Jer-Chyi Wang

List of Publications by Year
in descending order

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82	696	516710 16	642732 23
papers	citations	h-index	g-index

83	83	83	833
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Programmable Synaptic Metaplasticity and below Femtojoule Spiking Energy Realized in Graphene-Based Neuromorphic Memristor. ACS Applied Materials & Interfaces, 2018, 10, 20237-20243.	8.0	71
2	Characterization of Piezoresistive PEDOT:PSS Pressure Sensors with Inter-Digitated and Cross-Point Electrode Structures. Sensors, 2015, 15, 818-831.	3.8	37
3	Characteristics of Gadolinium Oxide Nanocrystal Memory with Optimized Rapid Thermal Annealing. Electrochemical and Solid-State Letters, 2009, 12, H202.	2.2	34
4	Total ionizing dose (TID) effects of Î³ ray radiation on switching behaviors of Ag/AlO x /Pt RRAM device. Nanoscale Research Letters, 2014, 9, 452.	5.7	34
5	Miniaturized Flexible Piezoresistive Pressure Sensors: Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) Copolymers Blended with Graphene Oxide for Biomedical Applications. ACS Applied Materials & Interfaces, 2019, 11, 34305-34315.	8.0	32
6	A Fluorographeneâ€Based Synaptic Transistor. Advanced Materials Technologies, 2019, 4, 1900422.	5.8	30
7	Nanostructure band engineering of gadolinium oxide nanocrystal memory by CF4 plasma treatment. Applied Physics Letters, 2010, 97, 023513.	3.3	25
8	LAPS with nanoscaled and highly polarized HfO2 by CF4 plasma for NH4+ detection. Sensors and Actuators B: Chemical, 2013, 180, 71-76.	7.8	24
9	Integration of ammonia-plasma-functionalized graphene nanodiscs as charge trapping centers for nonvolatile memory applications. Carbon, 2017, 113, 318-324.	10.3	22
10	CF4plasma treatment on nanostructure band engineered Gd2O3-nanocrystal nonvolatile memory. Journal of Applied Physics, 2011, 109, 064506.	2.5	21
11	Characterization of gadolinium oxide thin films with CF4 plasma treatment for resistive switching memory applications. Applied Surface Science, 2013, 276, 497-501.	6.1	21
12	Characterization of K+ and Na+-Sensitive Membrane Fabricated by CF4 Plasma Treatment on Hafnium Oxide Thin Films on ISFET. Journal of the Electrochemical Society, 2011, 158, J91.	2.9	19
13	Nitrogen Plasma Surface Modification of Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) Films To Enhance the Piezoresistive Pressure-Sensing Properties. Journal of Physical Chemistry C, 2016, 120, 25977-25984.	3.1	19
14	High-Performance Multilevel Resistive Switching Gadolinium Oxide Memristors With Hydrogen Plasma Immersion Ion Implantation Treatment. IEEE Electron Device Letters, 2014, 35, 452-454.	3.9	18
15	Lightâ€Addressable Potentiometric Sensor with Nitrogenâ€Incorporated Ceramic Sm₂O₃ Membrane for Chloride Ions Detection. Journal of the American Ceramic Society, 2015, 98, 443-447.	3.8	17
16	Gadolinium-based metal oxide for nonvolatile memory applications. Microelectronics Reliability, 2012, 52, 635-641.	1.7	16
17	Cross-Talk Immunity of PEDOT:PSS Pressure Sensing Arrays with Gold Nanoparticle Incorporation. Scientific Reports, 2017, 7, 12252.	3.3	12
18	Nonlinear resistive switching features of rapid-thermal-annealed aluminum nitride dielectrics with modified charge trapping behaviors. Microelectronic Engineering, 2019, 216, 111033.	2.4	11

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19	Robust sandwiched fluorinated graphene for highly reliable flexible electronics. Applied Surface Science, 2020, 499, 143839.	6.1	11
20	Nanoscale Multidimensional Pd/TiO2/g-C3N4 Catalyst for Efficient Solar-Driven Photocatalytic Hydrogen Production. Catalysts, 2021, 11, 59.	3.5	10
21	Submillimeter-Scaled PEDOT:PSS/PPy Piezoresistive Pressure Sensor Array and Its Applications in Biomedicine. IEEE Sensors Journal, 2022, 22, 6418-6425.	4.7	10
22	Gadolinium oxide nanocrystal nonvolatile memory with HfO2/Al2O3 nanostructure tunneling layers. Nanoscale Research Letters, 2012, 7, 177.	5.7	9
23	Effects of charge storage dielectric thickness on hybrid gadolinium oxide nanocrystal and charge trapping nonvolatile memory. Current Applied Physics, 2014, 14, 232-236.	2.4	9
24	Dimensionally anisotropic graphene with high mobility and a high onâ€“off ratio in a three-terminal RRAM device. Materials Chemistry Frontiers, 2020, 4, 1756-1763.	5.9	9
25	Zero Dipole Formation at HfGdO/SiO2 Interface by Hf/Gd Dual-Sputtered Method. Journal of the Electrochemical Society, 2011, 158, H502.	2.9	8
26	Superior Improvements in GIDL and Retention by Fluorine Implantation in Saddle-Fin Array Devices for Sub-40-nm DRAM Technology. IEEE Electron Device Letters, 2013, 34, 1124-1126.	3.9	8
27	Real-Time Intraoperative Pressure Monitoring to Avoid Surgically Induced Localized Brain Injury Using a Miniaturized Piezoresistive Pressure Sensor. ACS Omega, 2020, 5, 29342-29350.	3.5	8
28	Fluorinated HfO<inf>2</inf> gate dielectrics engineering for CMOS by pre- and post-CF<inf>4</inf> plasma passivation. , 2008, , .		7
29	Platinumâ€“aluminum alloy electrode for retention improvement of gadolinium oxide resistive switching memory. Applied Physics A: Materials Science and Processing, 2013, 113, 37-40.	2.3	7
30	Effects of bottom electrode on resistive switching of silver programmable metallization cells with Gd x O y /Al x O y solid electrolytes. Vacuum, 2017, 140, 30-34.	3.5	7
31	Layer-dependent solvent vapor annealing on stacked ferroelectric P(VDF-TrFE) copolymers for highly efficient nanogenerator applications. Polymer, 2020, 204, 122822.	3.8	7
32	Antiferroelectric titanium-doped zirconia thin films deposited via HiPIMS for highly efficient electrocaloric applications. Journal of the European Ceramic Society, 2021, 41, 3387-3396.	5.7	7
33	Effects of CF4Plasma Treatment on pH and pNa Sensing Properties of Light-Addressable Potentiometric Sensor with a 2-nm-Thick Sensitive HfO2Layer Grown by Atomic Layer Deposition. Japanese Journal of Applied Physics, 2011, 50, 04DL06.	1.5	7
34	Improved characteristics of Gd2O3 nanocrystal memory with substrate highâ€“low junction. Solid-State Electronics, 2010, 54, 1493-1496.	1.4	6
35	Tunable bandgap energy of fluorinated nanocrystals for flash memory applications produced by low-damage plasma treatment. Nanotechnology, 2012, 23, 475201.	2.6	6
36	Low-Power and High-Reliability Gadolinium Oxide Resistive Switching Memory with Remote Ammonia Plasma Treatment. Japanese Journal of Applied Physics, 2013, 52, 04CD07.	1.5	6

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37	Compacted Selfâ€Assembly Graphene with Hydrogen Plasma Surface Modification for Robust Artificial Electronic Synapses of Gadolinium Oxide Memristors. Advanced Materials Interfaces, 2020, 7, 2000860.	3.7	6
38	Nano-IGZO layer for EGFET in pH sensing characteristics. , 2013, , .		5
39	Thickness-Optimized Multilevel Resistive Switching of Silver Programmable Metallization Cells With Stacked SiO_{<italic>x</italic>}/SiO₂ Solid Electrolytes. IEEE Transactions on Electron Devices, 2015, 62, 1478-1483.	3.0	5
40	Low-damage NH 3 plasma treatment on SiO 2 tunneling oxide of chemically-synthesized gold nanoparticle nonvolatile memory. Current Applied Physics, 2016, 16, 605-610.	2.4	5
41	Dual-sputtered process sensitivity of HfGdO charge-trapping layer in SONOS-type nonvolatile memory. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 011009.	1.2	4
42	Retention behavior of graphene oxide resistive switching memory on flexible substrate. , 2013, , .		4
43	Performance improvement of gadolinium oxide resistive random access memory treated by hydrogen plasma immersion ion implantation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	4
44	Charge storage characteristics of nonvolatile memories with chemically-synthesized and vacuum-deposited gold nanoparticles. Current Applied Physics, 2015, 15, 535-540.	2.4	4
45	Interface Modification of Bernal- and Rhombohedral-Stacked Trilayer-Graphene/Metal Electrode on Resistive Switching of Silver Electrochemical Metallization Cells. ACS Applied Materials & Interfaces, 2017, 9, 37031-37040.	8.0	4
46	Multilevel resistive switching behaviors of N₂-plasma-treated stacked GdO _x /SiN _x RRAMs. Japanese Journal of Applied Physics, 2019, 58, SBBB13.	1.5	4
47	Analytical modeling electrical conduction in resistive-switching memory through current-limiting-friendly combination frameworks. AIP Advances, 2020, 10, 085117.	1.3	4
48	Reaction-inhibited interfacial coating between PEDOT:PSS sensing membrane and ITO electrode for highly-reliable piezoresistive pressure sensing applications. Journal of the Taiwan Institute of Chemical Engineers, 2021, 126, 297-306.	5.3	4
49	N-butylamine-modified graphite nanoflakes blended in ferroelectric P(VDF-TrFE) copolymers for piezoelectric nanogenerators with high power generation efficiency. European Polymer Journal, 2021, 159, 110754.	5.4	4
50	Characteristics optimization of N2O annealing on tungsten nanocrystal with W/Si dual-sputtered method for nonvolatile memory application. Microelectronics Reliability, 2010, 50, 639-642.	1.7	3
51	Charge storage and data retention characteristics of forming gas-annealed Gd2O3-nanocrystal nonvolatile memory cell. Microelectronics Reliability, 2012, 52, 1627-1631.	1.7	3
52	Performance Revelation and Optimization of Gold Nanocrystal for Future Nonvolatile Memory Application. Japanese Journal of Applied Physics, 2013, 52, 04CJ09.	1.5	3
53	Ultra-large resistance ratio of silver programmable metallization cell with stacked silicon oxide films. Vacuum, 2015, 118, 80-84.	3.5	3
54	Hybrid polarity and carrier injection of gold and gadolinium oxide bi-nanocrystals structure. Applied Physics Letters, 2013, 102, 083507.	3.3	2

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55	Thickness dependence of Al2O3/HfO2/Al2O3 stacked tunneling layers on gadolinium oxide nanocrystal nonvolatile memory. Microelectronic Engineering, 2015, 138, 52-56.	2.4	2
56	Nb2O5 and Ti-Doped Nb2O5 Charge Trapping Nano-Layers Applied in Flash Memory. Nanomaterials, 2018, 8, 799.	4.1	2
57	Damage-Free ALD Blocking Oxide Layer on Functionalized Graphene Nanosheets as Nonvolatile Memories. IEEE Transactions on Electron Devices, 2019, 66, 1113-1117.	3.0	2
58	Trifluoroethylene bond enrichment in P(VDF-TrFE) copolymers with enhanced ferroelectric behaviors by plasma fluorination on bottom electrode. Journal of the Taiwan Institute of Chemical Engineers, 2020, 107, 152-160.	5.3	2
59	Enhanced piezoelectric tactile sensing behaviors of high-density and low-damage CF4-plasma-treated IGZO thin-film transistors coated by P(VDF-TrFE) copolymers. Sensors and Actuators A: Physical, 2020, 304, 111855.	4.1	2
60	Modeling electrical conduction in resistive-switching memory through machine learning. AIP Advances, 2021, 11, .	1.3	2
61	Highly Reliable Electrocaloric Behaviors of Antiferroelectric Al:ZrOâ„ Thin Films for Solid-State Cooling in Integrated Circuits. IEEE Transactions on Electron Devices, 2021, , 1-7.	3.0	2
62	Characteristics of plasma immersion ion implantation treatment on tungsten nanocrystal nonvolatile memory. Solid-State Electronics, 2012, 77, 31-34.	1.4	1
63	Yield improvement of gadolinium oxide resistive switching memory with oxygen post-metallization annealing. , 2013, , .		1
64	High performance gadolinium oxide nanocrystal memory with optimized charge storage and blocking dielectric thickness. , 2013, , .		1
65	Oxygen plasma immersion ion implantation treatment to enhance data retention of tungsten nanocrystal nonvolatile memory. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, 02B112.	2.1	1
66	Data Retention Characterization of Gate-Injected Gold-Nanoparticle Non-Volatile Memory with Low-Damage CF4-Plasma-Treated Blocking Oxide Layer. Nanomaterials, 2017, 7, 385.	4.1	1
67	Color Discrimination in Color Vision Deficiency: Photonâ€Assisted Piezoelectric IGZO Colorâ€Tactile Sensors with P(VDFâ€TrFE)/Metalâ€Decorated TiO ₂ â€Nanofibers Nanocomposites. Advanced Materials Technologies, 0, , 2101147.	5.8	1
68	A Highly Reliable Multi-level and 2-bit/cell Operation of Wrapped-Select-Gate (WSG) SONOS Memory with Optimized ONO Thickness. , 2007, , .		0
69	Improvements of Fermi-level pinning and NBTI by fluorinated HfO. , 2010, , .		0
70	Fluorinated CMOS HfO<inf>2</inf> for high performance (HP) and low stand-by power (LSTP) application by pre- and post-CF<inf>4</inf> plasma passivation. , 2010, , .		0
71	Functionalization of nanoscaled 2 nm-thick ALD-HfO<inf>2</inf> layer by rapid thermal annealing and CF<inf>4</inf> plasma for LAPS NH<inf>4</inf>⁺ detection. , 2011, , .		0
72	Effects of a HfMoN Metal Gate and Self-Aligned Fluorine-Ion Implantation on the Negative-Bias Temperature Instability of pMOSFETs With $hbox{Gd}_{2} hbox{O}_{3}$ Gate Dielectrics. IEEE Electron Device Letters, 2011, 32, 1017-1019.	3.9	0

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73	Effects of HfO<inf>2</inf> trapping layer in Gd<inf>2</inf>O<inf>3</inf> nanocrystal nonvolatile memory with multi-tunneling layers. , 2011, , .		0
74	Highly sensitivity of potassium ion detection realized on fluorinated-HfO<inf>2</inf> by fluorine implantation on EIS. , 2011, , .		0
75	Robust nitrogen plasma immersion ion implantation treatment on gadolinium oxide resistive switching random access memory. , 2013, , .		0
76	Multilevel ultra-fast and disturb-free flash memory with double embedded Au and Gd<inf>2</inf>O<inf>3</inf> nanocrystals. , 2013, , .		0
77	Zero interface dipole induced threshold voltage shift of HfO2/SiO2 gate dielectric stacks with NH3 plasma treatment. Microelectronic Engineering, 2013, 109, 120-122.	2.4	0
78	Ambipolar carrier injection of gold nanocrystal nonvolatile memory with different tunneling oxide thickness. , 2014, , .		0
79	Analysis of current compliance on resistive switching of silver programmable metallization cells with stacked SiO<inf>x</inf>/SiO<inf>2</inf> solid electrolytes. , 2015, , .		0
80	Monolayer MoS2 for nonvolatile memory applications. , 2016, , .		0
81	Graphene nanodots with high-k dielectrics for flash memory applications. , 2017, , .		0
82	Memristors: Compacted Selfâ€Assembly Graphene with Hydrogen Plasma Surface Modification for Robust Artificial Electronic Synapses of Gadolinium Oxide Memristors (Adv. Mater. Interfaces) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 377	3.7	0