

Sheng-Dong Zhang

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Large-area patterning of full-color quantum dot arrays beyond 1000 pixels per inch by selective electrophoretic deposition. <i>Nature Communications</i> , 2021, 12, 4603.	12.8	64
2	High-Performance Transparent AZO TFTs Fabricated on Glass Substrate. <i>IEEE Transactions on Electron Devices</i> , 2013, 60, 2432-2435.	3.0	52
3	Low-Voltage a-InGaZnO Thin-Film Transistors With Anodized Thin HfO ₂ Gate Dielectric. <i>IEEE Electron Device Letters</i> , 2015, 36, 573-575.	3.9	51
4	Oxygen Interstitial Creation in a-IGZO Thin-Film Transistors Under Positive Gate-Bias Stress. <i>IEEE Electron Device Letters</i> , 2017, 38, 1252-1255.	3.9	41
5	Room-Temperature-Processed Flexible Amorphous InGaZnO Thin Film Transistor. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25850-25857.	8.0	36
6	One Gate Diode-Connected Dual-Gate a-IGZO TFT Driven Pixel Circuit for Active Matrix Organic Light-Emitting Diode Displays. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 3800-3803.	3.0	34
7	Metal Reaction-Induced Bulk-Doping Effect in Forming Conductive Source-Drain Regions of Self-Aligned Top-Gate Amorphous InGaZnO Thin-Film Transistors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 11442-11448.	8.0	33
8	Self-Aligned Top-Gate Amorphous InGaZnO TFTs With Plasma Enhanced Chemical Vapor Deposited Sub-10 nm SiO ₂ Gate Dielectric for Low-Voltage Applications. <i>IEEE Electron Device Letters</i> , 2019, 40, 1459-1462.	3.9	28
9	High-Performance ZnO Thin-Film Transistors Prepared by Atomic Layer Deposition. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 2965-2970.	3.0	25
10	Integrated a-Si:H Gate Driver With Low-Level Holding TFTs Biased Under Bipolar Pulses. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 4044-4050.	3.0	24
11	Enhanced electrical properties of dual-layer channel ZnO thin film transistors prepared by atomic layer deposition. <i>Applied Surface Science</i> , 2018, 439, 632-637.	6.1	24
12	Drain-Induced-Barrier-Lowering-Like Effect Induced by Oxygen-Vacancy in Scaling-Down via-Contact Type Amorphous InGaZnO Thin-Film Transistors. <i>IEEE Journal of the Electron Devices Society</i> , 2018, 6, 685-690.	2.1	21
13	Enhanced Performance of Atomic Layer Deposited Thin-Film Transistors With High-Quality ZnO/Al ₂ O ₃ Interface. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 518-523.	3.0	20
14	Top-Gate Amorphous Indium-Gallium-Zinc-Oxide Thin-Film Transistors With Magnesium Metallized Source/Drain Regions. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 1619-1624.	3.0	19
15	A Compact Bi-Direction Scannable a-Si:H TFT Gate Driver. <i>Journal of Display Technology</i> , 2015, 11, 3-5.	1.2	18
16	Analyzing Electric Field Effect by Applying an Ultra-Short Time Pulse Condition in Hafnium Oxide-Based RRAM. <i>IEEE Electron Device Letters</i> , 2018, 39, 1163-1166.	3.9	17
17	Enhancing the Electrical Uniformity and Reliability of the HfO ₂ -Based RRAM Using High-Permittivity Ta ₂ O ₅ Side Wall. <i>IEEE Journal of the Electron Devices Society</i> , 2018, 6, 627-632.	2.1	17
18	Robust Gate Driver on Array Based on Amorphous IGZO Thin-Film Transistor for Large Size High-Resolution Liquid Crystal Displays. <i>IEEE Journal of the Electron Devices Society</i> , 2019, 7, 717-721.	2.1	17

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19	Ultralow-voltage all-carbon low-dimensional-material flexible transistors integrated by room-temperature photolithography incorporated filtration. <i>Nanoscale</i> , 2019, 11, 15029-15036.	5.6	16
20	A Back-Channel-Etched Amorphous InGaZnO Thin-Film Transistor Technology With Al-Doped ZnO as Source/Drain and Pixel Electrodes. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 2205-2209.	3.0	15
21	Implementation of Self-Aligned Top-Gate Amorphous Zinc Tin Oxide Thin-Film Transistors. <i>IEEE Electron Device Letters</i> , 2019, 40, 901-904.	3.9	15
22	High-Performance Self-Aligned Top-Gate Amorphous InGaZnO TFTs With 4 nm-Thick Atomic-Layer-Deposited AlO _x Insulator. <i>IEEE Electron Device Letters</i> , 2022, 43, 729-732.	3.9	14
23	Analytical Drain Current Model for Organic Thin-Film Transistors at Different Temperatures Considering Both Deep and Tail Trap States. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 4423-4431.	3.0	13
24	A Low Power and IR Drop Compensable AMOLED Pixel Circuit Based on Low-Temperature Poly-Si and Oxide (LTPO) TFTs Hybrid Technology. <i>IEEE Journal of the Electron Devices Society</i> , 2022, 10, 51-58.	2.1	13
25	High Performance Ti-Doped ZnO TFTs With AZO/TZO Heterojunction S/D Contacts. <i>Journal of Display Technology</i> , 2015, 11, 412-416.	1.2	12
26	Pa ²⁰ : Effects of N ₂ O Plasma Treatment Time on the Performance of Self-Aligned Top-Gate amorphous oxide Thin Film Transistors. <i>Digest of Technical Papers SID International Symposium</i> , 2017, 48, 1299-1302.	0.3	11
27	Enhancing Repetitive Uniaxial Mechanical Bending Endurance at $R = 2$ mm Using an Organic Trench Structure in Foldable Low Temperature Poly-Si Thin-Film Transistors. <i>IEEE Electron Device Letters</i> , 2019, 40, 913-916.	3.9	11
28	Pixellated Perovskite Photodiode on IGZO Thin Film Transistor Backplane for Low Dose Indirect X-Ray Detection. <i>IEEE Journal of the Electron Devices Society</i> , 2021, 9, 96-101.	2.1	11
29	Abnormal Bias Instabilities Induced by Lateral H ₂ O Diffusion Into Top-Gate Insulator of a-InGaZnO Thin-Film Transistors. <i>IEEE Journal of the Electron Devices Society</i> , 2022, 10, 341-345.	2.1	11
30	Comparison of the electrical and optical properties of direct current and radio frequency sputtered amorphous indium gallium zinc oxide films. <i>Thin Solid Films</i> , 2013, 527, 21-25.	1.8	10
31	Threshold Voltage Shift Effect of a-Si:H TFTs Under Bipolar Pulse Bias. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 4037-4043.	3.0	9
32	Scalability and Stability Enhancement in Self-Aligned Top-Gate Indium- Zinc-Oxide TFTs With Al Reacted Source/Drain. <i>IEEE Journal of the Electron Devices Society</i> , 2018, 6, 680-684.	2.1	9
33	Homo-Junction Bottom-Gate Amorphous InGaZnO TFTs With Metal-Induced Source/Drain Regions. <i>IEEE Journal of the Electron Devices Society</i> , 2019, 7, 52-56.	2.1	9
34	Manipulation of epsilon-near-zero wavelength for the optimization of linear and nonlinear absorption by supercritical fluid. <i>Scientific Reports</i> , 2021, 11, 15936.	3.3	9
35	Intrinsically flexible all-carbon-nanotube electronics enabled by a hybrid organic-inorganic gate dielectric. <i>Npj Flexible Electronics</i> , 2022, 6, .	10.7	9
36	Analytical Drain Current Model for Amorphous InGaZnO Thin-Film Transistors at Different Temperatures Considering Both Deep and Tail Trap States. <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 3654-3660.	3.0	8

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37	High-performance Al-Zn-O Thin-Film Transistors Sputtering at Different Power. IEEE Transactions on Electron Devices, 2019, 66, 4774-4777.	3.0	8
38	Unveiling the influence of surrounding materials and realization of multi-level storage in resistive switching memory. Nanoscale, 2020, 12, 22070-22074.	5.6	8
39	Low-temperature supercritical dehydroxylation for achieving an ultra-low subthreshold swing of thin-film transistors. Nanoscale, 2021, 13, 5700-5705.	5.6	8
40	P-37: A High Accuracy Current Comparison Scheme for External Compensation Circuit of AMOLED Displays. Digest of Technical Papers SID International Symposium, 2016, 47, 1261-1264.	0.3	7
41	Self-Heating Stress-Induced Severe Humps in Transfer Characteristics of Amorphous InGaZnO Thin-Film Transistors. IEEE Transactions on Electron Devices, 2021, 68, 6197-6201.	3.0	7
42	Combined Effects of Light Illumination and Various Bottom Gate Length on the Instability of Via-Contact-Type Amorphous InGaZnO Thin-Film Transistors. IEEE Transactions on Electron Devices, 2018, 65, 533-536.	3.0	6
43	Effects of Ultraviolet Light on the Dual-Sweep I_{DS} vs V_{GS} Curve of a-InGaZnO ₄ Thin-Film Transistor. IEEE Transactions on Electron Devices, 2019, 66, 1772-1777.	3.0	6
44	Hydrogen Doping Oxide Transistors: Analysis of Ultrahigh Apparent Mobility in Oxide Field-Effect Transistors (Adv. Sci. 7/2019). Advanced Science, 2019, 6, 1970040.	11.2	6
45	Self-Aligned Top-Gate Amorphous Zinc-Tin Oxide Thin-Film Transistor With Source/Drain Regions Doped by Al Reaction. IEEE Journal of the Electron Devices Society, 2021, 9, 653-657.	2.1	6
46	Roles of Hot Carriers in Dynamic Self-Heating Degradation of a-InGaZnO Thin-Film Transistors. IEEE Electron Device Letters, 2022, 43, 40-43.	3.9	6
47	Mixed-Dimensional van der Waals Engineering for Charge Transfer Enables Wafer-Level Flexible Electronics. Advanced Functional Materials, 2022, 32, .	14.9	6
48	1.2: Invited Paper: Dynamic threshold voltage compensation IGZO-GOA circuit for AMOLED display. Digest of Technical Papers SID International Symposium, 2019, 50, 10-12.	0.3	5
49	Investigating the Back-Channel Effect and Asymmetric Degradation Under Self-Heating Stress in Large Size a-InGaZnO TFTs. IEEE Electron Device Letters, 2020, 41, 58-61.	3.9	5
50	Reliable High-Performance Amorphous InGaZnO Schottky Barrier Diodes With Silicon Dioxide Passivation Layer. IEEE Electron Device Letters, 2021, 42, 1338-1341.	3.9	5
51	A High-Efficiency Segmented Reconfigurable Cyclic Shifter for 5G QC-LDPC Decoder. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 401-414.	5.4	5
52	Sn-doped ZnO thin-film transistors with AZO, TZO and Al heterojunction source/drain contacts. Electronics Letters, 2016, 52, 302-304.	1.0	4
53	An Energy-Band Model for Dual-Gate-Voltage Sweeping in Hydrogenated Amorphous Silicon Thin-Film Transistors. IEEE Transactions on Electron Devices, 2019, 66, 2614-2619.	3.0	4
54	A Quantum Dot Polarizer for Liquid Crystal Displays With Much Improved Efficiency and Viewing Angle. IEEE Journal of Quantum Electronics, 2019, 55, 1-6.	1.9	4

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55	Compact Integration of Hydrogen-Resistant InGaZnO and Poly-Si Thin-Film Transistors. <i>Micromachines</i> , 2022, 13, 839.	2.9	4
56	Thorough Elimination of Persistent Photoconduction in Amorphous InZnO Thin-Film Transistor via Dual-Gate Pulses. <i>IEEE Electron Device Letters</i> , 2022, 43, 1247-1250.	3.9	4
57	Self-Stabilized Hydrogenation of Amorphous InGaZnO Schottky Diode with Bilayer Passivation. <i>Advanced Electronic Materials</i> , 0, , 2200280.	5.1	4
58	An a-IGZO TFT AMOLED Pixel Circuit to Compensate Threshold Voltage and Mobility Variations. , 2018, , .		3
59	Tilted LCD Pixel With Liquid Crystal GRIN Lens for Two-Dimensional/Three-Dimensional Switchable Display. <i>IEEE Photonics Journal</i> , 2019, 11, 1-9.	2.0	3
60	Abnormal $\{C\} \sim \{V\}$ Hump Effect Induced by Hot Carriers in Gate Length-Dependent p-Type LTPS TFTs. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 4764-4767.	3.0	3
61	Analytical Drain Current and Capacitance Model for Amorphous InGaZnO TFTs Considering Temperature Characteristics. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 3637-3644.	3.0	3
62	Supercritical Ammoniation-Enabled Interfacial Polarization for Function-Mode Transformation and Overall Optimization of Thin-Film Transistors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 40053-40061.	8.0	3
63	Porphyrin-Based All-Small-Molecule Organic Solar Cells With Absorption-Complementary Nonfullerene Acceptor. <i>IEEE Journal of Photovoltaics</i> , 2022, 12, 316-321.	2.5	3
64	Al Reaction-Induced Conductive a-InGaZnO as Pixel Electrode for Active-Matrix Quantum-Dot LED Displays. <i>IEEE Electron Device Letters</i> , 2022, 43, 749-752.	3.9	3
65	Self-Compensation Effect of Photo-Bias Instabilities in a-InGaZnO Thin-Film Transistors Induced by Unique Ion Migration. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 3206-3212.	3.0	3
66	Competition between heating and cooling during dynamic self-heating degradation of amorphous InGaZnO thin-film transistors. <i>Solid-State Electronics</i> , 2022, 195, 108393.	1.4	3
67	Modeling of Both Arrhenius and Non-Arrhenius Temperature-Dependent Drain Current for Organic Thin-Film Transistors. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 5091-5096.	3.0	2
68	Capacitor Reused Gate Driver for Compact In-Cell Touch Displays. <i>IEEE Journal of the Electron Devices Society</i> , 2021, 9, 533-538.	2.1	2
69	A compact gate driver with bifunctional capacitor for in-cell touch mobile display. <i>Journal of the Society for Information Display</i> , 2021, 29, 526.	2.1	2
70	Fast Progressive Compensation Method for Externally Compensated AMOLED Displays. <i>IEEE Journal of the Electron Devices Society</i> , 2021, 9, 257-264.	2.1	2
71	Precise Tuning of Epsilon-Near-Zero Properties in Indium Tin Oxide Nanolayer by Supercritical Carbon Dioxide. , 2020, , .		2
72	Performance Improvement of Back-Channel-Etched a-IGZO TFTs by O_2 Plasma Treatment. , 2018, , .		1

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73	Q-Cell: A Super Wide View Angle LCD Display with QD Polarizer. , 2019, , .		1
74	Pseudo Multi-Port SRAM Circuit for Image Processing in Display Drivers. IEEE Transactions on Circuits and Systems for Video Technology, 2021, 31, 2056-2062.	8.3	1
75	Segmented Reconfigurable Cyclic Shifter for QC-LDPC Decoder. , 2021, , .		1
76	Reliable Gate Driver for Real-Time External Compensated AMOLED Display Using InGaZnO TFTs. Digest of Technical Papers SID International Symposium, 2021, 52, 1108-1111.	0.3	1
77	Novel Asymmetric Source-Drain Thin Film Transistors Fabricated by Atomic Layer Deposition. Digest of Technical Papers SID International Symposium, 2019, 50, 1317-1320.	0.3	0
78	Enhancing Repetitive Uniaxial Mechanical Bending Endurance at R=2mm Using an Organic Trench Structure in Foldable Low Temperature Poly-Si Thin-Film Transistors. IEEE Electron Device Letters, 2019, , 1-1.	3.9	0
79	Abnormal Back Channel Leakage Under Large Drain Voltage in Short Channel Organic Thin-Film Transistors. IEEE Electron Device Letters, 2019, 40, 1752-1755.	3.9	0
80	Systematic Defect Manipulation in Metal Oxide Semiconductors towards High-Performance Thin-Film Transistors. , 2020, , .		0
81	Fully Self-Aligned Homojunction Bottom-Gate Amorphous InGaZnO TFTs with Al Reacted Source/Drain Regions. , 2020, , .		0