Byung Yang Lee

List of Publications by Citations

58 papers	2,444 citations	21 h-index	49 g-index
60 ext. papers	2,695 ext. citations	9.1 avg, IF	4.63 L-index

#	Paper	IF	Citations
58	Trapped charge-driven degradation of perovskite solar cells. *Nature Communications*, **2016**, 7, 13422	17.4	390
57	Biomimetic self-templating supramolecular structures. *Nature*, **2011**, 478, 364-8	50.4	323
56	Virus-based piezoelectric energy generation. *Nature Nanotechnology*, **2012**, 7, 351-6	28.7	294
55	Biomimetic virus-based colourimetric sensors. *Nature Communications*, **2014**, 5, 3043	17.4	171
54	Selective and sensitive TNT sensors using biomimetic polydiacetylene-coated CNT-FETs. *ACS Nano*, **2011**, 5, 2824-30	16.7	125
53	Ultrasensitive carbon nanotube-based biosensors using antibody-binding fragments. *Analytical Biochemistry*, **2008**, 381, 193-8	3.1	124
52	Large-scale assembly of silicon nanowire network-based devices using conventional microfabrication facilities. *Nano Letters*, **2008**, 8, 4523-7	11.5	108
51	Enhancement of sensitivity and specificity by surface modification of carbon nanotubes in diagnosis of prostate cancer based on carbon nanotube field effect transistors. *Biosensors and Bioelectronics*, **2009**, 24, 3372-8	11.8	106
50	Synergistically enhanced stability of highly flexible silver nanowire/carbon nanotube hybrid transparent electrodes by plasmonic welding. *ACS Applied Materials & Interfaces*, **2014**, 6, 10974-80	9.5	71
49	Universal parameters for carbon nanotube network-based sensors: can nanotube sensors be reproducible?. *ACS Nano*, **2011**, 5, 4373-9	16.7	58
48	H(2) sensing characteristics of SnO(2) coated single wall carbon nanotube network sensors. *Nanotechnology*, **2010**, 21, 215501	3.4	50
47	Cellulose Nanocrystal-Based Colored Thin Films for Colorimetric Detection of Aldehyde Gases. *ACS Applied Materials & Interfaces*, **2018**, 10, 10353-10361	9.5	42
46	Metallic nanowire-graphene hybrid nanostructures for highly flexible field emission devices. *Nanotechnology*, **2011**, 22, 355709	3.4	42
45	High-frequency micromechanical resonators from aluminium-carbon nanotube nanolaminates. *Nature Materials*, **2008**, 7, 459-63	27	38
44	Highly selective and sensitive detection of neurotransmitters using receptor-modified single-walled carbon nanotube sensors. *Nanotechnology*, **2013**, 24, 285501	3.4	32
43	Biosensor system-on-a-chip including CMOS-based signal processing circuits and 64 carbon nanotube-based sensors for the detection of a neurotransmitter. *Lab on A Chip*, **2010**, 10, 894-8	7.2	32
42	Scalable assembly method of vertically-suspended and stretched carbon nanotube network devices for nanoscale electro-mechanical sensing components. *Nano Letters*, **2008**, 8, 4483-7	11.5	30

41	100 nm scale low-noise sensors based on aligned carbon nanotube networks: overcoming the fundamental limitation of network-based sensors. *Nanotechnology*, **2010**, 21, 055504	3.4	26
40	Direct printing of aligned carbon nanotube patterns for high-performance thin film devices. *Applied Physics Letters*, **2009**, 94, 053109	3.4	24
39	Alignment strategies for the assembly of nanowires with submicron diameters. *Small*, **2010**, 6, 1736-40	11	23
38	Highly flexible and transparent dielectric elastomer actuators using silver nanowire and carbon nanotube hybrid electrodes. *Soft Matter*, **2017**, 13, 6390-6395	3.6	22
37	Modified Floating Electrode-Based Sensors for the Quantitative Monitoring of Drug Effects on Cytokine Levels Related with Inflammatory Bowel Diseases. *ACS Applied Materials & Interfaces*, **2018**, 10, 17100-17106	9.5	19
36	Direct-write complementary graphene field effect transistors and junctions via near-field electrospinning. *Small*, **2014**, 10, 1920-5	11	18
35	Nanotube-bridged wires with sub-10 nm gaps. *Nano Letters*, **2012**, 12, 1879-84	11.5	18
34	Real-time selective monitoring of allergenic Aspergillus molds using pentameric antibody-immobilized single-walled carbon nanotube-field effect transistors. *RSC Advances*, **2015**, 5, 15728-15735	3.7	17
33	Highly selective ppb-level detection of NH3 and NO2 gas using patterned porous channels of ITO nanoparticles. *Sensors and Actuators B: Chemical*, **2015**, 216, 482-487	8.5	17
32	Highly sensitive NO2 sensor array based on undecorated single-walled carbon nanotube monolayer junctions. *Applied Physics Letters*, **2008**, 93, 113111	3.4	17
31	Integrated devices based on networks of nanotubes and nanowires. *NPG Asia Materials*, **2010**, 2, 103-111	10.3	16
30	Directed assembly of carbon nanotubes on soft substrates for use as a flexible biosensor array. *Nanotechnology*, **2008**, 19, 505502	3.4	16
29	Colorimetric allergenic fungal spore detection using peptide-modified gold nanoparticles. *Sensors and Actuators B: Chemical*, **2021**, 327, 128894	8.5	16
28	Engineered Phage Matrix Stiffness-Modulating Osteogenic Differentiation. *ACS Applied Materials & Interfaces*, **2018**, 10, 4349-4358	9.5	13
27	Plasmon–Exciton Interactions in Hybrid Structures of Au Nanohemispheres and CdS Nanowires for Improved Photoconductive Devices. *Journal of Physical Chemistry C*, **2013**, 117, 24543-24548	3.8	13
26	Fully Automated Field-Deployable Bioaerosol Monitoring System Using Carbon Nanotube-Based Biosensors. *Environmental Science & Technology*, **2016**, 50, 5163-71	10.3	13
25	Selective and Sensitive Sensing of Flame Retardant Chemicals Through Phage Display Discovered Recognition Peptide. *Nano Letters*, **2015**, 15, 7697-703	11.5	12
24	Electrical control of kinesin-microtubule motility using a transparent functionalized-graphene substrate. *Nanotechnology*, **2013**, 24, 195102	3.4	12

23	Synaptic compartmentalization by micropatterned masking of a surface adhesive cue in cultured neurons. *Biomaterials*, **2016**, 92, 46-56	15.6	10
22	A "Nanoprism" Probe for Nano-optical Applications. *Advanced Materials*, **2009**, 21, 1238-1242	24	10
21	Facile fabrication of self-assembled ZnO nanowire network channels and its gate-controlled UV detection. *Nanoscale Research Letters*, **2018**, 13, 413	5	10
20	Carbon nanotube–metal nano-laminate for enhanced mechanical strength and electrical conductivity. *Carbon*, **2011**, 49, 2549-2554	10.4	8
19	Highly sensitive and flexible strain sensors based on patterned ITO nanoparticle channels. *Nanotechnology*, **2017**, 28, 495501	3.4	7
18	Real-time detection of chlorine gas using Ni/Si shell/core nanowires. *Nanoscale Research Letters*, **2015**, 10, 18	5	7
17	Real-time monitoring of microbial activity using hydrogel-hybridized carbon nanotube transistors. *Sensors and Actuators B: Chemical*, **2018**, 263, 486-492	8.5	7
16	All-solid-state flexible supercapacitor based on nanotube-reinforced polypyrrole hollowed structures.. *RSC Advances*, **2020**, 10, 41495-41502	3.7	7
15	Hierarchically structured peptide nanofibers for colorimetric detection of gaseous aldehydes. *Sensors and Actuators B: Chemical*, **2019**, 282, 868-875	8.5	6
14	Electric Field Assisted Self-Assembly of Viruses into Colored Thin Films. *Nanomaterials*, **2019**, 9,	5.4	3
13	Control of Volume-Responsive Properties of Hydrogels through Molybdenum Disulfide Nanosheet Incorporation. *Advanced Materials Technologies*, **2019**, 4, 1900021	6.8	3
12	Carbon and metal nanotube hybrid structures on graphene as efficient electron field emitters. *Nanotechnology*, **2016**, 27, 275301	3.4	3
11	Ruthenium-Incorporated Hydroxyapatites for the Oxidation of Alcohols and Amines Using Molecular Oxygen as an Oxidant. *Bulletin of the Korean Chemical Society*, **2015**, 36, 1-2	1.2	3
10	Selective adsorption of metal nanowires on molecularly patterned substrates using surface-to-volume ratio-dependent strategies. *Applied Physics Express*, **2014**, 7, 115001	2.4	2
9	Reply to comment on 'Metallic nanowire-graphene hybrid nanostructures for highly flexible field emission devices'. *Nanotechnology*, **2012**, 23, 288002	3.4	2
8	Electroluminescent soft elastomer actuators with adjustable luminance and strain. *Soft Matter*, **2019**, 15, 7996-8000	3.6	2
7	Surface Assembly Strategy for the Fabrication of MoS2 Thin-Film Patterns. *International Journal of Precision Engineering and Manufacturing*, **2019**, 20, 2215-2220	1.7	1
6	Dip-Pen Nanolithography **2006**, 141-174		1

List of Publications

5	Biomimetic Materials and Structures for Sensor Applications **2017**, 3-25		1
4	Biomimetic virus-based colourimetric sensors		1
3	M13 Virus Triboelectricity and Energy Harvesting. *Nano Letters*, **2021**, 21, 6851-6858	11.5	1
2	Field Effect Transistors: Direct-Write Complementary Graphene Field Effect Transistors and Junctions via Near-Field Electrospinning (Small 10/2014). *Small*, **2014**, 10, 2112-2112	11	
1	Characterization of Thermo-Mechanical Properties of Carbon-Based Low-Dimensional Material/Metallic Thin-Film Composites from NEMS Structures. *ECS Transactions*, **2010**, 33, 263-268	1	