

Byung Jin Cho

List of Publications by Year in descending order

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papers

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101543

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124
times ranked

6455
citing authors

#	ARTICLE	IF	CITATIONS
1	A wearable organic photovoltaic-thermoelectric (OPV-TE) hybrid generator to minimize the open-circuit voltage losses of OPV module. <i>Nano Energy</i> , 2022, 93, 106775.	16.0	16
2	Channel Mobility Boosting in a Poly-Si Channel Using Ge Diffusion Engineering and Hydrogen Plasma Treatment. <i>IEEE Electron Device Letters</i> , 2022, 43, 342-345.	3.9	1
3	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
4	Resistive Random Access Memory Behaviors in Organic-Inorganic Hybrid Ultra-Thin Films. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	3
5	Variable Rigidity Module with a Flexible Thermoelectric Device for Bidirectional Temperature Control. <i>Soft Robotics</i> , 2021, 8, 662-672.	8.0	8
6	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
7	Impact of Al doping on a hydrothermally synthesized $\text{In}_2\text{Ga}_2\text{O}_3$ nanostructure for photocatalysis applications. <i>RSC Advances</i> , 2021, 11, 7338-7346.	3.6	20
8	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
9	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
10	Method to Achieve the Morphotropic Phase Boundary in $\text{Hf}_x\text{Zr}_{1-x}\text{O}_2$ by Electric Field Cycling for DRAM Cell Capacitor Applications. <i>IEEE Electron Device Letters</i> , 2021, 42, 517-520.	3.9	23
11	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
12	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
13	Performance enhancement of p-type organic thin-film transistors by surface modification of hybrid dielectrics. <i>Organic Electronics</i> , 2021, 96, 106250.	2.6	1
14	Thermal diffusion barrier metallization based on Co-Mo powder-mixed composites for n-type skutterudite ((Mm,Sm)yCo4Sb12) thermoelectric devices. <i>Journal of Alloys and Compounds</i> , 2020, 818, 152917.	5.5	8
15	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
16	Thermal display glove for interacting with virtual reality. <i>Scientific Reports</i> , 2020, 10, 11403.	3.3	27
17	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
18	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

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19	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
20	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
21	Hydrothermal Synthesis and Photocatalytic Property of Sn-doped $\hat{1}^2$ -Ga ₂ O ₃ Nanostructure. <i>ECS Journal of Solid State Science and Technology</i> , 2020, 9, 045009.	1.8	34
22	Two-Dimensional Thermal Haptic Module Based on a Flexible Thermoelectric Device. <i>Soft Robotics</i> , 2020, 7, 736-742.	8.0	15
23	H ₂ 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
24	Spontaneous Generation of a Molecular Thin Hydrophobic Skin Layer on a Sub-20 nm, High- <i>k</i> Polymer Dielectric for Extremely Stable Organic Thin-Film Transistor Operation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 29113-29123.	8.0	29
25	Ultrathin ZrO _x -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
26	Schottky barrier height modulation of metal–interlayer–semiconductor structure depending on contact surface orientation for multi-gate transistors. <i>Applied Physics Letters</i> , 2019, 114, 012102.	3.3	7
27	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
28	Flexible heatsink based on a phase-change material for a wearable thermoelectric generator. <i>Energy</i> , 2019, 179, 12-18.	8.8	95
29	Ultrathin EOT (0.67 nm) High- <i>k</i> Dielectric on Ge MOSFET Using Y Doped ZrO ₂ With Record-Low Leakage Current. <i>IEEE Electron Device Letters</i> , 2019, 40, 502-505.	3.9	19
30	UV-Curable Silver Electrode for Screen-Printed Thermoelectric Generator. <i>Advanced Functional Materials</i> , 2019, 29, 1901505.	14.9	25
31	High-Performance Monolithic Photovoltaic–Thermoelectric Hybrid Power Generator Using an Exothermic Reactive Interlayer. <i>ACS Applied Energy Materials</i> , 2019, 2, 2381-2386.	5.1	14
32	Minimally invasive medical catheter with highly flexible FDSOI-based integrated circuits. , 2019, , .		2
33	Effect of ZrO ₂ interfacial layer on forming ferroelectric Hf _x Zr _y O _z on Si substrate. <i>AIP Advances</i> , 2019, 9, .	1.3	24
34	Enhanced Photocatalytic Activity of Electrospun $\hat{1}^2$ -Ga ₂ O ₃ Nanofibers via In-Situ Si Doping Using Tetraethyl Orthosilicate. <i>Catalysts</i> , 2019, 9, 1005.	3.5	10
35	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
36	Large Grain Ruthenium for Alternative Interconnects. <i>IEEE Electron Device Letters</i> , 2019, 40, 91-94.	3.9	14

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37	>1000-Fold Lifetime Extension of a Nickel Electromechanical Contact Device via Graphene. ACS Applied Materials & Interfaces, 2018, 10, 9085-9093.	8.0	23
38	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
39	Self-Powered Wearable Electrocardiography Using a Wearable Thermoelectric Power Generator. ACS Energy Letters, 2018, 3, 501-507.	17.4	226
40	Structural design of a flexible thermoelectric power generator for wearable applications. Applied Energy, 2018, 214, 131-138.	10.1	171
41	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
42	Novel Vapor-Phase Synthesis of Flexible, Homogeneous Organic-Inorganic Hybrid Gate Dielectric with sub 5 nm Equivalent Oxide Thickness. ACS Applied Materials & Interfaces, 2018, 10, 37326-37334.	8.0	26
43	High-Aspect Ratio $\text{In}_2\text{-Ga}_2\text{O}_3$ Nanorods via Hydrothermal Synthesis. Nanomaterials, 2018, 8, 594.	4.1	43
44	Performance Degradation of Flexible Si Nanomembrane Transistors With Al_2O_3 and SiO_2 Dielectrics Under Mechanical Stress. IEEE Transactions on Electron Devices, 2018, 65, 3069-3072.	3.0	2
45	High-performance self-powered wireless sensor node driven by a flexible thermoelectric generator. Energy, 2018, 162, 526-533.	8.8	75
46	Fermi-Level Unpinning Technique with Excellent Thermal Stability for n-Type Germanium. ACS Applied Materials & Interfaces, 2017, 9, 35988-35997.	8.0	14
47	Realization of High-Performance Screen-Printed Flexible Thermoelectric Generator by Improving Contact Characteristics. Advanced Materials Interfaces, 2017, 4, 1700870.	3.7	10
48	Mechanical Stability Analysis via Neutral Mechanical Plane for High-Performance Flexible Si Nanomembrane FDSOI Device. Advanced Materials Interfaces, 2017, 4, 1700618.	3.7	9
49	Surface-Localized Sealing of Porous Ultralow- κ Dielectric Films with Ultrathin (≤ 2 nm) Polymer Coating. ACS Nano, 2017, 11, 7841-7847.	14.6	19
50	Enhanced thermoelectric properties of screen-printed $\text{Bi}_{0.5}\text{Sb}_{1.5}\text{Te}_3$ and $\text{Bi}_2\text{Te}_{2.7}\text{Se}_{0.3}$ thick films using a post annealing process with mechanical pressure. Journal of Materials Chemistry C, 2017, 5, 8559-8565.	5.5	37
51	Post ionized defect engineering of the screen-printed $\text{Bi}_2\text{Te}_{2.7}\text{Se}_{0.3}$ thick film for high performance flexible thermoelectric generator. Nano Energy, 2017, 31, 258-263.	16.0	101
52	Fermi Level Depinning in $\text{Ti/GeO}_2/\text{n-Ge}$ via the Interfacial Reaction Between Ti and GeO_2 . IEEE Transactions on Electron Devices, 2017, 64, 4242-4245.	3.0	2
53	Compliment Graphene Oxide Coating on Silk Fiber Surface via Electrostatic Force for Capacitive Humidity Sensor Applications. Sensors, 2017, 17, 407.	3.8	23
54	Impedance Spectroscopy Analysis and Equivalent Circuit Modeling of Graphene Oxide Solutions. Nanomaterials, 2017, 7, 446.	4.1	15

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55	Free-Standing Graphene Thermophone on a Polymer-Mesh Substrate. <i>Small</i> , 2016, 12, 185-189.	10.0	43
56	Effective Schottky Barrier Height Lowering of Metal/n-Ge with a TiO ₂ /GeO ₂ Interlayer Stack. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 35419-35425.	8.0	37
57	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
58	High-Performance Flexible Thermoelectric Power Generator Using Laser Multiscanning Lift-Off Process. <i>ACS Nano</i> , 2016, 10, 10851-10857.	14.6	199
59	The Work Function Behavior of Aluminum-Doped Titanium Carbide Grown by Atomic Layer Deposition. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 1423-1427.	3.0	16
60	Synthesis of ultrathin polymer insulating layers by initiated chemical vapour deposition for low-power soft electronics. <i>Nature Materials</i> , 2015, 14, 628-635.	27.5	229
61	The Mechanism of Schottky Barrier Modulation of Tantalum Nitride/Ge Contacts. <i>IEEE Electron Device Letters</i> , 2015, 36, 997-1000.	3.9	21
62	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
63	Wrinkle-free graphene with spatially uniform electrical properties grown on hot-pressed copper. <i>Nano Research</i> , 2015, 8, 1075-1080.	10.4	13
64	Thermoelectric properties of P-type Sb ₂ Te ₃ thick film processed by a screen-printing technique and a subsequent annealing process. <i>Journal of Alloys and Compounds</i> , 2014, 582, 177-180.	5.5	56
65	A wearable thermoelectric generator fabricated on a glass fabric. <i>Energy and Environmental Science</i> , 2014, 7, 1959.	30.8	784
66	Hybrid composite of screen-printed inorganic thermoelectric film and organic conducting polymer for flexible thermoelectric power generator. <i>Energy</i> , 2014, 73, 506-512.	8.8	204
67	Improvement of the multi-level cell performance by a soft program method in flash memory devices. <i>Solid-State Electronics</i> , 2014, 94, 86-90.	1.4	0
68	Facile graphene n-doping by wet chemical treatment for electronic applications. <i>Nanoscale</i> , 2014, 6, 8503.	5.6	35
69	Improvement of thermoelectric properties of screen-printed Bi ₂ Te ₃ thick film by optimization of the annealing process. <i>Journal of Alloys and Compounds</i> , 2013, 552, 107-110.	5.5	60
70	Synthesis of Monolayer Graphene Having a Negligible Amount of Wrinkles by Stress Relaxation. <i>Nano Letters</i> , 2013, 13, 2496-2499.	9.1	36
71	Improvement of Charge Retention in Flash Memory Devices by Very Light Doping of Lanthanum into an Aluminum-Oxide Blocking Layer. <i>Applied Physics Express</i> , 2012, 5, 081102.	2.4	2
72	Determination of Work Function of Graphene under a Metal Electrode and Its Role in Contact Resistance. <i>Nano Letters</i> , 2012, 12, 3887-3892.	9.1	306

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73	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
74	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
75	Graphene Gate Electrode for MOS Structure-Based Electronic Devices. Nano Letters, 2011, 11, 5383-5386.	9.1	65
76	Thin-Film Thermoelectric Module for Power Generator Applications Using a Screen-Printing Method. Journal of Electronic Materials, 2011, 40, 615-619.	2.2	55
77	Thermoelectric properties of screen-printed ZnSb film. Thin Solid Films, 2011, 519, 5441-5443.	1.8	47
78	Cubic-Structured HfLaO for the Blocking Layer of a Charge-Trap Type Flash Memory Device. Applied Physics Express, 2010, 3, 091501.	2.4	6
79	Wide memory window in graphene oxide charge storage nodes. Applied Physics Letters, 2010, 96, .	3.3	87
80	Improvement of memory performance by high temperature annealing of the Al ₂ O ₃ blocking layer in a charge-trap type flash memory device. Applied Physics Letters, 2010, 96, .	3.3	26
81	Performance Improvement in Charge-Trap Flash Memory Using Lanthanum-Based High- κ Blocking Oxide. IEEE Transactions on Electron Devices, 2009, 56, 2746-2751.	3.0	26
82	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
83	Multi-layer high- $\hat{\epsilon}$ interpoly dielectric for floating gate flash memory devices. Solid-State Electronics, 2008, 52, 564-570.	1.4	7
84	Tensile-Strained Germanium CMOS Integration on Silicon. IEEE Electron Device Letters, 2007, 28, 1117-1119.	3.9	8
85	A Novel Hafnium Carbide (HfC\times/math>)\times/math>) Metal Gate Electrode for NMOS Device Application. , 2007, , .		4
86	P-Type Floating Gate for Retention and P/E Window Improvement of Flash Memory Devices. IEEE Transactions on Electron Devices, 2007, 54, 1910-1917.	3.0	13
87	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
88	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
89	Stoichiometry dependence of Fermi-level pinning in fully silicided (FUSI) NiSi gate on high-K dielectric. IEEE Electron Device Letters, 2005, 26, 882-884.	3.9	4
90	Metal-insulator-metal RF bypass capacitor using niobium oxide (Nb/sub 2/O/sub 5/) with HfO/sub 2//Al/sub 2/O/sub 3/ barriers. IEEE Electron Device Letters, 2005, 26, 625-627.	3.9	31

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91	Dopant-free FUSI Pt/sub x/Si metal gate for high work function and reduced Fermi-level pinning. IEEE Electron Device Letters, 2005, 26, 796-798.	3.9	5
92	Electron mobility enhancement using ultrathin pure Ge on Si substrate. IEEE Electron Device Letters, 2005, 26, 761-763.	3.9	50
93	Charge Trapping and Breakdown Mechanism in HfAlO/TaN Gate Stack Analyzed Using Carrier Separation. IEEE Transactions on Device and Materials Reliability, 2004, 4, 696-703.	2.0	13
94	RF, DC, and reliability characteristics of ALD HfO/sub 2/-Al/sub 2/O/sub 3/ laminate MIM capacitors for Si RF IC applications. IEEE Transactions on Electron Devices, 2004, 51, 886-894.	3.0	69
95	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
96	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
97	Thermally Stable Fully Silicided Hf-Silicide Metal-Gate Electrode. IEEE Electron Device Letters, 2004, 25, 372-374.	3.9	24
98	Thermal Instability of Effective Work Function in Metal/High- κ Stack and Its Material Dependence. IEEE Electron Device Letters, 2004, 25, 716-718.	3.9	34
99	MOS Characteristics of Synthesized HfAlON $\hat{=}$ "HfOAl_2O_3 Stack Using AlN $\hat{=}$ "HfOAl_2O_3. IEEE Electron Device Letters, 2004, 25, 619-621.	3.9	3
100	MOS Characteristics of Substituted Al Gate on High- κ Dielectric. IEEE Electron Device Letters, 2004, 25, 725-727.	3.9	2
101	Improvement of Voltage Linearity in High- κ MIM Capacitors UsingHfO_2- $\text{SiO}_2</math> Stacked Dielectric. IEEE Electron Device Letters, 2004, 25, 538-540.$	3.9	84
102	Evidence and Understanding of ALDHfO_2- $\text{Al}_2\text{O}_3</math> Laminate MIM Capacitors Outperforming Sandwich Counterparts. IEEE Electron Device Letters, 2004, 25, 681-683.$	3.9	33
103	High-performance MIM capacitor using ALD high-k HfO2-Al2O3 laminate dielectrics. IEEE Electron Device Letters, 2003, 24, 730-732.	3.9	55
104	Localized oxide degradation in ultrathin gate dielectric and its statistical analysis. IEEE Transactions on Electron Devices, 2003, 50, 967-972.	3.0	2
105	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
106	A high-density MIM capacitor (13 fF/ μm^2) using ALD HfO2 dielectrics. IEEE Electron Device Letters, 2003, 24, 63-65.	3.9	126
107	MIM capacitors using atomic-layer-deposited high- κ (HfO/sub 2/)/sub 1-x/(Al/sub 2/O/sub 3/)/sub x/ dielectrics. IEEE Electron Device Letters, 2003, 24, 60-62.	3.9	60
108	Lanthanide (Tb)-doped HfO/sub 2/ for high-density MIM capacitors. IEEE Electron Device Letters, 2003, 24, 442-444.	3.9	20

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109	PVD HfO ₂ for high-precision MIM capacitor applications. IEEE Electron Device Letters, 2003, 24, 387-389.	3.9	57
110	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
111	Evolution of quasi-breakdown in thin gate oxides. Journal of Applied Physics, 2002, 91, 5302-5306.	2.5	7
112	Correlation between interface traps and gate oxide leakage current in the direct tunneling regime. Applied Physics Letters, 2002, 81, 379-381.	3.3	7
113	A high performance MIM capacitor using HfO ₂ dielectrics. IEEE Electron Device Letters, 2002, 23, 514-516.	3.9	99
114	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
115	Effects of electron-beam lithography on thin gate oxide reliability. , 0, , .		0
116	Effects of post-decoupled-plasma-nitridation annealing of ultra-thin gate oxide. , 0, , .		0
117	HfO ₂ and lanthanide-doped HfO ₂ MIM capacitors for RF/mixed IC applications. , 0, , .		8
118	Fully silicided NiSi and germanided NiGe dual gates on SiO ₂ /Si and Al ₂ O ₃ /Ge-on-insulator MOSFETs. , 0, , .		22
119	A novel approach for integration of dual metal gate process using ultra thin aluminum nitride buffer layer. , 0, , .		3
120	Multiple-pulse laser annealing of boron-implanted preamorphized silicon and the process optimization. , 0, , .		0
121	High-K HfAlO charge trapping layer in SONOS-type nonvolatile memory device for high speed operation. , 0, , .		24
122	Substituted aluminum metal gate on high-K dielectric for low work-function and fermi-level pinning free. , 0, , .		7
123	Dual metal gate process by metal substitution of dopant-free polysilicon on high-K dielectric. , 0, , .		3
124	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