

Wan Sik Hwang

List of Publications by Year in descending order

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83
papers

2,087
citations

331670

21
h-index

243625

44
g-index

85
all docs

85
docs citations

85
times ranked

3562
citing authors

#	ARTICLE	IF	CITATIONS
1	High-voltage field effect transistors with wide-bandgap $\text{In}^2\text{-Ga}_2\text{O}_3$ nanomembranes. Applied Physics Letters, 2014, 104, .	3.3	288
2	Transistors with chemically synthesized layered semiconductor WS ₂ exhibiting 105 room temperature modulation and ambipolar behavior. Applied Physics Letters, 2012, 101, .	3.3	237
3	Exfoliated multilayer MoTe ₂ field-effect transistors. Applied Physics Letters, 2014, 105, .	3.3	168
4	AlGaSb/InAs Tunnel Field-Effect Transistor With On-Current of 78 $\mu\text{A}/\mu\text{m}$ at 0.5 V. IEEE Electron Device Letters, 2012, 33, 363-365.	3.9	129
5	Effect of Adding Cerium on Microstructure and Morphology of Ce-Based Inclusions Formed in Low-Carbon Steel. Scientific Reports, 2017, 7, 46503.	3.3	94
6	High-performance photocurrent generation from two-dimensional WS ₂ field-effect transistors. Applied Physics Letters, 2014, 104, .	3.3	88
7	Graphene nanoribbon field-effect transistors on wafer-scale epitaxial graphene on SiC substrates. APL Materials, 2015, 3, .	5.1	72
8	Synthesized multiwall MoS ₂ nanotube and nanoribbon field-effect transistors. Applied Physics Letters, 2015, 106, .	3.3	66
9	A Robust Highly Aligned DNA Nanowire Array-Enabled Lithography for Graphene Nanoribbon Transistors. Nano Letters, 2015, 15, 7913-7920.	9.1	58
10	Transport properties of graphene nanoribbon transistors on chemical-vapor-deposition grown wafer-scale graphene. Applied Physics Letters, 2012, 100, .	3.3	55
11	High-Aspect Ratio $\text{In}^2\text{-Ga}_2\text{O}_3$ Nanorods via Hydrothermal Synthesis. Nanomaterials, 2018, 8, 594.	4.1	43
12	Synthesis of Ultrathin, Homogeneous Copolymer Dielectrics to Control the Threshold Voltage of Organic Thin-Film Transistors. Advanced Functional Materials, 2016, 26, 6574-6582.	14.9	38
13	Hydrothermal Synthesis and Photocatalytic Property of Sn-doped $\text{In}^2\text{-Ga}_2\text{O}_3$ Nanostructure. ECS Journal of Solid State Science and Technology, 2020, 9, 045009.	1.8	34
14	Ultrathin graphene and graphene oxide layers as a diffusion barrier for advanced Cu metallization. Applied Physics Letters, 2015, 106, .	3.3	28
15	Electrical and photocurrent properties of a polycrystalline Sn-doped $\text{In}^2\text{-Ga}_2\text{O}_3$ thin film. Materials Science in Semiconductor Processing, 2021, 121, 105430.	4.0	27
16	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
17	Room-Temperature Graphene-Nanoribbon Tunneling Field-Effect Transistors. Npj 2D Materials and Applications, 2019, 3, .	7.9	26
18	Ultrathin ZrO _x -Organic Hybrid Dielectric (EOT 3.2 nm) via Initiated Chemical Vapor Deposition for High-Performance Flexible Electronics. ACS Applied Materials & Interfaces, 2019, 11, 44513-44520.	8.0	26

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19	Effect of ZrO ₂ interfacial layer on forming ferroelectric Hf _x Zr _{1-x} O ₂ on Si substrate. AIP Advances, 2019, 9, .	1.3	24
20	Unraveling Oxygen Transfer at the Graphene Oxide/ZnO Nanorod Interface. Journal of Physical Chemistry C, 2014, 118, 17638-17642.	3.1	23
21	Compliment Graphene Oxide Coating on Silk Fiber Surface via Electrostatic Force for Capacitive Humidity Sensor Applications. Sensors, 2017, 17, 407.	3.8	23
22	Method to Achieve the Morphotropic Phase Boundary in Hf _x Zr _{1-x} O ₂ by Electric Field Cycling for DRAM Cell Capacitor Applications. IEEE Electron Device Letters, 2021, 42, 517-520.	3.9	23
23	The Mechanism of Schottky Barrier Modulation of Tantalum Nitride/Ge Contacts. IEEE Electron Device Letters, 2015, 36, 997-1000.	3.9	21
24	Impact of Al doping on a hydrothermally synthesized In^{2+} -Ga ₂ O ₃ nanostructure for photocatalysis applications. RSC Advances, 2021, 11, 7338-7346.	3.6	20
25	The Preparation of TiAl-Based Intermetallics from Elemental Powders through a Two-Step Pressureless Sintering Process. Journal of Materials Engineering and Performance, 1998, 7, 385-392.	2.5	19
26	The Impact of an Ultrathin Y ₂ O ₃ Layer on GeO ₂ Passivation in Ge MOS Gate Stacks. IEEE Transactions on Electron Devices, 2017, 64, 3303-3307.	3.0	19
27	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
28	Fabrication of top-gated epitaxial graphene nanoribbon FETs using hydrogen-silsesquioxane. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, .	1.2	18
29	Relationship between Flow Characteristics and Surface Quality in Inclined Twin Roll Strip Casting.. ISIJ International, 1996, 36, 690-699.	1.4	17
30	Hybrid Integration of Graphene Analog and Silicon Complementary Metal-Oxide-Semiconductor Digital Circuits. ACS Nano, 2016, 10, 7142-7146.	14.6	16
31	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
32	Impedance Spectroscopy Analysis and Equivalent Circuit Modeling of Graphene Oxide Solutions. Nanomaterials, 2017, 7, 446.	4.1	15
33	Formation of In^{2+} -Ga ₂ O ₃ nanofibers of sub-50 nm diameter synthesized by electrospinning method. Thin Solid Films, 2018, 645, 358-362.	1.8	15
34	An 8-nm-thick Sn-doped polycrystalline In^{2+} -Ga ₂ O ₃ MOSFET with a normally off operation. Applied Physics Letters, 2021, 119, .	3.3	15
35	Three-dimensional fluid flow model for gas-stirred ladles. Journal of Materials Engineering and Performance, 1997, 6, 311-318.	2.5	14
36	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

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37	Fluorine Effects Originating From the CVD-W Process on Charge-Trap Flash Memory Cells. IEEE Transactions on Electron Devices, 2019, 66, 378-382.	3.0	13
38	Improved Drain Current Saturation and Voltage Gain in Graphene-Silicon Field Effect Transistors. Scientific Reports, 2016, 6, 25392.	3.3	12
39	Very Low-Work-Function ALD-Erbium Carbide (ErC_2) Metal Electrode on High- κ Dielectrics. IEEE Transactions on Electron Devices, 2016, 63, 2858-2863.	3.0	12
40	AlGaIn/GaN HEMTs on Si by MBE with regrown contacts and $f_T = 153$ GHz. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 887-889.	0.8	10
41	A Gallium Oxide-Graphene Oxide Hybrid Composite for Enhanced Photocatalytic Reaction. Nanomaterials, 2016, 6, 127.	4.1	10
42	Material characteristics and equivalent circuit models of stacked graphene oxide for capacitive humidity sensors. AIP Advances, 2016, 6, 035203.	1.3	10
43	A quantitative strain analysis of a flexible single-crystalline silicon membrane. Applied Physics Letters, 2017, 110, 033105.	3.3	10
44	Enhanced Photocatalytic Degradation of 2-Butanone Using Hybrid Nanostructures of Gallium Oxide and Reduced Graphene Oxide Under Ultraviolet-C Irradiation. Catalysts, 2019, 9, 449.	3.5	10
45	Enhanced Photocatalytic Activity of Electrospun ZnO - Ga_2O_3 Nanofibers via In-Situ Si Doping Using Tetraethyl Orthosilicate. Catalysts, 2019, 9, 1005.	3.5	10
46	Mechanical Stability Analysis via Neutral Mechanical Plane for High-Performance Flexible Si Nanomembrane FDSOI Device. Advanced Materials Interfaces, 2017, 4, 1700618.	3.7	9
47	A Zero-Power, Low-Cost Ultraviolet-C Colorimetric Sensor Using a Gallium Oxide and Reduced Graphene Oxide Hybrid via Photoelectrochemical Reactions. Catalysts, 2017, 7, 248.	3.5	9
48	Comparison of Ga_2O_3 and TiO_2 Nanostructures for Photocatalytic Degradation of Volatile Organic Compounds. Catalysts, 2020, 10, 545.	3.5	9
49	HfO_2 High Pressure Annealed Y-Doped ZrO_2 Gate Dielectric With an EOT of 0.57 nm for Ge MOSFETs. IEEE Electron Device Letters, 2019, 40, 1350-1353.	3.9	8
50	HfO_2 - and TiO_2 -Based Organic/Inorganic Hybrid Dielectrics Synthesized via Chemical Vapor Phase for Advanced Gate Stack in Flexible Electronic Devices. Advanced Electronic Materials, 2021, 7, 2001197.	5.1	8
51	Improved electromigration-resistance of Cu interconnects by graphene-based capping layer. , 2015, , .		7
52	Programming-Pulse Dependence of Ferroelectric Partial Polarization: Insights From a Comparative Study of PZT and HZO Capacitors. IEEE Transactions on Electron Devices, 2020, 67, 4482-4487.	3.0	7
53	Highly Reliable Charge Trap-Type Organic Non-Volatile Memory Device Using Advanced Band-Engineered Organic-Inorganic Hybrid Dielectric Stacks. Advanced Functional Materials, 2021, 31, 2103291.	14.9	7
54	Solar-Blind Ultrathin SnO_2 -Doped Polycrystalline Ga_2O_3 UV Phototransistor for Normally Off Operation. Advanced Photonics Research, 2022, 3, .	3.6	7

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55	Comparison of Phosphor Bronze Metal Sheet Produced by Twin Roll Casting and Horizontal Continuous Casting. <i>Journal of Materials Engineering and Performance</i> , 1998, 7, 495-503.	2.5	6
56	Reliability improvement of a flexible FD-SOI MOSFET via heat management. <i>Applied Physics Letters</i> , 2017, 110, 252101.	3.3	6
57	Fast-Response Colorimetric UVC Sensor Made of a Ga ₂ O ₃ Photocatalyst with a Hole Scavenger. <i>Sensors</i> , 2021, 21, 387.	3.8	6
58	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
59	Highly Aligned Polymeric Nanowire Etch-Mask Lithography Enabling the Integration of Graphene Nanoribbon Transistors. <i>Nanomaterials</i> , 2021, 11, 33.	4.1	5
60	Large electron concentration modulation using capacitance enhancement in SrTiO ₃ /SmTiO ₃ Fin-field effect transistors. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	4
61	Amorphous Si-island/graphene oxide-carbon hybrid anode thin film for a lithium-ion battery. <i>Thin Solid Films</i> , 2018, 653, 229-235.	1.8	4
62	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
63	Reversible photoinduced wettability and antimicrobial activity of Ga ₂ O ₃ thin film upon UVC irradiation. <i>Materials Chemistry and Physics</i> , 2022, 279, 125746.	4.0	4
64	Exfoliated MoTe ₂ field-effect transistor. , 2013, , .		3
65	Enhanced performance in graphene RF transistors via advanced process integration. <i>Semiconductor Science and Technology</i> , 2017, 32, 045009.	2.0	3
66	Vertically Formed Graphene Stripe for 3D Field-Effect Transistor Applications. <i>Small</i> , 2017, 13, 1602373.	10.0	3
67	Measurement of interfacial heat transfer coefficient for the evaporative pattern casting of A356 aluminium alloy. <i>International Journal of Cast Metals Research</i> , 2002, 15, 93-101.	1.0	2
68	Sub-10 nm epitaxial graphene nanoribbon FETs. , 2011, , .		2
69	First demonstration of two-dimensional WS ₂ transistors exhibiting 10 ⁵ room temperature modulation and ambipolar behavior. , 2012, , .		2
70	Valley-engineered ultra-thin silicon for high-performance junctionless transistors. <i>Scientific Reports</i> , 2016, 6, 29354.	3.3	2
71	Investigation of Border Trap Characteristics in the AlON/GeO ₂ /Ge Gate Stacks. <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 3998-4001.	3.0	2
72	Fermi Level Depinning in Ti/GeO ₂ /n-Ge via the Interfacial Reaction Between Ti and GeO ₂ . <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 4242-4245.	3.0	2

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73	Conformal, Wafer-Scale and Controlled Nanoscale Doping of Semiconductors Via the iCVD Process. , 2018, , .		2
74	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
75	Preparation of Wrinkled Graphene Oxide Using Solution Method. Journal of Nanoscience and Nanotechnology, 2018, 18, 4302-4305.	0.9	2
76	Minimally invasive medical catheter with highly flexible FDSOI-based integrated circuits. , 2019, , .		2
77	Synaptic Current Response of a Liquid Ga Electrode via a Surface Electrochemical Redox Reaction in a NaOH Solution. ACS Omega, 2022, 7, 19872-19878.	3.5	2
78	The Application of Two Phase Flow Simulation to the Development of Direct Iron Ore Smelting Reduction Process. International Journal of Cast Metals Research, 2003, 15, 491-496.	1.0	1
79	Influence of Self-Heating Effect on Interface Trap Generation in Highly Flexible Single-Crystalline Si Nanomembrane Transistors. Journal of Nanoscience and Nanotechnology, 2019, 19, 6481-6486.	0.9	1
80	Enhanced third harmonic generation in ultrathin free-standing \hat{I}^2 -Ga ₂ O ₃ nanomembranes: study on surface and bulk contribution. Nanoscale, 2021, 14, 175-186.	5.6	1
81	Thin-Film Transistors: Synthesis of Ultrathin, Homogeneous Copolymer Dielectrics to Control the Threshold Voltage of Organic Thin-Film Transistors (Adv. Funct. Mater. 36/2016). Advanced Functional Materials, 2016, 26, 6672-6672.	14.9	0
82	Mechanical and Electrical Reliability Analysis of Flexible Si Complementary Metal-Oxide-Semiconductor Integrated Circuit. Journal of Nanoscience and Nanotechnology, 2019, 19, 6473-6480.	0.9	0
83	Hydrothermal Synthesis and Characteristics of LiMN ₂ O ₄ as Cathode Materials. Nanoscience and Nanotechnology Letters, 2018, 10, 868-872.	0.4	0