Ao Liu

List of Publications by Year
in descending order

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61 papers	3,538 citations	109264 35 h-index	138417 58 g-index
62 all docs	62 docs citations	62 times ranked	3339 citing authors

#	Article	IF	Citations
1	Fully Solution-Processed Low-Voltage Aqueous In₂O₃ Thin-Film Transistors Using an Ultrathin ZrO_x Dielectric. ACS Applied Materials & Interfaces, 2014, 6, 17364-17369.	4.0	166
2	Lowâ€Temperature, Nontoxic Waterâ€Induced Metalâ€Oxide Thin Films and Their Application in Thinâ€Film Transistors. Advanced Functional Materials, 2015, 25, 2564-2572.	7.8	161
3	Solution Processed Metal Oxide Highâ€Î° Dielectrics for Emerging Transistors and Circuits. Advanced Materials, 2018, 30, e1706364.	11.1	158
4	Perovskite and Conjugated Polymer Wrapped Semiconducting Carbon Nanotube Hybrid Films for High-Performance Transistors and Phototransistors. ACS Nano, 2019, 13, 3971-3981.	7.3	151
5	Waterâ€Induced Scandium Oxide Dielectric for Lowâ€Operating Voltage nâ€and pâ€Type Metalâ€Oxide Thinâ€Film Transistors. Advanced Functional Materials, 2015, 25, 7180-7188.	7.8	147
6	Solution Combustion Synthesis: Lowâ€Temperature Processing for pâ€Type Cu:NiO Thin Films for Transparent Electronics. Advanced Materials, 2017, 29, 1701599.	11.1	145
7	Doping: A Key Enabler for Organic Transistors. Advanced Materials, 2018, 30, e1801830.	11.1	141
8	Printable Semiconductors for Backplane TFTs of Flexible OLED Displays. Advanced Functional Materials, 2020, 30, 1904588.	7.8	136
9	Roomâ€Temperature Solutionâ€Synthesized pâ€Type Copper(I) Iodide Semiconductors for Transparent Thinâ€Film Transistors and Complementary Electronics. Advanced Materials, 2018, 30, e1802379.	11.1	125
10	Hole mobility modulation of solution-processed nickel oxide thin-film transistor based on high-k dielectric. Applied Physics Letters, 2016, 108, .	1.5	122
11	High-performance inorganic metal halide perovskite transistors. Nature Electronics, 2022, 5, 78-83.	13.1	121
12	High-performance p-channel transistors with transparent Zn doped-CuI. Nature Communications, 2020, 11, 4309.	5.8	94
13	Low-temperature, nontoxic water-induced high-k zirconium oxide dielectrics for low-voltage, high-performance oxide thin-film transistors. Journal of Materials Chemistry C, 2016, 4, 10715-10721.	2.7	87
14	Highâ€Performance and Reliable Leadâ€Free Layeredâ€Perovskite Transistors. Advanced Materials, 2020, 32, e2002717.	11.1	86
15	High-mobility p-type NiO_x thin-film transistors processed at low temperatures with Al₂O₃ high-k dielectric. Journal of Materials Chemistry C, 2016, 4, 9438-9444.	2.7	82
16	Solution-processed inorganic p-channel transistors: Recent advances and perspectives. Materials Science and Engineering Reports, 2019, 135, 85-100.	14.8	74
17	Engineering Copper Iodide (CuI) for Multifunctional pâ€Type Transparent Semiconductors and Conductors. Advanced Science, 2021, 8, 2100546.	5.6	74
18	Low-temperature fabrication of high performance indium oxide thin film transistors. RSC Advances, 2015, 5, 37807-37813.	1.7	73

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19	In situ one-step synthesis of p-type copper oxide for low-temperature, solution-processed thin-film transistors. Journal of Materials Chemistry C, 2017, 5, 2524-2530.	2.7	70
20	Redox Chloride Elimination Reaction: Facile Solution Route for Indiumâ€Free, Lowâ€Voltage, and Highâ€Performance Transistors. Advanced Electronic Materials, 2017, 3, 1600513.	2.6	66
21	Photochemical Activation of Electrospun In₂O₃ Nanofibers for High-Performance Electronic Devices. ACS Applied Materials & Interfaces, 2017, 9, 10805-10812.	4.0	66
22	Eco-friendly water-induced aluminum oxide dielectrics and their application in a hybrid metal oxide/polymer TFT. RSC Advances, 2015, 5, 86606-86613.	1.7	65
23	Graphene nanodots-encaged porous gold electrode fabricated via ion beam sputtering deposition for electrochemical analysis of heavy metal ions. Sensors and Actuators B: Chemical, 2015, 206, 592-600.	4.0	58
24	Solution-processed p-type copper oxide thin-film transistors fabricated by using a one-step vacuum annealing technique. Journal of Materials Chemistry C, 2015, 3, 9509-9513.	2.7	56
25	Solution-processed high-k magnesium oxide dielectrics for low-voltage oxide thin-film transistors. Applied Physics Letters, 2016, 109, .	1.5	53
26	Solution-processed ytterbium oxide dielectrics for low-voltage thin-film transistors and inverters. Ceramics International, 2017, 43, 15194-15200.	2.3	52
27	Solution-processed ternary p-type CuCrO₂ semiconductor thin films and their application in transistors. Journal of Materials Chemistry C, 2018, 6, 1393-1398.	2.7	51
28	High-performance hysteresis-free perovskite transistors through anion engineering. Nature Communications, 2022, 13, 1741.	5.8	51
29	Solution-Processed SrO_x-Gated Oxide Thin-Film Transistors and Inverters. IEEE Transactions on Electron Devices, 2017, 64, 4137-4143.	1.6	50
30	A water-induced high-k yttrium oxide dielectric for fully-solution-processed oxide thin-film transistors. Current Applied Physics, 2015, 15, S75-S81.	1.1	47
31	One-step synthesis of graphene quantum dots from defective CVD graphene and their application in IGZO UV thin film phototransistor. Carbon, 2016, 100, 201-207.	5.4	47
32	Electrospun p-Type Nickel Oxide Semiconducting Nanowires for Low-Voltage Field-Effect Transistors. ACS Applied Materials & Interfaces, 2018, 10, 25841-25849.	4.0	47
33	Eco-friendly, solution-processed In-W-O thin films and their applications in low-voltage, high-performance transistors. Journal of Materials Chemistry C, 2016, 4, 4478-4484.	2.7	45
34	Solutionâ€Processed Alkaline Lithium Oxide Dielectrics for Applications in nâ€•and pâ€Type Thinâ€Film Transistors. Advanced Electronic Materials, 2016, 2, 1600140.	2.6	45
35	Solution-processed hafnium oxide dielectric thin films for thin-film transistors applications. Ceramics International, 2015, 41, 13218-13223.	2.3	38
36	Polyol Reduction: A Low-Temperature Eco-Friendly Solution Process for p-Channel Copper Oxide-Based Transistors and Inverter Circuits. ACS Applied Materials & Interfaces, 2019, 11, 33157-33164.	4.0	37

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37	Solution-processed yttrium oxide dielectric for high-performance IZO thin-film transistors. Ceramics International, 2015, 41, S337-S343.	2.3	33
38	Electrospun p-type CuO nanofibers for low-voltage field-effect transistors. Applied Physics Letters, 2017, 111, .	1.5	31
39	High-Performance Layered Perovskite Transistors and Phototransistors by Binary Solvent Engineering. Chemistry of Materials, 2021, 33, 1174-1181.	3.2	29
40	The annealing effects on the properties of solution-processed alumina thin film and its application in TFTs. Ceramics International, 2015, 41, S349-S355.	2.3	28
41	Effect of Monovalent Metal Iodide Additives on the Optoelectric Properties of Two-Dimensional Sn-Based Perovskite Films. Chemistry of Materials, 2021, 33, 2498-2505.	3.2	28
42	Graphene nanodots encaged 3-D gold substrate as enzyme loading platform for the fabrication of high performance biosensors. Sensors and Actuators B: Chemical, 2015, 220, 1186-1195.	4.0	27
43	Molecule Charge Transfer Doping for pâ€Channel Solutionâ€Processed Copper Oxide Transistors. Advanced Functional Materials, 2020, 30, 2002625.	7.8	26
44	Graphene quantum dots directly generated from graphite via magnetron sputtering and the application in thin-film transistors. Carbon, 2015, 88, 225-232.	5.4	25
45	High-Performance InTiZnO Thin-Film Transistors Deposited by Magnetron Sputtering. Chinese Physics Letters, 2013, 30, 127301.	1.3	22
46	Transparent Inorganic Copper Bromide (CuBr) p-Channel Transistors Synthesized From Solution at Room Temperature. IEEE Electron Device Letters, 2019, 40, 769-772.	2.2	22
47	Perovskite transistors clean up their act. Nature Electronics, 2020, 3, 662-663.	13.1	18
48	Molecular Doping Enabling Mobility Boosting of 2D Sn²⁺â€Based Perovskites. Advanced Functional Materials, 2022, 32, .	7.8	18
49	Key Roles of Trace Oxygen Treatment for Highâ€Performance Znâ€Doped CuI pâ€Channel Transistors. Advanced Electronic Materials, 2021, 7, .	2.6	17
50	Highly Reliable Organic Field-Effect Transistors with Molecular Additives for a High-Performance Printed Gas Sensor. ACS Applied Materials & Interfaces, 2021, 13, 4278-4283.	4.0	17
51	Modulation of vacancy-ordered double perovskite Cs2SnI6 for air-stable thin-film transistors. Cell Reports Physical Science, 2022, 3, 100812.	2.8	17
52	Direct transfer of graphene and application in low-voltage hybrid transistors. RSC Advances, 2017, 7, 2172-2179.	1.7	16
53	Recent progress on metal halide perovskite field-effect transistors. Journal of Information Display, 2021, 22, 257-268.	2.1	16
54	Wafer-scale fabrication of a Cu/graphene double-nanocap array for surface-enhanced Raman scattering substrates. Chemical Communications, 2017, 53, 3273-3276.	2.2	14

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55	Electronic Devices Based on Oxide Thin Films Fabricated by Fiber-to-Film Process. ACS Applied Materials & Interfaces, 2018, 10, 18057-18065.	4.0	14
56	Sodium Incorporation for Enhanced Performance of Two-Dimensional Sn-Based Perovskite Transistors. ACS Applied Materials & Interfaces, 2022, 14, 9363-9367.	4.0	14
57	Draw Spinning of Waferâ€Scale Oxide Fibers for Electronic Devices. Advanced Electronic Materials, 2018, 4, 1700644.	2.6	13
58	Impact of Humidity on the Performance and Stability of Solution-Processed Copper Oxide Transistors. IEEE Electron Device Letters, 2020, , 1-1.	2.2	6
59	22.1: Invited Paper: Solution processable pâ€type metal halide semiconductors for high performance transparent pâ€channel thinâ€film transistors. Digest of Technical Papers SID International Symposium, 2019, 50, 215-215.	0.1	0
60	8â€4: Invited Paper: Transparent Zn Dopedâ€CuI for Highâ€Performance pâ€Channel Thin Film Transistors. Digest of Technical Papers SID International Symposium, 2021, 52, 89-91.	0.1	0
61	Pâ€17: Lowâ€Temperature, Solutionâ€Processed Inorganic pâ€Channel Cuâ€based Thinâ€Film Transistors and Circuits. Digest of Technical Papers SID International Symposium, 2020, 51, 1372-1374.	0.1	0