applications. ECS Transactions, 2018, 85, 93-98.	0.3	1
518	Mid-Infrared Aluminum Nitride on Insulator (AlNOI) Platform. , 2019, , .		1
519	Self-Powered Intuitive Control Interface Towards Diversified Gaming, AI, and Online Shopping Applications. , 2019, , .		1
520	Thermally Reflowed Die-Attached Linear Variable Optical Filter for Mid-Infrared Volatile Organic Compounds Detection. Journal of Microelectromechanical Systems, 2019, 28, 824-832.	1.7	1
521	Characterization of Aluminum Nitride (AlN) Photonic Modulator as Function of High Voltage from Textile Triboelectric Nanogenerator (TENG). , 2019, , .		1
522	Feasibility Study of High-Voltage Ion Mobility for Gas Identification Based on Triboelectric Power Source. , 2019, , .		1

#	Article	IF	Citations
523	Multi-Functional Human-Machine Interface (HMI) Using Flexible Wearable Triboelectric Nanogenerator for Diversified Interacting Applications. , 2019, , .		1
524	Mid-Infrared Waveguide-Integrated Dielectric Metalens by Bigradient Slots on Silicon. , 2021, , .		1
525	Novel Augmented Reality/Virtual Reality Interface Using A Self-Powered Triboelectric-Based Virtual Reality 3D Control Sensor. , 2018, , .		1
526	Characterization and design optimization for CMOS-compatible MEMS. , 2000, 4175, 170.		0
527	<title>Development of TMAH anisotropic etching manufacturing process for MEMS</title>. , 2000, , .		0
528	3D thermoelectric structures derived from a new mixed micromachining process. , 0, , .		0
529	<title>Transmission-line model: cascade-matrix-transform method for computing the reflection of grating filters</title>. , 2001, , .		0
530	Bi-directional movable latched micromechanism using one-directional movable Chevron electrothermal actuators for switch and relay applications. , 0, , .		0
531	New out-of-plane light attenuation scheme based on surface micromachined pop-up mirror and movement translation micromechanism. , 0, , .		0
532	Out-of-plane mems shutter with continuous motion capability for voa application. , 0, , .		0
533	Design and characterization of electrothermal actuator from reliability and robust aspects. , 0, , .		0
534	Photothermally Actuated Microcantilever Beams Using Nanoparticles. , 2007, , .		0
535	Optical NEMS Based Force Sensor Using Silicon Nanophotonics. , 2007, , .		0
536	Nanophotonics Based Cantilever Sensor. , 2008, , .		0
537	Effect of bonding pressure on the bond strengths of low temperature Ag-In bonds. , 2008, , .		0
538	Silicon beam structures comprising nanophotonics as NEMS sensors. , 2008, , .		0
539	Design and modeling of nanophotonic beam structures as optical NEMS sensors. Proceedings of SPIE, 2008, , .	0.8	0
540	Microcantilever sensor using photonic crystal nanocavity resonator. , 2009, , .		0

#	Article	IF	Citations
541	Nanomechanical cantilever sensor using optical nanocavity resonator. , 2009, , .		0
542	MEMS VOA based on torsional and bending attenuation mechanisms using piezoelectric cantilever integrated with 1×10 PZT thin film actuators. , 2010, , .		0
543	Dependence of resonant wavelength and mechanical deformation of photonic crystal cantilever integrated with dual nano-ring resonator. , 2010, , .		0
544	Torsional mirror driven by a cantilever beam integrated with 1×10 individually biased PZT array actuator for VOA application. , 2010, , .		0
545	A 2-D raster scanning mirror driven by piezoelectric cantilever actuator array in combinational mode — Bending and torsional. , 2011, , .		0
546	Experimental demonstration of microfabricated phononic crystal resonators based on two-dimensional silicon plate. , 2011, , .		0
547	A Novel Micromechanical Resonator Using Two-Dimensional Phononic Crystal Slab. Advanced Materials Research, 2011, 254, 195-198.	0.3	0
548	Development of microfabricated phononic crystal resonators based on two-dimensional silicon slab. , 2012, , .		0
549	MEMS-based devices. , 2012, , .		0
550	Characterization of a multi-layered MEMS pressure sensor using piezoresistive silicon nanowire within large measurable strain range. , 2012, , .		0
551	Calibration-free force sensors using liquid crystal arrays. , 2012, , .		0
552	Thermally tunable photonic dual-disk resonator with wide operation range. , 2013, , .		0
553	Nanoplasmonic optical filter based on complementary split-ring resonator. , 2013, , .		0
554	Experimental verification of phononic crystal slab based silicon microresonators. , 2013, , .		0
555	Tunable THz filter using 3-D split-ring resonators. , 2013, , .		0
556	Development of MEMS electric split-ring resonator arrays as tunable THz filters. , 2013, , .		0
557	MEMS/NEMS based enabling technologies for self-sustained wireless sensor nodes. , 2013, , .		0
558	A three-dimensional THz metamaterials using double split-ring resonators. , 2013, , .		0

#	Article	IF	Citations
559	Fabrication and characterization of a silicon nanofin non-volatile memory. , 2013, , .		0
560	A 3-D movable THz filter using surface micromachining process. , 2013, , .		0
561	Development of tunable 3-D eSRR for THz applications. , 2013, , .		0
562	Enhanced electro-optic switching characteristics using mems based terahertz metamaterial. , 2014, , .		0
563	Electrothermally actuated MEMS terahertz metamaterial. , 2014, , .		0
564	MEMS-based high-Q Fabry-Perot filters. , 2014, , .		0
565	Polymer Microneedle Array Integrated with CNT Nanofilter for Selective Drug Delivery Review Decision. IFMBE Proceedings, 2014, , 872-875.	0.2	0
566	Development of silicon photonics dual disks resonators as chemical sensors. , 2014, , .		0
567	Special Section Guest Editorial: Nanophotonic Materials and Devices. Journal of Nanophotonics, 2014, 8, 084001.	0.4	0
568	Active MEMS metamaterial with uniaxially isotropic dual band switching characteristics in terahertz region. , 2015, , .		0
569	Subwavelength MEMS cantilever array for dynamic manipulation of terahertz waves. , 2015, , .		0
570	Scalable fabrication of triboelectric nanogenerators for commercial applications. Journal of Physics: Conference Series, 2015, 660, 012032.	0.3	0
571	Linear polarization switching in terahertz MEMS metamaterial. , 2015, , .		0
572	Polycrystalline silicon based photonic crystal Fabry-Perot etalon. , 2015, , .		0
573	Polycrystalline silicon based photonic crystal Fabry-Perot etalon. , 2015, , .		0
574	Polarization-insensitive electro-optic switching in terahertz MEMS metamaterial. , 2015, , .		0
575	Subwavelength prestressed microcantilevers based metamaterials for efficient manipulation of terahertz waves. , 2015, , .		0
576	ZnO-nanowires based power generation from low frequency vibration. , 2015, , .		0

#	Article	IF	Citations
577	MEMS tunable terahertz metamaterials using out-of-plane mechanisms. , 2015, , .		0
578	Development of a disposable and flexible microneedle-fluidic-system with finger driven drug loading and delivery functions. , 2015, , .		0
579	Self-powered liquid volume sensor aiming at lab-on-chip applications. , 2016, , .		0
580	Active control of electromagnetically induced transparency analogue and slow light phenomena via MEMS based terahertz metamaterials. , 2016, , .		0
581	Thermoresponsive absorption induced transparency (AIT) for nonplasmonic sensing on a quasi-3D platform. , 2016, , .		0
582	Compact CMOS-compatible polarization splitter and rotator based on 90Â° bends. , 2016, , .		0
583	Versatility of microcantilever metamaterials for advanced polarization control in terahertz region. , 2016, , .		0
584	Ultrathin flexible sensor in curving terahertz metamaterial. , 2016, , .		0
585	Three-dimensional polarization splitter and rotator based on multi-layer Si<inf>3</inf>N<inf>4</inf>-on-SOI platform. , 2016, , .		0
586	Reconfigurable MEMS metamaterials. , 2017, , .		0
587	Compact low loss silicon-on-insulator waveguide for broadband mid-infrared photonics. , 2017, , .		0
588	Hybrid metamatarial absorber enhanced sensing of Co<inf>2</inf> gas in the 5â€“8 Î¼m mid IR spectral window. , 2017, , .		0
589	Broadband mid-infrared silicon-on-insulator waveguide devices. , 2017, , .		0
590	Systematic Engineering of Mid-Infrared Flat Band Slow Light in One-Dimensional Grating Waveguide. , 2018, , .		0
591	Wavelength-Insensitive Mid-IR Directional Coupler. , 2018, , .		0
592	Tuning Mid-IR Plasmon-Phonon Coupling on Graphene/Metamaterial Platform. , 2018, , .		0
593	Rib Waveguide Dispersion Engineered Mid- Infrared Wavelength-Flattened Directional Coupler (WFDC). , 2018, , .		0
594	Engineering and Tuning of Slow Light in Mid-Infrared Silicon-on-Insulator Photonic Crystal Waveguides. , 2019, , .		0

#	Article	IF	Citations
595	Dual Mode Mid-Infrared Chemical Sensor Using Bragg Wavelength in Subwavelength Grating Incorporated Broadband Directional Coupler. , 2019, , .		0
596	An Optimized Nanoantenna Platform for Surface Enhanced Mid-Infrared Sensing. , 2019, , .		0
597	Bio-Mimetic Flexible Wearable Interface with Spider-Net Coding Based On Self-Powered Triboelectric Mechanism. , 2019, , .		0
598	Current-Enhanced Self-Sustainable Wearable Triboelectric Textile System for Healthcare Monitoring and Rehabilitation Applications. , 2019, , .		0
599	Mid Infrared Volatile Compounds Detection Using Thermally Reflowed Flip-Stack Die Linear Variable Filter. , 2019, , .		0
600	A switchable fabric-triboelectric nanogenerators (SF-TENGs) profile sensing application. , 2019, , .		0
601	Mid-Infrared Aluminum Nitride on Insulator (AlNOI) Platform. , 2019, , .		0
602	Uncooled Zero-Bias Graphene Mid-Infrared Detectors. , 2021, , .		0
603	Zero-Bias Long-Wave Infrared Waveguide Photodetector via Graphene/Silicon/Halide Heterogeneous Integration. , 2021, , .		0
604	Transfer-Printed NEMS Tunable Fabry Perot Filter for Mid-Infrared Computational Spectroscopy. , 2021, , .		0
605	Heterogeneous LiNbO3/Si Direct Bonding for Wavelength-Dependent Mid-Infrared Imaging. , 2021, , .		0
606	Integrated Mid-Infrared Photonics Toward Chip-Scale Sensing Systems. , 2021, , .		0
607	Evolution of Wafer Bonding Technology and Applications from Wafer-Level Packaging to Micro/Nanofluidics-Enhanced Sensing. , 2022, , 187-215.		0
608	Optical NEMS and MEMS. , 2012, , 405-469.		0
609	A MEMS-Based 3-D Movable Metamaterials. , 2013, , .		0
610	Multi-bit memory cell using long-range non-anchored actuation for high temperature applications. Additional Conferences (Device Packaging HiTEC HiTEN & CICMT), 2013, 2013, 000152-000159.	0.2	0
611	(Invited) Mid-IR Metamaterial Absorber Platform for Gas and Chemical Sensing Applications. ECS Meeting Abstracts, 2018, , .	0.0	0
612	Reconfigurable MEMS metasurface for active tuning of Fano resonance and logic gate operations at THz frequencies. , 2019, , .		0

#	Article	IF	Citations
613	A Piezoelectric Bulk Wave Resonant Humidity Sensor for Noncontact Human-Machine Interaction. , 2022, , .		0
614	Coupling characterizes of spatial modes in photonic crystal nanobeam cavity. , 2022, , .		0
615	Investigation of self-oscillation piezoelectric energy harvesting mechanics for lower-limb motion. , 2021, , .		0
616	Multi-Functional Hybridized Units for Self- Sustainable IoT Sensing and Ultra-Low Frequency Energy Harvesting. , 2021, , .		0
617	Exploration of Multi-dimensional Sensing in Human Machine Interactions. , 2021, , .		0