

# Mallory Mativenga

## List of Publications by Year in descending order

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110  
papers

2,892  
citations

136740

32  
h-index

189595

50  
g-index

110  
all docs

110  
docs citations

110  
times ranked

1845  
citing authors

#	ARTICLE	IF	CITATIONS
1	P&#252; Student Poster: Solution-Processed CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Phototransistor with High Photodetectivity. Digest of Technical Papers SID International Symposium, 2022, 53, 1130-1133.	0.1	0
2	Reduction of Hysteresis in Hybrid Perovskite Transistors by Solvent-Controlled Growth. Materials, 2021, 14, 2573.	1.3	6
3	A feasibility study of a portable intraoperative specimen imaging X-ray system based on carbon nanotube field emitters. International Journal of Imaging Systems and Technology, 2021, 31, 1128-1135.	2.7	3
4	P&#3; Student Paper: An Amplifier with Higher Gain Using Corbino TFTs. Digest of Technical Papers SID International Symposium, 2021, 52, 784-787.	0.1	0
5	Effects of Structural Phase Transitions on Hysteresis in Air-Processed Organic-Inorganic Halide Perovskite Thin-Film Transistors. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100211.	1.2	3
6	Origin of light instability in amorphous IGZO thin-film transistors and its suppression. Scientific Reports, 2021, 11, 14618.	1.6	46
7	Compact X-Ray Tube With Ceramic Vacuum Seal for Portable and Robust Dental Imaging. IEEE Transactions on Electron Devices, 2021, 68, 4705-4710.	1.6	6
8	Highly Stable Thin-Film Transistors for Flexible and Transparent Displays. , 2021, , .		0
9	P&#121; Solution Processed Organic-Inorganic Hybrid Perovskite TFTs with Excellent Ambient Air Stability. Digest of Technical Papers SID International Symposium, 2020, 51, 1825-1828.	0.1	0
10	Ambient-Air-Processed Ambipolar Perovskite Phototransistor With High Photodetectivity. IEEE Transactions on Electron Devices, 2020, 67, 3215-3220.	1.6	7
11	Halide perovskite memtransistor enabled by ion migration. Japanese Journal of Applied Physics, 2020, 59, 081002.	0.8	15
12	Highly Sensitive and Ambient Air-Processed Hybrid Perovskite TFT Temperature Sensor. IEEE Electron Device Letters, 2020, 41, 1086-1089.	2.2	8
13	Impact of Source-to-Gate and Drain-to-Gate Overlap Lengths on Performance of Inverted Staggered a-IGZO TFTs With an Etch Stopper. IEEE Transactions on Electron Devices, 2020, 67, 3152-3156.	1.6	12
14	Ambient Air Stability of Hybrid Perovskite Thin-Film Transistors by Ambient Air Processing. Advanced Materials Interfaces, 2020, 7, 1901777.	1.9	20
15	Threshold voltage shift-proof circular oxide thin film transistor with top and bottom gates for high bending stability. Japanese Journal of Applied Physics, 2020, 59, 104001.	0.8	4
16	Effect of Precursor Composition on Ion Migration in Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . IEEE Electron Device Letters, 2019, 40, 1756-1759.	2.2	18
17	Design and Fabrication of CNT-Based E-Gun Using Stripe-Patterned Alloy Substrate for X-Ray Applications. IEEE Transactions on Electron Devices, 2019, 66, 5301-5304.	1.6	11
18	Ambipolar Transport in Methylammonium Lead Iodide Thin Film Transistors. Crystals, 2019, 9, 539.	1.0	13

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19	Fast-Switching Mixed A-Cation Organic-Inorganic Hybrid Perovskite TFTs. IEEE Electron Device Letters, 2019, 40, 917-920.	2.2	18
20	Carbon Nanotube Field Emitters Synthesized on Metal Alloy Substrate by PECVD for Customized Compact Field Emission Devices to Be Used in X-Ray Source Applications. Nanomaterials, 2018, 8, 378.	1.9	46
21	Thermal Stability Improvement of Back Channel Etched a-IGZO TFTs by Using Fluorinated Organic Passivation. ECS Journal of Solid State Science and Technology, 2018, 7, Q123-Q126.	0.9	9
22	Touch Sensor Array With Integrated Drivers and Comparator Using a-IGZO TFTs. IEEE Electron Device Letters, 2017, 38, 391-394.	2.2	32
23	Enhanced Operation of Back-Channel-Etched a-IGZO TFTs by Fluorine Treatment during Source/Drain Wet-Etching. ECS Journal of Solid State Science and Technology, 2017, 6, P300-P303.	0.9	9
24	Highly Robust Bendable Oxide Thin-Film Transistors on Polyimide Substrates via Mesh and Strip Patterning of Device Layers. Advanced Functional Materials, 2017, 27, 1700437.	7.8	62
25	Piezoelectric Pressure Sensing Device Using Top-Gate Effect of Dual-Gate a-IGZO TFT. IEEE Sensors Journal, 2017, 17, 585-586.	2.4	32
26	P-29: Flexible Gate Driver for Bendable AMOLED Display with Homo Junction Oxide TFTs. Digest of Technical Papers SID International Symposium, 2017, 48, 1335-1338.	0.1	1
27	P-22: Spice Model for Detection of Dynamic Threshold Voltage Shift During Failure Analysis of Oxide TFT-Based AMD Gate Drivers. Digest of Technical Papers SID International Symposium, 2017, 48, 1307-1310.	0.1	0
28	Spice model for detection of dynamic threshold voltage shift during failure analysis of oxide TFT-based AMD gate drivers. Journal of the Society for Information Display, 2017, 25, 663-671.	0.8	2
29	Circular Structure for High Mechanical Bending Stability of a-IGZO TFTs. IEEE Journal of the Electron Devices Society, 2017, 5, 453-457.	1.2	27
30	Reduction of Bias and Light Instability of Mixed Oxide Thin-Film Transistors. Applied Sciences (Switzerland), 2017, 7, 885.	1.3	25
31	P-8: Corbino Oxide TFTs for Flexible AMOLED Display Stability. Digest of Technical Papers SID International Symposium, 2016, 47, 1147-1150.	0.1	2
32	64-3: Distinguished Student Paper: Bulk Accumulation Oxide TFTs for Flexible AMOLED Display with High Yield Integrated Gate Driver. Digest of Technical Papers SID International Symposium, 2016, 47, 872-875.	0.1	12
33	P-1: Distinguished Student Poster: Oxide TFT with Split Source Drain Electrodes for Highly Flexible Display. Digest of Technical Papers SID International Symposium, 2016, 47, 1125-1128.	0.1	4
34	P-206L: Late-News Poster: QVGA AMOLED Displays Using the Carbon Nanotube Enabled Vertical Organic Light Emitting Transistor. Digest of Technical Papers SID International Symposium, 2016, 47, 1796-1798.	0.1	9
35	P-7: High Performance LTPS Thin-film Transistors using Low Cost Polycrystalline Silicon by Blue Laser Annealing. Digest of Technical Papers SID International Symposium, 2016, 47, 1143-1146.	0.1	4
36	(Invited) Highly Robust a-IGZO TFT for Foldable Displays. ECS Transactions, 2016, 75, 201-204.	0.3	1

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37	Fast Threshold Voltage Compensation AMOLED Pixel Circuit Using Secondary Gate Effect of Dual Gate a-IGZO TFTs. IEEE Electron Device Letters, 2016, 37, 1450-1453.	2.2	23
38	Low temperature polycrystalline silicon with single orientation on glass by blue laser annealing. Thin Solid Films, 2016, 616, 838-841.	0.8	28
39	Double-Gate Modulated Corbino TFTs. IEEE Electron Device Letters, 2016, 37, 1143-1146.	2.2	3
40	Highly Robust Neutral Plane Oxide TFTs Withstanding 0.25%mm Bending Radius for Stretchable Electronics. Scientific Reports, 2016, 6, 25734.	1.6	94
41	Analysis of Improved Performance Under Negative Bias Illumination Stress of Dual Gate Driving a-IGZO TFT by TCAD Simulation. IEEE Electron Device Letters, 2016, , 1-1.	2.2	46
42	Full-Swing Clock Generating Circuits on Plastic Using a-IGZO Dual-Gate TFTs With Pseudo-CMOS and Bootstrapping. IEEE Electron Device Letters, 2016, 37, 882-885.	2.2	35
43	7-4: AMOLED Pixel Circuit using Dual Gate a-IGZO TFTs for Simple Scheme and High Speed V <sub>TH</sub> Extraction. Digest of Technical Papers SID International Symposium, 2016, 47, 65-68.	0.1	10
44	Lateral Grain Growth of Amorphous Silicon Films With Wide Thickness Range by Blue Laser Annealing and Application to High Performance Poly-Si TFTs. IEEE Electron Device Letters, 2016, 37, 291-294.	2.2	47
45	Channel length dependence of negative-bias-illumination-stress in amorphous-indium-gallium-zinc-oxide thin-film transistors. Journal of Applied Physics, 2015, 117, .	1.1	9
46	59.2: Highly Stable and Transparent Oxide TFTs for Rollable Displays. Digest of Technical Papers SID International Symposium, 2015, 46, 883-886.	0.1	6
47	29.3: High Resolution Flexible AMOLED with Integrated Gate Driver using Bulk Accumulation a-IGZO TFTs. Digest of Technical Papers SID International Symposium, 2015, 46, 423-426.	0.1	8
48	High Current Stress-Induced Heating Effects in Thin-Film Transistors on Plastic: Oxide Vs. Ltps. ECS Transactions, 2015, 67, 73-78.	0.3	7
49	P454L: Late News Poster: Stability Enhancement of Oxide TFTs By Blue Laser Annealing. Digest of Technical Papers SID International Symposium, 2015, 46, 1228-1230.	0.1	1
50	P452: High Gain Source Followers Driven by Corbino Oxide TFTs for Integrated Display Data Drivers. Digest of Technical Papers SID International Symposium, 2015, 46, 1330-1333.	0.1	0
51	P451: A Compact a-IGZO TFT-Based Digital-to-Analog Converter for Flexible Displays. Digest of Technical Papers SID International Symposium, 2015, 46, 1326-1329.	0.1	2
52	High-Performance Homojunction a-IGZO TFTs With Selectively Defined Low-Resistive a-IGZO Source/Drain Electrodes. IEEE Transactions on Electron Devices, 2015, 62, 2212-2218.	1.6	37
53	Bulk-Accumulation Oxide Thin-Film Transistor Circuits With Zero Gate-to-Drain Overlap Capacitance for High Speed. IEEE Electron Device Letters, 2015, 36, 1329-1331.	2.2	17
54	High-Speed Pseudo-CMOS Circuits Using Bulk Accumulation a-IGZO TFTs. IEEE Electron Device Letters, 2015, 36, 153-155.	2.2	61

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55	Fully Transparent and Rollable Electronics. ACS Applied Materials & Interfaces, 2015, 7, 1578-1585.	4.0	115
56	Highly Robust Flexible Oxide Thin-Film Transistors by Bulk Accumulation. IEEE Electron Device Letters, 2015, 36, 811-813.	2.2	38
57	$\mu\text{m}$ Pitch Oxide TFT-Based Gate Driver Design for Small-Size, High-Resolution, and Narrow-Bezel Displays. IEEE Electron Device Letters, 2015, 36, 805-807.	2.2	55
58	Effect of $\text{SiO}_2$ and $\text{SiN}_x$ Passivation on the Stability of Amorphous Indium-Gallium Zinc-Oxide Thin-Film Transistors Under High Humidity. IEEE Transactions on Electron Devices, 2015, 62, 869-874.	1.6	68
59	Modification of Electrode-Etchant for Sidewall Profile Control and Reduced Back-Channel Corrosion of Inverted-Staggered Metal-Oxide TFTs. ECS Journal of Solid State Science and Technology, 2015, 4, Q124-Q129.	0.9	16
60	Effect of Bulk-Accumulation on Switching Speed of Dual-Gate a-IGZO TFT-Based Circuits. IEEE Electron Device Letters, 2014, 35, 1242-1244.	2.2	30
61	All-Carbon Electrode Consisting of Carbon Nanotubes on Graphite Foil for Flexible Electrochemical Applications. Materials, 2014, 7, 1975-1983.	1.3	13
62	Field-induced carrier generation in amorphous-InGaZnO <sub>4</sub> thin-film transistors. Solid State Communications, 2014, 194, 54-58.	0.9	6
63	High Speed a-IGZO TFT-based Gate Driver by using Back Channel Etched Structure. Digest of Technical Papers SID International Symposium, 2014, 45, 968-971.	0.1	11
64	Extreme bending test of IGZO TFT. , 2014, , .		2
65	49.2: Corbino TFTs for Large Area AMOLED Displays. Digest of Technical Papers SID International Symposium, 2014, 45, 705-708.	0.1	4
66	3.1: Invited Paper: Oxide Versus LTPS TFTs for Active Matrix Displays. Digest of Technical Papers SID International Symposium, 2014, 45, 1-4.	0.1	32
67	Coplanar amorphous-indium-gallium-zinc-oxide thin film transistor with He plasma treated heavily doped layer. Applied Physics Letters, 2014, 104, 022115.	1.5	64
68	Defect generation in amorphous-indium-gallium-zinc-oxide thin-film transistors by positive bias stress at elevated temperature. Journal of Applied Physics, 2014, 115, .	1.1	23
69	Reduction of Negative Bias and Light Instability of a-IGZO TFTs by Dual-Gate Driving. IEEE Electron Device Letters, 2014, 35, 93-95.	2.2	53
70	Intrinsic Channel Mobility of Amorphous, InGaZnO Thin-Film Transistors by a Gated Four-Probe Method. IEEE Transactions on Electron Devices, 2014, 61, 2106-2112.	1.6	13
71	Improvement of bias-stability in amorphous-indium-gallium-zinc-oxide thin-film transistors by using solution-processed Y <sub>2</sub> O <sub>3</sub> passivation. Applied Physics Letters, 2014, 105, .	1.5	33
72	High-Speed Dual-Gate a-IGZO TFT-Based Circuits With Top-Gate Offset Structure. IEEE Electron Device Letters, 2014, 35, 461-463.	2.2	77

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73	Infinite Output Resistance of Corbino Thin-Film Transistors With an Amorphous-InGaZnO Active Layer for Large-Area AMOLED Displays. IEEE Transactions on Electron Devices, 2014, 61, 3199-3205.	1.6	25
74	Removal of Negative-Bias-Illumination-Stress Instability in Amorphous-InGaZnO Thin-Film Transistors by Top-Gate Offset Structure. IEEE Electron Device Letters, 2014, 35, 930-932.	2.2	51
75	Reduction of Positive-Bias-Stress Effects in Bulk-Accumulation Amorphous-InGaZnO TFTs. IEEE Electron Device Letters, 2014, 35, 560-562.	2.2	32
76	Increase of mobility in dual gate amorphous-InGaZnO4 thin-film transistors by pseudo-doping. Applied Physics Letters, 2013, 103, .	1.5	16
77	Mechanism of positive bias stress-assisted recovery in amorphous-indium-gallium-zinc-oxide thin-film transistors from negative bias under illumination stress. Applied Physics Letters, 2013, 103, .	1.5	76
78	Reliability of oxide TFT for display application. , 2013, , .		1
79	Bulk Accumulation a-IGZO TFT for High Current and Turn-On Voltage Uniformity. IEEE Electron Device Letters, 2013, 34, 1533-1535.	2.2	120
80	Channel Length Dependent Bias-Stability of Self-Aligned Coplanar a-IGZO TFTs. Journal of Display Technology, 2013, 9, 985-988.	1.3	27
81	(Invited) Channel Width and Channel Length Dependencies in Amorphous-Oxide-Semiconductor Thin-Film Transistors: From a Device Structure Perspective. ECS Transactions, 2013, 50, 151-159.	0.3	7
82	P.22: Improving Switching Characteristics of Amorphous-InGaZnO <sub>4</sub> Thin-Film Transistors by Dual-Gate Driving. Digest of Technical Papers SID International Symposium, 2013, 44, 1062-1065.	0.1	1
83	Achieving High Performance Oxide TFT-Based Inverters by Use of Dual-Gate Configurations With Floating and Biased Secondary Gates. IEEE Transactions on Electron Devices, 2013, 60, 3787-3793.	1.6	41
84	High current stress effects in amorphous-InGaZnO <sub>4</sub> thin-film transistors. Applied Physics Letters, 2013, 102, .	1.5	53
85	Threshold voltage dependence on channel length in amorphous-indium-gallium-zinc-oxide thin-film transistors. Applied Physics Letters, 2013, 102, .	1.5	48
86	67.1: <i>Distinguished Student Paper</i> : 40 $\mu\text{m}$ Pitch IGZO TFT Gate Driver for High-Resolution Rollable AMOLED. Digest of Technical Papers SID International Symposium, 2013, 44, 927-930.	0.1	20
87	Amorphous-InGaZnO <sub>4</sub> Thin-Film Transistors with Damage-Free Back Channel Wet-Etch Process. ECS Solid State Letters, 2012, 1, Q17-Q19.	1.4	84
88	Edge Effects in Bottom-Gate Inverted Staggered Thin-Film Transistors. IEEE Transactions on Electron Devices, 2012, 59, 2501-2506.	1.6	27
89	Performance of 5-nm a-IGZO TFTs With Various Channel Lengths and an Etch Stopper Manufactured by Back UV Exposure. IEEE Electron Device Letters, 2012, 33, 824-826.	2.2	33
90	Bias-induced migration of ionized donors in amorphous oxide semiconductor thin-film transistors with full bottom-gate and partial top-gate structures. AIP Advances, 2012, 2, 032129.	0.6	10

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91	A Three-Mask-Processed Coplanar a-IGZO TFT With Source and Drain Offsets. IEEE Electron Device Letters, 2012, 33, 812-814.	2.2	24
92	Study of mechanism of stress-induced threshold voltage shift and recovery in top-gate amorphous-InGaZnO4 thin-film transistors with source- and drain-offsets. Solid State Communications, 2012, 152, 1739-1743.	0.9	12
93	3.3: High-Speed Shift Register for High Resolution AMD with Self-Aligned Coplanar a-IGZO TFTs. Digest of Technical Papers SID International Symposium, 2012, 43, 8-10.	0.1	2
94	High-Speed and Low-Voltage-Driven Shift Register With Self-Aligned Coplanar a-IGZO TFTs. IEEE Electron Device Letters, 2012, 33, 1012-1014.	2.2	54
95	Increase of interface and bulk density of states in amorphous-indium-gallium-zinc-oxide thin-film transistors with negative-bias-under-illumination-stress time. Applied Physics Letters, 2012, 101, .	1.5	67
96	High-Performance Drain-Offset a-IGZO Thin-Film Transistors. IEEE Electron Device Letters, 2011, 32, 644-646.	2.2	53
97	A Full-Swing a-IGZO TFT-Based Inverter With a Top-Gate-Bias-Induced Depletion Load. IEEE Electron Device Letters, 2011, 32, 1089-1091.	2.2	99
98	Transparent Flexible Circuits Based on Amorphous-Indium-Gallium-Zinc-Oxide Thin-Film Transistors. IEEE Electron Device Letters, 2011, 32, 170-172.	2.2	174
99	Design of a low-power-consumption a-IGZO TFT-based Vcom driver circuit with long-term reliability. Journal of the Society for Information Display, 2011, 19, 825-832.	0.8	11
100	P413: A Full-Swing a-IGZO TFT-Based Inverter with a Top Gate-Induced Depletion Load. Digest of Technical Papers SID International Symposium, 2011, 42, 1144-1147.	0.1	1
101	26.3 Design of a Low Power Consumption a-IGZO TFT-based Vcom Driver Circuit with Long-Term Reliability. Digest of Technical Papers SID International Symposium, 2011, 42, 338-341.	0.1	2
102	Degradation Model of Self-Heating Effects in Silicon-on-Glass TFTs. IEEE Transactions on Electron Devices, 2011, 58, 2440-2447.	1.6	29
103	Gate bias-stress induced hump-effect in transfer characteristics of amorphous-indium-gallium-zinc-oxide thin-film transistors with various channel widths. Applied Physics Letters, 2011, 99, .	1.5	80
104	Reduction of Hot Carrier Effects in Silicon-on-Glass TFTs. Journal of the Electrochemical Society, 2011, 158, J169-J174.	1.3	1
105	Low Voltage-Driven CMOS Circuits Based on SiOG. Electrochemical and Solid-State Letters, 2011, 14, J1.	2.2	1
106	Highly stable amorphous indium-gallium-zinc-oxide thin-film transistor using an etch-stopper and a via-hole structure. Journal of Information Display, 2011, 12, 47-50.	2.1	42
107	High performance pMOS circuits with silicon-on-glass TFTs. Solid-State Electronics, 2010, 54, 299-302.	0.8	8
108	Reduction of Hot Carrier Effects in Corning Silicon-on-Glass TFTs. ECS Transactions, 2010, 33, 83-94.	0.3	0

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109	Low Voltage Driven CMOS Circuits Based on Silicon on Glass. ECS Transactions, 2010, 33, 391-398.	0.3	0
110	(Invited) Stabilities of TFTs under Bias-Stress. ECS Transactions, 2010, 33, 31-39.	0.3	6