

# Alexander Kloes

## List of Publications by Year in descending order

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84  
papers

814  
citations

623734

14  
h-index

610901

24  
g-index

86  
all docs

86  
docs citations

86  
times ranked

490  
citing authors

#	ARTICLE	IF	CITATIONS
1	Physics-Based DC Compact Modeling of Schottky Barrier and Reconfigurable Field-Effect Transistors. IEEE Journal of the Electron Devices Society, 2022, 10, 416-423.	2.1	7
2	Quasi-Compact Model of Direct Source-to-Drain Tunneling Current in Ultrashort-Channel Nanosheet MOSFETs by Wavelet Transform. IEEE Transactions on Electron Devices, 2022, 69, 17-24.	3.0	4
3	Modeling the Short-Channel Effects in Coplanar Organic Thin-Film Transistors. IEEE Transactions on Electron Devices, 2022, 69, 1099-1106.	3.0	2
4	Cryogenic Temperature and Doping Analysis of Source-to-Drain Tunneling Current in Ultrashort-Channel Nanosheet MOSFETs. IEEE Transactions on Electron Devices, 2022, 69, 1588-1595.	3.0	4
5	Implementation of device-to-device and cycle-to-cycle variability of memristive devices in circuit simulations. Solid-State Electronics, 2022, 194, 108321.	1.4	3
6	Organic bipolar transistors. Nature, 2022, 606, 700-705.	27.8	35
7	Noise-Based Simulation Technique for Circuit-Variability Analysis. IEEE Journal of the Electron Devices Society, 2021, 9, 450-455.	2.1	3
8	New Compact Modeling Solutions for Organic and Amorphous Oxide TFTs. IEEE Journal of the Electron Devices Society, 2021, 9, 911-932.	2.1	8
9	Efficient and low-voltage vertical organic permeable base light-emitting transistors. Nature Materials, 2021, 20, 1007-1014.	27.5	36
10	Uniform DC Compact Model for Schottky Barrier and Reconfigurable Field-Effect Transistors. , 2021, , .		1
11	(Invited) Compact Model for Short-Channel Organic Thin-Film Transistors with Extension for Non-Quasistatic Circuit Simulation and Variability Analysis. ECS Meeting Abstracts, 2021, MA2021-01, 1064-1064.	0.0	0
12	Compact Modeling of Nonlinear Contact Effects in Short-Channel Coplanar and Staggered Organic Thin-Film Transistors. IEEE Transactions on Electron Devices, 2021, 68, 3843-3850.	3.0	15
13	Flexible megahertz organic transistors and the critical role of the device geometry on their dynamic performance. Journal of Applied Physics, 2021, 130, .	2.5	6
14	Temperature-dependent performance of Schottky-Barrier FET ultra-low-power diode. Solid-State Electronics, 2021, 184, 108124.	1.4	0
15	Charge-Based Model for the Drain-Current Variability in Organic Thin-Film Transistors Due to Carrier-Number and Correlated- Mobility Fluctuation. IEEE Transactions on Electron Devices, 2020, 67, 4667-4671.	3.0	8
16	Macromodel for AC and Transient Simulations of Organic Thin-Film Transistor Circuits Including Nonquasistatic Effects. IEEE Transactions on Electron Devices, 2020, 67, 4672-4676.	3.0	4
17	Compact Modeling of Short-Channel Effects in Staggered Organic Thin-Film Transistors. IEEE Transactions on Electron Devices, 2020, 67, 5082-5090.	3.0	7
18	Vertical organic permeable dual-base transistors for logic circuits. Nature Communications, 2020, 11, 4725.	12.8	25

#	ARTICLE	IF	CITATIONS
19	A Comprehensive Physics-Based Current-Voltage SPICE Compact Model for 2-D-Material-Based Top-Contact Bottom-Gated Schottky-Barrier FETs. IEEE Transactions on Electron Devices, 2020, 67, 5188-5195.	3.0	8
20	Equivalent DG Dimensions Concept for Compact Modeling of Short-Channel and Thin Body GAA MOSFETs Including Quantum Confinement. IEEE Transactions on Electron Devices, 2020, 67, 5381-5387.	3.0	4
21	Unraveling Structure and Device Operation of Organic Permeable Base Transistors. Advanced Electronic Materials, 2020, 6, 2000230.	5.1	11
22	Direct Source-to-Drain Tunneling Current in Ultra-Short Channel DG MOSFETs by Wavelet Transform. , 2020, , .		3
23	Charge-Based Compact Modeling of Capacitances in Staggered Multi-Finger OTFTs. IEEE Journal of the Electron Devices Society, 2020, 8, 396-406.	2.1	10
24	2-D Physics-Based Compact DC Modeling of Double-Gate Tunnel-FETs. IEEE Transactions on Electron Devices, 2019, 66, 132-138.	3.0	29
25	Analytical Model for Threshold-Voltage Shift in Submicron Staggered Organic Thin-Film Transistors. , 2019, , .		1
26	Charge-Based Compact Modeling of Capacitances in Staggered OTFTs. , 2019, , .		5
27	Performance analysis of parallel array of nanowires and a nanosheet in SG, DG and GAA FETs. Solid-State Electronics, 2019, 162, 107641.	1.4	6
28	Closed-Form Modeling Approach of Trap-Assisted Tunneling Current for Use in Compact TFET Models. , 2019, , .		3
29	Analytical modeling of capacitances in tunnel-FETs including the effect of Schottky barrier contacts. Solid-State Electronics, 2019, 159, 191-196.	1.4	6
30	Equivalent Length Concept for Compact Modeling of Short-Channel GAA and DG MOSFETs. , 2019, , .		2
31	Characterization of the Charge-Trap Dynamics in Organic Thin-Film Transistors. , 2019, , .		7
32	(Invited) Physics-Based Compact Model for Organic Thin-Film Transistors with a Universal Charge Expression for Quasi-Static Operation. ECS Meeting Abstracts, 2019, , .	0.0	0
33	Impact of On-Current on the Static and Dynamic Performance of TFET Inverters. , 2019, , .		0
34	Advanced analytical modeling of double-gate Tunnel-FETs – A performance evaluation. Solid-State Electronics, 2018, 141, 31-39.	1.4	9
35	Charge based, continuous compact model for the channel current in organic thin-film transistors for all regions of operation. Solid-State Electronics, 2017, 133, 17-24.	1.4	22
36	A quantum wave based compact modeling approach for the current in ultra-short DG MOSFETs suitable for rapid multi-scale simulations. Solid-State Electronics, 2017, 137, 70-79.	1.4	0

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37	On the Physical Behavior of Cryogenic IV and III-V Schottky Barrier MOSFET Devices. IEEE Transactions on Electron Devices, 2017, 64, 3808-3815.	3.0	28
38	Non-iterative NEGF based model for band-to-band tunneling current in DG TFETs. , 2017, , .		1
39	Analytical modeling of RDF effects on the threshold voltage in short-channel double-gate MOSFETs. , 2017, , .		1
40	Comparative numerical analysis and analytical RDF-modeling of MOSFETs and DG Tunnel-FETs. , 2016, , .		3
41	Numerical analysis and analytical modeling of RDF in DG Tunnel-FETs. , 2016, , .		4
42	Modeling approach for rapid NEGF-based simulation of ballistic current in ultra-short DG MOSFETs. , 2016, , .		2
43	Implementation of a DC compact model for double-gate Tunnel-FET based on 2D calculations and application in circuit simulation. , 2016, , .		8
44	Analysis and Performance Study of III-V Schottky Barrier Double-Gate MOSFETs Using a 2-D Analytical Model. IEEE Transactions on Electron Devices, 2016, 63, 2757-2763.	3.0	14
45	Wavelet-based calculation of the transmission coefficient for tunneling events in Tunnel-FETs. , 2015, , .		3
46	3-D compact model for nanoscale junctionless triple-gate nanowire MOSFETs, including simple treatment of quantization effects. Solid-State Electronics, 2015, 112, 85-98.	1.4	18
47	Modeling and performance study of nanoscale double gate junctionless and inversion mode MOSFETs including carrier quantization effects. Microelectronics Journal, 2014, 45, 1220-1225.	2.0	9
48	Compact Model for Short-Channel Junctionless Accumulation Mode Double Gate MOSFETs. IEEE Transactions on Electron Devices, 2014, 61, 288-299.	3.0	95
49	Improved analytical potential modeling in double-gate tunnel-FETs. , 2014, , .		8
50	3-D compact model for nanoscale junctionless triple-gate nanowire MOSFETs. , 2014, , .		3
51	Two-dimensional modeling of an ultra-thin body single-gate Si Tunnel-FET. , 2014, , .		6
52	A 2D closed form model for the electrostatics in hetero-junction double-gate tunnel-FETs for calculation of band-to-band tunneling current. Microelectronics Journal, 2014, 45, 1144-1153.	2.0	26
53	2D physics-based closed-form modeling of dopant-segregated Schottky barrier UTB MOSFETs. Solid-State Electronics, 2014, 99, 65-77.	1.4	3
54	Threshold voltage, and 2D potential modeling within short-channel junctionless DG MOSFETs in subthreshold region. Solid-State Electronics, 2013, 90, 107-115.	1.4	52

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55	Two-dimensional bias dependent model for the screening length in double-gate Tunnel-FETs. , 2013, , .		2
56	Quantum Confinement and Volume Inversion in $\{m \text{ MOS}\}^{\{3\}}$ Model for Short-Channel Tri-Gate MOSFETs. IEEE Transactions on Electron Devices, 2013, 60, 2691-2694.	3.0	13
57	Model for investigation of $I_{\text{on}}/I_{\text{off}}$ ratios in short-channel junctionless double gate MOSFETs. , 2013, , .		4
58	Performance Study of a Schottky Barrier Double-Gate MOSFET Using a Two-Dimensional Analytical Model. IEEE Transactions on Electron Devices, 2013, 60, 884-886.	3.0	5
59	Compact modeling solutions for short-channel SOI Schottky barrier MOSFETs. Solid-State Electronics, 2013, 82, 86-98.	1.4	10
60	Complex 2D Electric Field Solution in Undoped Double-gate MOSFETs. IETE Journal of Research, 2012, 58, 197.	2.6	1
61	Explicit model for tunneling and thermionic current in Schottky barrier Double-Gate MOSFETs. , 2012, , .		1
62	2D Analytical Calculation of the Parasitic Source/Drain Resistances in DG-MOSFETs Using the Conformal Mapping Technique. IETE Journal of Research, 2012, 58, 205.	2.6	6
63	2D analytical potential modeling of junctionless DG MOSFETs in subthreshold region including proposal for calculating the threshold voltage. , 2012, , .		22
64	Analytical compact modeling framework for the 2D electrostatics in lightly doped double-gate MOSFETs. Solid-State Electronics, 2012, 69, 72-84.	1.4	25
65	$\{MOS\}^{\{3\}}$ : A New Physics-Based Explicit Compact Model for Lightly Doped Short-Channel Triple-Gate SOI MOSFETs. IEEE Transactions on Electron Devices, 2012, 59, 349-358.	3.0	32
66	2D analytical DC model for nanoscale Schottky barrier DG-MOSFETs. , 2011, , .		2
67	2D Analysis of source/drain carrier tunneling in lightly doped Schottky barrier DG-MOSFETs using a fully analytical model. , 2011, , .		3
68	Physics-based, closed-form DC model for lightly-doped short channel triple-gate MOSFETs including three-dimensional effects. , 2011, , .		0
69	2D analytical calculation of the electric field in lightly doped Schottky barrier double-gate MOSFETs and estimation of the tunneling/thermionic current. Solid-State Electronics, 2011, 63, 119-129.	1.4	13
70	2D Analytical calculation of the source/drain access resistance in DG-MOSFET structures. , 2011, , .		1
71	2D analytical calculation of the electrostatic potential in lightly doped Schottky barrier Double-Gate MOSFET. Solid-State Electronics, 2010, 54, 1372-1380.	1.4	19
72	Analytical current equation for short channel SOI multigate FETs including 3D effects. Solid-State Electronics, 2010, 54, 1408-1415.	1.4	10

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73	Two-dimensional model for the potential profile in a short channel Schottky barrier DG-FET. , 2009, , .		0
74	Analysis and modeling of the pinch-off point in a lightly doped asymmetrically biased double gate MOSFET. , 2009, , .		0
75	Design considerations for undoped FinFETs based on a 3D compact model for the potential barrier. , 2009, , .		0
76	Compact model of output conductance in nanoscale bulk MOSFET based on 2D analytical calculations. Solid-State Electronics, 2008, 52, 1722-1729.	1.4	0
77	Three-Dimensional Closed-Form Model for Potential Barrier in Undoped FinFETs Resulting in Analytical Equations for $V_{T}$ and Subthreshold Slope. IEEE Transactions on Electron Devices, 2008, 55, 3467-3475.	3.0	45
78	Physics-based modeling of output conductance in nanoscale bulk MOSFET by analytically solving 2D poisson. , 2007, , .		0
79	Compact Model for Electric Field at Pinch-Off and Channel Length Shortening in Bulk MOSFET. , 2007, , .		0
80	Analytical 3D Approach for Modeling the Electrostatic Potential in Triple-Gate SOI MOSFETs. , 2007, , .		2
81	Compact Model for Electric Field at Pinch-Off and Channel Length Shortening in Bulk MOSFET. , 2007, , .		1
82	Self-consistent 2D compact modeling of nanoscale bulk MOSFETs. Solid-State Electronics, 2007, 51, 739-748.	1.4	8
83	Closed-form Model of Barrier Height in Bulk MOSFET Including 2D Effects and Electron Statistics. , 2006, , .		0
84	Unified current equation for predictive modeling of submicron MOSFETs. Solid-State Electronics, 2005, 49, 85-95.	1.4	11