

# Keekeun Lee

## List of Publications by Year in descending order

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Version: 2024-02-01

76  
papers

1,370  
citations

331670

21  
h-index

377865

34  
g-index

76  
all docs

76  
docs citations

76  
times ranked

1539  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polyimide based neural implants with stiffness improvement. Sensors and Actuators B: Chemical, 2004, 102, 67-72.	7.8	92
2	Development of SAW-based multi-gas sensor for simultaneous detection of CO <sub>2</sub> and NO <sub>2</sub> . Sensors and Actuators B: Chemical, 2011, 154, 9-16.	7.8	90
3	Biocompatible benzocyclobutene (BCB)-based neural implants with micro-fluidic channel. Biosensors and Bioelectronics, 2004, 20, 404-407.	10.1	83
4	A novel wireless, passive CO <sub>2</sub> sensor incorporating a surface acoustic wave reflective delay line. Smart Materials and Structures, 2007, 16, 1382-1389.	3.5	70
5	Optimal design on SAW sensor for wireless pressure measurement based on reflective delay line. Sensors and Actuators A: Physical, 2007, 139, 2-6.	4.1	67
6	Nanohybrids of Pt-Functionalized Al <sub>2</sub> O <sub>3</sub> /ZnO Core-Shell Nanorods for High-Performance MEMS-Based Acetylene Gas Sensor. ACS Applied Materials & Interfaces, 2019, 11, 25891-25900.	8.0	59
7	A novel 440 MHz wireless SAW microsensors integrated with pressure-temperature sensors and ID tag. Journal of Micromechanics and Microengineering, 2007, 17, 515-523.	2.6	52
8	Broadband-absorbing hybrid solar cells with efficiency greater than 3% based on a bulk heterojunction of PbS quantum dots and a low-bandgap polymer. Journal of Materials Chemistry A, 2014, 2, 3978.	10.3	52
9	Development of SAW based gyroscope with high shock and thermal stability. Sensors and Actuators A: Physical, 2011, 165, 8-15.	4.1	39
10	Development of highly sensitive and stable humidity sensor for real-time monitoring of dissolved moisture in transformer-insulating oil. Sensors and Actuators B: Chemical, 2019, 286, 377-385.	7.8	34
11	Development of a high-sensitivity strain measurement system based on a SH SAW sensor. Journal of Micromechanics and Microengineering, 2012, 22, 025002.	2.6	30
12	Enhanced Sensitivity of Novel Surface Acoustic Wave Microelectromechanical System-Interdigital Transducer Gyroscope. Japanese Journal of Applied Physics, 2009, 48, 06FK09.	1.5	29
13	Development of chipless and wireless underground temperature sensor system based on magnetic antennas and SAW sensor. Sensors and Actuators A: Physical, 2019, 297, 111549.	4.1	29
14	Efficient hybrid solar cells using PbS <sub>x</sub> Se <sub>1-x</sub> quantum dots and nanorods for broad-range photon absorption and well-assembled charge transfer networks. Nanoscale, 2013, 5, 8202.	5.6	26
15	Gyroscopes based on surface acoustic waves. Micro and Nano Systems Letters, 2015, 3, .	3.7	26
16	A stable and highly sensitive strain sensor based on a surface acoustic wave oscillator. Sensors and Actuators A: Physical, 2014, 218, 80-87.	4.1	24
17	An Analysis of a Highly Sensitive and Selective Hydrogen Gas Sensor Based on a 3D Cu-Doped SnO <sub>2</sub> Sensing Material by Efficient Electronic Sensor Interface. ACS Sensors, 2021, 6, 4145-4155.	7.8	24
18	Development of a high sensitive pH sensor based on shear horizontal surface acoustic wave with ZnO nanoparticles. Microelectronic Engineering, 2013, 111, 154-159.	2.4	23

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19	The development of a wireless Love wave biosensor on 41Å° YX LiNbO <sub>3</sub> . Smart Materials and Structures, 2009, 18, 025008.	3.5	22
20	Development of wireless, batteryfree gyroscope based on one-port SAW delay line and double resonant antenna. Sensors and Actuators A: Physical, 2014, 220, 270-280.	4.1	22
21	Development of chipless, wireless current sensor system based on giant magnetoimpedance magnetic sensor and surface acoustic wave transponder. Scientific Reports, 2018, 8, 2401.	3.3	22
22	Enhanced sensitivity of a surface acoustic wave gyroscope using a progressive wave. Journal of Micromechanics and Microengineering, 2011, 21, 075015.	2.6	21
23	A Highly Sensitive and Stable rGO:MoS <sub>2</sub> -Based Chemiresistive Humidity Sensor Directly Insertable to Transformer Insulating Oil Analyzed by Customized Electronic Sensor Interface. ACS Sensors, 2021, 6, 1012-1021.	7.8	21
24	MEMS hydrogen gas sensor for in-situ monitoring of hydrogen gas in transformer oil. Sensors and Actuators B: Chemical, 2021, 326, 128989.	7.8	21
25	A New Micro-rate Sensor Based on Shear Horizontal Surface Acoustic Wave Gyroscopic Effect. Japanese Journal of Applied Physics, 2010, 49, 096602.	1.5	20
26	Near-infrared-sensitive bulk heterojunction solar cells using nanostructured hybrid composites of HgTe quantum dots and a low-bandgap polymer. Solar Energy Materials and Solar Cells, 2014, 126, 163-169.	6.2	20
27	Efficiency enhancement in organic solar cells by configuring hybrid interfaces with narrow bandgap PbSse nanocrystals. Organic Electronics, 2012, 13, 1546-1552.	2.6	19
28	Biocompatible benzocyclobutene-based intracortical neural implant with surface modification. Journal of Micromechanics and Microengineering, 2005, 15, 2149-2155.	2.6	18
29	Current Sensor Based on Nanocrystalline NiFe/Cu/NiFe Thin Film. Procedia Engineering, 2016, 168, 675-679.	1.2	18
30	Langmuir-Blodgett assembly of nanometric WO <sub>3</sub> thin film for electrochromic performance: A new way. Materials Letters, 2017, 194, 102-106.	2.6	18
31	Sensitivity Improvement of Wireless Pressure Sensor by Incorporating a Saw Reflective Delay Line. International Journal on Smart Sensing and Intelligent Systems, 2008, 1, 940-954.	0.7	18
32	Surface Acoustic Wave Based Pressure Sensor with Ground Shielding over Cavity on 41Å°YXLiNbO <sub>3</sub> . Japanese Journal of Applied Physics, 2006, 45, 5974-5980.	1.5	17
33	Fabrication of micro-lens array using quartz wet etching and polymer. Sensors and Actuators A: Physical, 2010, 164, 161-167.	4.1	17
34	An ultraviolet sensor using spinâ€‘coated ZnO nanoparticles based on surface acoustic waves. Microelectronic Engineering, 2013, 111, 105-109.	2.4	17
35	Wireless and Simultaneous Detections of Multiple Bio-Molecules in a Single Sensor Using Love Wave Biosensor. Sensors, 2014, 14, 21660-21675.	3.8	17
36	MEMS spring probe for non-destructive wafer level chip test. Journal of Micromechanics and Microengineering, 2005, 15, 953-957.	2.6	16

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37	Enhanced Sensitivity of Wireless Chemical Sensor Based on Love Wave Mode. Japanese Journal of Applied Physics, 2008, 47, 7372.	1.5	14
38	Development of novel dual-axis sensing gyroscope using surface acoustic wave. Microelectronic Engineering, 2012, 97, 259-264.	2.4	14
39	Development of Highly Sensitive Ethane Gas Sensor Based on 3D WO <sub>3</sub> Nanocone Structure Integrated with Low-Powered In-Plane Microheater and Temperature Sensor. Advanced Materials Technologies, 2020, 5, 2000009.	5.8	14
40	Wireless neural probes based on one-port SAW delay line and neural firing-dependent varicap diode. Sensors and Actuators B: Chemical, 2015, 207, 243-253.	7.8	13
41	A novel shock and heat tolerant gyrosensor utilizing a one-port surface acoustic wave reflective delay line. Journal of Micromechanics and Microengineering, 2012, 22, 045007.	2.6	9
42	A multifunctional fullerene interlayer in colloidal quantum dot-based hybrid solar cells. Journal of Materials Chemistry A, 2015, 3, 10585-10591.	10.3	9
43	Development of a highly sensitive and portable particulate matter SAW sensor and interface electronics. Sensors and Actuators A: Physical, 2022, 343, 113641.	4.1	9
44	Development of Highly Sensitive and Stable Surface Acoustic Wave-Based Hydrogen Sensor and Its Interface Electronics. Advanced Materials Technologies, 2022, 7, .	5.8	8
45	Solution-processed inverted solar cells using an inorganic bulk heterojunction of iron pyrite nanocrystals and cadmium selenide quantum dots with a polymeric hole-transport medium. Journal of Materials Chemistry A, 2014, 2, 9758.	10.3	7
46	Deployment of Underground Wireless Sensor Network Based on Magnetic Core Antennas and Multiple Surface Acoustic Wave Sensor Modules. Journal of Electrical Engineering and Technology, 2020, 15, 2227-2237.	2.0	7
47	Photovoltaic Cell With Built-In Antenna for Internet of Things Applications. IEEE Access, 2021, 9, 107437-107445.	4.2	7
48	Toward Real Time Monitoring of Wafer Temperature in Plasma Chamber Through Surface Acoustic Wave Resonator and Mu-Negative Metamaterial Antenna. IEEE Sensors Journal, 2021, 21, 19863-19871.	4.7	7
49	Wirelessly Driven and Battery-Free Love Wave Biosensor Based on Dinitrophenyl Immobilization. Japanese Journal of Applied Physics, 2009, 48, 06FJ05.	1.5	6
50	Highly efficient current sensor built on a chip based on nanocrystalline NiFe/Cu/NiFe thin film. Journal of Industrial and Engineering Chemistry, 2017, 53, 416-424.	5.8	6
51	Enhancing the sensitivity of three-axis detectable surface acoustic wave gyroscope by using a floating thin piezoelectric membrane. Japanese Journal of Applied Physics, 2017, 56, 06GN14.	1.5	6
52	Development of a Wireless, Battery-Free SAW Volatile Organic Compounds Sensor Integrated with Temperature Sensor. Sensor Letters, 2011, 9, 82-86.	0.4	5
53	Towards optimised wireless Love wave biosensor with high sensitivity. Micro and Nano Letters, 2012, 7, 1202-1205.	1.3	4
54	A compact spiral stripline-loaded monopole antenna with a vertical ground plane. Microwave and Optical Technology Letters, 2008, 50, 250-252.	1.4	3

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55	Development of chip-less and wireless neural probe functioning stimulation and reading in a single device. <i>Microelectronic Engineering</i> , 2016, 158, 118-125.	2.4	3
56	Lateral-Type Field Emission-Based Magnetic Sensor Fabricated by Electron-Beam Lithography. <i>Journal of the Electrochemical Society</i> , 2004, 151, H81.	2.9	2
57	Optimized Surface Acoustic Wave-based Pressure Sensor Using Equivalent Circuit Model. , 2006, , .		2
58	Development of a New Wireless Chemical Sensor for CO&lt;inf&gt;2&lt;/inf&gt; detection. , 2007, , .		2
59	Improving the Insertion Loss and Sensitivity Over Existing SAW Strain Sensor. <i>Procedia Engineering</i> , 2011, 25, 567-570.	1.2	2
60	Development of Novel LOVE Wave Biosensor for Simultaneous Detection of Multi-Analyte. <i>Procedia Engineering</i> , 2011, 25, 908-911.	1.2	2
61	Battery-Free Love-Wave-Based Neural Probe and Its Wireless Characterizations. <i>Japanese Journal of Applied Physics</i> , 2013, 52, 06GK08.	1.5	2
62	Highly diffractive, reversibly fast responsive gratings formulated through focused surface acoustic wave for holographic display. <i>Journal of Materials Science: Materials in Electronics</i> , 2017, 28, 5366-5374.	2.2	2
63	Development of wireless, chipless neural stimulator by using one-port surface acoustic wave delay line and diode&quot;capacitor interface. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 06GN13.	1.5	2
64	Development of acousto-optic spatial light modulator unit for effective control of light beam intensity and diffraction angle in 3D holographic display applications. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 074001.	2.6	2
65	Modeling and performance evaluation of 2.4GHz SAW-based pressure sensor. , 2006, , .		1
66	Development of passive surface acoustic wave gyroscope with standing wave mode. , 2011, , .		1
67	Development of acoustic-optic (AO) SLM applicable to 3D holographic display. , 2017, , .		1
68	Towards a wireless chip less smart current sensor system based on giant magnetoresistance. , 2017, , .		1
69	Development of a Room Temperature-Operable PbS QD-Based Infrared Sensor by Using Bandgap Manipulation. <i>Journal of the Korean Physical Society</i> , 2018, 73, 343-348.	0.7	1
70	Highly Sensitive and Long-Term Stable Hydrogen Sensor for Real-Time Tracing of Dissolved Hydrogen in Transformer-Insulating Oil. , 2019, , .		1
71	Effective Light Beam Modulation by Chirp IDT on a Suspended LiNbO3 Membrane for 3D Holographic Displays. <i>Sensors</i> , 2020, 20, 1218.	3.8	1
72	Fabrication of WO3 Nanocone Arrays for Highly Sensitive C2H6 Gas Sensor Integrated with Low Powered in Plane Microheater. , 2020, , .		1

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73	The development of novel surface acoustic wave MEMS-IDT gyroscope based on standing wave mode. , 2009, , .		0
74	Simultaneous and wireless measurement of CO<math>2</math> and NO<math>2</math> using a saw reflective delay line. , 2009, , .		0
75	Wireless neural stimulator based on two-port SAW delay line and AC/DC converting interface. , 2017, , .		0
76	Fabrication of Platinum Functionalized Zinc Oxide Nanorods for High-Performance Acetylene Gas Sensor Integrated with Microheater. , 2019, , .		0