

Tae-Sik Yoon

List of Publications by Year in descending order

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80
papers

1,223
citations

393982

19
h-index

433756

31
g-index

80
all docs

80
docs citations

80
times ranked

1537
citing authors

#	ARTICLE	IF	CITATIONS
1	Use of fluorine-doped tin oxide instead of indium tin oxide in highly efficient air-fabricated inverted polymer solar cells. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	109
2	Nucleation kinetics of Ru on silicon oxide and silicon nitride surfaces deposited by atomic layer deposition. <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	69
3	Reversible transition of volatile to non-volatile resistive switching and compliance current-dependent multistate switching in IGZO/MnO RRAM devices. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	60
4	Compliance Current-Controlled Conducting Filament Formation in Tantalum Oxide-Based RRAM Devices with Different Top Electrodes. <i>ACS Applied Electronic Materials</i> , 2020, 2, 1154-1161.	2.0	55
5	Digital versus analog resistive switching depending on the thickness of nickel oxide nanoparticle assembly. <i>RSC Advances</i> , 2013, 3, 20978.	1.7	53
6	A memristor crossbar array of titanium oxide for non-volatile memory and neuromorphic applications. <i>Semiconductor Science and Technology</i> , 2017, 32, 065014.	1.0	43
7	Artificial synaptic characteristics with strong analog memristive switching in a Pt/CeO ₂ /Pt structure. <i>Nanotechnology</i> , 2017, 28, 285203.	1.3	38
8	Tunable threshold resistive switching characteristics of Pt@Fe ₂ O ₃ core-shell nanoparticle assembly by space charge effect. <i>Nanoscale</i> , 2013, 5, 772-779.	2.8	36
9	Organic memory device with polyaniline nanoparticles embedded as charging elements. <i>Applied Physics Letters</i> , 2012, 100, 163301.	1.5	31
10	Colloidal Nanoparticle-Layer Formation Through Dip-Coating: Effect of Solvents and Substrate Withdrawing Speed. <i>Journal of the Electrochemical Society</i> , 2009, 156, K86.	1.3	27
11	Analog reversible nonvolatile memcapacitance in metal-oxide-semiconductor memcapacitor with ITO/HfOx/Si structure. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	27
12	Single- and double-gate synaptic transistor with TaO _x gate insulator and IGZO channel layer. <i>Nanotechnology</i> , 2019, 30, 025203.	1.3	26
13	Investigation of analog memristive switching of iron oxide nanoparticle assembly between Pt electrodes. <i>Journal of Applied Physics</i> , 2013, 114, 224505.	1.1	24
14	Multimode threshold and bipolar resistive switching in bi-layered Pt-Fe ₂ O ₃ core-shell and Fe ₂ O ₃ nanoparticle assembly. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	23
15	A Pt/ITO/CeO ₂ /Pt memristor with an analog, linear, symmetric, and long-term stable synaptic weight modulation. <i>APL Materials</i> , 2019, 7, 071113.	2.2	23
16	Enhancement of cortisol measurement sensitivity by laser illumination for AlGaIn/GaN transistor biosensor. <i>Biosensors and Bioelectronics</i> , 2020, 159, 112186.	5.3	23
17	High spatial density nanocrystal formation using thin layer of amorphous Si _{0.7} Ge _{0.3} deposited on SiO ₂ . <i>Journal of Applied Physics</i> , 2000, 87, 2449-2453.	1.1	20
18	Synaptic transistor with a reversible and analog conductance modulation using a Pt/HfOx/n-IGZO memcapacitor. <i>Nanotechnology</i> , 2017, 28, 225201.	1.3	20

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19	Resistive switching characteristics of manganese oxide thin film and nanoparticle assembly hybrid devices. Japanese Journal of Applied Physics, 2018, 57, 06HC03.	0.8	20
20	Surface roughness and dislocation distribution in compositionally graded relaxed SiGe buffer layer with inserted-strained Si layers. Applied Physics Letters, 2005, 87, 012104.	1.5	19
21	Analog and bipolar resistive switching in pn junction of n-type ZnO nanowires on p-type Si substrate. Journal of Applied Physics, 2013, 114, 064502.	1.1	19
22	Analog Memristive and Memcapacitive Characteristics of Pt-Fe ₂ O ₃ Core-Shell Nanoparticles Assembly on p-Si Substrate. IEEE Nanotechnology Magazine, 2015, 14, 798-805.	1.1	19
23	CsPbBr ₃ Perovskite Quantum Dot Light-Emitting Diodes Using Atomic Layer Deposited Al ₂ O ₃ and ZnO Interlayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900573.	1.2	19
24	Effects on Annealing Temperature for Solution-Processed IZTO TFTs by Nitrogen Incorporation. Electrochemical and Solid-State Letters, 2010, 13, H419.	2.2	18
25	Electrical charging of Au nanoparticles embedded by streptavidin-biotin biomolecular binding in organic memory device. Applied Physics Letters, 2010, 97, .	1.5	18
26	Forming-free resistive switching characteristics of Ag/CeO ₂ /Pt devices with a large memory window. Semiconductor Science and Technology, 2017, 32, 055006.	1.0	18
27	Completely Filling Anodic Aluminum Oxide with Maghemite Nanoparticles by Dip Coating and Their Magnetic Properties. Electrochemical and Solid-State Letters, 2009, 12, K59.	2.2	17
28	Memcapacitive characteristics in reactive-metal (Mo, Al)/HfOX/n-Si structures through migration of oxygen by applied voltage. Applied Physics Letters, 2016, 108, .	1.5	17
29	The effect of excess surfactants on the adsorption of iron oxide nanoparticles during a dip-coating process. Journal of Nanoparticle Research, 2009, 11, 831-839.	0.8	16
30	Robust ZnO nanoparticle embedded memory device using vancomycin conjugate and its biorecognition for electrical charging node. Biosensors and Bioelectronics, 2014, 56, 33-38.	5.3	16
31	Resistive switching characteristics of Ag/MnO/CeO ₂ /Pt heterostructures memory devices. Microelectronic Engineering, 2018, 189, 28-32.	1.1	16
32	Reversible capacitance changes in the MOS capacitor with an ITO/CeO ₂ /p-Si structure. Journal of Alloys and Compounds, 2019, 786, 655-661.	2.8	16
33	Multistate resistive switching characteristics of ZnO nanoparticles embedded polyvinylphenol device. Journal of Industrial and Engineering Chemistry, 2018, 64, 85-89.	2.9	15
34	Nonvolatile Memory and Artificial Synaptic Characteristics in Thin-Film Transistors with Atomic Layer Deposited HfOx Gate Insulator and ZnO Channel Layer. Advanced Electronic Materials, 2020, 6, 2000412.	2.6	13
35	Assembly of Colloidal Nanoparticles into Anodic Aluminum Oxide Templates by Dip-Coating Process. IEEE Nanotechnology Magazine, 2009, 8, 707-712.	1.1	12
36	Enhanced Brightness and Device Lifetime of Quantum Dot Light-Emitting Diodes by Atomic Layer Deposition. Advanced Materials Interfaces, 2020, 7, 2000343.	1.9	12

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37	Strain-Induced Photocurrent Enhancement in Photodetectors Based on Nanometer-Thick ZnO Films on Flexible Polydimethylsiloxane Substrates. <i>ACS Applied Nano Materials</i> , 2020, 3, 10922-10930.	2.4	11
38	Ge-rich Si _{1-x} Ge _x nanocrystal formation by the oxidation of an as-deposited thin amorphous Si _{0.7} Ge _{0.3} layer. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002, 20, 631.	1.6	10
39	Non-volatile nano-floating gate memory with Pt-Fe ₂ O ₃ composite nanoparticles and indium gallium zinc oxide channel. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	0.8	10
40	Organic memory device with self-assembly monolayered aptamer conjugated nanoparticles. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	10
41	Resistive switching of in situ polymerized polystyrene matrix copolymerized with alkanediethyl passivated Si nanoparticles. <i>Microelectronic Engineering</i> , 2015, 136, 26-30.	1.1	10
42	Resistive Switching Characteristics of Tantalum Oxide and Titanium Oxide Heterojunction Devices. <i>Journal of Nanoscience and Nanotechnology</i> , 2017, 17, 7150-7154.	0.9	10
43	Synaptic characteristics with strong analog potentiation, depression, and short-term to long-term memory transition in a Pt/CeO ₂ /Pt crossbar array structure. <i>Nanotechnology</i> , 2018, 29, 265204.	1.3	10
44	Analog Memristive Characteristics of Mesoporous Silica-Titania Nanocomposite Device Concurrent with Selection Diode Property. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 36807-36816.	4.0	10
45	Electrical charging characteristics of Au NPs embedded by sequence specific complementary DNA hybridization in metal-pentacene-insulator-silicon device. <i>Biochip Journal</i> , 2014, 8, 275-281.	2.5	9
46	Improvement of forming-free threshold switching reliability of CeO ₂ -based selector device by controlling volatile filament formation behaviors. <i>APL Materials</i> , 2022, 10, .	2.2	9
47	Voltage-dependent resistive switching characteristics in mixed layer consisting of Fe ₂ O ₃ and Pt-Fe ₂ O ₃ core-shell nanoparticles. <i>Applied Physics Letters</i> , 2014, 104, 093514.	1.5	8
48	Nonvolatile reversible capacitance changes through filament formation in a floating-gate metal-oxide-semiconductor capacitor with Ag/CeO _x /Pt/HfO _x /n-Si structure. <i>Applied Physics Letters</i> , 2019, 115, 072106.	1.5	8
49	Resistive Switching Characteristics in MnO Nanoparticle Assembly and Ag ₂ Se Thin Film Devices. <i>Journal of Nanoscience and Nanotechnology</i> , 2017, 17, 7189-7193.	0.9	7
50	Nanocrystal floating gate memory with solution-processed indium-zinc-tin-oxide channel and colloidal silver nanocrystals. <i>Semiconductor Science and Technology</i> , 2011, 26, 125021.	1.0	6
51	Interface state-dependent synaptic characteristics of Pt/CeO ₂ /Pt memristors controlled by post-deposition annealing. <i>Materials Science in Semiconductor Processing</i> , 2022, 147, 106718.	1.9	6
52	Study of growth behaviour and microstructure of epitaxially grown self-assembled Ge quantum dots on nanometer-scale patterned SiO ₂ /Si(001) substrates. <i>Physica Status Solidi (B): Basic Research</i> , 2009, 246, 721-724.	0.7	5
53	Selective Incorporation of Colloidal Nanocrystals in Nanopatterned SiO ₂ Layer for Nanocrystal Memory Device. <i>Electrochemical and Solid-State Letters</i> , 2010, 13, K19.	2.2	5
54	Morphological dependence of hydrothermally synthesized ZnO nanowires on synthesis temperature and molar concentration. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 1448-1453.	0.8	5

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55	Resistive switching characteristics of TiO ₂ thin films with different electrodes. Journal of the Korean Physical Society, 2015, 67, 936-940.	0.3	5
56	The γ -Fe ₂ O ₃ Nanoparticle Assembly-Based Memristor Ratioed Logic and Its Optical Tuning. IEEE Electron Device Letters, 2016, 37, 986-989.	2.2	5
57	Tri-state resistive switching characteristics of MnO/Ta ₂ O ₅ resistive random access memory device by a controllable reset process. Journal Physics D: Applied Physics, 2018, 51, 225102.	1.3	5
58	Post-annealing temperature-dependent electrical properties of thin-film transistors with a ZnO channel and HfO _x gate insulator deposited by atomic layer deposition. Semiconductor Science and Technology, 2020, 35, 075013.	1.0	5
59	Wide range modulation of synaptic weight in thin-film transistors with hafnium oxide gate insulator and indium-zinc oxide channel layer for artificial synapse application. Nanoscale, 2021, 13, 11370-11379.	2.8	5
60	Synaptic behaviors of thin-film transistor with a Pt/HfO _x /n-type indium-gallium-zinc oxide gate stack. Nanotechnology, 2018, 29, 295201.	1.3	4
61	Effect of nitrogen-doping on drain current modulation characteristics of an indium-gallium-zinc oxide thin-film transistor. Nanotechnology, 2020, 31, 265201.	1.3	4
62	Analog Memristive Characteristics of Square Shaped Lanthanum Oxide Nanoplates Layered Device. Nanomaterials, 2021, 11, 441.	1.9	4
63	Vertically and Laterally Self-Aligned Double Layer of Nanocrystals in Nanopatterned Dielectric Layer for Nanocrystal Floating Gate Memory Device. Electrochemical and Solid-State Letters, 2010, 13, H366.	2.2	3
64	Resistive switching characteristics of ZnO nanoparticles layer-by-layer assembly based on cortisol and its antibody immune binding. Journal of Industrial and Engineering Chemistry, 2019, 78, 66-72.	2.9	3
65	Effect of the Bilayer Period of Atomic Layer Deposition on the Growth Behavior and Electrical Properties of the Amorphous In-Zn-O Film. ACS Applied Materials & Interfaces, 2020, 12, 39372-39380.	4.0	3
66	CsPbBr ₃ Perovskite Quantum Dot Light-Emitting Diodes Using Atomic Layer Deposited Al ₂ O ₃ and ZnO Interlayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2070012.	1.2	3
67	Electroforming-free threshold switching of NbO _x -based selector devices by controlling conducting phases in the NbO _x layer for the application to crossbar array architectures. RSC Advances, 2022, 12, 18547-18558.	1.7	3
68	Nonvolatile memory characteristics associated with oxygen ion exchange in thin-film transistors with indium-zinc oxide channel and HfO _{2-x} gate oxide. Materials Today Advances, 2022, 15, 100264.	2.5	3
69	Programming dynamics of a single electron memory cell with a high-density SiGe nanocrystal array at room temperature. , 0, , .		2
70	Improvement of dynamic characteristics of polydimethylsiloxane based microvalve. Microsystem Technologies, 2009, 15, 607-609.	1.2	2
71	Effects of gamma irradiation on the electrical characteristics of trench-gate non-punch-through insulated gate bipolar transistor. Semiconductor Science and Technology, 2019, 34, 065022.	1.0	2
72	Affinity Characteristics of Histone-Derived Peptide Layer by Memory Charging Effect Using Chromatin Protein Conjugated Gold Nanoparticles. Science of Advanced Materials, 2014, 6, 2478-2482.	0.1	2

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73	Resistive Switching Characteristics of Core-Shell Nanoparticles of Metal-Oxide on Flexible Substrate. ECS Transactions, 2011, 41, 483-488.	0.3	1
74	Attachment of FePt-Fe ₂ O ₃ core-shell nanoparticles on carbon nanotubes and their electrical-transport characteristics. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2622-2627.	0.8	1
75	Solution Processed Hafnium Oxide Doped Siloxane Dielectrics for a Thin Film Transistor with Reduced Graphene Oxide Channel on Flexible Substrate. Journal of Nanoscience and Nanotechnology, 2017, 17, 7423-7428.	0.9	1
76	Light-Emitting Diodes: Enhanced Brightness and Device Lifetime of Quantum Dot Light-Emitting Diodes by Atomic Layer Deposition (Adv. Mater. Interfaces 12/2020). Advanced Materials Interfaces, 2020, 7, 2070067.	1.9	1
77	Si _{0.7} /Ge _{0.3} Quantum Dot Formation by Interface Agglomeration. , 1998, , .		0
78	Ge-rich Si _{1-x} Ge _x Nanocrystal Formation by the Oxidation of As-Deposited Thin Amorphous Si _{0.7} Ge _{0.3} Layer. Materials Research Society Symposia Proceedings, 2002, 727, 1.	0.1	0
79	Electrical properties of charging effect in Au nanoparticle memory device. Materials Research Society Symposia Proceedings, 2009, 1207, 1.	0.1	0
80	Controlling dislocation positions in silicon germanium (SiGe) buffer layers by local oxidation. Thin Solid Films, 2010, 518, S217-S221.	0.8	0