

# Niko MÃ¼nzenrieder

## List of Publications by Year in descending order

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130  
papers

3,899  
citations

147726

31  
h-index

133188

59  
g-index

134  
all docs

134  
docs citations

134  
times ranked

4555  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal oxide semiconductor thin-film transistors for flexible electronics. Applied Physics Reviews, 2016, 3, 021303.	5.5	511
2	Woven Electronic Fibers with Sensing and Display Functions for Smart Textiles. Advanced Materials, 2010, 22, 5178-5182.	11.1	355
3	Wafer-scale design of lightweight and transparent electronics that wraps around hairs. Nature Communications, 2014, 5, 2982.	5.8	279
4	Fabrication and Transfer of Flexible Few-Layers MoS <sub>2</sub> Thin Film Transistors to Any Arbitrary Substrate. ACS Nano, 2013, 7, 8809-8815.	7.3	185
5	The Effects of Mechanical Bending and Illumination on the Performance of Flexible IGZO TFTs. IEEE Transactions on Electron Devices, 2011, 58, 2041-2048.	1.6	152
6	Flexible Sensors—From Materials to Applications. Technologies, 2019, 7, 35.	3.0	139
7	Flexible Self-Aligned Amorphous InGaZnO Thin-Film Transistors With Submicrometer Channel Length and a Transit Frequency of 135 MHz. IEEE Transactions on Electron Devices, 2013, 60, 2815-2820.	1.6	96
8	Biomimetic Microelectronics for Regenerative Neuronal Cuff Implants. Advanced Materials, 2015, 27, 6797-6805.	11.1	86
9	IGZO TFT-Based All-Enhancement Operational Amplifier Bent to a Radius of 5 mm. IEEE Electron Device Letters, 2013, 34, 1394-1396.	2.2	79
10	Stretchable and Conformable Oxide Thin-Film Electronics. Advanced Electronic Materials, 2015, 1, 1400038.	2.6	78
11	Flexible Self-Aligned Double-Gate IGZO TFT. IEEE Electron Device Letters, 2014, 35, 69-71.	2.2	69
12	Flexible a-IGZO Phototransistor for Instantaneous and Cumulative UV Exposure Monitoring for Skin Health. Advanced Electronic Materials, 2016, 2, 1600273.	2.6	59
13	Contact resistance and overlapping capacitance in flexible sub-micron long oxide thin-film transistors for above 100%MHz operation. Applied Physics Letters, 2014, 105, .	1.5	57
14	Buckled Thin-Film Transistors and Circuits on Soft Elastomers for Stretchable Electronics. ACS Applied Materials & Interfaces, 2017, 9, 28750-28757.	4.0	54
15	An electronic nose on flexible substrates integrated into a smart textile. Sensors and Actuators B: Chemical, 2012, 174, 81-86.	4.0	52
16	Flexible Temperature Sensor Integration into E-Textiles Using Different Industrial Yarn Fabrication Processes. Sensors, 2020, 20, 73.	2.1	52
17	Flexible double gate a-IGZO TFT fabricated on free standing polyimide foil. Solid-State Electronics, 2013, 84, 198-204.	0.8	49
18	Integration Method for Electronics in Woven Textiles. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 1107-1117.	1.4	48

#	ARTICLE	IF	CITATIONS
19	Flexible a-IGZO TFT amplifier fabricated on a free standing polyimide foil operating at 1.2 MHz while bent to a radius of 5 mm. , 2012, , .		47
20	Design Rules for IGZO Logic Gates on Plastic Foil Enabling Operation at Bending Radii of 3.5 mm. IEEE Transactions on Electron Devices, 2012, 59, 2153-2159.	1.6	47
21	Design of Engineered Elastomeric Substrate for Stretchable Active Devices and Sensors. Advanced Functional Materials, 2018, 28, 1705132.	7.8	47
22	Low-temperature spray-deposited indium oxide for flexible thin-film transistors and integrated circuits. Applied Physics Letters, 2015, 106, .	1.5	46
23	Encapsulation for Flexible Electronic Devices. IEEE Electron Device Letters, 2011, 32, 1743-1745.	2.2	44
24	A Compact a-IGZO TFT Model Based on MOSFET SPICE $\{m\}$ Level=3\$ Template for Analog/RF Circuit Designs. IEEE Electron Device Letters, 2013, 34, 1391-1393.	2.2	44
25	Locally Reinforced Polymer-Based Composites for Elastic Electronics. ACS Applied Materials & Interfaces, 2012, 4, 2860-2864.	4.0	40
26	Textile integrated sensors and actuators for near-infrared spectroscopy. Optics Express, 2013, 21, 3213.	1.7	40
27	Influence of Mechanical Bending on Flexible InGaZnO-Based Ferroelectric Memory TFTs. IEEE Transactions on Electron Devices, 2014, 61, 1085-1092.	1.6	38
28	Entirely Flexible On-site Conditioned Magnetic Sensorics. Advanced Electronic Materials, 2016, 2, 1600188.	2.6	38
29	Review of recent trends in flexible metal oxide thin-film transistors for analog applications. Flexible and Printed Electronics, 2020, 5, 033001.	1.5	38
30	Combining electronics on flexible plastic strips with textiles. Textile Research Journal, 2013, 83, 1130-1142.	1.1	37
31	Flexible In-Ga-Zn-O Thin-Film Transistors on Elastomeric Substrate Bent to 2.3% Strain. IEEE Electron Device Letters, 2015, 36, 781-783.	2.2	37
32	Flexible Quasi-Vertical In-Ga-Zn-O Thin-Film Transistor With 300-nm Channel Length. IEEE Electron Device Letters, 2015, 36, 475-477.	2.2	36
33	Fabricating and Assembling Acoustic Metamaterials and Phononic Crystals. Advanced Engineering Materials, 2021, 23, 2000988.	1.6	34
34	Solution-processed p-type copper(I) thiocyanate (CuSCN) for low-voltage flexible thin-film transistors and integrated inverter circuits. Applied Physics Letters, 2017, 110, 113504.	1.5	33
35	Ferroelectric-Like Charge Trapping Thin-Film Transistors and Their Evaluation as Memories and Synaptic Devices. Advanced Electronic Materials, 2017, 3, 1700309.	2.6	33
36	Thin-film electronics on active substrates: review of materials, technologies and applications. Journal Physics D: Applied Physics, 2022, 55, 323002.	1.3	33

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37	22.5 dB open-loop gain, 31 kHz GBW pseudo-CMOS based operational amplifier with a-IGZO TFTs on a flexible film. , 2014, , .		32
38	Room temperature fabricated flexible NiO/IGZO pn diode under mechanical strain. Solid-State Electronics, 2013, 87, 17-20.	0.8	31
39	Charge Trapping Mechanism Leading to Sub-60-mV/decade-Swing FETs. IEEE Transactions on Electron Devices, 2017, 64, 2789-2796.	1.6	29
40	Impact of Mechanical Bending on ZnO and IGZO Thin-Film Transistors. IEEE Electron Device Letters, 2010, , .	2.2	26
41	Flexible InGaZnO TFTs With $f_{max}$ Above 300 MHz. IEEE Electron Device Letters, 2018, 39, 1310-1313.	2.2	26
42	Investigation of gate material ductility enables flexible a-IGZO TFTs bendable to a radius of 1.7 mm. , 2013, , .		23
43	Positive charge trapping phenomenon in n-channel thin-film transistors with amorphous alumina gate insulators. Journal of Applied Physics, 2016, 120, .	1.1	23
44	Woven active-matrix display. IEEE Transactions on Electron Devices, 2012, 59, 721-728.	1.6	19
45	Mechanically flexible vertically integrated a-IGZO thin-film transistors with 500 nm channel length fabricated on free standing plastic foil. , 2013, , .		19
46	Hand-Drawn Resistors, Capacitors, Diodes, and Circuits for a Pressure Sensor System on Paper. Advanced Electronic Materials, 2018, 4, 1700600.	2.6	19
47	Directly 3D-printed monolithic soft robotic gripper with liquid metal microchannels for tactile sensing. Flexible and Printed Electronics, 2019, 4, 035001.	1.5	19
48	Flexible IGZO TFT SPICE Model and Design of Active Strain-Compensation Circuits for Bendable Active Matrix Arrays. IEEE Electron Device Letters, 2018, 39, 1314-1317.	2.2	17
49	A 70° phase margin OPAMP with positive feedback in flexible a-IGZO TFT technology. , 2015, , .		16
50	Indium-gallium-zinc-oxide based mechanically flexible transimpedance amplifier. Electronics Letters, 2011, 47, 691.	0.5	15
51	The influence of bending on the performance of flexible carbon black/polymer composite gas sensors. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 329-336.	2.4	15
52	Flexible In-Ga-Zn-O-Based Circuits With Two and Three Metal Layers: Simulation and Fabrication Study. IEEE Electron Device Letters, 2016, 37, 1582-1585.	2.2	15
53	Gain-Tunable Complementary Common-Source Amplifier Based on a Flexible Hybrid Thin-Film Transistor Technology. IEEE Electron Device Letters, 2017, 38, 1536-1539.	2.2	14
54	A transistor model for a-IGZO TFT circuit design built upon the RPI-aTFT model. , 2017, , .		14

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55	Oxide Thin-Film Transistors on Fibers for Smart Textiles. <i>Technologies</i> , 2017, 5, 31.	3.0	14
56	Flexible IGZO TFTs and Their Suitability for Space Applications. <i>IEEE Journal of the Electron Devices Society</i> , 2019, 7, 1182-1190.	1.2	14
57	2D Thin Film Temperature Sensors Fabricated onto 3D Nylon Yarn Surface for Smart Textile Applications. <i>Research Journal of Textile and Apparel</i> , 2013, 17, 16-20.	0.6	13
58	Cherry-Hooper amplifiers with 33 dB gain at 400 kHz BW and 10 dB gain at 3.5 MHz BW in flexible self-aligned a-IGZO TFT technology. , 2014, , .		13
59	Focused ion beam milling for the fabrication of 160 nm channel length IGZO TFTs on flexible polymer substrates. <i>Flexible and Printed Electronics</i> , 2020, 5, 015007.	1.5	13
60	Coco Stretch: Strain Sensors Based on Natural Coconut Oil and Carbon Black Filled Elastomers. <i>Advanced Materials Technologies</i> , 2021, 6, 2000780.	3.0	13
61	A 2.62 MHz 762 &#x00B5;W cascode amplifier in flexible a-IGZO thin-film technology for textile and wearable-electronics applications. , 2013, , .		12
62	High gain amplifiers in flexible self-aligned a-IGZO thin-film-transistor technology. , 2014, , .		12
63	Program FFlexCom â€” High frequency flexible bendable electronics for wireless communication systems. , 2017, , .		12
64	Improvement of contact resistance in flexible a-IGZO thin-film transistors by CF4/O2 plasma treatment. <i>Solid-State Electronics</i> , 2018, 150, 23-27.	0.8	12
65	Flexible Inâ€“Gaâ€“Znâ€“O Thin-Film Transistors With Sub-300-nm Channel Lengths Defined by Two-Photon Direct Laser Writing. <i>IEEE Transactions on Electron Devices</i> , 2018, 65, 3796-3802.	1.6	11
66	Design and analysis of high-gain amplifiers in flexible self-aligned a-IGZO thin-film transistor technology. <i>Analog Integrated Circuits and Signal Processing</i> , 2016, 87, 213-222.	0.9	9
67	5â€“31-Hz 188- $\mu$ W Light-Sensing Oscillator With Two Active Inductors Fully Integrated on Plastic. <i>IEEE Journal of Solid-State Circuits</i> , 2019, 54, 2195-2206.	3.5	9
68	Fabrication and AC Performance of Flexible Indium-Gallium-Zinc-Oxide Thin-Film Transistors. <i>ECS Transactions</i> , 2019, 90, 55-63.	0.3	9
69	Non-contact long range AC voltage measurement. , 2019, , .		9
70	Bendable energy-harvesting module with organic photovoltaic, rechargeable battery, and a-IGZO TFT charging electronics. , 2015, , .		8
71	15 dB conversion gain, 20 MHz carrier frequency AM receiver in flexible a-IGZO TFT technology with textile antennas. , 2015, , .		8
72	Fabrication, Modeling, and Evaluation of a Digital Output Tilt Sensor With Conductive Microspheres. <i>IEEE Sensors Journal</i> , 2017, 17, 3635-3643.	2.4	8

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73	Oxide Thin-Film Electronics on Carbon Fiber Reinforced Polymer Composite. IEEE Electron Device Letters, 2017, 38, 1043-1046.	2.2	8
74	ShapeSense3D. , 2019, , .		8
75	Flexible Electronics for Wireless Communication: A Technology and Circuit Design Review With an Application Example. IEEE Microwave Magazine, 2022, 23, 24-44.	0.7	8
76	A flexible InGaZnO based 1-bit SRAM under mechanical strain. , 2011, , .		7
77	Integration of solution-processed (7,5) SWCNTs with sputtered and spray-coated metal oxides for flexible complementary inverters. , 2014, , .		7
78	A wearable bluetooth LE sensor for patient monitoring during MRI scans. , 2016, 2016, 4975-4978.		7
79	Fabricating and Assembling Acoustic Metamaterials and Phononic Crystals. Advanced Engineering Materials, 2021, 23, 2170008.	1.6	7
80	15 dB Conversion gain, 20 MHz carrier frequency AM receiver in flexible a-IGZO TFT technology with textile antennas. , 2015, , .		6
81	3â€“5 V, 3â€“3.8 MHz OOK modulator with a-IGZO TFTs for flexible wireless transmitter. , 2017, , .		6
82	Flexible Green Perovskite Light Emitting Diodes. IEEE Journal of the Electron Devices Society, 2019, 7, 769-775.	1.2	6
83	Design and Characterisation of a Non-Contact Flexible Sensor Array for Electric Potential Imaging Applications. IEEE Sensors Journal, 2021, 21, 26328-26336.	2.4	6
84	Cost-effective, mask-less, and high-throughput prototyping of flexible hybrid electronic devices using dispense printing and conductive silver ink. , 2021, , .		6
85	A Low-Cost Method to Prepare Biocompatible Filaments with Enhanced Physico-Mechanical Properties for FDM 3D Printing. Current Drug Delivery, 2021, 18, 700-711.	0.8	6
86	In Tube Integrated Electronic Nose System on a Flexible Polymer Substrate. Sensors, 2012, 12, 13681-13693.	2.1	5
87	InGaZnO TFTs on a flexible membrane transferred to a curved surface with a radius of 2 mm. , 2013, , .		5
88	Programmable e-textile composite Circuit. , 2015, , .		5
89	3.5mW 1MHz AM detector and digitally-controlled tuner in a-IGZO TFT for wireless communications in a fully integrated flexible system for audio bag. , 2016, , .		5
90	Flexible carbon nanotube-based electrolyte-gated field-effect transistor for spermidine detection. , 2021, , .		5

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91	Overview of the EC project FLEXIBILITY: Organic and thin-film ICs up to radio frequencies for multifunctional flexible systems. , 2013, , .		4
92	High performance flexible electronics for biomedical devices. , 2014, 2014, 4176-9.		4
93	A fully integrated audio amplifier in flexible a-IGZO TFT technology for printed piezoelectric loudspeakers. , 2015, , .		4
94	Geometry-Based Tunability Enhancement of Flexible Thin-Film Varactors. IEEE Electron Device Letters, 2017, 38, 1117-1120.	2.2	4
95	Aluminum oxide as a dielectric and passivation layer for (flexible) metal-oxide and 2D semiconductor devices. , 2021, , .		4
96	Inferring Complex Textile Shape from an Integrated Carbon Black-infused Ecoflex-based Bend and Stretch Sensor Array. , 2021, , .		4
97	Non-contact Measurement of DC Potentials with Applications in Static Charge Imaging. , 2020, , .		4
98	20 MHz carrier frequency AM receiver in flexible a-IGZO TFT technology with textile antennas. , 2015, , .		3
99	Flexible CMOS electronics based on p-type $\text{Ge}_{2\text{Sb}_2\text{Te}_5}$ and n-type $\text{InGaZnO}_4$ semiconductors. , 2017, , .		3
100	Long-Term Aging of $\text{Al}_2\text{O}_3$ Passivated and Unpassivated Flexible a-IGZO TFTs. IEEE Transactions on Electron Devices, 2020, 67, 4934-4939.	1.6	3
101	6.2.4 Influence of Flexible Substrate Materials on the Performance of Polymer Composite Gas Sensors. , 2012, , .		3
102	Recycled Carbon-based Strain Sensors: An Ecofriendly Approach using Char and Coconut Oil. , 2021, , .		3
103	The Influence of Climate Conditions and On-Skin Positioning on InGaZnO Thin-Film Transistor Performance. Frontiers in Electronics, 2022, 2, .	2.0	3
104	Mechanically flexible double gate a-IGZO TFTs. , 2012, , .		2
105	Digital output flexible tilt sensor with conductive microspheres. , 2015, , .		2
106	Baseband amplifiers in a-IGZO TFT technology for flexible audio systems. , 2015, , .		2
107	Design of bendable high-frequency circuits based on short-channel InGaZnO TFTs. , 2019, , .		2
108	Flexible Micro-Scale Sensor Array for Non-Contact Electric Potential Imaging. , 2020, , .		2

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109	Fabrication of Flexible and Transferable RTDs via Fused Deposition Modelling 3D Printing. , 2021, , .		2
110	Flexible Bootstrapped Cascode System with Feedback for Capacitive Through-Substrate Electric Potential Measurements with a 55 dB Relative Gain. , 2020, , .		2
111	Thermal Stability of Flexible IGZO/Ag Schottky Diodes on Cellulose Microfiber Paper Substrate. , 2021, , .		2
112	Copper wire based electrical contacts for direct interfacing of stretchable sensors. , 2020, , .		2
113	Flexible electronics based on oxide semiconductors. , 2014, , .		1
114	Radio frequency electronics on plastic. , 2015, , .		1
115	Sensors: Entirely Flexible On-site Conditioned Magnetic Sensorics (Adv. Electron. Mater. 8/2016). Advanced Electronic Materials, 2016, 2, .	2.6	1
116	20.3dB 0.39mW AM detector with single-transistor active inductor in bendable a-IGZO TFT. , 2016, , .		1
117	20.3dB 0.39mW AM detector with single-transistor active inductor in bendable a-IGZO TFT. , 2016, , .		1
118	Low Temperature and Radiation Stability of Flexible IGZO TFTs and their Suitability for Space Applications. , 2018, , .		1
119	Bendable Printed and Thin-film Electronics for Wireless Communications. , 2018, , .		1
120	Flexible IGZO thin-film transistors with liquid EGaIn gate contacts. , 2019, , .		1
121	Evaluation of a Pseudo Zero-Potential Flexible Readout Circuit for Resistive Sensor Matrixes. , 2020, , .		1
122	Strain Sensors: Coco Stretch: Strain Sensors Based on Natural Coconut Oil and Carbon Black Filled Elastomers (Adv. Mater. Technol. 2/2021). Advanced Materials Technologies, 2021, 6, 2170012.	3.0	1
123	Bendable metal oxide thin-film transistors and circuits for analog electronics applications. , 2021, , .		1
124	Soft Gel-free ECG electrodes based on Biocompatible Coconut-Oil and Carbon Black. , 2021, , .		1
125	Fabrication technologies for the integration of thin-film electronics into smart textiles. , 2013, , 227-252.		0
126	Design and simulation of a 800 Mbit/s data link for magnetic resonance imaging wearables. , 2015, 2015, 1323-6.		0



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127	Mechanical and Electrical Design Strategies for Flexible InGaZnO Circuits. , 2021, , .		0
128	Non-contact thin-film sheet conductance measurement based on the attenuation of low frequency electric potentials. Journal Physics D: Applied Physics, 2021, 54, 414003.	1.3	0
129	Oxide Thin-Film Electronics for the Front-End Conditioning of Flexible Magnetic Field Sensors. Minerals, Metals and Materials Series, 2021, , 294-302.	0.3	0
130	Lessons Learned in Developing Sensorised Textiles to Capture Body Shapes. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2022, , 365-380.	0.2	0