Jongbaeg Kim

List of Publications by Year in Descending Order

87 papers	1,815 citations	22 h-index	40 g-index
106 ext. papers	2,363 ext. citations	6.9 avg, IF	5.31 L-index

#	Paper	IF	Citations
87	Highly Sensitive Flexible Tactile Sensors in Wide Sensing Range Enabled by Hierarchical Topography of Biaxially Strained and Capillary-Densified Carbon Nanotube Bundles. *Small*, **2021**, 17, e2105334	11	3
86	Three-Dimensional Axotomy and Regeneration on Open-Access Microfluidic Platform.. *IEEE Transactions on Nanobioscience*, **2021**, PP,	3.4	2
85	Large-Area, Crosstalk-Free, Flexible Tactile Sensor Matrix Pixelated by Mesh Layers. *ACS Applied Materials & Interfaces*, **2021**, 13, 12259-12267	9.5	7
84	Integration of Gold Nanoparticle-Carbon Nanotube Composite for Enhanced Contact Lifetime of Microelectromechanical Switches with Very Low Contact Resistance. *ACS Applied Materials & Interfaces*, **2021**, 13, 16959-16967	9.5	0
83	Recent Progress in Flexible Tactile Sensors for Human-Interactive Systems: From Sensors to Advanced Applications. *Advanced Materials*, **2021**, 33, e2005902	24	45
82	Self-Powered Wind Sensor Based on Triboelectric Generator with Curved Flap Array for Multi-Directional Wind Speed Detection **2020**,		1
81	Carbon-Doped WO3 Nanostructure Based on CNT Sacrificial Template and its Application to Highly Sensitive NO2 Sensor. *IEEE Sensors Journal*, **2020**, 20, 5705-5711	4	4
80	Highly Sensitive Detection of Benzene, Toluene, and Xylene Based on CoPP-Functionalized TiO Nanoparticles with Low Power Consumption. *ACS Sensors*, **2020**, 5, 754-763	9.2	21
79	Crosstalk-Free Mesh-Embedded Tactile Sensor Array with Electrically Isolated Sensing Cells **2020**,		2
78	All-textile wearable triboelectric nanogenerator using pile-embroidered fibers for enhancing output power. *Smart Materials and Structures*, **2020**, 29, 055026	3.4	12
77	Patterned Carbon Nanotube Bundles as Stretchable Strain Sensors for Human Motion Detection. *ACS Applied Nano Materials*, **2020**, 3, 11408-11415	5.6	3
76	Detection of volatile organic compounds based on low-energy electron scattering according to difference in collisional cross-section. *Sensors and Actuators B: Chemical*, **2020**, 323, 128706	8.5	
75	CoPP-Functionalized TIO2 Nanoparticles for Highly Sensitive and Reliable VOC Detection **2019**,		1
74	Multi-Layered, Hierarchical Fabric-Based Tactile Sensors with High Sensitivity and Linearity in Ultrawide Pressure Range. *Advanced Functional Materials*, **2019**, 29, 1902484	15.6	73
73	Impact Ionization Induced by Accelerated Photoelectrons for Wide-Range and Highly Sensitive Detection of Volatile Organic Compounds at Room Temperature. *ACS Applied Materials & Interfaces*, **2019**, 11, 20491-20499	9.5	1
72	Light-assisted recovery of reacted MoS for reversible NO sensing at room temperature. *Nanotechnology*, **2019**, 30, 355504	3.4	35
71	Integration of a Carbon Nanotube Network on a Microelectromechanical Switch for Ultralong Contact Lifetime. *ACS Applied Materials & Interfaces*, **2019**, 11, 18617-18625	9.5	5

70	Improved photo- and chemical-responses of graphene via porphyrin-functionalization for flexible, transparent, and sensitive sensors. *Nanotechnology*, **2019**, 30, 215501	3.4	11
69	Humidity-resistant triboelectric energy harvester using electrospun PVDF/PU nanofibers for flexibility and air permeability. *Nanotechnology*, **2019**, 30, 275401	3.4	11
68	Sensitivity enhancement in photoionization detector using microelectrodes with integrated 1D nanostructures. *Sensors and Actuators B: Chemical*, **2019**, 288, 618-624	8.5	11
67	Polymer-based flexible and multi-directional tactile sensor with multiple NiCr piezoresistors. *Micro and Nano Systems Letters*, **2019**, 7,	2	12
66	Flexible Energy Harvester with Piezoelectric and Thermoelectric Hybrid Mechanisms for Sustainable Harvesting. *International Journal of Precision Engineering and Manufacturing - Green Technology*, **2019**, 6, 691-698	3.8	26
65	WO3-MoS2 Mixture-Based Gas Sensor for NO2 Detection at Room Temperature **2019**,		1
64	Development of a Highly Stretchable Strain Sensor Based on Patterned and Rolled Carbon Nanotubes **2019**,		1
63	A Textile-Based Resistive Tactile Sensor with High Sensitivity in a Wide Pressure Range **2019**,		1
62	Ultrasensitive Strain Sensor Based on Separation of Overlapped Carbon Nanotubes. *Small*, **2019**, 15, e1805120	11	85
61	Detection of Mixed BTEX With Suppressed Reaction Specificity Using Tin Oxide Nanoparticles Functionalized by Multi-Metalloporphyrins. *IEEE Sensors Journal*, **2019**, 19, 11791-11796	4	6
60	A Novel Conductive and Micropatterned PEG-Based Hydrogel Enabling the Topographical and Electrical Stimulation of Myoblasts. *ACS Applied Materials & Interfaces*, **2019**, 11, 47695-47706	9.5	23
59	Fabrication of suspended nanowires for highly sensitive gas sensing. *Sensors and Actuators B: Chemical*, **2019**, 284, 362-368	8.5	8
58	A Fully Transparent, Flexible, Sensitive, and Visible-Blind Ultraviolet Sensor Based on Carbon Nanotube□raphene Hybrid. *Advanced Electronic Materials*, **2019**, 5, 1800737	6.4	28
57	Flexible and multi-directional piezoelectric energy harvester for self-powered human motion sensor. *Smart Materials and Structures*, **2018**, 27, 035001	3.4	37
56	Simple fabrication method of silicon/tungsten oxide nanowires heterojunction for NO2 gas sensors. *Sensors and Actuators B: Chemical*, **2018**, 265, 522-528	8.5	13
55	Suspended CoPP-ZnO nanorods integrated with micro-heaters for highly sensitive VOC detection. *Sensors and Actuators B: Chemical*, **2018**, 264, 249-254	8.5	13
54	Flexible, Transparent, Sensitive, and Crosstalk-Free Capacitive Tactile Sensor Array Based on Graphene Electrodes and Air Dielectric. *Advanced Electronic Materials*, **2018**, 4, 1700427	6.4	64
53	Multidirectional flexible force sensors based on confined, self-adjusting carbon nanotube arrays. *Nanotechnology*, **2018**, 29, 055501	3.4	12

52	Fabrication and characterization of VOC sensor array based on SnO2 and ZnO nanoparticles functionalized by metalloporphyrins. *Micro and Nano Systems Letters*, **2018**, 6,	2	15
51	Humidity-Resistant, Fabric-Based, Wearable Triboelectric Energy Harvester by Treatment of Hydrophobic Self-Assembled Monolayers. *Advanced Materials Technologies*, **2018**, 3, 1800048	6.8	19
50	Carbon nanotubes network contact lubrication for highly reliable MEMS switch **2017**,		2
49	Flexible piezoelectric strain energy harvester responsive to multi-directional input forces and its application to self-powered motion sensor **2017**,		2
48	Piezoelectric and electromagnetic hybrid energy harvester using two cantilevers for frequency up-conversion **2017**,		8
47	Highly sensitive detection of VOC using impact ionization induced by photoelectron **2017**,		4
46	Low-voltage and low-power field-ionization gas sensor based on micro-gap between suspended silver nanowires electrodes for toluene detection **2017**,		2
45	Triboelectric energy harvester using frequency up-conversion to generate from extremely low frequency strain inputs **2017**,		1
44	MoS 2 gas sensor functionalized by Pd for the detection of hydrogen. *Sensors and Actuators B: Chemical*, **2017**, 250, 686-691	8.5	119
43	Heterogeneous Integration of Carbon-Nanotube-Graphene for High-Performance, Flexible, and Transparent Photodetectors. *Small*, **2017**, 13, 1700918	11	36
42	Micromachined Resonant Frequency Tuning Unit for Torsional Resonator. *Micromachines*, **2017**, 8,	3.3	2
41	Development of MEMS Multi-Mode Electrostatic Energy Harvester Based on the SOI Process. *Micromachines*, **2017**, 8, 51	3.3	13
40	Fabrication of carbon nanotube-coated fabric for highly sensitive pressure sensor **2017**,		3
39	Wind-powered triboelectric energy harvester using curved flapping film array **2017**,		2
38	Fabrication and characterization of monolithic piezoresistive high-g three-axis accelerometer. *Micro and Nano Systems Letters*, **2017**, 5,	2	6
37	Flexible and transparent NO2 sensor using functionalized MoS2 with light-enhanced response **2017** ,		1
36	A highly sensitive flexible strain sensor based on the contact resistance change of carbon nanotube bundles. *Nanotechnology*, **2016**, 27, 205502	3.4	16
35	Improvement of Gas-Sensing Performance of Large-Area Tungsten Disulfide Nanosheets by Surface Functionalization. *ACS Nano*, **2016**, 10, 9287-9296	16.7	243

34	Miniaturized VOC Detectors for Monitoring Indoor Air Quality. *KAIST Research Series*, **2015**, 171-188		1
33	Molecularly Engineered Surface Triboelectric Nanogenerator by Self-Assembled Monolayers (METS). *Chemistry of Materials*, **2015**, 27, 4749-4755	9.6	77
32	Widely Tunable Variable Capacitor With Switching and Latching Mechanisms. *IEEE Electron Device Letters*, **2015**, 36, 186-188	4.4	11
31	Development and performance test of a ZnO nanowire charger for measurements of nano-aerosol particles. *Sensors and Actuators A: Physical*, **2015**, 222, 1-7	3.9	5
30	A High-Efficiency DCDC Boost Converter for a Miniaturized Microbial Fuel Cell. *IEEE Transactions on Power Electronics*, **2015**, 30, 2041-2049	7.2	35
29	A high power density miniaturized microbial fuel cell having carbon nanotube anodes. *Journal of Power Sources*, **2015**, 273, 823-830	8.9	93
28	Low-Temperature Selective Growth of Tungsten Oxide Nanowires by Controlled Nanoscale Stress Induction. *Scientific Reports*, **2015**, 5, 18265	4.9	8
27	Defective carbon nanotube-silicon heterojunctions for photodetector and chemical sensor with improved responses. *Journal of Micromechanics and Microengineering*, **2015**, 25, 115004	2	3
26	A highly sensitive hydrogen sensor with gas selectivity using a PMMA membrane-coated Pd nanoparticle/single-layer graphene hybrid. *ACS Applied Materials & Interfaces*, **2015**, 7, 3554-61	9.5	141
25	Humidity sensing characteristics of focused ion beam-induced suspended single tungsten nanowire. *Sensors and Actuators B: Chemical*, **2014**, 194, 38-44	8.5	10
24	Piezoelectric energy harvester converting strain energy into kinetic energy for extremely low frequency operation. *Applied Physics Letters*, **2014**, 104, 113904	3.4	26
23	Acid-sensitive pH sensor using electrolysis and a microfluidic channel for read-out amplification. *RSC Advances*, **2014**, 4, 39634	3.7	3
22	Investigation of interfacial adhesion between the top ends of carbon nanotubes. *ACS Applied Materials & Interfaces*, **2014**, 6, 6598-605	9.5	7
21	Resonant-frequency tuning of angular vertical comb-driven microscanner. *Micro and Nano Systems Letters*, **2014**, 2,	2	5
20	Highly sensitive cantilever type chemo-mechanical hydrogen sensor based on contact resistance of self-adjusted carbon nanotube arrays. *Sensors and Actuators B: Chemical*, **2014**, 197, 414-421	8.5	4
19	Using confined self-adjusting carbon nanotube arrays as high-sensitivity displacement sensing element. *ACS Applied Materials & Interfaces*, **2014**, 6, 10181-7	9.5	9
18	Thickness-, alignment- and defect-tunable growth of carbon nanotube arrays using designed mechanical loads. *Carbon*, **2014**, 66, 126-133	10.4	16
17	A flexible hybrid strain energy harvester using piezoelectric and electrostatic conversion. *Smart Materials and Structures*, **2014**, 23, 045040	3.4	37

16	Development of a flexible three-axis tactile sensor based on screen-printed carbon nanotube-polymer composite. *Journal of Micromechanics and Microengineering*, **2014**, 24, 075012	2	61
15	Resonant Frequency Tuning of Torsional Microscanner using MEMS actuator. *Transactions of the Society of Information Storage Systems*, **2014**, 10, 23-26		
14	Adhesion between Carbon Nanotube Arrays with Different Contact Area Measured Using Microactuator. *Transactions of the Society of Information Storage Systems*, **2014**, 10, 14-18		
13	Scalable and number-controlled synthesis of carbon nanotubes by nanostencil lithography. *Nanoscale Research Letters*, **2013**, 8, 281	5	3
12	Synthesis and bidirectional frequency tuning of cantilever-shape nano resonators using a focused ion beam. *ACS Applied Materials & Interfaces*, **2013**, 5, 9684-90	9.5	5
11	Site-specific growth and density control of carbon nanotubes by direct deposition of catalytic nanoparticles generated by spark discharge. *Nanoscale Research Letters*, **2013**, 8, 409	5	3
10	Transparent and flexible toluene sensor with enhanced sensitivity using adsorption catalyst-functionalized graphene **2013**,		1
9	Suspended GaN nanowires as NO2 sensor for high temperature applications. *Analyst, The*, **2013**, 138, 2432-7	5	22
8	Reversible and continuous latching using a carbon internanotube interface. *ACS Applied Materials & Interfaces*, **2013**, 5, 7465-9	9.5	1
7	Fabrication of a nitric oxide gas sensor using microwires and basic research for its application. *Korean Journal of Clinical Oncology*, **2013**, 9, 109-114	0.1	
6	Deformable Carbon Nanotube-Contact Pads for Inertial Microswitch to Extend Contact Time. *IEEE Transactions on Industrial Electronics*, **2012**, 59, 4914-4920	8.9	33
5	Aligned carbon nanotube arrays for degradation-resistant, intimate contact in micromechanical devices. *Advanced Materials*, **2011**, 23, 2231-6	24	46
4	Integrated carbon nanotube array as dry adhesive for high-temperature silicon processing. *Advanced Materials*, **2011**, 23, 4285-9	24	22
3	Highly sensitive hydrogen sensor based on suspended, functionalized single tungsten nanowire bridge. *Sensors and Actuators B: Chemical*, **2009**, 136, 92-98	8.5	42
2	Frequency Up-Conversion Hybrid Energy Harvester Combining Piezoelectric and Electromagnetic Transduction Mechanisms. *International Journal of Precision Engineering and Manufacturing - Green Technology*,1	3.8	8
1	All Paper-Based, Multilayered, Inkjet-Printed Tactile Sensor in Wide Pressure Detection Range with High Sensitivity. *Advanced Materials Technologies*,2100428	6.8	3