

Arokia Nathan

List of Publications by Year in descending order

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116
papers

4,539
citations

126907

33
h-index

106344

65
g-index

122
all docs

122
docs citations

122
times ranked

4889
citing authors

#	ARTICLE	IF	CITATIONS
1	Tactile and Vision Perception for Intelligent Humanoids. Advanced Intelligent Systems, 2022, 4, 2100074.	6.1	16
2	46: Invited Paper: Strip-Helix Fiber Architecture for Stretchable TFTs and Circuits. Digest of Technical Papers SID International Symposium, 2022, 53, 581-584.	0.3	0
3	Emerging Applications. , 2021, , 179-229.		1
4	Touch Detection Technologies. , 2021, , 19-89.		1
5	New Compact Modeling Solutions for Organic and Amorphous Oxide TFTs. IEEE Journal of the Electron Devices Society, 2021, 9, 911-932.	2.1	8
6	Performance Optimization. , 2021, , 109-154.		0
7	Energy Autonomous Sweat-Based Wearable Systems. Advanced Materials, 2021, 33, e2100899.	21.0	85
8	43.2: Invited Paper: Can TFTs Meet Low Power Requirements of Sensor Interfaces?. Digest of Technical Papers SID International Symposium, 2021, 52, 539-539.	0.3	0
9	50.5: Invited Paper: Reducing Trap Density in All-Inkjet-Printed Organic Thin-Film Transistors. Digest of Technical Papers SID International Symposium, 2021, 52, 611-611.	0.3	0
10	Tail state mediated conduction in zinc tin oxide thinfilm phototransistors under below bandgap optical excitation. Scientific Reports, 2021, 11, 19016.	3.3	4
11	The Advancement of Radio Frequency Energy Harvesters (RFEHs) as a Revolutionary Approach for Solving Energy Crisis in Wireless Communication Devices: A Review. IEEE Access, 2021, 9, 106107-106139.	4.2	18
12	Interchannel Mismatch Calibration Techniques for Time-Interleaved SAR ADCs. IEEE Open Journal of Circuits and Systems, 2021, 2, 420-433.	1.9	2
13	Guest Editorial Special Section From the Selected Extended Papers Presented at the CAD-TFT 2020. IEEE Journal of the Electron Devices Society, 2021, 9, 909-910.	2.1	0
14	Guest Editorial Special Issue on Papers From the IEEE FLEPS Conference 2020. IEEE Sensors Journal, 2021, 21, 26207-26207.	4.7	0
15	Oxide electronics: Translating materials science from lab-to-fab. MRS Bulletin, 2021, 46, 1028-1036.	3.5	8
16	Indium Silicon Oxide TFT Fully Photolithographically Processed for Circuit Integration. IEEE Journal of the Electron Devices Society, 2020, 8, 1162-1167.	2.1	5
17	Foreword Special Issue From the Selected Extended Papers Presented at EDTM 2020. IEEE Journal of the Electron Devices Society, 2020, 8, 1105-1110.	2.1	0
18	Ensemble Learning-Based Technique for Force Classifications in Piezoelectric Touch Panels. IEEE Sensors Journal, 2020, , 1-1.	4.7	3

#	ARTICLE	IF	CITATIONS
19	Ultralow-Power All-Inkjet-Printed Organic Thin-Film Transistors for Wearables. , 2020, , .		0
20	Films Stoichiometry Effects on the Electronic Transport Properties of Solution-Processed Yttrium Doped Indium-Zinc Oxide Crystalline Semiconductors for Thin Film Transistor Applications. Advanced Electronic Materials, 2020, 6, 1900976.	5.1	1
21	High Security User Authentication Enabled by Piezoelectric Keystroke Dynamics and Machine Learning. IEEE Sensors Journal, 2020, 20, 13037-13046.	4.7	18
22	Low voltage thin film transistors based on solution-processed In ₂ O ₃ :W. A remarkably stable semiconductor under negative and positive bias stress. Applied Physics Letters, 2020, 116, .	3.3	13
23	42.2: <i>Invited Paper:</i> Multi-Force Touch Technology Augmenting Capacitive Touch in Displays. Digest of Technical Papers SID International Symposium, 2019, 50, 472-475.	0.3	1
24	Flexible Ultralow-Power Sensor Interfaces for E-Skin. Proceedings of the IEEE, 2019, 107, 2084-2105.	21.3	41
25	ZnON MIS Thin-Film Diodes. IEEE Journal of the Electron Devices Society, 2019, 7, 375-381.	2.1	3
26	Printed subthreshold organic transistors operating at high gain and ultralow power. Science, 2019, 363, 719-723.	12.6	208
27	Photoconductive laser spectroscopy as a method to enhance defect spectral signatures in amorphous oxide semiconductor thin-film transistors. Applied Physics Letters, 2019, 114, 011907.	3.3	3
28	Deep Subthreshold TFT Operation and Design Window for Analog Gain Stages. IEEE Journal of the Electron Devices Society, 2018, 6, 195-200.	2.1	16
29	Stability Analysis of All-Inkjet-Printed Organic Thin-Film Transistors. MRS Advances, 2018, 3, 1871-1876.	0.9	3
30	Dye-Assisted Transformation of Cu ₂ O Nanocrystals to Amorphous Cu _x O Nanoflakes for Enhanced Photocatalytic Performance. ACS Omega, 2018, 3, 1939-1945.	3.5	13
31	Vertically Integrated Optical Sensor With Photoconductive Gain > 10 and Fill Factor > 70%. IEEE Electron Device Letters, 2018, 39, 386-389.	3.9	14
32	Dirac-Point Shift by Carrier Injection Barrier in Graphene Field-Effect Transistor Operation at Room Temperature. ACS Applied Materials & Interfaces, 2018, 10, 10618-10621.	8.0	5
33	Editorial For J-EDS Website. IEEE Journal of the Electron Devices Society, 2018, 6, 743-743.	2.1	0
34	Transparent and Flexible Oxide Nano-Electronics. , 2018, , .		0
35	PIN Diodes Array Made of Perovskite Single Crystal for X-Ray Imaging. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800380.	2.4	63
36	Influence of Surface Energy and Roughness on Hole Mobility in Solution-Processed Hybrid Organic Thin Film Transistors. IEEE Journal of the Electron Devices Society, 2018, 6, 653-657.	2.1	10

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37	P193: High Force Sensing Accuracy in Piezoelectric Based Interactive Displays by Artificial Neural Networks. Digest of Technical Papers SID International Symposium, 2018, 49, 1893-1896.	0.3	4
38	User-Oriented Piezoelectric Force Sensing and Artificial Neural Networks in Interactive Displays. IEEE Journal of the Electron Devices Society, 2018, 6, 766-773.	2.1	20
39	P2: Highly Sensitive Si:H PIN Photodiode Gated LTPS TFT for Optical In-Display Fingerprint Identification. Digest of Technical Papers SID International Symposium, 2018, 49, 490-493.	0.3	5
40	Optical-reconfigurable carbon nanotube and indium-tin-oxide complementary thin-film transistor logic gates. Nanoscale, 2018, 10, 13122-13129.	5.6	17
41	Controlling Surface Termination and Facet Orientation in Cu ₂ O Nanoparticles for High Photocatalytic Activity: A Combined Experimental and Density Functional Theory Study. ACS Applied Materials & Interfaces, 2017, 9, 8100-8106.	8.0	99
42	Ultrathin Multifunctional Graphene-PVDF Layers for Multidimensional Touch Interactivity for Flexible Displays. ACS Applied Materials & Interfaces, 2017, 9, 18410-18416.	8.0	62
43	A Lewis Acid Monopolar Gate Dielectric for All-Inkjet-Printed Highly Bias-Stress Stable Organic Transistors. Advanced Electronic Materials, 2017, 3, 1700029.	5.1	19
44	P209: Augmenting Capacitive Touch with Piezoelectric Force Sensing. Digest of Technical Papers SID International Symposium, 2017, 48, 2068-2071.	0.3	6
45	LED-Assisted Degradation of Aromatic Organics Using Cu ₂ O Photocatalysts. MRS Advances, 2017, 2, 3377-3381.	0.9	2
46	Surface/Interface Carrier-Transport Modulation for Constructing Photon-Alternative Ultraviolet Detectors Based on Self-Bending-Assembled ZnO Nanowires. ACS Applied Materials & Interfaces, 2017, 9, 31042-31053.	8.0	15
47	Device-Circuit Interactions and Impact on TFT Circuit-System Design. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2017, 7, 71-80.	3.6	11
48	3-D Dual-Gate Photosensitive Thin-Film Transistor Architectures Based on Amorphous Silicon. IEEE Transactions on Electron Devices, 2017, 64, 4952-4958.	3.0	12
49	P-180: Force Sensing Technique for Capacitive Touch Panel. Digest of Technical Papers SID International Symposium, 2016, 47, 1814-1817.	0.3	4
50	Interpreting anomalies observed in oxide semiconductor TFTs under negative and positive bias stress. AIP Advances, 2016, 6, .	1.3	21
51	Influence of polarization on contact angle saturation during electrowetting. Applied Physics Letters, 2016, 109, .	3.3	13
52	ZnO nanowire array growth on precisely controlled patterns of inkjet-printed zinc acetate at low-temperatures. Nanoscale, 2016, 8, 11760-11765.	5.6	24
53	Inkjet-printed Ag electrodes on paper for high sensitivity impedance measurements. RSC Advances, 2016, 6, 84547-84552.	3.6	9
54	Interactive Displays: The Next Omnipresent Technology [Point of View]. Proceedings of the IEEE, 2016, 104, 1503-1507.	21.3	19

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55	Precise control of Cu ₂ O nanostructures and LED-assisted photocatalysis. RSC Advances, 2016, 6, 78181-78186.	3.6	19
56	All ink-jet printed low-voltage organic field-effect transistors on flexible substrate. Organic Electronics, 2016, 38, 186-192.	2.6	74
57	Fast Readout and Low Power Consumption in Capacitive Touch Screen Panel by Downsampling. Journal of Display Technology, 2016, 12, 1417-1422.	1.2	6
58	Mono-Type TFT Logic Architectures for Low Power Systems on Panel Applications. Journal of Display Technology, 2016, , 1-1.	1.2	1
59	Piezoelectric vs. Capacitive Based Force Sensing in Capacitive Touch Panels. IEEE Access, 2016, 4, 3769-3774.	4.2	31
60	Subthreshold Schottky-barrier thin-film transistors with ultralow power and high intrinsic gain. Science, 2016, 354, 302-304.	12.6	199
61	Conduction Threshold in Accumulation-Mode InGaZnO Thin Film Transistors. Scientific Reports, 2016, 6, 22567.	3.3	31
62	TFT Small Signal Model and Analysis. IEEE Electron Device Letters, 2016, 37, 890-893.	3.9	10
63	TFT Compact Modeling. Journal of Display Technology, 2016, 12, 898-906.	1.2	23
64	Size Tunable ZnO Nanoparticles To Enhance Electron Injection in Solution Processed QLEDs. ACS Photonics, 2016, 3, 215-222.	6.6	159
65	Oxygen Defect-Induced Metastability in Oxide Semiconductors Probed by Gate Pulse Spectroscopy. Scientific Reports, 2015, 5, 14902.	3.3	53
66	Localized Tail States and Electron Mobility in Amorphous ZnON Thin Film Transistors. Scientific Reports, 2015, 5, 13467.	3.3	70
67	Graphene oxide/PEDOT:PSS as injection layer for quantum dot light emitting diode. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2856-2861.	1.8	9
68	Orthogonal Thin Film Photovoltaics on Vertical Nanostructures. Nanoscale Research Letters, 2015, 10, 486.	5.7	5
69	Oxide thin film transistor technology: Capturing device-circuit interactions. , 2015, , .		0
70	Transparent Semiconducting Oxide Technology for Touch Free Interactive Flexible Displays. Proceedings of the IEEE, 2015, 103, 644-664.	21.3	85
71	Cell constant studies of bipolar and tetrapolar electrode systems for impedance measurement. Sensors and Actuators B: Chemical, 2015, 221, 1264-1270.	7.8	20
72	High-current field-emission of carbon nanotubes and its application as a fast-imaging X-ray source. Carbon, 2015, 94, 687-693.	10.3	68

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73	Large area quantitative analysis of nanostructured thin-films. RSC Advances, 2015, 5, 12409-12415.	3.6	1
74	Fourier spectrum based extraction of an equivalent trap state density in indium gallium zinc oxide transistors. Applied Physics Letters, 2014, 104, 203505.	3.3	1
75	Unified Analytic Model for Current–Voltage Behavior in Amorphous Oxide Semiconductor TFTs. IEEE Electron Device Letters, 2014, 35, 84-86.	3.9	25
76	Top Down Scale-Up of Semiconducting Nanostructures for Large Area Electronics. Journal of Display Technology, 2014, 10, 660-665.	1.2	2
77	Origin of High Photoconductive Gain in Fully Transparent Heterojunction Nanocrystalline Oxide Image Sensors and Interconnects. Advanced Materials, 2014, 26, 7102-7109.	21.0	65
78	13.2: Invited Paper: LTPS vs Oxide Backplanes for AMOLED Displays: System Design Considerations and Compensation Techniques. Digest of Technical Papers SID International Symposium, 2014, 45, 153-156.	0.3	27
79	Amorphous Oxide Semiconductor TFTs for Displays and Imaging. Journal of Display Technology, 2014, 10, 917-927.	1.2	133
80	An Analysis of Electrode Patterns in Capacitive Touch Screen Panels. Journal of Display Technology, 2014, 10, 362-366.	1.2	119
81	Localized surface plasmon resonance enhanced quantum dot light-emitting diodes via quantum dot-capped gold nanoparticles. RSC Advances, 2014, 4, 57574-57579.	3.6	14
82	All Solution-processed Stable White Quantum Dot Light-emitting Diodes with Hybrid ZnO@TiO ₂ as Blue Emitters. Scientific Reports, 2014, 4, 4085.	3.3	61
83	Recyclable, Flexible, Low-Power Oxide Electronics. Advanced Functional Materials, 2013, 23, 2153-2161.	14.9	124
84	Vertical CNT-Si Photodiode Array. Nano Letters, 2013, 13, 4131-4136.	9.1	11
85	Modeling Sub-Threshold Current–Voltage Characteristics in Thin Film Transistors. Journal of Display Technology, 2013, 9, 883-889.	1.2	42
86	Amorphous Silicon Thin Film Transistor Biosensing System. Materials Research Society Symposia Proceedings, 2013, 1530, 1.	0.1	0
87	High-Performance Nanowire Oxide Photo-Thin Film Transistor. Advanced Materials, 2013, 25, 5549-5554.	21.0	49
88	Foreword [Special Issue on the 8th International Thin-Film Transistor Conference (ITC 2012)]. Journal of Display Technology, 2013, 9, 687-687.	1.2	0
89	Transparent Oxide Semiconductors for Advanced Display Applications. Information Display, 2013, 29, 6-11.	0.2	5
90	Thin Film Coil Design Considerations for Wireless Power Transfer in Flat Panel Display. Materials Research Society Symposia Proceedings, 2012, 1388, 1.	0.1	1

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91	How to achieve ultra high photoconductive gain for transparent oxide semiconductor image sensors. , 2012, , .		8
92	Gated three-terminal device architecture to eliminate persistent photoconductivity in oxide semiconductor photosensor arrays. Nature Materials, 2012, 11, 301-305.	27.5	434
93	Electrical Characterization of Electrochemically Grown ZnO Nanorods using STM. Materials Research Society Symposia Proceedings, 2012, 1391, 71.	0.1	4
94	Localized tail state distribution in amorphous oxide transistors deduced from low temperature measurements. Applied Physics Letters, 2012, 101, .	3.3	64
95	Challenges in visible wavelength detection using optically transparent oxide semiconductors. , 2012, , .		3
96	Flat-Panel Compatible Photovoltaic Energy Harvesting System. Journal of Display Technology, 2012, 8, 204-211.	1.2	10
97	3.1: <i>Invited Paper</i>: Amorphous Oxide TFTs: Progress and Issues. Digest of Technical Papers SID International Symposium, 2012, 43, 1-4.	0.3	9
98	25.2: Photoâ€Sensor Thin Film Transistor based on Double Metalâ€Oxide Layer for Inâ€cell Remote Touch Screen. Digest of Technical Papers SID International Symposium, 2012, 43, 334-337.	0.3	11
99	Analytical Field-Effect Method for Extraction of Subgap States in Thin-Film Transistors. IEEE Electron Device Letters, 2012, 33, 1006-1008.	3.9	28
100	Metal Oxide Thin Film Phototransistor for Remote Touch Interactive Displays. Advanced Materials, 2012, 24, 2631-2636.	21.0	143
101	Temperature dependent electron transport in amorphous oxide semiconductor thin film transistors. , 2011, , .		37
102	Dual gate photo-thin film transistor with high photoconductive gain for high reliability, and low noise flat panel transparent imager. , 2011, , .		4
103	Trap-limited and percolation conduction mechanisms in amorphous oxide semiconductor thin film transistors. Applied Physics Letters, 2011, 98, .	3.3	249
104	Complementary Metal Oxide Semiconductor Technology With and On Paper. Advanced Materials, 2011, 23, 4491-4496.	21.0	235
105	Phototransistor with nanocrystalline Si/amorphous Si bilayer channel. Applied Physics Letters, 2010, 96, .	3.3	11
106	Instability in threshold voltage and subthreshold behavior in Hfâ€Inâ€Znâ€O thin film transistors induced by bias-and light-stress. Applied Physics Letters, 2010, 97, .	3.3	108
107	Persistent photoconductivity in Hfâ€Inâ€Znâ€O thin film transistors. Applied Physics Letters, 2010, 97, .	3.3	139
108	Arrays of Parallel Connected Coaxial Multiwallâ€Carbonâ€Nanotubeâ€Amorphousâ€Silicon Solar Cells. Advanced Materials, 2009, 21, 3919-3923.	21.0	95

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109	Zinc Oxide Nanostructures and High Electron Mobility Nanocomposite Thin Film Transistors. IEEE Transactions on Electron Devices, 2008, 55, 3001-3011.	3.0	46
110	A comparative study of plasma-enhanced chemical vapor gate dielectrics for solution-processed polymer thin-film transistor circuit integration. Journal of Applied Physics, 2008, 104, .	2.5	12
111	Organic thin-film transistor integration using silicon nitride gate dielectric. Applied Physics Letters, 2007, 90, 133514.	3.3	31
112	Stable indium oxide thin-film transistors with fast threshold voltage recovery. Applied Physics Letters, 2007, 91, 263508.	3.3	104
113	Low leakage p-NiO \cdot i-ZnO \cdot n-ITO heterostructure ultraviolet sensor. Applied Physics Letters, 2006, 89, 172105.	3.3	49
114	Directly deposited nanocrystalline silicon thin-film transistors with ultra high mobilities. Applied Physics Letters, 2006, 89, 252101.	3.3	47
115	Applications of Disordered Semiconductors in Modern Electronics: Selected Examples. , 2006, , 149-177.		5
116	High-mobility nanocrystalline silicon thin-film transistors fabricated by plasma-enhanced chemical vapor deposition. Applied Physics Letters, 2005, 86, 222106.	3.3	142