

# Gyu-Tae Kim

## List of Publications by Year in descending order

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117  
papers

8,602  
citations

279798

23  
h-index

42399

92  
g-index

117  
all docs

117  
docs citations

117  
times ranked

14613  
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-Dimensional Nanosheets Produced by Liquid Exfoliation of Layered Materials. <i>Science</i> , 2011, 331, 568-571.	12.6	6,190
2	Photocurrent in ZnO nanowires grown from Au electrodes. <i>Applied Physics Letters</i> , 2004, 84, 4376-4378.	3.3	293
3	Photoresponse of sol-gel-synthesized ZnO nanorods. <i>Applied Physics Letters</i> , 2004, 84, 5022-5024.	3.3	264
4	Electrical Characteristics of Molybdenum Disulfide Flakes Produced by Liquid Exfoliation. <i>Advanced Materials</i> , 2011, 23, 4178-4182.	21.0	224
5	A skin-integrated transparent and stretchable strain sensor with interactive color-changing electrochromic displays. <i>Nanoscale</i> , 2017, 9, 7631-7640.	5.6	160
6	Low-frequency noise in multilayer MoS <sub>2</sub> field-effect transistors: the effect of high-k passivation. <i>Nanoscale</i> , 2014, 6, 433-441.	5.6	146
7	V <sub>2</sub> O <sub>5</sub> nanowire-based nanoelectronic devices for helium detection. <i>Applied Physics Letters</i> , 2005, 86, 253102.	3.3	62
8	Low-frequency noise in junctionless multigate transistors. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	52
9	Plasma treatment effect on charge carrier concentrations and surface traps in a-InGaZnO thin-film transistors. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	46
10	Separation of interlayer resistance in multilayer MoS <sub>2</sub> field-effect transistors. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	46
11	Effect of chemical treatment on the thermoelectric properties of single walled carbon nanotube networks. <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 2353-2356.	1.5	45
12	Photoconductance of aligned SnO <sub>2</sub> nanowire field effect transistors. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	43
13	White-Light Emitting Diode Array of p <sup>+</sup> /Si/Aligned n-SnO <sub>2</sub> Nanowires Heterojunctions. <i>Advanced Functional Materials</i> , 2011, 21, 119-124.	14.9	43
14	Effect of Intertube Junctions on the Thermoelectric Power of Monodispersed Single Walled Carbon Nanotube Networks. <i>Journal of Physical Chemistry C</i> , 2014, 118, 26454-26461.	3.1	43
15	Triethanolamine doped multilayer MoS <sub>2</sub> field effect transistors. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 13133-13139.	2.8	36
16	Preparation and characterization of expanded graphite polymer composite films for thermoelectric applications. <i>Physica Status Solidi (B): Basic Research</i> , 2013, 250, 2529-2534.	1.5	34
17	A 2D material-based floating gate device with linear synaptic weight update. <i>Nanoscale</i> , 2020, 12, 24503-24509.	5.6	34
18	High-Performance Silver Cathode Surface Treated with Scandia-Stabilized Zirconia Nanoparticles for Intermediate Temperature Solid Oxide Fuel Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1601956.	19.5	32

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19	Brillouin Optical Correlation Domain Analysis Enhanced by Time-Domain Data Processing for Concurrent Interrogation of Multiple Sensing Points. <i>Journal of Lightwave Technology</i> , 2017, 35, 5311-5316.	4.6	30
20	Piezo-impedance response of carbon nanotube/polydimethylsiloxane nanocomposites. <i>APL Materials</i> , 2019, 7, .	5.1	29
21	Low-frequency noise in strained SiGe core-shell nanowire p-channel field effect transistors. <i>Applied Physics Letters</i> , 2010, 97, 073505.	3.3	27
22	A dual analyzer for real-time impedance and noise spectroscopy of nanoscale devices. <i>Review of Scientific Instruments</i> , 2011, 82, 034702.	1.3	26
23	Optimized single-layer MoS <sub>2</sub> field-effect transistors by non-covalent functionalisation. <i>Nanoscale</i> , 2018, 10, 17557-17566.	5.6	26
24	Analysis of charge sensitivity and low frequency noise limitation in silicon nanowire sensors. <i>Journal of Applied Physics</i> , 2010, 107, 044501.	2.5	22
25	Reduced charge fluctuations in individual SnO <sub>2</sub> nanowires by suppressed surface reactions. <i>Journal of Materials Chemistry</i> , 2012, 22, 24012.	6.7	22
26	Controlling charge balance using non-conjugated polymer interlayer in quantum dot light-emitting diodes. <i>Organic Electronics</i> , 2017, 50, 82-86.	2.6	22
27	Reconfigurable Si Nanowire Nonvolatile Transistors. <i>Advanced Electronic Materials</i> , 2018, 4, 1700399.	5.1	21
28	Thermoelectric properties of single walled carbon nanotube networks in polycarbonate matrix. <i>Physica Status Solidi (B): Basic Research</i> , 2013, 250, 1468-1473.	1.5	20
29	A direct measurement of the local resistances in a ZnO tetrapod by means of impedance spectroscopy: The role of the junction in the overall resistance. <i>Applied Physics Letters</i> , 2008, 93, 042111.	3.3	19
30	Structural Origin of the Band Gap Anomaly of Quaternary Alloy Cd <sub>x</sub> Zn <sub>1-x</sub> S <sub>y</sub> Se <sub>1-y</sub> Nanowires, Nanobelts, and Nanosheets in the Visible Spectrum. <i>ACS Nano</i> , 2015, 9, 5486-5499.	14.6	17
31	Evaluation of power generated by thermoelectric modules comprising a p-type and n-type single walled carbon nanotube composite paper. <i>RSC Advances</i> , 2015, 5, 78099-78103.	3.6	17
32	Few-Layer WSe <sub>2</sub> Schottky Junction-Based Photovoltaic Devices through Site-Selective Dual Doping. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 42912-42918.	8.0	17
33	Field-Dependent Electrical and Thermal Transport in Polycrystalline WSe <sub>2</sub> . <i>Advanced Materials Interfaces</i> , 2018, 5, 1701161.	3.7	17
34	Probing Distinctive Electron Conduction in Multilayer Rhenium Disulfide. <i>Advanced Materials</i> , 2018, 31, 1805860.	21.0	16
35	50 km-Range Brillouin Optical Correlation Domain Analysis With First-Order Backward Distributed Raman Amplification. <i>Journal of Lightwave Technology</i> , 2020, 38, 5199-5204.	4.6	16
36	Low-temperature operation of junctionless nanowire transistors: Less surface roughness scattering effects and dominant scattering mechanisms. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	15

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37	Resistive switching characteristics of polycrystalline SrTiO <sub>3</sub> films. Applied Physics Letters, 2014, 104, .	3.3	15
38	Effects of junctions on carbon nanotube network-based devices. Physica Status Solidi (B): Basic Research, 2011, 248, 2644-2648.	1.5	14
39	Enhanced efficiency and high temperature stability of hybrid quantum dot light-emitting diodes using molybdenum oxide doped hole transport layer. RSC Advances, 2019, 9, 16252-16257.	3.6	14
40	Understanding tunable photoresponsivity of two-dimensional multilayer phototransistors: Interplay between thickness and carrier mobility. Applied Physics Letters, 2020, 116, .	3.3	14
41	Drain induced barrier increasing in multilayer ReS <sub>2</sub> . 2D Materials, 2020, 7, 031004.	4.4	13
42	Restricted Channel Migration in 2D Multilayer ReS <sub>2</sub> . ACS Applied Materials & Interfaces, 2021, 13, 19016-19022.	8.0	13
43	Origin of exciplex degradation in organic light emitting diodes: Thermal stress effects over glass transition temperature of emission layer. Applied Physics Letters, 2020, 117, .	3.3	12
44	Understanding of the aging pattern in quantum dot light-emitting diodes using low-frequency noise. Nanoscale, 2020, 12, 15888-15895.	5.6	12
45	Controlled surface adsorption of fd filamentous phage by tuning of the <i>i&gt;p</i> /H and the functionalization of the surface. Journal of Applied Physics, 2011, 109, 064701.	2.5	11
46	Effect of humidity and thermal curing of polymer gate dielectrics on the electrical hysteresis of SnO <sub>2</sub> nanowire field effect transistors. Applied Physics Letters, 2011, 98, 102906.	3.3	11
47	Tailoring the Electrical Characteristics of MoS <sub>2</sub> FETs through Controllable Surface Charge Transfer Doping Using Selective Inkjet Printing. ACS Nano, 2022, 16, 6215-6223.	14.6	11
48	Contact barriers in a single ZnO nanowire device. Applied Physics A: Materials Science and Processing, 2009, 94, 253-256.	2.3	10
49	Channel access resistance effects on charge carrier mobility and low-frequency noise in a polymethyl methacrylate passivated SnO <sub>2</sub> nanowire field-effect transistors. Applied Physics Letters, 2013, 102, .	3.3	10
50	Conductive carbon nanotube paper by recycling waste paper. RSC Advances, 2015, 5, 32118-32123.	3.6	10
51	Extraction of Intrinsic Electrical Parameters in Partially Depleted MoS <sub>2</sub> Field-Effect Transistors. IEEE Transactions on Electron Devices, 2018, 65, 3050-3053.	3.0	10
52	Simulator acceleration and inverse design of fin field-effect transistors using machine learning. Scientific Reports, 2022, 12, 1140.	3.3	10
53	Static and low frequency noise characterization of N-type random network of carbon nanotubes thin film transistors. Journal of Applied Physics, 2013, 114, .	2.5	9
54	Anisotropic electrical and thermal characteristics of carbon nanotube-embedded wood. Cellulose, 2019, 26, 5719-5730.	4.9	9

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55	Influence of hydrogen incorporation on conductivity and work function of VO <sub>2</sub> nanowires. <i>Nanoscale</i> , 2019, 11, 4219-4225.	5.6	9
56	Transfer of transition-metal dichalcogenide circuits onto arbitrary substrates for flexible device applications. <i>Nanoscale</i> , 2019, 11, 22118-22124.	5.6	9
57	Modeling and Understanding the Compact Performance of hBN Dual-Gated ReS <sub>2</sub> Transistor. <i>Advanced Functional Materials</i> , 2021, 31, 2100625.	14.9	9
58	Effect of gate dielectrics on the device performance of SnO <sub>2</sub> nanowire field effect transistors. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	8
59	Degradation pattern of SnO <sub>2</sub> nanowire field effect transistors. <i>Nanotechnology</i> , 2010, 21, 485201.	2.6	8
60	Array of Single-Walled Carbon Nanotube Intrajunction Devices Fabricated via Type Conversion by Partial Coating with 2'-Nicotinamide Adenine Dinucleotide. <i>Advanced Functional Materials</i> , 2011, 21, 2515-2521.	14.9	8
61	Short channel mobility analysis of SiGe nanowire p-type field effect transistors: Origins of the strain induced performance improvement. <i>Applied Physics Letters</i> , 2012, 101, 143502.	3.3	8
62	Influence of chemical treatment on the electrical conductivity and thermopower of expanded graphite foils. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2013, 10, 1183-1187.	0.8	8
63	Electrical properties of high density arrays of silicon nanowire field effect transistors. <i>Journal of Applied Physics</i> , 2013, 114, 144503.	2.5	8
64	Channel Length-Dependent Operation of Ambipolar Schottky-Barrier Transistors on a Single Si Nanowire. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 43927-43932.	8.0	8
65	Real-time effect of electron beam on MoS <sub>2</sub> field-effect transistors. <i>Nanotechnology</i> , 2020, 31, 455202.	2.6	8
66	Experimental and Theoretical Investigation of Magnetoresistance From Linear Regime to Saturation in 14-nm FD-SOI MOS Devices. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 3-8.	3.0	7
67	Detection and Accurate Classification of Mixed Gases Using Machine Learning with Impedance Data. <i>Advanced Theory and Simulations</i> , 2020, 3, 2000012.	2.8	7
68	Multiple machine learning approach to characterize two-dimensional nanoelectronic devices via featurization of charge fluctuation. <i>Npj 2D Materials and Applications</i> , 2021, 5, .	7.9	7
69	Electronic properties of light-emitting p-n hetero-junction array consisting of p+-Si and aligned n-ZnO nanowires. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	6
70	Conductive multi-walled boron nitride nanotubes by catalytic etching using cobalt oxide. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 976-985.	2.8	6
71	Effect of interlayer tunneling barrier on carrier transport and fluctuation in multilayer ReS <sub>2</sub> . <i>Applied Physics Letters</i> , 2020, 117, .	3.3	6
72	Emergence of Quantum Tunneling in Ambipolar Black Phosphorus Multilayers without Heterojunctions. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	6

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73	Tuning the on/off current ratio in ionic-liquid gated multi-layer MoS <sub>2</sub> field-effect transistors. Journal Physics D: Applied Physics, 2020, 53, 275104.	2.8	5
74	Hidden surface channel in two-dimensional multilayers. 2D Materials, 2022, 9, 035004.	4.4	5
75	Energy-Efficient III-V Tunnel FET-Based Synaptic Device with Enhanced Charge Trapping Ability Utilizing Both Hot Hole and Hot Electron Injections for Analog Neuromorphic Computing. ACS Applied Materials & Interfaces, 2022, 14, 24592-24601.	8.0	5
76	Ultra-Easy and Fast Method for Transferring Graphene Grown on Metal Foil. Nano, 2017, 12, 1750140.	1.0	4
77	Soft-type trap-induced degradation of MoS <sub>2</sub> field effect transistors. Nanotechnology, 2018, 29, 22LT01.	2.6	4
78	Transport-map analysis of ionic liquid-gated ambipolar WSe <sub>2</sub> field-effect transistors. Semiconductor Science and Technology, 2019, 34, 075022.	2.0	4
79	Effect of Ir(pq) <sub>2</sub> acac doping on CBP in phosphorescence organic light-emitting diodes. Current Applied Physics, 2020, 20, 78-81.	2.4	4
80	Cyclic Thermal Effects on Devices of Two-Dimensional Layered Semiconducting Materials. Advanced Electronic Materials, 2021, 7, 2100348.	5.1	4
81	Lifetime assessment of organic light emitting diodes by compact model incorporated with deep learning technique. Organic Electronics, 2022, 101, 106404.	2.6	4
82	Electron beam tuning of carrier concentrations in oxide nanowires. Journal of Applied Physics, 2011, 110, .	2.5	3
83	Static and low frequency noise characterization of densely packed CNT-TFTs. , 2012, , .		3
84	Simulation methodology for 2D random network of CNTs field-effect transistors. , 2013, , .		3
85	Impedance characterization of nanogap interdigitated electrode arrays fabricated by tilted angle evaporation for electrochemical biosensor applications. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, 021803.	1.2	3
86	Surface Modulation of Graphene Field Effect Transistors on Periodic Trench Structure. ACS Applied Materials & Interfaces, 2016, 8, 18513-18518.	8.0	3
87	Linearly Configured Brillouin Optical Correlation Domain Analysis System Incorporating Time-Domain Data Processing. Journal of Lightwave Technology, 2019, 37, 4728-4733.	4.6	3
88	Defect spectroscopy of sidewall interfaces in gate-all-around silicon nanosheet FET. Nanotechnology, 2021, 32, 165202.	2.6	3
89	Metal-Contact Improvement in a Multilayer WSe <sub>2</sub> Transistor through Strong Hot Carrier Injection. ACS Applied Materials & Interfaces, 2021, 13, 2829-2835.	8.0	3
90	MWCNT-coated cotton yarn array for piezoresistive force and bending sensor applications in Internet of Things systems. Sensors and Actuators A: Physical, 2021, 332, 113209.	4.1	3

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91	Understanding random telegraph noise in two-dimensional BP/ReS <sub>2</sub> heterointerface. Applied Physics Letters, 2022, 120, 253507.	3.3	3
92	Inhomogeneous spin accumulation in Py/Au/Py spin valve. Physica Status Solidi (B): Basic Research, 2007, 244, 4530-4533.	1.5	2
93	Efficient characterization and suppression methodology of edge effects for leakage current reduction of sub-40nm DRAM device. , 2010, , .		2
94	Raman investigation of few-layer graphene on different substrate structures. Physica Status Solidi (B): Basic Research, 2012, 249, 2534-2537.	1.5	2
95	Web-drive based source measure unit for automated evaluations of ionic liquid-gated MoS <sub>2</sub> transistors. Review of Scientific Instruments, 2019, 90, 124708.	1.3	2
96	Experimental analysis of surface roughness scattering in FinFET devices. , 2010, , .		1
97	ZnO-SnO <sub>2</sub> core-shell nanowire networks and their gas sensing characteristics. , 2011, , .		1
98	Nitrogen-plasma treatment of parallel-aligned SnO <sub>2</sub> -nanowire field-effect transistors. Journal of the Korean Physical Society, 2014, 65, 502-508.	0.7	1
99	The Rayleigh and Polarization Fading Elimination in Phase-Extracted OTDR. , 2018, , .		1
100	A Simple Method for Estimation of Silicon Film Thickness in Tri-Gate Junctionless Transistors. IEEE Electron Device Letters, 2018, 39, 1282-1285.	3.9	1
101	Series Resistance Effects on the Back-gate Biased Operation of Junctionless Transistors. , 2019, , .		1
102	The Shared Subjective Frames of Interdisciplinary Practitioners Involved in Function-Focused Care in a Nursing Home: Q-Methodology. The Journal of Nursing Research: JNR, 2020, 28, e69.	1.7	1
103	SPICE Study of STDP Characteristics in a Drift and Diffusive Memristor-Based Synapse for Neuromorphic Computing. IEEE Access, 2022, 10, 6381-6392.	4.2	1
104	Deep Understanding of Electron Beam Effects on 2D Layered Semiconducting Devices Under Bias Applications. Advanced Materials Interfaces, 0, , 2102488.	3.7	1
105	The characteristics of joints with Indium-silver alloy using diffusion soldering method. Materials Research Society Symposia Proceedings, 2004, 817, 13.	0.1	0
106	Simple selective electron beam patterning on a single nanowire. , 2006, , .		0
107	Effect of intervening ferromagnet on spin accumulation in Py/Au/Py spin valve device. , 2006, , .		0
108	Extracting the Device Parameters from Organic Thin Film Transistors. Materials Research Society Symposia Proceedings, 2006, 965, 1.	0.1	0

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109	Degradation of ZnO nanowire devices under the ambient condition. Materials Research Society Symposia Proceedings, 2008, 1080, 1.	0.1	0
110	The electrical characteristics of high density arrays of silicon nanowire field-effect transistors: Dependence on wire spacing. , 2013, , .		0
111	Inductively coupled plasma etching of hafnium-indium-zinc oxide using chlorine based gas mixtures. , 2013, , .		0
112	Low-temperature characterization of hall and effective mobility in junctionless transistors. , 2014, , .		0
113	Low frequency noise reduction in multilayer WSe2 field effect transistors. , 2015, , .		0
114	A BOCDA system using time-domain data processing for an enlarged measurement range to 10 km. , 2017, , .		0
115	Long Range One-End Accessible BOCDA Adopting Time Domain Data Processing. , 2018, , .		0
116	Simple Method for Determining Channel Doping Concentration of Highly Doped FD-SOI Devices. , 2019, , .		0
117	Foldable water-activated reserve battery with diverse voltages. RSC Advances, 2020, 10, 402-410.	3.6	0