

Woo-Tae Park

List of Publications by Year in descending order

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86
papers

3,070
citations

430442

18
h-index

174990

52
g-index

86
all docs

86
docs citations

86
times ranked

3872
citing authors

#	ARTICLE	IF	CITATIONS
1	Review: Semiconductor Piezoresistance for Microsystems. Proceedings of the IEEE, 2009, 97, 513-552.	16.4	742
2	Polymeric Biomaterials for Medical Implants and Devices. ACS Biomaterials Science and Engineering, 2016, 2, 454-472.	2.6	524
3	RF power harvesting: a review on designing methodologies and applications. Micro and Nano Systems Letters, 2017, 5, .	1.7	187
4	Long-Term and Accelerated Life Testing of a Novel Single-Wafer Vacuum Encapsulation for MEMS Resonators. Journal of Microelectromechanical Systems, 2006, 15, 1446-1456.	1.7	183
5	Single wafer encapsulation of mems devices. IEEE Transactions on Advanced Packaging, 2003, 26, 227-232.	1.7	163
6	Impact of Geometry on Thermoelastic Dissipation in Micromechanical Resonant Beams. Journal of Microelectromechanical Systems, 2006, 15, 927-934.	1.7	127
7	Frequency stability of wafer-scale film encapsulated silicon based MEMS resonators. Sensors and Actuators A: Physical, 2007, 136, 125-131.	2.0	114
8	A CMOS Rectifier With a Cross-Coupled Latched Comparator for Wireless Power Transfer in Biomedical Applications. IEEE Transactions on Circuits and Systems II: Express Briefs, 2012, 59, 409-413.	2.2	109
9	Gate-All-Around Junctionless Nanowire MOSFET With Improved Low-Frequency Noise Behavior. IEEE Electron Device Letters, 2011, 32, 1752-1754.	2.2	80
10	Frequency stability of wafer-scale encapsulated MEMS resonators. , 0, , .		60
11	Measurement System for Low Force and Small Displacement Contacts. Journal of Microelectromechanical Systems, 2004, 13, 220-229.	1.7	58
12	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
13	An Inductively Powered Implantable Blood Flow Sensor Microsystem for Vascular Grafts. IEEE Transactions on Biomedical Engineering, 2012, 59, 2466-2475.	2.5	52
14	Encapsulated Submillimeter Piezoresistive Accelerometers. Journal of Microelectromechanical Systems, 2006, 15, 507-514.	1.7	37
15	A study of piezoelectric harvesters for low-level vibrations in wireless sensor networks. International Journal of Precision Engineering and Manufacturing, 2013, 14, 1257-1262.	1.1	32
16	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
17	MEMS tri-axial force sensor with an integrated mechanical stopper for guidewire applications. Microsystem Technologies, 2013, 19, 1005-1015.	1.2	25
18	Hydrogen diffusion and pressure control of encapsulated MEMS resonators. , 0, , .		23

#	ARTICLE	IF	CITATIONS
19	Rapid, low-cost fabrication of circular microchannels by air expansion into partially cured polymer. <i>Sensors and Actuators B: Chemical</i> , 2016, 235, 302-308.	4.0	22
20	Ultraminiature encapsulated accelerometers as a fully implantable sensor for implantable hearing aids. <i>Biomedical Microdevices</i> , 2007, 9, 939-949.	1.4	20
21	100-Channel wireless neural recording system with 54-Mb/s data link and 40%-efficiency power link. , 2012, , .		18
22	Simulation of train induced forced wind draft for generating electrical power from Vertical Axis Wind Turbine (VAWT). <i>International Journal of Precision Engineering and Manufacturing</i> , 2012, 13, 1177-1181.	1.1	18
23	Characterization of a silicon nanowire-based cantilever air-flow sensor. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 095008.	1.5	17
24	Micro-ultrasonic welding using thermoplastic-elastomeric composite film. <i>Journal of Materials Processing Technology</i> , 2016, 236, 183-188.	3.1	17
25	UV-LEDs for the Disinfection and Bio-Sensing Applications. <i>International Journal of Precision Engineering and Manufacturing</i> , 2018, 19, 1901-1915.	1.1	17
26	High sensitive dielectric filled Lamã© mode mass sensor. <i>Sensors and Actuators A: Physical</i> , 2012, 188, 82-88.	2.0	16
27	Piezoresistive Sensing Performance of Junctionless Nanowire FET. <i>IEEE Electron Device Letters</i> , 2012, 33, 1759-1761.	2.2	16
28	Characterization of Silicon Nanowire Embedded in a MEMS Diaphragm Structure Within Large Compressive Strain Range. <i>IEEE Electron Device Letters</i> , 2011, 32, 1764-1766.	2.2	15
29	A compact wireless power transfer system at 915ã€‰MHz with supercapacitor for optogenetics applications. <i>Sensors and Actuators A: Physical</i> , 2019, 285, 386-394.	2.0	14
30	Microstructure and mechanical properties of aluminumã€“germanium eutectic bonding with polysilicon metallization for microelectromechanical systems (MEMS) packaging. <i>Scripta Materialia</i> , 2011, 64, 733-736.	2.6	13
31	Tunable piezoresistance and noise in gate-all-around nanowire field-effect-transistor. <i>Applied Physics Letters</i> , 2012, 100, 063106.	1.5	13
32	A low-profile three-dimensional neural probe array using a silicon lead transfer structure. <i>Journal of Micromechanics and Microengineering</i> , 2013, 23, 095013.	1.5	13
33	Fabrication method of multi-depth circular microchannels for investigating arterial thrombosis-on-a-chip. <i>Sensors and Actuators B: Chemical</i> , 2020, 321, 128590.	4.0	12
34	Microcantilever sensors with embedded piezoresistive transistor read-out: Design and characterization. <i>Sensors and Actuators A: Physical</i> , 2011, 171, 178-185.	2.0	11
35	A flexible polyimide cable for implantable neural probe arrays. <i>Microsystem Technologies</i> , 2013, 19, 1111-1118.	1.2	11
36	Real-time precision pedestrian navigation solution using Inertial Navigation System and Global Positioning System. <i>Advances in Mechanical Engineering</i> , 2015, 7, 168781401456850.	0.8	11

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37	Development of wafer scale encapsulation process for large displacement piezoresistive MEMS devices. <i>Sensors and Actuators A: Physical</i> , 2009, 156, 275-283.	2.0	10
38	Silicon nanowire-based ring-shaped tri-axial force sensor for smart integration on guidewire. <i>Journal of Micromechanics and Microengineering</i> , 2014, 24, 065002.	1.5	10
39	Drug release from porous silicon for stable neural interface. <i>Applied Surface Science</i> , 2014, 292, 843-851.	3.1	10
40	Rapid biodegradable microneedles with allergen reservoir for skin allergy test. <i>Micro and Nano Systems Letters</i> , 2020, 8, .	1.7	10
41	MEMS particle sensor based on resonant frequency shifting. <i>Micro and Nano Systems Letters</i> , 2020, 8, .	1.7	10
42	Implantable Polyimide Cable for Multichannel High-Data-Rate Neural Recording Microsystems. <i>IEEE Transactions on Biomedical Engineering</i> , 2012, 59, 390-399.	2.5	9
43	Biomimetic Flow Sensor for Detecting Flow Rate and Direction as an Application for Maneuvering Autonomous Underwater Vehicle. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2022, 9, 163-173.	2.7	9
44	Characteristics of NEMS Piezoresistive Silicon Nanowires Pressure Sensors With various Diaphragm Layers. <i>Procedia Engineering</i> , 2011, 25, 1433-1436.	1.2	8
45	Ultra-low-power wireless implantable blood flow sensing microsystem for vascular graft applications. , 2011, , .		8
46	MEMS PZT Oscillating Platform for Fine Dust Particle Removal at Resonance. <i>International Journal of Precision Engineering and Manufacturing</i> , 2018, 19, 1851-1859.	1.1	8
47	Fully encapsulated sub-millimeter accelerometers. , 0, , .		7
48	Gate-bias-controlled sensitivity and SNR enhancement in a nanowire FET pressure sensor. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 105007.	1.5	7
49	Biotin-Streptavidin Binding Interactions of Dielectric Filled Silicon Bulk Acoustic Resonators for Smart Label-Free Biochemical Sensor Applications. <i>Sensors</i> , 2014, 14, 4585-4598.	2.1	7
50	Sensorized guidewires with MEMS tri-axial force sensor for minimally invasive surgical applications. , 2010, 2010, 6461-4.		6
51	A wirelessly powered and interrogated blood flow monitoring microsystem fully integrated with a prosthetic vascular graft for early failure detection. , 2012, , .		6
52	Microfabricated porous silicon backbone for stable neural interfaces. <i>Materials Letters</i> , 2016, 165, 119-122.	1.3	6
53	An Integrated Wafer-Scale Packaging Process for MEMS. , 2002, , .		6
54	Modeling in vitro neural electrode interface in neural cell culture medium. <i>Microsystem Technologies</i> , 2015, 21, 1739-1747.	1.2	5

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55	Sub-mm encapsulated accelerometers: a fully implantable sensor for cochlear implants. , 0, , .		4
56	Ultrasensitive pressure sensor based on gate- all-around nanowire fet. , 2011, , .		4
57	Design and Characterization of Microelectromechanical System Flow Sensors Using Silicon Nanowires. Nanoscience and Nanotechnology Letters, 2011, 3, 230-234.	0.4	4
58	Developing High Sensitivity Biomass Sensor Using LamÃ© Mode Square Resonator. Advanced Materials Research, 0, 254, 46-49.	0.3	4
59	A polymer membrane electrolysis micropump powered by a compact wireless power transmission system. Journal of Mechanical Science and Technology, 2021, 35, 697-706.	0.7	4
60	Investigation of MEMS Resonator Characteristics for Long-Term and Wide Temperature Variation Operation. , 2004, , 413.		3
61	Design, Fabrication and Characterization of Ultra Miniature Piezoresistive Pressure Sensors for Medical Implants. Advanced Materials Research, 0, 254, 94-98.	0.3	3
62	Bio-Inspired Barbed Microneedle for Skin Adhesion with Interlocking Mechanics. , 2019, , .		3
63	Cytocompatibility Assessment of Si, Plasma Enhanced Chemical Vapor Deposition-Formed SiO2 and Si3N4 Used for Neural Prosthesis: A Comparative Study. Nanoscience and Nanotechnology Letters, 2013, 5, 916-920.	0.4	3
64	Wafer Scale Encapsulation of Wide Gaps using oxidation of Sacrificial Beams. Electronics Manufacturing Technology Symposium (IEMT), IEEE/CPMT International, 2006, , .	0.0	2
65	Ultrasensitive dielectric filled Lamé mode biomass sensor. , 2011, , .		2
66	Wireless sensor microsystems for emerging biomedical applications (Invited). , 2015, , .		2
67	Rapid, low cost fabrication of circular cross-section microchannels by thermal air molding. , 2015, , .		2
68	Surface Characteristics, Biodegradability and Biocompatibility of Porous Silicon for Microfabricated Neural Electrode. Journal of Nanoscience and Nanotechnology, 2015, 15, 2821-2828.	0.9	2
69	A Bioinspired Piezoelectric Cilia Array for Sensing of Hydrodynamic Flow. , 2019, , .		2
70	Analysis of Laser Sintering of Zirconia to Magnesium Alloy by Laser-Induced Plasma Spectroscopy. Nanoscience and Nanotechnology Letters, 2018, 10, 790-795.	0.4	2
71	Batteryless MEMS flow sensor within prosthetic vascular graft. , 2011, , .		1
72	Characterization of Si nanowires-based piezoresistive pressure sensor by dynamic cycling test. , 2012, , .		1

#	ARTICLE	IF	CITATIONS
73	Minimum detectable strain improvement in junctionless nanowire FET sensors. , 2012, , .		1
74	Effect of Solution Aging Time on Stability of Colorimetric Assay for Degradation Rate Evaluation of Porous Si in Artificial Cerebrospinal Fluid. Advanced Materials Research, 0, 651, 306-311.	0.3	1
75	A microfabricated neural probe with porous si-parylene hybrid structure to enable a reliable brain-machine interface. , 2016, , .		1
76	MEMS Packaging. , 2016, , 2019-2028.		1
77	Surface charge extraction methods in offset shift-related failures of MEMS pressure sensors. Journal of Micromechanics and Microengineering, 2010, 20, 115027.	1.5	0
78	Characterization of a multi-layered MEMS pressure sensor using piezoresistive silicon nanowire within large measurable strain range. , 2012, , .		0
79	Artificial hair cell flow sensor with ball joint. , 2017, , .		0
80	Novel circular microchannels fabrication method for artery thrombosis investigation. , 2018, , .		0
81	Cantilever Structural Analysis for Optimal Piezoelectric Power Harvesting. Journal of the Microelectronics and Packaging Society, 2013, 20, 31-34.	0.1	0
82	A Four-point Bending Probe Station for Semiconductor Sensor Piezoresistance Measurement. Journal of the Microelectronics and Packaging Society, 2013, 20, 35-39.	0.1	0
83	A Microfluidic Chip-Based Creatinine Filtration Device. Transactions of the Korean Society of Mechanical Engineers, B, 2015, 39, 921-925.	0.0	0
84	Application of Laser-Induced Plasma Spectroscopy to Diffusion of Cu/Snâ€“Pb Metal Composites. Nanoscience and Nanotechnology Letters, 2018, 10, 682-687.	0.4	0
85	Rapid and Versatile Micromold Fabrication Using Micromilling and Nanopolishing for Microfluidic Devices. , 2019, , .		0
86	Immobilization of Magnetic Beads for Microfluidic Immunoassays. , 2019, , .		0