

# Tae In Lee

## List of Publications by Citations

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108  
papers

2,322  
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19  
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45  
g-index

116  
ext. papers

2,748  
ext. citations

5.9  
avg, IF

5.22  
L-index

#	Paper	IF	Citations
108	A wearable thermoelectric generator fabricated on a glass fabric. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 1959	35.4	597
107	Synthesis of ultrathin polymer insulating layers by initiated chemical vapour deposition for low-power soft electronics. <i>Nature Materials</i> , <b>2015</b> , 14, 628-35	27	184
106	Self-Powered Wearable Electrocardiography Using a Wearable Thermoelectric Power Generator. <i>ACS Energy Letters</i> , <b>2018</b> , 3, 501-507	20.1	144
105	Flexible Resistive Switching Memory Device Based on Graphene Oxide. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 1005-1007	4.4	126
104	Analysis on switching mechanism of graphene oxide resistive memory device. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 044506	2.5	89
103	Wide memory window in graphene oxide charge storage nodes. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 143109	3.4	82
102	Monolayer graphene growth on sputtered thin film platinum. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 104309	3.9	78
101	Thin-Film Thermoelectric Module for Power Generator Applications Using a Screen-Printing Method. <i>Journal of Electronic Materials</i> , <b>2011</b> , 40, 615-619	1.9	46
100	Highly air-stable electrical performance of graphene field effect transistors by interface engineering with amorphous fluoropolymer. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 153505	3.4	38
99	Observation of Ultrafast Carrier Dynamics and Phonon Relaxation of Graphene from the Deep-Ultraviolet to the Visible Region. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 6454-6461	3.8	36
98	Cubic-Structured $\text{HfO}_2$ With Optimized Doping of Lanthanum for Higher Dielectric Constant. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 623-625	4.4	34
97	Comparative study of chemically synthesized and exfoliated multilayer MoS <sub>2</sub> field-effect transistors. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 043116	3.4	33
96	Enhanced thermoelectric properties of screen-printed Bi <sub>0.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> and Bi <sub>2</sub> Te <sub>2.7</sub> Se <sub>0.3</sub> thick films using a post annealing process with mechanical pressure. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 8559-8565	7.1	33
95	Free-Standing Graphene Thermophone on a Polymer-Mesh Substrate. <i>Small</i> , <b>2016</b> , 12, 185-9	11	32
94	Effective Schottky Barrier Height Lowering of Metal/n-Ge with a TiO/GeO Interlayer Stack. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 35419-35425	9.5	27
93	Direct Graphene Transfer and Its Application to Transfer Printing Using Mechanically Controlled, Large Area Graphene/Copper Freestanding Layer. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1707102	15.6	26
92	High-Aspect Ratio -Ga <sub>2</sub> O <sub>3</sub> Nanorods via Hydrothermal Synthesis. <i>Nanomaterials</i> , <b>2018</b> , 8,	5.4	26

91	Improvement of memory performance by high temperature annealing of the Al <sub>2</sub> O <sub>3</sub> blocking layer in a charge-trap type flash memory device. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 222902	3.4	25
90	Application of N-Doped Three-Dimensional Reduced Graphene Oxide Aerogel to Thin Film Loudspeaker. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 22295-300	9.5	24
89	Surface Passivation of Germanium Using SF <sub>6</sub> Plasma to Reduce Source/Drain Contact Resistance in Germanium n-FET. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 745-747	4.4	19
88	Performance evaluation of GaN light-emitting diodes using transferred graphene as current spreading layer. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 054503	2.5	19
87	Performance Improvement in Charge-Trap Flash Memory Using Lanthanum-Based High- $\kappa$ Blocking Oxide. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 2746-2751	2.9	19
86	The Impact of an Ultrathin Y <sub>2</sub> O <sub>3</sub> Layer on GeO <sub>2</sub> Passivation in Ge MOS Gate Stacks. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 3303-3307	2.9	17
85	Ultrathin ZrO-Organic Hybrid Dielectric (EOT 3.2 nm) via Initiated Chemical Vapor Deposition for High-Performance Flexible Electronics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 44513-44520	9.5	16
84	High performance graphene field effect transistors on an aluminum nitride substrate with high surface phonon energy. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 193112	3.4	15
83	The Efficacy of Metal-Interfacial Layer-Semiconductor Source/Drain Structure on Sub-10-nm n-Type Ge FinFET Performances. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1185-1187	4.4	15
82	Aluminum-Doped Gadolinium Oxides as Blocking Layer for Improved Charge Retention in Charge-Trap-Type Nonvolatile Memory Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 2739-2745	2.9	15
81	Thermal display glove for interacting with virtual reality. <i>Scientific Reports</i> , <b>2020</b> , 10, 11403	4.9	15
80	Compliment Graphene Oxide Coating on Silk Fiber Surface via Electrostatic Force for Capacitive Humidity Sensor Applications. <i>Sensors</i> , <b>2017</b> , 17,	3.8	14
79	High-Performance MIM Capacitors Using HfLaO-Based Dielectrics. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 17-19	4.4	14
78	Ultrathin EOT (0.67 nm) High-k Dielectric on Ge MOSFET Using Y Doped ZrO <sub>2</sub> With Record-Low Leakage Current. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 502-505	4.4	13
77	UV-Curable Silver Electrode for Screen-Printed Thermoelectric Generator. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1901505	15.6	13
76	The Mechanism of Schottky Barrier Modulation of Tantalum Nitride/Ge Contacts. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 997-1000	4.4	13
75	Doping suppression and mobility enhancement of graphene transistors fabricated using an adhesion promoting dry transfer process. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 243504	3.4	13
74	Large-Area, Periodic, Hexagonal Wrinkles on Nanocrystalline Graphitic Film. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 5492-5503	15.6	13

73	The Work Function Behavior of Aluminum-Doped Titanium Carbide Grown by Atomic Layer Deposition. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 1423-1427	2.9	12
72	Fermi-Level Unpinning Technique with Excellent Thermal Stability for n-Type Germanium. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 35988-35997	9.5	11
71	Very Low-Work-Function ALD-Erbium Carbide (ErC <sub>2</sub> ) Metal Electrode on High- $\kappa$ Dielectrics. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 2858-2863	2.9	11
70	Crystallized HfLaO embedded tetragonal ZrO <sub>2</sub> for dynamic random access memory capacitor dielectrics. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 173505	3.4	11
69	Low-Voltage High-Performance Pentacene Thin-Film Transistors With Ultrathin PVP/High- $\kappa$ HfLaO Hybrid Gate Dielectric. <i>IEEE Electron Device Letters</i> , <b>2010</b> ,	4.4	11
68	Improved Drain Current Saturation and Voltage Gain in Graphene-on-Silicon Field Effect Transistors. <i>Scientific Reports</i> , <b>2016</b> , 6, 25392	4.9	10
67	Random Dopant Fluctuation-Induced Threshold Voltage Variation-Immune Ge FinFET With Metal/Interlayer Semiconductor Source/Drain. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 4167-4172	2.9	10
66	Control of Carrier Concentration by Ag Doping in N-Type Bi <sub>2</sub> Te <sub>3</sub> Based Compounds. <i>Applied Sciences (Switzerland)</i> , <b>2018</b> , 8, 735	2.6	10
65	Graphene as anode electrode for colloidal quantum dots based light emitting diodes. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 043124	3.4	10
64	Impedance Spectroscopy Analysis and Equivalent Circuit Modeling of Graphene Oxide Solutions. <i>Nanomaterials</i> , <b>2017</b> , 7,	5.4	10
63	Effect of Hydrogen Annealing on Contact Resistance Reduction of Metal/Interlayer-Germanium Source/Drain Structure. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 1-1	4.4	10
62	Effect of ZrO <sub>2</sub> interfacial layer on forming ferroelectric Hf <sub>x</sub> Zr <sub>y</sub> O <sub>z</sub> on Si substrate. <i>AIP Advances</i> , <b>2019</b> , 9, 125020	1.5	10
61	Wrinkle-free graphene with spatially uniform electrical properties grown on hot-pressed copper. <i>Nano Research</i> , <b>2015</b> , 8, 1075-1080	10	9
60	Hybrid Integration of Graphene Analog and Silicon Complementary Metal-Oxide-Semiconductor Digital Circuits. <i>ACS Nano</i> , <b>2016</b> , 10, 7142-6	16.7	9
59	Metal Carbides for Band-Edge Work Function Metal Gate CMOS Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 2469-2474	2.9	9
58	Material characteristics and equivalent circuit models of stacked graphene oxide for capacitive humidity sensors. <i>AIP Advances</i> , <b>2016</b> , 6, 035203	1.5	9
57	Electrical and photocurrent properties of a polycrystalline Sn-doped $\beta$ -Ga <sub>2</sub> O <sub>3</sub> thin film. <i>Materials Science in Semiconductor Processing</i> , <b>2021</b> , 121, 105430	4.3	9
56	A quantitative strain analysis of a flexible single-crystalline silicon membrane. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 033105	3.4	8

55	Realization of High-Performance Screen-Printed Flexible Thermoelectric Generator by Improving Contact Characteristics. <i>Advanced Materials Interfaces</i> , <b>2017</b> , 4, 1700870	4.6	8
54	Multi-Layer Metallization Structure Development for Highly Efficient Polycrystalline SnSe Thermoelectric Devices. <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 1116	2.6	8
53	Material Optimization for a High Power Thermoelectric Generator in Wearable Applications. <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 1015	2.6	8
52	A High-Performance Top-Gated Graphene Field-Effect Transistor with Excellent Flexibility Enabled by an iCVD Copolymer Gate Dielectric. <i>Small</i> , <b>2018</b> , 14, 1703035	11	8
51	Design Strategy for Transformative Electronic System toward Rapid, Bidirectional Stiffness Tuning using Graphene and Flexible Thermoelectric Device Interfaces. <i>Advanced Materials</i> , <b>2021</b> , 33, e2007239	24	8
50	Mechanical Stability Analysis via Neutral Mechanical Plane for High-Performance Flexible Si Nanomembrane FDSOI Device. <i>Advanced Materials Interfaces</i> , <b>2017</b> , 4, 1700618	4.6	7
49	Reduction of charge trapping in HfO <sub>2</sub> film on a Ge substrate by trimethylaluminum pretreatment. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2012</b> , 6, 439-441	2.5	7
48	Method to Achieve the Morphotropic Phase Boundary in Hf <sub>x</sub> Zr <sub>1-x</sub> O <sub>2</sub> by Electric Field Cycling for DRAM Cell Capacitor Applications. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 517-520	4.4	7
47	Enhanced Photocatalytic Activity of Electrospun Ga <sub>2</sub> O <sub>3</sub> Nanofibers via In-Situ Si Doping Using Tetraethyl Orthosilicate. <i>Catalysts</i> , <b>2019</b> , 9, 1005	4	7
46	Design of Electrochemically Reduced Graphene Oxide/Titanium Disulfide Nanocomposite Sensor for Selective Determination of Ascorbic Acid. <i>ACS Applied Nano Materials</i> ,	5.6	7
45	Reliability improvement of a flexible FD-SOI MOSFET via heat management. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 252101	3.4	6
44	High-Performance Monolithic Photovoltaic-Thermoelectric Hybrid Power Generator Using an Exothermic Reactive Interlayer. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 2381-2386	6.1	6
43	Comparison of Ga <sub>2</sub> O <sub>3</sub> and TiO <sub>2</sub> Nanostructures for Photocatalytic Degradation of Volatile Organic Compounds. <i>Catalysts</i> , <b>2020</b> , 10, 545	4	6
42	First Demonstration of Ultra-Thin SiGe-Channel Junctionless Accumulation-Mode (JAM) Bulk FinFETs on Si Substrate with PN Junction-Isolation Scheme. <i>IEEE Journal of the Electron Devices Society</i> , <b>2014</b> , 2, 123-127	2.3	6
41	Fluorine Effects Originating From the CVD-W Process on Charge-Trap Flash Memory Cells. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 378-382	2.9	6
40	Large Grain Ruthenium for Alternative Interconnects. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 91-94	4.4	6
39	Two-Dimensional Thermal Haptic Module Based on a Flexible Thermoelectric Device. <i>Soft Robotics</i> , <b>2020</b> , 7, 736-742	9.2	6
38	Schottky barrier height modulation of metal/interlayer/semiconductor structure depending on contact surface orientation for multi-gate transistors. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 012102	3.4	5

37	Enhanced Photocatalytic Degradation of 2-Butanone Using Hybrid Nanostructures of Gallium Oxide and Reduced Graphene Oxide Under Ultraviolet-C Irradiation. <i>Catalysts</i> , <b>2019</b> , 9, 449	4	5
36	Dye-Sensitized Solar Cell/Thermoelectric Hybrid Generator Utilizing Bipolar Conduction in a Unified Element. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 4155-4161	6.1	5
35	H <sub>2</sub> High Pressure Annealed Y-Doped ZrO <sub>2</sub> Gate Dielectric With an EOT of 0.57 nm for Ge MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1350-1353	4.4	5
34	Demonstration of Ge pMOSFETs with 6 $\text{\AA}$ EOT using TaN/ZrO <sub>2</sub> /Zr-cap/n-Ge(100) gate stack fabricated by novel vacuum annealing and in-situ metal capping method <b>2014</b> ,		5
33	Simultaneous measurement of the Seebeck coefficient and thermal conductivity in the cross-sectional direction of thermoelectric thick film. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 104511	2.5	5
32	A Flexible Micro-Thermoelectric Generator Sticker with Trapezoidal-Shaped Legs for Large Temperature Gradient and High-Power Density. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2000486	6.8	5
31	Improved electromigration-resistance of Cu interconnects by graphene-based capping layer <b>2015</b> ,		4
30	Lanthanum-Oxide-Doped Nitride Charge-Trap Layer for a TANOS Memory Device. <i>IEEE Transactions on Electron Devices</i> , <b>2011</b> , 58, 3314-3320	2.9	4
29	Variable Rigidity Module with a Flexible Thermoelectric Device for Bidirectional Temperature Control. <i>Soft Robotics</i> , <b>2021</b> , 8, 662-672	9.2	4
28	Impact of Al doping on a hydrothermally synthesized $\beta$ GaO nanostructure for photocatalysis applications.. <i>RSC Advances</i> , <b>2021</b> , 11, 7338-7346	3.7	4
27	An 8-nm-thick Sn-doped polycrystalline $\beta$ Ga <sub>2</sub> O <sub>3</sub> MOSFET with a normally off operation. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 122103	3.4	4
26	Vertically Formed Graphene Stripe for 3D Field-Effect Transistor Applications. <i>Small</i> , <b>2017</b> , 13, 1602373	11	3
25	Origin of transient V <sub>th</sub> shift after erase and its impact on 2D/3D structure charge trap flash memory cell operations <b>2012</b> ,		3
24	Structural and compositional dependence of gadolinium-aluminum oxide for the application of charge-trap-type nonvolatile memory devices. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 052907	3.4	3
23	Large-Area, Conformal, and Uniform Synthesis of Hybrid Polymeric Film via Initiated Chemical Vapor Deposition. <i>Macromolecular Materials and Engineering</i> , <b>2021</b> , 306, 2000608	3.9	3
22	Construction of a Multiway Carbon Nanotube Loudspeaker with Finely Tunable Resonance Frequencies. <i>Advanced Materials Technologies</i> , <b>2018</b> , 3, 1700197	6.8	3
21	Valley-engineered ultra-thin silicon for high-performance junctionless transistors. <i>Scientific Reports</i> , <b>2016</b> , 6, 29354	4.9	2
20	Investigation of Border Trap Characteristics in the AlON/GeO <sub>2</sub> /Ge Gate Stacks. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 3998-4001	2.9	2

19	Fermi Level Depinning in Ti/GeO <sub>2</sub> /n-Ge via the Interfacial Reaction Between Ti and GeO <sub>2</sub> . <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 4242-4245	2.9	2
18	Development of a Measurement Method for the Thermal Conductivity of a Thick Film Prepared by a Screen-Printing Technique. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 1170-1176	1.9	2
17	Non-volatile memory using graphene oxide for flexible electronics <b>2010</b> ,		2
16	A wearable organic photovoltaic-thermoelectric (OPV-TE) hybrid generator to minimize the open-circuit voltage losses of OPV module. <i>Nano Energy</i> , <b>2021</b> , 93, 106775	17.1	2
15	Hf- and Ti-Based Organic/Inorganic Hybrid Dielectrics Synthesized via Chemical Vapor Phase for Advanced Gate Stack in Flexible Electronic Devices. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2001197	6.4	2
14	Effect of Metal Nitride on Contact Resistivity of Metal-Interlayer-Ge Source/Drain in Sub-10-nm n-Type Ge FinFET. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 1-1	4.4	2
13	Minimally invasive medical catheter with highly flexible FDSOI-based integrated circuits <b>2019</b> ,		2
12	Electrospun SnO <sub>2</sub> and its composite V <sub>2</sub> O <sub>5</sub> nanofibers for thermoelectric power generator. <i>Journal of Sol-Gel Science and Technology</i> , <b>2021</b> , 98, 183-192	2.3	2
11	Conformal, Wafer-Scale and Controlled Nanoscale Doping of Semiconductors Via the iCVD Process <b>2018</b> ,		2
10	Highly Reliable Charge Trap-Type Organic Non-Volatile Memory Device Using Advanced Band-Engineered Organic-Inorganic Hybrid Dielectric Stacks. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2103291	15.6	2
9	Influence of Self-Heating Effect on Interface Trap Generation in Highly Flexible Single-Crystalline Si Nanomembrane Transistors. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2019</b> , 19, 6481-6486	1.3	1
8	Channel Mobility Boosting in a Poly-Si Channel Using Ge Diffusion Engineering and Hydrogen Plasma Treatment. <i>IEEE Electron Device Letters</i> , <b>2022</b> , 1-1	4.4	1
7	Transformative Electronics: Design Strategy for Transformative Electronic System toward Rapid, Bidirectional Stiffness Tuning using Graphene and Flexible Thermoelectric Device Interfaces (Adv. Mater. 10/2021). <i>Advanced Materials</i> , <b>2021</b> , 33, 2170076	24	1
6	Performance Degradation of Flexible Si Nanomembrane Transistors With Al <sub>2</sub> O <sub>3</sub> and SiO <sub>2</sub> Dielectrics Under Mechanical Stress. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 3069-3072	2.9	1
5	Energy-Band-Engineered Unified-RAM (URAM) Cell on Buried $\text{Si}_{1-y}\text{C}_y$ Substrate for Multifunctioning Flash Memory and 1T-DRAM. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 641-647	2.9	0
4	Copolymer-Based Flexible Resistive Random Access Memory Prepared by Initiated Chemical Vapor Deposition Process. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2100375	6.4	0
3	Design of low cost, scalable, and high-performance TiS <sub>2</sub> thermoelectric materials via wet ball-milling process. <i>Journal of Materials Science: Materials in Electronics</i> , 1	2.1	0
2	Mechanical and Electrical Reliability Analysis of Flexible Si Complementary Metal-Oxide-Semiconductor Integrated Circuit. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2019</b> , 19, 6473-6480	1.3	

- 1 Performance enhancement of p-type organic thin-film transistors by surface modification of hybrid dielectrics. *Organic Electronics*, **2021**, 96, 106250 3.5