Jiawei Zhang

List of Publications by Year
in descending order

67 papers	2,603 citations	186265 28 h-index	189892 50 g-index
67 all docs	67 docs citations	67 times ranked	3349 citing authors

#	Article	IF	Citations
1	Recent progress on the electronic structure, defect, and doping properties of Ga2O3. APL Materials, 2020, 8, .	5.1	295
2	Sustainable production of highly conductive multilayer graphene ink for wireless connectivity and IoT applications. Nature Communications, 2018, 9, 5197.	12.8	206
3	Wide Bandgap Oxide Semiconductors: from Materials Physics to Optoelectronic Devices. Advanced Materials, 2021, 33, e2006230.	21.0	185
4	Flexible indiumâ€“galliumâ€“zincâ€“oxide Schottky diode operating beyond 2.45â€‰GHz. Nature Communications, 2015, 6, 7561.	12.8	143
5	Cyclic Penta-Twinned Rhodium Nanobranches as Superior Catalysts for Ethanol Electro-oxidation. Journal of the American Chemical Society, 2018, 140, 11232-11240.	13.7	133
6	Terahertz Detection and Imaging Using Graphene Ballistic Rectifiers. Nano Letters, 2017, 17, 7015-7020.	9.1	100
7	Synthesis of Concave Palladium Nanocubes with Highâ€Index Surfaces and High Electrocatalytic Activities. Chemistry - A European Journal, 2011, 17, 9915-9919.	3.3	98
8	Facile syntheses and enhanced electrocatalytic activities of Pt nanocrystals with {hkk} high-index surfaces. Nano Research, 2012, 5, 181-189.	10.4	92
9	Surfactantâ€Concentrationâ€Dependent Shape Evolution of Auâ€“Pd Alloy Nanocrystals from Rhombic Dodecahedron to Trisoctahedron and Hexoctahedron. Small, 2013, 9, 538-544.	10.0	88
10	Graphene ballistic nano-rectifier with very high responsivity. Nature Communications, 2016, 7, 11670.	12.8	74
11	Fabrication and Interfacial Electronic Structure of Wide Bandgap NiO and Ga₂O₃ pâ€“n Heterojunction. ACS Applied Electronic Materials, 2020, 2, 456-463.	4.3	66
12	Facile syntheses and electrocatalytic properties of porous Pd and its alloy nanospheres. Journal of Materials Chemistry, 2011, 21, 9620.	6.7	62
13	One-Volt IGZO Thin-Film Transistors With Ultra-Thin, Solution-Processed Al_xO_y Gate Dielectric. IEEE Electron Device Letters, 2018, 39, 375-378.	3.9	60
14	Extremely high-gain source-gated transistors. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4843-4848.	7.1	58
15	Toward Rationally Designing Surface Structures of Micro- and Nanocrystallites: Role of Supersaturation. Accounts of Chemical Research, 2018, 51, 2880-2887.	15.6	53
16	Complementary Integrated Circuits Based on p-Type SnO and n-Type IGZO Thin-Film Transistors. IEEE Electron Device Letters, 2018, 39, 208-211.	3.9	48
17	Significant Performance Enhancement of Very Thin InGaZnO Thin-Film Transistors by a Self-Assembled Monolayer Treatment. ACS Applied Electronic Materials, 2020, 2, 301-308.	4.3	45
18	High Performance Complementary Circuits Based on p-SnO and n-IGZO Thin-Film Transistors. Materials, 2017, 10, 319.	2.9	41

#	Article	IF	Citations
19	Room Temperature Processed Ultrahigh-Frequency Indium-Galliumâ€“Zinc-Oxide Schottky Diode. IEEE Electron Device Letters, 2016, 37, 389-392.	3.9	38
20	A Sputtered Silicon Oxide Electrolyte for High-Performance Thin-Film Transistors. Scientific Reports, 2017, 7, 809.	3.3	37
21	Synthesis of spatially uniform metal alloys nanocrystals via a diffusion controlled growth strategy: The case of Au-Pd alloy trisoctahedral nanocrystals with tunable composition. Nano Research, 2012, 5, 618-629.	10.4	36
22	Effects of substrate and anode metal annealing on InGaZnO Schottky diodes. Applied Physics Letters, 2017, 110, .	3.3	32
23	Amorphous-InGaZnO Thin-Film Transistors Operating Beyond 1 GHz Achieved by Optimizing the Channel and Gate Dimensions. IEEE Transactions on Electron Devices, 2018, 65, 1377-1382.	3.0	32
24	Improving photoelectrochemical performance of highly-ordered TiO₂ nanotube arrays with cosensitization of PbS and CdS quantum dots. RSC Advances, 2016, 6, 8118-8126.	3.6	31
25	Analysis of carrier transport and band tail states in p-type tin monoxide thin-film transistors by temperature dependent characteristics. Applied Physics Letters, 2016, 108, .	3.3	29
26	Complementary Integrated Circuits Based on n-Type and p-Type Oxide Semiconductors for Applications Beyond Flat-Panel Displays. IEEE Transactions on Electron Devices, 2019, 66, 950-956.	3.0	29
27	Oxide-Based Electric-Double-Layer Thin-Film Transistors on a Flexible Substrate. IEEE Electron Device Letters, 2017, 38, 1680-1683.	3.9	28
28	Interface energy band alignment at the all-transparent p-n heterojunction based on NiO and BaSnO3. Applied Physics Letters, 2018, 112, .	3.3	28
29	Effects of annealing conditions on resistive switching characteristics of SnOx thin films. Journal of Alloys and Compounds, 2016, 673, 54-59.	5.5	23
30	Modulation of the Bi³⁺ 6s² Lone Pair State in Perovskites for Highâ€Mobility pâ€Type Oxide Semiconductors. Advanced Science, 2022, 9, e2104141.	11.2	23
31	High performance Schottky diodes based on indium-gallium-zinc-oxide. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	22
32	Solution-Processed HfO_x for Half-Volt Operation of InGaZnO Thin-Film Transistors. ACS Applied Electronic Materials, 2019, 1, 1581-1589.	4.3	22
33	Low-Voltage, Flexible InGaZnO Thin-Film Transistors Gated with Solution-Processed, Ultra-Thin AlxOy. IEEE Electron Device Letters, 2018, , 1-1.	3.9	21
34	Ambipolar SnOx thin-film transistors achieved at high sputtering power. Applied Physics Letters, 2018, 112, .	3.3	20
35	High-Performance Flexible Schottky Diodes Based on Sputtered InGaZnO. IEEE Transactions on Electron Devices, 2018, 65, 4326-4333.	3.0	20
36	Low-Voltage, Full-Swing InGaZnO-Based Inverters Enabled by Solution-Processed, Ultra-Thin Al_xO_y. IEEE Electron Device Letters, 2019, 40, 1285-1288.	3.9	20

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37	Significant Performance Improvement of Oxide Thinâ€Film Transistors by a Selfâ€Assembled Monolayer Treatment. Advanced Electronic Materials, 2020, 6, 1901421.	5.1	20
38	(In_xGa_{1â”’}_x)₂O₃ Thin Film Based Solarâ€Blind Deep UV Photodetectors with Ultraâ€High Detectivity and On/Off Current Ratio. Advanced Optical Materials, 2022, 10, .	7.3	16
39	Influence of sputtering conditions on room-temperature fabricated InGaZnO-based Schottky diodes. Thin Solid Films, 2016, 616, 569-572.	1.8	15
40	Influence of interface inhomogeneities in thin-film Schottky diodes. Applied Physics Letters, 2017, 111, 213503.	3.3	15
41	Hollow porous rhodium nanoballs. Chemical Communications, 2019, 55, 4989-4992.	4.1	15
42	Optimizing the Electronic Structure of In₂O₃ through Mg Doping for NiO/In₂O₃ pâ€“n Heterojunction Diodes. ACS Applied Materials & Interfaces, 2020, 12, 53446-53453.	8.0	15
43	High performance InGaZnOâ€based Schottky diodes fabricated at room temperature. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 618-622.	0.8	14
44	Band edge evolution of transparent <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Zn</mml:mi><mml:msubsup><mml:mi>M</mml:mi><mm		

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55	Transparent Thin-Film Transistors Based on Sputtered Electric Double Layer. Materials, 2017, 10, 429.	2.9	6
56	Tailoring the Chemical Potential of Crystal Growth Units to Tune the Bulk Structure of Nanocrystals. Small Methods, 2021, 5, e2000447.	8.6	6
57	A high speed PE-ALD ZnO Schottky diode rectifier with low interface-state density. Journal Physics D: Applied Physics, 2018, 51, 065102.	2.8	5
58	Low-Frequency Noise in Electric Double Layer InGaZnO Thin-Film Transistors Gated with Sputtered SiO₂-Based Electrolyte. ACS Applied Electronic Materials, 2019, 1, 972-976.	4.3	5
59	Solution-Processed TiO₂-Based Schottky Diodes With a Large Barrier Height. IEEE Electron Device Letters, 2019, 40, 1378-1381.	3.9	4
60	Analytical Theory of Thin-Film Schottky Diodes. ACS Applied Electronic Materials, 2019, 1, 1570-1580.	4.3	3
61	8.4: Invited Paper: Oxide devices for displays and low power electronics. Digest of Technical Papers SID International Symposium, 2019, 50, 81-84.	0.3	2
62	Manipulating the metal-to-insulator transition and magnetic properties in manganite thin films via epitaxial strain. Physical Review B, 2022, 105, .	3.2	2
63	A unipolar nano-diode detector with improved performance using the high-k material SiN x. Semiconductor Science and Technology, 2018, 33, 114016.	2.0	1
64	High Performance Graphene Ballistic Rectifiers for THz detection. , 2019, , .		1
65	A thinâ€film transistor with no apparent channel for simplified, high aperture ratio pixel architectures. Journal of the Society for Information Display, 2022, 30, 765-774.	2.1	1
66	A Graphene Self-Switching Diode Bridge Rectifier. , 2019, , .		0
67	15.3: Low Voltage InGaZnO Thinâ€Film Transistors and Logic Circuits Using Ultraâ€Thin, Solutionâ€Processed Al x O y Gate Dielectrics. Digest of Technical Papers SID International Symposium, 2021, 52, 210-210.	0.3	0