

Jae-Won Jang

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Enhanced switching ratio of sol-gel-processed $Y_{2O_{3}}$ RRAM device by suppressing oxygen vacancy formation at high annealing temperatures. <i>Semiconductor Science and Technology</i> , 2022, 37, 015007.	1.0	10
2	Analysis for DC and RF Characteristics Recessed-Gate GaN MOSFET Using Stacked $TiO_{2}/Si_{3}N_{4}$ Dual-Layer Insulator. <i>Materials</i> , 2022, 15, 819.	1.3	3
3	Environmentally and Electrically Stable Sol-Gel-Deposited SnO_{2} Thin-Film Transistors with Controlled Passivation Layer Diffusion Penetration Depth That Minimizes Mobility Degradation. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 10558-10565.	4.0	9
4	Enhanced Switching Reliability of Sol-Gel-Processed $Y_{2}O_{3}$ RRAM Devices Based on $Y_{2}O_{3}$ Surface Roughness-Induced Local Electric Field. <i>Materials</i> , 2022, 15, 1943.	1.3	8
5	Flexible Sol-Gel-Processed $Y_{2}O_{3}$ RRAM Devices Obtained via UV/Ozone-Assisted Photochemical Annealing Process. <i>Materials</i> , 2022, 15, 1899.	1.3	8
6	Room-Temperature High-Detectivity Flexible Near-Infrared Photodetectors with Chalcogenide Silver Telluride Nanoparticles. <i>ACS Omega</i> , 2022, 7, 10262-10267.	1.6	4
7	Viable strategy to minimize trap states of patterned oxide thin films for both exceptional electrical performance and uniformity in sol-gel processed transistors. <i>Chemical Engineering Journal</i> , 2022, 441, 135833.	6.6	7
8	Semi-Transparent, Micrometer Resolution $p\text{-NiO}/n\text{-ZnO}$ Heterojunction Diode Temperature Sensors with Ultrathin Metal Anode. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	2
9	Combustion-assisted low-temperature solution process for high-performance SnO_{2} thin-film transistors. <i>Ceramics International</i> , 2022, 48, 20591-20598.	2.3	6
10	Polycrystalline-Silicon-MOSFET-Based Capacitorless DRAM With Grain Boundaries and Its Performances. <i>IEEE Access</i> , 2021, 9, 50281-50290.	2.6	9
11	Influence of Active Channel Layer Thickness on SnO_{2} Thin-Film Transistor Performance. <i>Electronics (Switzerland)</i> , 2021, 10, 200.	1.8	9
12	Improving of Sensitivity of PbS Quantum Dot Based SWIR Photodetector Using P3HT. <i>Materials</i> , 2021, 14, 1488.	1.3	4
13	Numerical Design of Carrier Transporting Layer in Top-Gate $InGaZnO$ Thin-Film Transistors for Controlling Potential Energy. <i>Journal of Nanoscience and Nanotechnology</i> , 2021, 21, 3847-3852.	0.9	1
14	Improved Negative Bias Stress Stability of Sol-Gel-Processed Li-Doped SnO_{2} Thin-Film Transistors. <i>Electronics (Switzerland)</i> , 2021, 10, 1629.	1.8	6
15	Design of a Capacitorless Dynamic Random Access Memory Based on Ultra-Thin Polycrystalline Silicon Junctionless Field-Effect Transistor with Dual-Gate. <i>Journal of Nanoscience and Nanotechnology</i> , 2021, 21, 4223-4229.	0.9	1
16	The Effect of Grain Boundary on Electrical Characteristics in the Source and Drain Regions of Polycrystalline Silicon Based in One Transistor Dynamic Random Access Memory. <i>Journal of Nanoscience and Nanotechnology</i> , 2021, 21, 4258-4267.	0.9	0
17	Design and Analysis of DC/DC Boost Converter Using Vertical GaN Power Device. <i>Journal of Nanoscience and Nanotechnology</i> , 2021, 21, 4320-4324.	0.9	0
18	Design of a Capacitorless Dynamic Random Access Memory Based on Junctionless Dual-Gate Field-Effect Transistor with a Silicon-Germanium/Silicon Nanotube. <i>Journal of Nanoscience and Nanotechnology</i> , 2021, 21, 4235-4242.	0.9	1

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19	Extremely bias stress stable enhancement mode sol-gel-processed SnO ₂ thin-film transistors with Y ₂ O ₃ passivation layers. Applied Surface Science, 2021, 559, 149971.	3.1	20
20	Urbach Energy-Dictated Spatial Propagation of Electrons in Thermodynamically Tuned Amorphous Zirconia Thin Films. Advanced Materials Interfaces, 2021, 8, 2101104.	1.9	2
21	Sol-gel-processed amorphous-phase ZrO ₂ based resistive random access memory. Materials Research Express, 2021, 8, 116301.	0.8	10
22	Design of Capacitorless DRAM Based on Polycrystalline Silicon Nanotube Structure. IEEE Access, 2021, 9, 163675-163685.	2.6	6
23	Fluoropolymer-based organic memristor with multifunctionality for flexible neural network system. Npj Flexible Electronics, 2021, 5, .	5.1	40
24	Versatile use of ZnO interlayer in hybrid solar cells for self-powered near infra-red photo-detecting application. Journal of Alloys and Compounds, 2020, 813, 152202.	2.8	19
25	Contact line curvature-induced molecular misorientation of a surface energy patterned organic semiconductor in meniscus-guided coating. Applied Surface Science, 2020, 504, 144362.	3.1	10
26	Polycrystalline silicon metal-oxide-semiconductor field-effect transistor-based stacked multi-layer one-transistor dynamic random-access memory with double-gate structure for the embedded systems. Japanese Journal of Applied Physics, 2020, 59, SGG01.	0.8	5
27	Improving Ni/GaN Schottky diode performance through interfacial passivation layer formed via ultraviolet/ozone treatment. Current Applied Physics, 2020, 20, 293-297.	1.1	4
28	Simulation of capacitorless dynamic random access memory based on junctionless FinFETs using grain boundary of polycrystalline silicon. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	5
29	Polarization-Charge Inversion at Al ₂ O ₃ /GaN Interfaces through Post-Deposition Annealing. Electronics (Switzerland), 2020, 9, 1068.	1.8	4
30	Expeditious and eco-friendly solution-free self-patterning of sol-gel oxide semiconductor thin films. Materials and Design, 2020, 194, 108949.	3.3	5
31	Conformal and Ultra Shallow Junction Formation Achieved Using a Pulsed-Laser Annealing Process Integrated With a Modified Plasma Assisted Doping Method. IEEE Access, 2020, 8, 172166-172174.	2.6	7
32	Effect of High-Speed Blade Coating on Electrical Characteristics in Polymer Based Transistors. Journal of Nanoscience and Nanotechnology, 2020, 20, 5486-5490.	0.9	3
33	Effect of Mg Doping on the Electrical Performance of a Sol-Gel-Processed SnO ₂ Thin-Film Transistor. Electronics (Switzerland), 2020, 9, 523.	1.8	16
34	Fabrication of AlGaN/GaN MISHEMT with dual-metal gate electrode and its performances. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	9
35	Enhancement Mode Flexible SnO ₂ Thin Film Transistors Via a UV/Ozone-Assisted Sol-Gel Approach. IEEE Access, 2020, 8, 123013-123018.	2.6	10
36	Recessed-Gate GaN Metal-Insulator-Semiconductor High-Electron-Mobility Transistor Using a Dual Gate-Insulator Employing TiO ₂ /SiN. Journal of Nanoscience and Nanotechnology, 2020, 20, 4678-4683.	0.9	2

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37	Analysis of Logic Inverter Based on Polycrystalline Silicon with Single Grain Boundary. Journal of Nanoscience and Nanotechnology, 2020, 20, 6616-6621.	0.9	0
38	Sol-Gel Processed Yttrium-Doped SnO ₂ Thin Film Transistors. Electronics (Switzerland), 2020, 9, 254.	1.8	29
39	Numerical Analysis on Effective Mass and Traps Density Dependence of Electrical Characteristics of a-IGZO Thin-Film Transistors. Electronics (Switzerland), 2020, 9, 119.	1.8	13
40	High performance of solution-processed SnO ₂ thin-film transistors by promotion of photo-exposure time-dependent carrier transport during the pre-annealing stage. Semiconductor Science and Technology, 2020, 35, 065019.	1.0	7
41	Application of Genetic Algorithm for More Efficient Multi-Layer Thickness Optimization in Solar Cells. Energies, 2020, 13, 1726.	1.6	13
42	Improved negative bias stability of sol-gel processed Ti-doped SnO ₂ thin-film transistors. Semiconductor Science and Technology, 2020, 35, 115023.	1.0	9
43	Theoretical Analysis of Prospects of Organic Photovoltaics as a Multi-Functional Solar Cell and Laser Power Converter for Wireless Power Transfer. Journal of Nanoscience and Nanotechnology, 2020, 20, 4878-4883.	0.9	1
44	Optoelectronic Properties of Sol-gel Processed SnO ₂ Thin Film Transistors. Journal of Sensor Science and Technology, 2020, 29, 328-331.	0.1	0
45	Analysis of CMOS Logic Inverter Based on Gate-All-Around Field-Effect Transistors with the Strained-Silicon Layer for Improving the Switching Performances. Journal of Nanoscience and Nanotechnology, 2020, 20, 6632-6637.	0.9	0
46	Design and Analysis of Metal-Oxide-Semiconductor Field-Effect Transistor-Based Capacitorless One-Transistor Embedded Dynamic Random-Access Memory with Double-Polysilicon Layer Using Grain Boundary for Hole Storage. Journal of Nanoscience and Nanotechnology, 2020, 20, 6596-6602.	0.9	0
47	High-Detectivity Flexible Near-Infrared Photodetector Based on Chalcogenide Ag ₂ Se Nanoparticles. Advanced Optical Materials, 2019, 7, 1900812.	3.6	35
48	Importance of Blade-Coating Temperature for Diketopyrrolopyrrole-based Thin-Film Transistors. Crystals, 2019, 9, 346.	1.0	6
49	Effect of Annealing Ambient on SnO ₂ Thin Film Transistors Fabricated via An Ethanol-based Sol-gel Route. Electronics (Switzerland), 2019, 8, 955.	1.8	15
50	Comparative Study of Triboelectric Nanogenerators with Differently Woven Cotton Textiles for Wearable Electronics. Polymers, 2019, 11, 1443.	2.0	13
51	Effect of Annealing Environment on the Performance of Sol-Gel-Processed ZrO ₂ RRAM. Electronics (Switzerland), 2019, 8, 947.	1.8	18
52	Alternative approach to optimizing optical spacer layer thickness in solar cell using evolutionary algorithm. , 2019, , .		0
53	The Crucial Role of Quaternary Mixtures of Active Layer in Organic Indoor Solar Cells. Energies, 2019, 12, 1838.	1.6	12
54	Ultra-Short Pulsed Laser Annealing Effects on MoS ₂ Transistors with Asymmetric and Symmetric Contacts. Electronics (Switzerland), 2019, 8, 222.	1.8	8

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55	Densification Control as a Method of Improving the Ambient Stability of Sol-Gel-Processed SnO ₂ Thin-Film Transistors. IEEE Electron Device Letters, 2019, 40, 905-908.	2.2	13
56	Design and Optimization of Germanium-Based Gate-Metal-Core Vertical Nanowire Tunnel FET. Micromachines, 2019, 10, 749.	1.4	6
57	Impact of Device Area and Film Thickness on Performance of Sol-Gel Processed ZrO ₂ RRAM. IEEE Electron Device Letters, 2018, 39, 668-671.	2.2	29
58	Sol-Gel Processed p-Type CuO Phototransistor for a Near-Infrared Sensor. IEEE Electron Device Letters, 2018, 39, 47-50.	2.2	43
59	Schottky Nature of Au/SnO ₂ Ultrathin Film Diode Fabricated Using Sol-Gel Process. IEEE Electron Device Letters, 2018, 39, 1732-1735.	2.2	16
60	High Performance Sol-gel Processed SnO ₂ thin film transistor with sol-gel processed ZrO ₂ layers. , 2018, , .		1
61	Improved Negative Bias Stress Stability of Sol-Gel-Processed Mg-Doped In ₂ O ₃ Thin Film Transistors. IEEE Electron Device Letters, 2018, 39, 1872-1875.	2.2	20
62	UV/ozone-process-assisted low-temperature SnO ₂ thin-film transistors. , 2018, , .		0
63	Sol-gel processed Mg-doped In ₂ O ₃ thin-film transistors. , 2018, , .		0
64	High Performance Ultrathin SnO ₂ Thin-Film Transistors by Sol-Gel Method. IEEE Electron Device Letters, 2018, 39, 1179-1182.	2.2	32
65	Effect of electrode material on resistive switching memory behavior of solution-processed resistive switches: Realization of robust multi-level cells. Thin Solid Films, 2017, 625, 87-92.	0.8	26
66	Self-alignment of 6,13-bis(triisopropylsilylethynyl)pentacene molecules through magnetic flux-affected nanoparticle motion in solution-processed transistors. Organic Electronics, 2017, 47, 44-50.	1.4	6
67	Improvement in the Performance of Sol-Gel Processed In ₂ O ₃ Thin-Film Transistor Depending on Sb Dopant Concentration. IEEE Electron Device Letters, 2017, 38, 1027-1030.	2.2	18
68	Enhanced Performance of Thiophene-Rich Heteroacene, Dibenzothiopheno [6,5-b:6 TM ,5 TM -f] Thieno[3,2-b]Thiophene Thin-Film Transistor With MoO _x Hole Injection Layers. IEEE Electron Device Letters, 2017, 38, 649-652.	2.2	6
69	Solution-Processed Complementary Resistive Switching Arrays for Associative Memory. IEEE Transactions on Electron Devices, 2017, 64, 4310-4316.	1.6	19
70	Effect of electrode material on characteristics of non-volatile resistive memory consisting of Ag ₂ S nanoparticles. AIP Advances, 2016, 6, 075006.	0.6	6
71	Laser Direct Writing Process for Making Electrodes and High- <i>k</i> Sol-Gel ZrO ₂ for Boosting Performances of MoS ₂ Transistors. ACS Applied Materials & Interfaces, 2016, 8, 9314-9318.	4.0	21
72	P-type CuO and Cu ₂ O transistors derived from a sol-gel copper (II) acetate monohydrate precursor. Thin Solid Films, 2016, 600, 157-161.	0.8	72

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73	Aging Effects on Electrical Characteristics of Sol-gel Processed CuO Thin Film Transistors. Journal of the Korean Institute of Electrical and Electronic Material Engineers, 2016, 29, 527-531.	0.0	0
74	Flexible spin-orbit torque devices. Applied Physics Letters, 2015, 107, .	1.5	26
75	39.1: <i>Invited Paper</i>: Printed Inorganic Transistors Based on Transparent Oxides. Digest of Technical Papers SID International Symposium, 2015, 46, 587-590.	0.1	3
76	Gravure-Printed Solâ€Gels on Flexible Glass: A Scalable Route to Additively Patterned Transparent Conductors. ACS Applied Materials & Interfaces, 2015, 7, 12679-12687.	4.0	44
77	Fully Inkjetâ€Printed Transparent Oxide Thin Film Transistors Using a Fugitive Wettability Switch. Advanced Electronic Materials, 2015, 1, 1500086.	2.6	99
78	Megahertz-class printed high mobility organic thin-film transistors and inverters on plastic using attoliter-scale high-speed gravure-printed sub-5 Î¼m gate electrodes. Organic Electronics, 2014, 15, 3639-3647.	1.4	50
79	Analysis of flicker noise in two-dimensional multilayer MoS2 transistors. Applied Physics Letters, 2014, 104, .	1.5	56
80	Transparent Highâ€Performance Thin Film Transistors from Solutionâ€Processed SnO₂/ZrO₂ Gelâ€like Precursors. Advanced Materials, 2013, 25, 1042-1047.	11.1	149
81	Nanocrystal-Based Complementary Inverters Constructed on Flexible Plastic Substrates. Journal of Nanoscience and Nanotechnology, 2013, 13, 3597-3601.	0.9	2
82	A very reliable multilevel YSZ resistive switching memory. , 2012, , .		2
83	Resistance Switching Characteristics of Solid Electrolyte Chalcogenide Ag₂Se Nanoparticles for Flexible Nonvolatile Memory Applications. Advanced Materials, 2012, 24, 3573-3576.	11.1	101
84	Highâ€Performance Printed Transistors Realized Using Femtoliter Gravureâ€Printed Subâ€10 Î¼m Metallic Nanoparticle Patterns and Highly Uniform Polymer Dielectric and Semiconductor Layers. Advanced Materials, 2012, 24, 3065-3069.	11.1	168
85	Optoelectronic Characteristics of HgSe Nanoparticle Films Spin-Coated on Flexible Plastic Substrates. Japanese Journal of Applied Physics, 2010, 49, 030210.	0.8	10
86	N-channel thin-film transistors constructed on plastic by solution processes of HgSe nanocrystals. Microelectronic Engineering, 2009, 86, 2030-2033.	1.1	15
87	Synthesis and electrical characteristics of Ag2S nanocrystals. Materials Letters, 2008, 62, 1438-1440.	1.3	29
88	Transparent and flexible thin-film transistors with channel layers composed of sintered HgTe nanocrystals. Nanotechnology, 2008, 19, 015204.	1.3	33
89	Analysis and Optimization for Characteristics of Vertical GaN Junctionless MOSFETs Depending on Specifications of GaN Substrates. Journal of Electrical Engineering and Technology, 0, , .	1.2	0