

# Joachim Burghartz

## List of Publications by Year in descending order

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67  
papers

2,285  
citations

218677

26  
h-index

214800

47  
g-index

67  
all docs

67  
docs citations

67  
times ranked

2407  
citing authors

#	ARTICLE	IF	CITATIONS
1	Bridging the gap between optical fibers and silicon photonic integrated circuits. Optics Express, 2014, 22, 1277.	3.4	279
2	Contact Resistance and Megahertz Operation of Aggressively Scaled Organic Transistors. Small, 2012, 8, 73-79.	10.0	217
3	Small contact resistance and high-frequency operation of flexible low-voltage inverted coplanar organic transistors. Nature Communications, 2019, 10, 1119.	12.8	163
4	Flexible low-voltage high-frequency organic thin-film transistors. Science Advances, 2020, 6, eaaz5156.	10.3	133
5	Flexible Low-Voltage Organic Complementary Circuits: Finding the Optimum Combination of Semiconductors and Monolayer Gate Dielectrics. Advanced Materials, 2015, 27, 207-214.	21.0	106
6	Spray coating of photoresist for pattern transfer on high topography surfaces. Journal of Micromechanics and Microengineering, 2005, 15, 691-697.	2.6	105
7	Detailed analysis and contact properties of low-voltage organic thin-film transistors based on dinaphtho[2,3-b:2'3'-f]thieno[3,2-b]thiophene (DNNT) and its didecyl and diphenyl derivatives. Organic Electronics, 2016, 35, 33-40.	2.6	83
8	A 3.3 V 6-Bit 100 kS/s Current-Steering Digital-to-Analog Converter Using Organic P-Type Thin-Film Transistors on Glass. IEEE Journal of Solid-State Circuits, 2012, 47, 292-300.	5.4	78
9	A New Fabrication and Assembly Process for Ultrathin Chips. IEEE Transactions on Electron Devices, 2009, 56, 321-327.	3.0	73
10	Ultra-thin chip technology and applications, a new paradigm in silicon technology. Solid-State Electronics, 2010, 54, 818-829.	1.4	73
11	Megahertz operation of flexible low-voltage organic thin-film transistors. Organic Electronics, 2013, 14, 1516-1520.	2.6	73
12	Accurate Capacitance Modeling and Characterization of Organic Thin-Film Transistors. IEEE Transactions on Electron Devices, 2014, 61, 98-104.	3.0	55
13	Flexible low-voltage organic phototransistors based on air-stable dinaphtho[2,3-b:2'3'-f]thieno[3,2-b]thiophene (DNNT). Organic Electronics, 2015, 20, 63-68.	2.6	54
14	S-Parameter Characterization of Submicrometer Low-Voltage Organic Thin-Film Transistors. IEEE Electron Device Letters, 2013, 34, 520-522.	3.9	53
15	Roadmap to Gigahertz Organic Transistors. Advanced Functional Materials, 2020, 30, 1903812.	14.9	52
16	Low-Voltage, High-Frequency Organic Transistors and Unipolar and Complementary Ring Oscillators on Paper. Advanced Electronic Materials, 2019, 5, 1800453.	5.1	40
17	A digital library for a flexible low-voltage organic thin-film transistor technology. Organic Electronics, 2017, 50, 491-498.	2.6	36
18	Low-Dispersion, High-Voltage, Low-Leakage GaN HEMTs on Native GaN Substrates. IEEE Transactions on Electron Devices, 2018, 65, 2939-2947.	3.0	36

#	ARTICLE	IF	CITATIONS
19	AC characterization of organic thin-film transistors with asymmetric gate-to-source and gate-to-drain overlaps. <i>Organic Electronics</i> , 2013, 14, 1318-1322.	2.6	32
20	Hybrid Systems in Foil (HySiF) exploiting ultra-thin flexible chips. <i>Solid-State Electronics</i> , 2015, 113, 101-108.	1.4	31
21	Stencil lithography for organic thin-film transistors with a channel length of 300 nm. <i>Organic Electronics</i> , 2018, 61, 65-69.	2.6	31
22	Ultra-Efficient Silicon-on-Insulator Grating Couplers With Backside Metal Mirrors. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2020, 26, 1-6.	2.9	31
23	Status and trends of silicon RF technology. <i>Microelectronics Reliability</i> , 2001, 41, 13-19.	1.7	29
24	Ultra-thin smart electronic skin based on hybrid system in foil concept combining three flexible electronics technologies. <i>Electronics Letters</i> , 2018, 54, 338-340.	1.0	28
25	Magnetic properties of electroplated nano/microgranular NiFe thin films for rf application. <i>Journal of Applied Physics</i> , 2005, 97, 10N305.	2.5	27
26	Analysis of an AlGaN/AlN Super-Lattice Buffer Concept for 650-V Low-Dispersion and High-Reliability GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 1113-1119.	3.0	27
27	Magnetic-Multilayered Interconnects Featuring Skin Effect Suppression. <i>IEEE Electron Device Letters</i> , 2008, 29, 319-321.	3.9	26
28	Compact modeling of CMOS transistors under variable uniaxial stress. <i>Solid-State Electronics</i> , 2011, 57, 52-60.	1.4	24
29	Adaptive Layout Technique for Microhybrid Integration of Chip-Film Patch. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2018, 8, 802-810.	2.5	20
30	Hybrid Systems-in-Foil Combining the Merits of Thin Chips and of Large-Area Electronics. <i>IEEE Journal of the Electron Devices Society</i> , 2019, 7, 776-783.	2.1	20
31	Low-Power Organic Light Sensor Array Based on Active-Matrix Common-Gate Transimpedance Amplifier on Foil for Imaging Applications. <i>IEEE Journal of Solid-State Circuits</i> , 2020, 55, 2553-2566.	5.4	20
32	Parameter Uniformity of Submicron-Channel-Length Organic Thin-Film Transistors Fabricated by Stencil Lithography. <i>IEEE Nanotechnology Magazine</i> , 2017, 16, 837-841.	2.0	18
33	Subthreshold Swing of 59 mV decade <sup>-1</sup> in Nanoscale Flexible Ultralow-Voltage Organic Transistors. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	18
34	An Ultra-Low-Power BPSK Receiver and Demodulator Based on Injection-Locked Oscillators. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2011, 59, 1339-1349.	4.6	17
35	Two-Dimensional Flex Sensor Exploiting Stacked Ultrathin Chips. <i>IEEE Electron Device Letters</i> , 2012, 33, 444-446.	3.9	15
36	Multi-Chip Patch in Low Stress Polymer Foils based on an Adaptive Layout for Flexible Sensor Systems. , 2018, , .		13

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37	Compensation of externally applied mechanical stress by stacking of ultrathin chips. Solid-State Electronics, 2012, 74, 102-107.	1.4	12
38	Numerical analysis of capacitance compact models for organic thin-film transistors. Organic Electronics, 2014, 15, 1503-1508.	2.6	12
39	Consistent Surface-Potential-Based Modeling of Drain and Gate Currents in AlGaIn/GaN HEMTs. IEEE Transactions on Electron Devices, 2020, 67, 455-462.	3.0	12
40	Backside Illuminated $\alpha$ -Ge-on-Si NIR Camera. IEEE Sensors Journal, 2021, 21, 18696-18705.	4.7	11
41	Modeling of Strained CMOS on Disposable SiGe Dots: Strain Impacts on Devices' Electrical Characteristics. IEEE Transactions on Electron Devices, 2007, 54, 2321-2326.	3.0	10
42	Miniaturized Optical Encoder with Micro Structured Encoder Disc. Applied Sciences (Switzerland), 2019, 9, 452.	2.5	9
43	Physical Modeling of Charge Trapping Effects in GaN/Si Devices and Incorporation in the ASM-HEMT Model. IEEE Journal of the Electron Devices Society, 2021, 9, 748-755.	2.1	9
44	Experimental Determination of the Nonuniform Shape-Induced Anisotropy Field in Thin Ni $\alpha$ -Fe Films. IEEE Transactions on Magnetics, 2007, 43, 1880-1883.	2.1	6
45	Toward a flexible and adaptive wireless hub by embedding power amplifier thinned silicon chip and antenna in a polymer foil. International Journal of Microwave and Wireless Technologies, 2019, 11, 864-871.	1.9	6
46	Characterization of Thin-Film Temperature Sensors and Ultra-Thin Chips for HySiF Integration. , 2019, , .		6
47	Modeling of strained CMOS on disposable SiGe dots: Shape impacts on electrical/thermal characteristics. Solid-State Electronics, 2008, 52, 919-925.	1.4	5
48	Thermal Issues in Micromachined Spiral Inductors for High-Power Applications. IEEE Transactions on Electron Devices, 2008, 55, 3288-3294.	3.0	5
49	Thin Film on CMOS Active Pixel Sensor for Space Applications. Sensors, 2008, 8, 6340-6354.	3.8	5
50	Evaluation of High-Temperature High-Frequency GaN-Based LC-Oscillator Components. IEEE Transactions on Electron Devices, 2020, 67, 4587-4591.	3.0	5
51	Model and Simulation of GaN-Based Pressure Sensors for High Temperature Applications $\alpha$ Part II: Sensor Design and Simulation. IEEE Sensors Journal, 2021, 21, 20176-20183.	4.7	5
52	Integrated Microstrip Lines With Co $\alpha$ -Ta $\alpha$ -Zr Magnetic Films. IEEE Transactions on Magnetics, 2008, 44, 3103-3106.	2.1	4
53	A Flexible Chip-Film Patch and a Flexible Strain Gauge Sensor Suitable for a Hybrid System-in-Foil Integration. IEEE Sensors Journal, 2021, 21, 26345-26354.	4.7	4
54	Extraction of collector resistances for device characterization and compact models. Solid-State Electronics, 2006, 50, 1475-1478.	1.4	3

#	ARTICLE	IF	CITATIONS
55	Ferromagnetic Thin Films for Loss Reduction in On-Chip Transmission Lines. IEEE Transactions on Magnetics, 2007, 43, 2630-2632.	2.1	3
56	Thermal characterization and modeling of ultra-thin silicon chips. Solid-State Electronics, 2015, 113, 121-126.	1.4	3
57	Model and Simulation of GaN-Based Pressure Sensors for High Temperature Applicationsâ€™ Part I: Physics Based Compact Modeling. IEEE Sensors Journal, 2021, 21, 20165-20175.	4.7	3
58	Temperature dependent lateral and vertical conduction mechanisms in AlGaIn/GaN HEMT on thinned silicon substrate. Japanese Journal of Applied Physics, 2019, 58, SCCD11.	1.5	2
59	Characterization of On-Foil Sensors and Ultra-Thin Chips for HySiF Integration. IEEE Sensors Journal, 2020, 20, 7595-7604.	4.7	2
60	A 12-to-15Âµs, 100-to-25Âµs Resolution Reconfigurable, Power Scalable Incremental ADC Using Ultrathin Chips. , 2021, 5, 1-4.		2
61	Ultra-thin Image Sensor Chip Embeded Foil. , 2021, , .		2
62	Dopant interactions during the diffusion of arsenic and boron in opposite directions in polycrystalline/monocrystalline silicon structures. Applied Physics Letters, 1995, 67, 3156-3158.	3.3	1
63	International Workshop on High Frequency Micromagnetic Devices and Materials. Transactions of the Magnetics Society of Japan, 2002, 2, 355-356.	0.5	1
64	Investigation of Long-Term Stability of Hybrid Systems-in-Foil (HySiF) for Biomedical Applications. , 2020, , .		1
65	Organic Thin-Film Transistors: Flexible Low-Voltage Organic Complementary Circuits: Finding the Optimum Combination of Semiconductors and Monolayer Gate Dielectrics (Adv. Mater. 2/2015). Advanced Materials, 2015, 27, 391-391.	21.0	0
66	Ge-on-Si camera for NIR detection. , 2021, , .		0
67	Processing and Characterisation of an Ultra-thin Image Sensor Chip in flexible Foil System. , 2022, , .		0