

Byung Jin Cho

List of Publications by Year in descending order

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124
papers

5,549
citations

101543

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85541

71
g-index

124
all docs

124
docs citations

124
times ranked

6455
citing authors

#	ARTICLE	IF	CITATIONS
1	A wearable thermoelectric generator fabricated on a glass fabric. Energy and Environmental Science, 2014, 7, 1959.	30.8	784
2	Direct Measurement of Adhesion Energy of Monolayer Graphene As-Grown on Copper and Its Application to Renewable Transfer Process. Nano Letters, 2012, 12, 1448-1452.	9.1	352
3	Determination of Work Function of Graphene under a Metal Electrode and Its Role in Contact Resistance. Nano Letters, 2012, 12, 3887-3892.	9.1	306
4	Synthesis of ultrathin polymer insulating layers by initiated chemical vapour deposition for low-power soft electronics. Nature Materials, 2015, 14, 628-635.	27.5	229
5	Self-Powered Wearable Electrocardiography Using a Wearable Thermoelectric Power Generator. ACS Energy Letters, 2018, 3, 501-507.	17.4	226
6	Hybrid composite of screen-printed inorganic thermoelectric film and organic conducting polymer for flexible thermoelectric power generator. Energy, 2014, 73, 506-512.	8.8	204
7	High-Performance Flexible Thermoelectric Power Generator Using Laser Multiscanning Lift-Off Process. ACS Nano, 2016, 10, 10851-10857.	14.6	199
8	Structural design of a flexible thermoelectric power generator for wearable applications. Applied Energy, 2018, 214, 131-138.	10.1	171
9	Electrical and Interfacial Characterization of Atomic Layer Deposited High- κ Gate Dielectrics on GaAs for Advanced CMOS Devices. IEEE Transactions on Electron Devices, 2007, 54, 1831-1837.	3.0	130
10	A high-density MIM capacitor (13 fF/ μm^2) using ALD HfO ₂ dielectrics. IEEE Electron Device Letters, 2003, 24, 63-65.	3.9	126
11	Over-Erase Phenomenon in SONOS-Type Flash Memory and its Minimization Using a Hafnium Oxide Charge Storage Layer. IEEE Transactions on Electron Devices, 2004, 51, 1143-1147.	3.0	121
12	Hafnium aluminum oxide as charge storage and blocking-oxide layers in SONOS-type nonvolatile memory for high-speed operation. IEEE Transactions on Electron Devices, 2006, 53, 654-662.	3.0	117
13	Post ionized defect engineering of the screen-printed Bi ₂ Te _{2.7} Se _{0.3} thick film for high performance flexible thermoelectric generator. Nano Energy, 2017, 31, 258-263.	16.0	101
14	A high performance MIM capacitor using HfO ₂ dielectrics. IEEE Electron Device Letters, 2002, 23, 514-516.	3.9	99
15	Flexible heatsink based on a phase-change material for a wearable thermoelectric generator. Energy, 2019, 179, 12-18.	8.8	95
16	Wide memory window in graphene oxide charge storage nodes. Applied Physics Letters, 2010, 96, .	3.3	87
17	Improvement of Voltage Linearity in High- κ MIM Capacitors Using $\text{HfO}_2/\text{SiO}_2$ Stacked Dielectric. IEEE Electron Device Letters, 2004, 25, 538-540.	3.9	84
18	High-performance self-powered wireless sensor node driven by a flexible thermoelectric generator. Energy, 2018, 162, 526-533.	8.8	75

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19	RF, DC, and reliability characteristics of ALD HfO ₂ /Al ₂ O ₃ laminate MIM capacitors for Si RF IC applications. IEEE Transactions on Electron Devices, 2004, 51, 886-894.	3.0	69
20	Graphene Gate Electrode for MOS Structure-Based Electronic Devices. Nano Letters, 2011, 11, 5383-5386.	9.1	65
21	MIM capacitors using atomic-layer-deposited high- κ (HfO ₂)/ ϵ -Si ₃ N ₄ /dielectrics. IEEE Electron Device Letters, 2003, 24, 60-62.	3.9	60
22	Improvement of thermoelectric properties of screen-printed Bi ₂ Te ₃ thick film by optimization of the annealing process. Journal of Alloys and Compounds, 2013, 552, 107-110.	5.5	60
23	PVD HfO ₂ for high-precision MIM capacitor applications. IEEE Electron Device Letters, 2003, 24, 387-389.	3.9	57
24	Thermoelectric properties of P-type Sb ₂ Te ₃ thick film processed by a screen-printing technique and a subsequent annealing process. Journal of Alloys and Compounds, 2014, 582, 177-180.	5.5	56
25	High-performance MIM capacitor using ALD high- κ HfO ₂ -Al ₂ O ₃ laminate dielectrics. IEEE Electron Device Letters, 2003, 24, 730-732.	3.9	55
26	Thin-Film Thermoelectric Module for Power Generator Applications Using a Screen-Printing Method. Journal of Electronic Materials, 2011, 40, 615-619.	2.2	55
27	Formation of hafnium-aluminum-oxide gate dielectric using single cocktail liquid source in MOCVD process. IEEE Transactions on Electron Devices, 2003, 50, 2088-2094.	3.0	54
28	Al_2O_3-Ge-On-Insulator n- and p-MOSFETs With Fully NiSi and NiGe Dual Gates. IEEE Electron Device Letters, 2004, 25, 138-140.	3.9	52
29	Enhancement of reproducibility and reliability in a high-performance flexible thermoelectric generator using screen-printed materials. Nano Energy, 2018, 46, 39-44.	16.0	51
30	Electron mobility enhancement using ultrathin pure Ge on Si substrate. IEEE Electron Device Letters, 2005, 26, 761-763.	3.9	50
31	Thermoelectric properties of screen-printed ZnSb film. Thin Solid Films, 2011, 519, 5441-5443.	1.8	47
32	Free-Standing Graphene Thermophone on a Polymer-Mesh Substrate. Small, 2016, 12, 185-189.	10.0	43
33	High-Aspect Ratio In_2S_3 Nanorods via Hydrothermal Synthesis. Nanomaterials, 2018, 8, 594.	4.1	43
34	Effective Schottky Barrier Height Lowering of Metal/n-Ge with a TiO ₂ /GeO ₂ Interlayer Stack. ACS Applied Materials & Interfaces, 2016, 8, 35419-35425.	8.0	37
35	Enhanced thermoelectric properties of screen-printed Bi _{0.5} Sb _{1.5} Te ₃ and Bi ₂ Te _{2.7} Se _{0.3} thick films using a post annealing process with mechanical pressure. Journal of Materials Chemistry C, 2017, 5, 8559-8565.	5.5	37
36	Synthesis of Monolayer Graphene Having a Negligible Amount of Wrinkles by Stress Relaxation. Nano Letters, 2013, 13, 2496-2499.	9.1	36

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37	Facile graphene n-doping by wet chemical treatment for electronic applications. <i>Nanoscale</i> , 2014, 6, 8503.	5.6	35
38	Thermal Instability of Effective Work Function in Metal/High- κ Stack and Its Material Dependence. <i>IEEE Electron Device Letters</i> , 2004, 25, 716-718.	3.9	34
39	Hydrothermal Synthesis and Photocatalytic Property of Sn-doped Ga_2O_3 Nanostructure. <i>ECS Journal of Solid State Science and Technology</i> , 2020, 9, 045009.	1.8	34
40	Evidence and Understanding of ALD HfO_2 - Al_2O_3 Laminate MIM Capacitors Outperforming Sandwich Counterparts. <i>IEEE Electron Device Letters</i> , 2004, 25, 681-683.	3.9	33
41	Metal-insulator-metal RF bypass capacitor using niobium oxide (Nb_2O_5) with $\text{HfO}_2/\text{Al}_2\text{O}_3$ barriers. <i>IEEE Electron Device Letters</i> , 2005, 26, 625-627.	3.9	31
42	Spontaneous Generation of a Molecular Thin Hydrophobic Skin Layer on a Sub-20 nm, High- κ Polymer Dielectric for Extremely Stable Organic Thin-Film Transistor Operation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 29113-29123.	8.0	29
43	Thermal display glove for interacting with virtual reality. <i>Scientific Reports</i> , 2020, 10, 11403.	3.3	27
44	Performance Improvement in Charge-Trap Flash Memory Using Lanthanum-Based High- κ Blocking Oxide. <i>IEEE Transactions on Electron Devices</i> , 2009, 56, 2746-2751.	3.0	26
45	Improvement of memory performance by high temperature annealing of the Al_2O_3 blocking layer in a charge-trap type flash memory device. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	26
46	Novel Vapor-Phase Synthesis of Flexible, Homogeneous Organic-Inorganic Hybrid Gate Dielectric with sub 5 nm Equivalent Oxide Thickness. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 37326-37334.	8.0	26
47	Ultrathin ZrO_2 -Organic Hybrid Dielectric (EOT 3.2 nm) via Initiated Chemical Vapor Deposition for High-Performance Flexible Electronics. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 44513-44520.	8.0	26
48	UV-Curable Silver Electrode for Screen-Printed Thermoelectric Generator. <i>Advanced Functional Materials</i> , 2019, 29, 1901505.	14.9	25
49	High-K HfAlO charge trapping layer in SONOS-type nonvolatile memory device for high speed operation. , 0, , .		24
50	Thermally Stable Fully Silicided Hf-Silicide Metal-Gate Electrode. <i>IEEE Electron Device Letters</i> , 2004, 25, 372-374.	3.9	24
51	Effect of ZrO_2 interfacial layer on forming ferroelectric $\text{Hf}_x\text{Zr}_y\text{O}_z$ on Si substrate. <i>AIP Advances</i> , 2019, 9, .	1.3	24
52	Surface Passivation of Germanium Using SF_6 Plasma to Reduce Source/Drain Contact Resistance in Germanium n-FET. <i>IEEE Electron Device Letters</i> , 2015, 36, 745-747.	3.9	23
53	Compliment Graphene Oxide Coating on Silk Fiber Surface via Electrostatic Force for Capacitive Humidity Sensor Applications. <i>Sensors</i> , 2017, 17, 407.	3.8	23
54	>1000-Fold Lifetime Extension of a Nickel Electromechanical Contact Device via Graphene. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 9085-9093.	8.0	23

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55	Method to Achieve the Morphotropic Phase Boundary in $\text{Hf}_{1-x}\text{Zr}_x\text{O}_2$ by Electric Field Cycling for DRAM Cell Capacitor Applications. IEEE Electron Device Letters, 2021, 42, 517-520.	3.9	23
56	Fully silicided NiSi and germanided NiGe dual gates on SiO_2/Si and $\text{Al}_2\text{O}_3/\text{Ge}$ -on-insulator MOSFETs. , 0, , .		22
57	The Mechanism of Schottky Barrier Modulation of Tantalum Nitride/Ge Contacts. IEEE Electron Device Letters, 2015, 36, 997-1000.	3.9	21
58	Lanthanide (Tb)-doped HfO_2 for high-density MIM capacitors. IEEE Electron Device Letters, 2003, 24, 442-444.	3.9	20
59	Impact of Al doping on a hydrothermally synthesized Ga_2O_3 nanostructure for photocatalysis applications. RSC Advances, 2021, 11, 7338-7346.	3.6	20
60	Surface-Localized Sealing of Porous Ultralow- k Dielectric Films with Ultrathin (≈ 2 nm) Polymer Coating. ACS Nano, 2017, 11, 7841-7847.	14.6	19
61	Ultrathin EOT (0.67 nm) High- k Dielectric on Ge MOSFET Using Y Doped ZrO_2 With Record-Low Leakage Current. IEEE Electron Device Letters, 2019, 40, 502-505.	3.9	19
62	An integratable dual metal gate CMOS process using an ultrathin aluminum nitride buffer layer. IEEE Electron Device Letters, 2003, 24, 298-300.	3.9	17
63	Aluminum-Doped Gadolinium Oxides as Blocking Layer for Improved Charge Retention in Charge-Trap-Type Nonvolatile Memory Devices. IEEE Transactions on Electron Devices, 2009, 56, 2739-2745.	3.0	16
64	The Work Function Behavior of Aluminum-Doped Titanium Carbide Grown by Atomic Layer Deposition. IEEE Transactions on Electron Devices, 2016, 63, 1423-1427.	3.0	16
65	A wearable organic photovoltaic-thermoelectric (OPV-TE) hybrid generator to minimize the open-circuit voltage losses of OPV module. Nano Energy, 2022, 93, 106775.	16.0	16
66	Impedance Spectroscopy Analysis and Equivalent Circuit Modeling of Graphene Oxide Solutions. Nanomaterials, 2017, 7, 446.	4.1	15
67	Two-Dimensional Thermal Haptic Module Based on a Flexible Thermoelectric Device. Soft Robotics, 2020, 7, 736-742.	8.0	15
68	Experimental evidence of interface-controlled mechanism of quasi-breakdown in ultrathin gate oxide. IEEE Transactions on Electron Devices, 2001, 48, 1010-1013.	3.0	14
69	Fermi-Level Unpinning Technique with Excellent Thermal Stability for n-Type Germanium. ACS Applied Materials & Interfaces, 2017, 9, 35988-35997.	8.0	14
70	A High-Performance Top-Gated Graphene Field-Effect Transistor with Excellent Flexibility Enabled by an iCVD Copolymer Gate Dielectric. Small, 2018, 14, 1703035.	10.0	14
71	High-Performance Monolithic Photovoltaic-Thermoelectric Hybrid Power Generator Using an Exothermic Reactive Interlayer. ACS Applied Energy Materials, 2019, 2, 2381-2386.	5.1	14
72	Large Grain Ruthenium for Alternative Interconnects. IEEE Electron Device Letters, 2019, 40, 91-94.	3.9	14

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73	Dye-Sensitized Solar Cell–Thermoelectric Hybrid Generator Utilizing Bipolar Conduction in a Unified Element. <i>ACS Applied Energy Materials</i> , 2020, 3, 4155-4161.	5.1	14
74	Charge Trapping and Breakdown Mechanism in HfAlO/TaN Gate Stack Analyzed Using Carrier Separation. <i>IEEE Transactions on Device and Materials Reliability</i> , 2004, 4, 696-703.	2.0	13
75	P-Type Floating Gate for Retention and P/E Window Improvement of Flash Memory Devices. <i>IEEE Transactions on Electron Devices</i> , 2007, 54, 1910-1917.	3.0	13
76	Wrinkle-free graphene with spatially uniform electrical properties grown on hot-pressed copper. <i>Nano Research</i> , 2015, 8, 1075-1080.	10.4	13
77	Fluorine Effects Originating From the CVD-W Process on Charge-Trap Flash Memory Cells. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 378-382.	3.0	13
78	Long-Term Retention of Low-Power, Nonvolatile Organic Transistor Memory Based on Ultrathin, Trilayered Dielectric Containing Charge Trapping Functionality. <i>Advanced Functional Materials</i> , 2020, 30, 2004665.	14.9	13
79	Effect of Hydrogen Annealing on Contact Resistance Reduction of Metal–Interlayer–n-Germanium Source/Drain Structure. <i>IEEE Electron Device Letters</i> , 2016, , 1-1.	3.9	11
80	Realization of High-Performance Screen-Printed Flexible Thermoelectric Generator by Improving Contact Characteristics. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700870.	3.7	10
81	Enhanced Photocatalytic Degradation of 2-Butanone Using Hybrid Nanostructures of Gallium Oxide and Reduced Graphene Oxide Under Ultraviolet-C Irradiation. <i>Catalysts</i> , 2019, 9, 449.	3.5	10
82	Enhanced Photocatalytic Activity of Electrospun γ -Ga ₂ O ₃ Nanofibers via In-Situ Si Doping Using Tetraethyl Orthosilicate. <i>Catalysts</i> , 2019, 9, 1005.	3.5	10
83	A Flexible Micro-Thermoelectric Generator Sticker with Trapezoidal-Shaped Legs for Large Temperature Gradient and High-Power Density. <i>Advanced Materials Technologies</i> , 2020, 5, 2000486.	5.8	10
84	Mechanical Stability Analysis via Neutral Mechanical Plane for High-Performance Flexible Si Nanomembrane FDSOI Device. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700618.	3.7	9
85	Comparison of Ga ₂ O ₃ and TiO ₂ Nanostructures for Photocatalytic Degradation of Volatile Organic Compounds. <i>Catalysts</i> , 2020, 10, 545.	3.5	9
86	HfO ₂ and lanthanide-doped HfO ₂ MIM capacitors for RF/mixed IC applications. , 0, , .		8
87	Tensile-Strained Germanium CMOS Integration on Silicon. <i>IEEE Electron Device Letters</i> , 2007, 28, 1117-1119.	3.9	8
88	High Pressure Annealed Y-Doped ZrO ₂ Gate Dielectric With an EOT of 0.57 nm for Ge MOSFETs. <i>IEEE Electron Device Letters</i> , 2019, 40, 1350-1353.	3.9	8
89	Thermal diffusion barrier metallization based on Co–Mo powder-mixed composites for n-type skutterudite ((M _m ,S _m)Co ₄ Sb ₁₂) thermoelectric devices. <i>Journal of Alloys and Compounds</i> , 2020, 818, 152917.	5.5	8
90	Variable Rigidity Module with a Flexible Thermoelectric Device for Bidirectional Temperature Control. <i>Soft Robotics</i> , 2021, 8, 662-672.	8.0	8

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91	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> , 2021, 7, 2001197.	5.1	8
92	Evolution of quasi-breakdown in thin gate oxides. <i>Journal of Applied Physics</i> , 2002, 91, 5302-5306.	2.5	7
93	Correlation between interface traps and gate oxide leakage current in the direct tunneling regime. <i>Applied Physics Letters</i> , 2002, 81, 379-381.	3.3	7
94	Substituted aluminum metal gate on high-K dielectric for low work-function and fermi-level pinning free. , 0, , .		7
95	Multi-layer high- ϵ interpoly dielectric for floating gate flash memory devices. <i>Solid-State Electronics</i> , 2008, 52, 564-570.	1.4	7
96	Schottky barrier height modulation of metal- ϵ interlayer- ϵ semiconductor structure depending on contact surface orientation for multi-gate transistors. <i>Applied Physics Letters</i> , 2019, 114, 012102.	3.3	7
97	Large-Area, Conformal, and Uniform Synthesis of Hybrid Polymeric Film via Initiated Chemical Vapor Deposition. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000608.	3.6	7
98	Highly Reliable Charge Trap-Type Organic Non-Volatile Memory Device Using Advanced Band-Engineered Organic-Inorganic Hybrid Dielectric Stacks. <i>Advanced Functional Materials</i> , 2021, 31, 2103291.	14.9	7
99	Cubic-Structured HfLaO for the Blocking Layer of a Charge-Trap Type Flash Memory Device. <i>Applied Physics Express</i> , 2010, 3, 091501.	2.4	6
100	Copolymer-Based Flexible Resistive Random Access Memory Prepared by Initiated Chemical Vapor Deposition Process. <i>Advanced Electronic Materials</i> , 2021, 7, 2100375.	5.1	6
101	A Novel Split-Gate Ferroelectric FET for a Compact and Energy Efficient Neuron. <i>IEEE Electron Device Letters</i> , 2022, 43, 1375-1378.	3.9	6
102	Dopant-free FUSI Pt/sub x /Si metal gate for high work function and reduced Fermi-level pinning. <i>IEEE Electron Device Letters</i> , 2005, 26, 796-798.	3.9	5
103	Electrospun SnO ₂ and its composite V ₂ O ₅ nanofibers for thermoelectric power generator. <i>Journal of Sol-Gel Science and Technology</i> , 2021, 98, 183-192.	2.4	5
104	Stoichiometry dependence of Fermi-level pinning in fully silicided (FUSI) NiSi gate on high-K dielectric. <i>IEEE Electron Device Letters</i> , 2005, 26, 882-884.	3.9	4
105	A Novel Hafnium Carbide (HfC ϵ) Metal Gate Electrode for NMOS Device Application. , 2007, , .		4
106	Analysis of fluorine effects on charge-trap flash memory of W/TiN/Al ₂ O ₃ /Si ₃ N ₄ /SiO ₂ /poly-Si gate stack. <i>Solid-State Electronics</i> , 2020, 164, 107713.	1.4	4
107	A novel approach for integration of dual metal gate process using ultra thin aluminum nitride buffer layer. , 0, , .		3
108	MOS Characteristics of Synthesized HfAlON ϵ HfO ϵ Stack Using AlN ϵ HfO ϵ . <i>IEEE Electron Device Letters</i> , 2004, 25, 619-621.	3.9	3

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109	Dual metal gate process by metal substitution of dopant-free polysilicon on high-K dielectric. , 0, , .		3
110	Resistive Random Access Memory Behaviors in Organic-Inorganic Hybrid Ultra-Thin Films. Advanced Electronic Materials, 2022, 8, .	5.1	3
111	Localized oxide degradation in ultrathin gate dielectric and its statistical analysis. IEEE Transactions on Electron Devices, 2003, 50, 967-972.	3.0	2
112	MOS Characteristics of Substituted Al Gate on High- κ Dielectric. IEEE Electron Device Letters, 2004, 25, 725-727.	3.9	2
113	Improvement of Charge Retention in Flash Memory Devices by Very Light Doping of Lanthanum into an Aluminum-Oxide Blocking Layer. Applied Physics Express, 2012, 5, 081102.	2.4	2
114	Development of a Measurement Method for the Thermal Conductivity of a Thick Film Prepared by a Screen-Printing Technique. Journal of Electronic Materials, 2012, 41, 1170-1176.	2.2	2
115	Fermi Level Depinning in Ti/GeO ₂ /n-Ge via the Interfacial Reaction Between Ti and GeO ₂ . IEEE Transactions on Electron Devices, 2017, 64, 4242-4245.	3.0	2
116	Performance Degradation of Flexible Si Nanomembrane Transistors With Al ₂ O ₃ and SiO ₂ Dielectrics Under Mechanical Stress. IEEE Transactions on Electron Devices, 2018, 65, 3069-3072.	3.0	2
117	Minimally invasive medical catheter with highly flexible FDSOI-based integrated circuits. , 2019, , .		2
118	Design of low cost, scalable, and high-performance TiS ₂ thermoelectric materials via wet ball-milling process. Journal of Materials Science: Materials in Electronics, 0, , 1.	2.2	1
119	Performance enhancement of p-type organic thin-film transistors by surface modification of hybrid dielectrics. Organic Electronics, 2021, 96, 106250.	2.6	1
120	Channel Mobility Boosting in a Poly-Si Channel Using Ge Diffusion Engineering and Hydrogen Plasma Treatment. IEEE Electron Device Letters, 2022, 43, 342-345.	3.9	1
121	Effects of electron-beam lithography on thin gate oxide reliability. , 0, , .		0
122	Effects of post-decoupled-plasma-nitridation annealing of ultra-thin gate oxide. , 0, , .		0
123	Multiple-pulse laser annealing of boron-implanted preamorphized silicon and the process optimization. , 0, , .		0
124	Improvement of the multi-level cell performance by a soft program method in flash memory devices. Solid-State Electronics, 2014, 94, 86-90.	1.4	0