

# 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	Lifetime assessment of organic light emitting diodes by compact model incorporated with deep learning technique. Organic Electronics, 2022, 101, 106404.	2.6	4
2	Simulator acceleration and inverse design of fin field-effect transistors using machine learning. Scientific Reports, 2022, 12, 1140.	3.3	10
3	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
4	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
5	Hidden surface channel in two-dimensional multilayers. 2D Materials, 2022, 9, 035004.	4.4	5
6	Emergence of Quantum Tunneling in Ambipolar Black Phosphorus Multilayers without Heterojunctions. Advanced Functional Materials, 2022, 32, .	14.9	6
7	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
8	Understanding random telegraph noise in two-dimensional BP/ReS <sub>2</sub> heterointerface. Applied Physics Letters, 2022, 120, 253507.	3.3	3
9	Defect spectroscopy of sidewall interfaces in gate-all-around silicon nanosheet FET. Nanotechnology, 2021, 32, 165202.	2.6	3
10	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
11	Modeling and Understanding the Compact Performance of hBN Dual-Gated ReS <sub>2</sub> Transistor. Advanced Functional Materials, 2021, 31, 2100625.	14.9	9
12	Restricted Channel Migration in 2D Multilayer ReS <sub>2</sub> . ACS Applied Materials & Interfaces, 2021, 13, 19016-19022.	8.0	13
13	Cyclic Thermal Effects on Devices of Two-Dimensional Layered Semiconducting Materials. Advanced Electronic Materials, 2021, 7, 2100348.	5.1	4
14	Multiple machine learning approach to characterize two-dimensional nanoelectronic devices via featurization of charge fluctuation. Npj 2D Materials and Applications, 2021, 5, .	7.9	7
15	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
16	Effect of Ir(pq)2acac doping on CBP in phosphorescence organic light-emitting diodes. Current Applied Physics, 2020, 20, 78-81.	2.4	4
17	Effect of interlayer tunneling barrier on carrier transport and fluctuation in multilayer ReS <sub>2</sub> . Applied Physics Letters, 2020, 117, .	3.3	6
18	Channel Length-Dependent Operation of Ambipolar Schottky-Barrier Transistors on a Single Si Nanowire. ACS Applied Materials & Interfaces, 2020, 12, 43927-43932.	8.0	8

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19	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
20	A 2D material-based floating gate device with linear synaptic weight update. Nanoscale, 2020, 12, 24503-24509.	5.6	34
21	Real-time effect of electron beam on MoS <sub>2</sub> field-effect transistors. Nanotechnology, 2020, 31, 455202.	2.6	8
22	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
23	Understanding tunable photoresponsivity of two-dimensional multilayer phototransistors: Interplay between thickness and carrier mobility. Applied Physics Letters, 2020, 116, .	3.3	14
24	Detection and Accurate Classification of Mixed Gases Using Machine Learning with Impedance Data. Advanced Theory and Simulations, 2020, 3, 2000012.	2.8	7
25	Understanding of the aging pattern in quantum dot light-emitting diodes using low-frequency noise. Nanoscale, 2020, 12, 15888-15895.	5.6	12
26	Drain induced barrier increasing in multilayer ReS <sub>2</sub> . 2D Materials, 2020, 7, 031004.	4.4	13
27	50 km-Range Brillouin Optical Correlation Domain Analysis With First-Order Backward Distributed Raman Amplification. Journal of Lightwave Technology, 2020, 38, 5199-5204.	4.6	16
28	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
29	Foldable water-activated reserve battery with diverse voltages. RSC Advances, 2020, 10, 402-410.	3.6	0
30	Linearly Configured Brillouin Optical Correlation Domain Analysis System Incorporating Time-Domain Data Processing. Journal of Lightwave Technology, 2019, 37, 4728-4733.	4.6	3
31	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
32	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
33	Anisotropic electrical and thermal characteristics of carbon nanotube-embedded wood. Cellulose, 2019, 26, 5719-5730.	4.9	9
34	Piezo-impedance response of carbon nanotube/polydimethylsiloxane nanocomposites. APL Materials, 2019, 7, .	5.1	29
35	Influence of hydrogen incorporation on conductivity and work function of VO <sub>2</sub> nanowires. Nanoscale, 2019, 11, 4219-4225.	5.6	9
36	Simple Method for Determining Channel Doping Concentration of Highly Doped FD-SOI Devices. , 2019, , .		0

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37	Series Resistance Effects on the Back-gate Biased Operation of Junctionless Transistors. , 2019, , .		1
38	Transfer of transition-metal dichalcogenide circuits onto arbitrary substrates for flexible device applications. Nanoscale, 2019, 11, 22118-22124.	5.6	9
39	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
40	Field-Dependent Electrical and Thermal Transport in Polycrystalline WSe <sub>2</sub> . Advanced Materials Interfaces, 2018, 5, 1701161.	3.7	17
41	Soft-type trap-induced degradation of MoS <sub>2</sub> field effect transistors. Nanotechnology, 2018, 29, 22LT01.	2.6	4
42	Reconfigurable Si Nanowire Nonvolatile Transistors. Advanced Electronic Materials, 2018, 4, 1700399.	5.1	21
43	Long Range One-End Accessible BOCDA Adopting Time Domain Data Processing. , 2018, , .		0
44	The Rayleigh and Polarization Fading Elimination in Phase-Extracted OTDR. , 2018, , .		1
45	Probing Distinctive Electron Conduction in Multilayer Rhenium Disulfide. Advanced Materials, 2018, 31, 1805860.	21.0	16
46	Optimized single-layer MoS <sub>2</sub> field-effect transistors by non-covalent functionalisation. Nanoscale, 2018, 10, 17557-17566.	5.6	26
47	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
48	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
49	Triethanolamine doped multilayer MoS <sub>2</sub> field effect transistors. Physical Chemistry Chemical Physics, 2017, 19, 13133-13139.	2.8	36
50	A skin-integrated transparent and stretchable strain sensor with interactive color-changing electrochromic displays. Nanoscale, 2017, 9, 7631-7640.	5.6	160
51	Brillouin Optical Correlation Domain Analysis Enhanced by Time-Domain Data Processing for Concurrent Interrogation of Multiple Sensing Points. Journal of Lightwave Technology, 2017, 35, 5311-5316.	4.6	30
52	Controlling charge balance using non-conjugated polymer interlayer in quantum dot light-emitting diodes. Organic Electronics, 2017, 50, 82-86.	2.6	22
53	Few-Layer WSe <sub>2</sub> Schottky Junction-Based Photovoltaic Devices through Site-Selective Dual Doping. ACS Applied Materials & Interfaces, 2017, 9, 42912-42918.	8.0	17
54	High-Performance Silver Cathode Surface Treated with Scandia-Stabilized Zirconia Nanoparticles for Intermediate Temperature Solid Oxide Fuel Cells. Advanced Energy Materials, 2017, 7, 1601956.	19.5	32

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55	Conductive multi-walled boron nitride nanotubes by catalytic etching using cobalt oxide. Physical Chemistry Chemical Physics, 2017, 19, 976-985.	2.8	6
56	A BOFDA system using time-domain data processing for an enlarged measurement range to 10 km. , 2017, , .		0
57	Ultra-Easy and Fast Method for Transferring Graphene Grown on Metal Foil. Nano, 2017, 12, 1750140.	1.0	4
58	Surface Modulation of Graphene Field Effect Transistors on Periodic Trench Structure. ACS Applied Materials & Interfaces, 2016, 8, 18513-18518.	8.0	3
59	Low frequency noise reduction in multilayer WSe <sub>2</sub> field effect transistors. , 2015, , .		0
60	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. ACS Nano, 2015, 9, 5486-5499.	14.6	17
61	Conductive carbon nanotube paper by recycling waste paper. RSC Advances, 2015, 5, 32118-32123.	3.6	10
62	Evaluation of power generated by thermoelectric modules comprising a p-type and n-type single walled carbon nanotube composite paper. RSC Advances, 2015, 5, 78099-78103.	3.6	17
63	Experimental and Theoretical Investigation of Magnetoresistance From Linear Regime to Saturation in 14-nm FD-SOI MOS Devices. IEEE Transactions on Electron Devices, 2015, 62, 3-8.	3.0	7
64	Low-temperature operation of junctionless nanowire transistors: Less surface roughness scattering effects and dominant scattering mechanisms. Applied Physics Letters, 2014, 105, .	3.3	15
65	Plasma treatment effect on charge carrier concentrations and surface traps in a-InGaZnO thin-film transistors. Journal of Applied Physics, 2014, 115, .	2.5	46
66	Resistive switching characteristics of polycrystalline SrTiO <sub>3</sub> films. Applied Physics Letters, 2014, 104, .	3.3	15
67	Effect of Intertube Junctions on the Thermoelectric Power of Monodispersed Single Walled Carbon Nanotube Networks. Journal of Physical Chemistry C, 2014, 118, 26454-26461.	3.1	43
68	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
69	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
70	Separation of interlayer resistance in multilayer MoS <sub>2</sub> field-effect transistors. Applied Physics Letters, 2014, 104, .	3.3	46
71	Low-frequency noise in multilayer MoS <sub>2</sub> field-effect transistors: the effect of high-k passivation. Nanoscale, 2014, 6, 433-441.	5.6	146
72	Low-temperature characterization of hall and effective mobility in junctionless transistors. , 2014, , .		0

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73	Thermoelectric properties of single walled carbon nanotube networks in polycarbonate matrix. Physica Status Solidi (B): Basic Research, 2013, 250, 1468-1473.	1.5	20
74	The electrical characteristics of high density arrays of silicon nanowire field-effect transistors: Dependence on wire spacing. , 2013, , .		0
75	Inductively coupled plasma etching of hafnium-indium-zinc oxide using chlorine based gas mixtures. , 2013, , .		0
76	Simulation methodology for 2D random network of CNTs field-effect transistors. , 2013, , .		3
77	Influence of chemical treatment on the electrical conductivity and thermopower of expanded graphite foils. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1183-1187.	0.8	8
78	Electrical properties of high density arrays of silicon nanowire field effect transistors. Journal of Applied Physics, 2013, 114, 144503.	2.5	8
79	Electronic properties of light-emitting p-n hetero-junction array consisting of p+-Si and aligned n-ZnO nanowires. Journal of Applied Physics, 2013, 113, .	2.5	6
80	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
81	Preparation and characterization of expanded graphite polymer composite films for thermoelectric applications. Physica Status Solidi (B): Basic Research, 2013, 250, 2529-2534.	1.5	34
82	Channel access resistance effects on charge carrier mobility and low-frequency noise in a polymethyl methacrylate passivated SnO2 nanowire field-effect transistors. Applied Physics Letters, 2013, 102, .	3.3	10
83	Static and low frequency noise characterization of densely packed CNT-TFTs. , 2012, , .		3
84	Short channel mobility analysis of SiGe nanowire p-type field effect transistors: Origins of the strain induced performance improvement. Applied Physics Letters, 2012, 101, 143502.	3.3	8
85	Effect of chemical treatment on the thermoelectric properties of single walled carbon nanotube networks. Physica Status Solidi (B): Basic Research, 2012, 249, 2353-2356.	1.5	45
86	Raman investigation of few-layer graphene on different substrate structures. Physica Status Solidi (B): Basic Research, 2012, 249, 2534-2537.	1.5	2
87	Reduced charge fluctuations in individual SnO2 nanowires by suppressed surface reactions. Journal of Materials Chemistry, 2012, 22, 24012.	6.7	22
88	Low-frequency noise in junctionless multigate transistors. Applied Physics Letters, 2011, 98, .	3.3	52
89	Two-Dimensional Nanosheets Produced by Liquid Exfoliation of Layered Materials. Science, 2011, 331, 568-571.	12.6	6,190
90	ZnO-SnO <sub>2</sub> core-shell nanowire networks and their gas sensing characteristics. , 2011, , .		1

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91	Effects of junctions on carbon nanotube network-based devices. Physica Status Solidi (B): Basic Research, 2011, 248, 2644-2648.	1.5	14
92	White-Light Emitting Diode Array of p <sup>+</sup> /Si/Aligned n-SnO <sub>2</sub> Nanowires Heterojunctions. Advanced Functional Materials, 2011, 21, 119-124.	14.9	43
93	Array of Single-Walled Carbon Nanotube Intrajunction Devices Fabricated via Type Conversion by Partial Coating with 5'-Nicotinamide Adenine Dinucleotide. Advanced Functional Materials, 2011, 21, 2515-2521.	14.9	8
94	Electrical Characteristics of Molybdenum Disulfide Flakes Produced by Liquid Exfoliation. Advanced Materials, 2011, 23, 4178-4182.	21.0	224
95	A dual analyzer for real-time impedance and noise spectroscopy of nanoscale devices. Review of Scientific Instruments, 2011, 82, 034702.	1.3	26
96	Controlled surface adsorption of fd filamentous phage by tuning of the p <i>H</i> and the functionalization of the surface. Journal of Applied Physics, 2011, 109, 064701.	2.5	11
97	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
98	Electron beam tuning of carrier concentrations in oxide nanowires. Journal of Applied Physics, 2011, 110, .	2.5	3
99	Experimental analysis of surface roughness scattering in FinFET devices. , 2010, , .		1
100	Effect of gate dielectrics on the device performance of SnO <sub>2</sub> nanowire field effect transistors. Applied Physics Letters, 2010, 96, .	3.3	8
101	Low-frequency noise in strained SiGe core-shell nanowire p-channel field effect transistors. Applied Physics Letters, 2010, 97, 073505.	3.3	27
102	Degradation pattern of SnO <sub>2</sub> nanowire field effect transistors. Nanotechnology, 2010, 21, 485201.	2.6	8
103	Analysis of charge sensitivity and low frequency noise limitation in silicon nanowire sensors. Journal of Applied Physics, 2010, 107, 044501.	2.5	22
104	Efficient characterization and suppression methodology of edge effects for leakage current reduction of sub-40nm DRAM device. , 2010, , .		2
105	Photoconductance of aligned SnO <sub>2</sub> nanowire field effect transistors. Applied Physics Letters, 2009, 95, .	3.3	43
106	Contact barriers in a single ZnO nanowire device. Applied Physics A: Materials Science and Processing, 2009, 94, 253-256.	2.3	10
107	Degradation of ZnO nanowire devices under the ambient condition. Materials Research Society Symposia Proceedings, 2008, 1080, 1.	0.1	0
108	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. Applied Physics Letters, 2008, 93, 042111.	3.3	19

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109	Inhomogeneous spin accumulation in Py/Au/Py spin valve. Physica Status Solidi (B): Basic Research, 2007, 244, 4530-4533.	1.5	2
110	Simple selective electron beam patterning on a single nanowire. , 2006, , .		0
111	Effect of intervening ferromagnet on spin accumulation in Py/Au/Py spin valve device. , 2006, , .		0
112	Extracting the Device Parameters from Organic Thin Film Transistors. Materials Research Society Symposia Proceedings, 2006, 965, 1.	0.1	0
113	V2O5 nanowire-based nanoelectronic devices for helium detection. Applied Physics Letters, 2005, 86, 253102.	3.3	62
114	The characteristics of joints with Indium-silver alloy using diffusion soldering method. Materials Research Society Symposia Proceedings, 2004, 817, 13.	0.1	0
115	Photoresponse of sol-gel-synthesized ZnO nanorods. Applied Physics Letters, 2004, 84, 5022-5024.	3.3	264
116	Photocurrent in ZnO nanowires grown from Au electrodes. Applied Physics Letters, 2004, 84, 4376-4378.	3.3	293
117	Deep Understanding of Electron Beam Effects on 2D Layered Semiconducting Devices Under Bias Applications. Advanced Materials Interfaces, 0, , 2102488.	3.7	1