Hsiao-Hsuan Hsu

List of Publications by Year
in descending order

57 papers	655 citations	623734 14 h-index	610901 24 g-index
57 all docs	57 docs citations	57 times ranked	812 citing authors

#	Article	IF	Citations
1	A Flexible IGZO Thin-Film Transistor With Stacked ${m TiO}_{2}$-Based Dielectrics Fabricated at Room Temperature. IEEE Electron Device Letters, 2013, 34, 768-770.	3.9	103
2	Organic small molecule-based RRAM for data storage and neuromorphic computing. Journal of Materials Chemistry C, 2020, 8, 12714-12738.	5.5	76
3	High Mobility Bilayer Metalâ€“Oxide Thin Film Transistors Using Titanium-Doped InGaZnO. IEEE Electron Device Letters, 2014, 35, 87-89.	3.9	56
4	Progress and challenges in p-type oxide-based thin film transistors. Nanotechnology Reviews, 2019, 8, 422-443.	5.8	42
5	Effect of Plasma Fluorination in p-Type SnO TFTs: Experiments, Modeling, and Simulation. IEEE Transactions on Electron Devices, 2019, 66, 1314-1321.	3.0	31
6	Fully room-temperature IGZO thin film transistors adopting stacked gate dielectrics on flexible polycarbonate substrate. Solid-State Electronics, 2013, 89, 194-197.	1.4	28
7	Implementation of Dopant-Free Hafnium Oxide Negative Capacitance Field-Effect Transistor. IEEE Transactions on Electron Devices, 2019, 66, 825-828.	3.0	25
8	High-Performance Metalâ€“Insulatorâ€“Metal Capacitors With $hbox{HfTiO}/hbox{Y}_{2}hbox{O}_{3}$ Stacked Dielectric. IEEE Electron Device Letters, 2010, 31, 875-877.	3.9	21
9	Fast Low-Temperature Plasma Process for the Application of Flexible Tin-Oxide-Channel Thin Film Transistors. IEEE Nanotechnology Magazine, 2017, 16, 876-879.	2.0	18
10	Flexible InGaZnO thin film transistors using stacked Y₂O₃/TiO₂/Y₂O₃ gate dielectrics grown at room temperature. Physica Status Solidi - Rapid Research Letters, 2013, 7, 285-288.	2.4	17
11	Investigation of Gate-Stress Engineering in Negative Capacitance FETs Using Ferroelectric Hafnium Aluminum Oxides. IEEE Transactions on Electron Devices, 2019, 66, 1082-1086.	3.0	17
12	Investigation of Double-Snapback Characteristic in Resistor-Triggered SCRs Stacking Structure. IEEE Transactions on Electron Devices, 2017, 64, 4200-4205.	3.0	16
13	Structural stability of thermoelectric diffusion barriers: Experimental results and first principles calculations. Applied Physics Letters, 2013, 103, .	3.3	15
14	An Oxygen Gettering Scheme for Improving Device Mobility and Subthreshold Swing of InGaZnO-Based Thin-Film Transistor. IEEE Nanotechnology Magazine, 2014, 13, 933-938.	2.0	14
15	Low power 1T DRAM/NVM versatile memory featuring steep sub-60-mV/decade operation, fast 20-ns speed, and robust 85°C-extrapolated 10¹⁶ endurance. , 2015, , .		14
16	Bipolar Conduction in Tin-Oxide Semiconductor Channel Treated by Oxygen Plasma for Low-Power Thin-Film Transistor Application. Journal of Display Technology, 2016, 12, 224-227.	1.2	14
17	Improvement of dielectric flexibility and electrical properties of mechanically flexible thin film devices using titanium oxide materials fabricated at a very low temperature of 100Â°C. Journal of Alloys and Compounds, 2015, 643, S133-S136.	5.5	13
18	Amorphous bilayer TiO2â€“InGaZnO thin film transistors with low drive voltage. Solid-State Electronics, 2014, 99, 51-54.	1.4	12

#	Article	IF	Citations
19	Room-temperature flexible thin film transistor with high mobility. Current Applied Physics, 2013, 13, 1459-1462.	2.4	11
20	High Mobility Field-Effect Thin Film Transistor Using Room-Temperature High-<formula formulatype="inline"><tex Notation="TeX">$kappa$</tex> </formula> Gate Dielectrics. Journal of Display Technology, 2014, 10, 875-881.	1.2	10
21	Low power resistive random access memory using interface-engineered dielectric stack of SiOx/a-Si/TiOy with 1D1R-like structure. Current Applied Physics, 2014, 14, 139-143.	2.4	10
22	Improved highâ€temperature switching characteristics of Y₂O₃/TiO_x resistive memory through carrier depletion effect. Physica Status Solidi - Rapid Research Letters, 2014, 8, 431-435.	2.4	8
23	Impact of Zirconium Doping on Steep Subthreshold Switching of Negative Capacitance Hafnium Oxide Based Transistors. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800573.	2.4	8
24	Gettering Effect Induced by Oxygen-Deficient Titanium Oxide in InZnO and InGaZnO Channel Systems for Low-Power Display Applications. Journal of Display Technology, 2016, 12, 219-223.	1.2	7
25	Interface engineering of ferroelectric negative capacitance FET for hysteresis-free switch and reliability improvement. , 2018, , .		6
26	Correlation of thermal annealing effect, crystallinity and electrical characteristics in c-axis crystallized InGaZnO thin-film transistors. Journal of Alloys and Compounds, 2015, 643, S187-S192.	5.5	5
27	Investigation of Phase Transformation in HfO2 Ferroelectric Capacitor by Means of a ZrO2 Capping Layer. , 2019, , .		4
28	Forming-Free SiGeOx/TiOy Resistive Random Access Memories Featuring Large Current Distribution Windows. Journal of Nanoscience and Nanotechnology, 2019, 19, 7916-7919.	0.9	4
29	Improved Negativeâ€Capacitance Switch of Ferroelectric Field Effect Transistor Using Defect Passivation Engineering. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800493.	2.4	4
30	Experimental Investigation of Thermal Annealing and Ferroelectric Capacitor Area Effects for Hafnium-Zirconium Oxide Devices. Coatings, 2020, 10, 733.	2.6	4
31	Impact of stress and doping effects on the polarization behavior and electrical characteristics of hafniumâ€“zirconium oxides. Ceramics International, 2021, 47, 2864-2868.	4.8	4
32	High performance metal/insulator/metal capacitors using HfTiO as dielectric. , 2009, , .		3
33	Impact of nanoscale polarization relaxation on endurance reliability of one-transistor hybrid memory using combined storage mechanisms. , 2015, , .		3
34	Temperature-Dependent Transfer Characteristics of Low Turn-On Voltage InGaZnO Metal-Oxide Devices With Thin Titanium Oxide Capping Layers. Journal of Display Technology, 2015, 11, 512-517.	1.2	3
35	Investigation of Polarization Hysteresis and Transient Current Switching in Ferroelectric Aluminum-Doped Hafnium Oxides. , 2018, , .		3
36	Improved Thermal Stability and Stress Immunity in Highly Scalable Junctionless FETs Using Enhanced-Depletion Channels. ECS Journal of Solid State Science and Technology, 2018, 7, Q242-Q245.	1.8	3

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37	Stabilizing Ferroelectric Domain Switching of Hafnium Aluminum Oxide Using Metal Nitride Electrode Engineering. ECS Journal of Solid State Science and Technology, 2019, 8, P553-P556.	1.8	3
38	Preparation and magnetic properties of high performance Caâ€“Sr based M-type hexagonal ferrites. Results in Materials, 2020, 8, 100150.	1.8	3
39	A comparative study of metal-ferroelectric-metal devices using doped- and stacked-hafnium zirconium oxides. Thin Solid Films, 2020, 701, 137927.	1.8	3
40	Effect of capping layer on the ferroelectricity of hafnium oxide. Thin Solid Films, 2022, 753, 139274.	1.8	3
41	Structural and electrical characteristics of thin film transistor employing an oriented crystalline InGaZnO channel. Japanese Journal of Applied Physics, 2015, 54, 04DF05.	1.5	2
42	Investigation on the La Replacement and Little Additive Modification of High-Performance Permanent Magnetic Strontium-Ferrite. Processes, 2021, 9, 1034.	2.8	2
43	Preparation and magnetic properties of lanthanum- and cobalt- substituted M-type Sr base sintered magnets. Japanese Journal of Applied Physics, 0, , .	1.5	2
44	Stability of Vanadium Electrolytes in the Vanadium Redox Flow Battery. Materials Research Society Symposia Proceedings, 2013, 1492, 25-31.	0.1	1
45	Amorphous Titanium Oxide Semiconductors on Quasi-Crystal-Like InGaZnO Channels for Thin Film Transistor Applications. Journal of Display Technology, 2015, 11, 506-511.	1.2	1
46	Interface polarization fluctuation effect of ferroelectric hafnium-zirconium-oxide ferroelectric memory with nearly ideal subthreshold slope. , 2015, , .		1
47	High holding voltage segmentation stacking silicon-controlled-rectifier structure with field implant as body ties blocking layer. Japanese Journal of Applied Physics, 2016, 55, 04ER10.	1.5	1
48	Electrical Characteristics Investigation of Ferroelectric Memories Using Stacked and Mixed Hafnium Zirconium Oxides. Thin Solid Films, 2022, , 139395.	1.8	1
49	A low operating voltage IGZO TFT using LaLuO<inf>3</inf> gate dielectric. , 2013, , .		0
50	Flexible InGaZnO TFTs with stacked GeO<inf>2</inf>/TiO<inf>2</inf> gate dielectrics. , 2013, , .		0
51	Modified Carbon Papers as Electrode Materials of all-Vanadium Redox Flow Battery. Materials Research Society Symposia Proceedings, 2013, 1492, 15-23.	0.1	0
52	On the variability of threshold voltage window in gate-injection versatile memories with Sub-60mV/dec subthreshold swing and 1012-cycling endurance. , 2016, , .		0
53	Gammaâ€Ray Irradiation Effect on Ferroelectric Devices with Hafnium Aluminum Oxides. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900414.	2.4	0
54	Ferroelectric Characterization of Hafnium-Oxide-Based Ferroelectric Memories with Remote Nitrogen Plasma Treatments. , 2019, , .		0

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55	Integration of Dielectric and Ferroelectric Hafnium Aluminum Oxides for Thinâ€Film Transistor Applications. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2070041.	2.4	0
56	Integration of Dielectric and Ferroelectric Hafnium Aluminum Oxides for Thinâ€Film Transistor Applications. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000258.	2.4	0
57	Performance investigation of hafnium-oxide negative capacitance transistor with remote nitrogen plasma treatment. Thin Solid Films, 2022, 755, 139345.	1.8	0