

Alexander Grill

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7954229/publications.pdf>

Version: 2024-02-01

38
papers

532
citations

1040056

9
h-index

713466

21
g-index

38
all docs

38
docs citations

38
times ranked

740
citing authors

#	ARTICLE	IF	CITATIONS
1	The role of charge trapping in MoS ₂ /SiO ₂ and MoS ₂ /hBN field-effect transistors. 2D Materials, 2016, 3, 035004.	4.4	174
2	Physical Model of Low-Temperature to Cryogenic Threshold Voltage in MOSFETs. IEEE Journal of the Electron Devices Society, 2020, 8, 780-788.	2.1	51
3	Characterization of Single Defects in Ultrascaled MoS ₂ Field-Effect Transistors. ACS Nano, 2018, 12, 5368-5375.	14.6	48
4	Reliability and Variability of Advanced CMOS Devices at Cryogenic Temperatures. , 2020, , .		31
5	Impact of Mixed Negative Bias Temperature Instability and Hot Carrier Stress on MOSFET Characteristicsâ€”Part II: Theory. IEEE Transactions on Electron Devices, 2019, 66, 241-248.	3.0	23
6	Superior NBTI in High- k SiGe Transistorsâ€”Part I: Experimental. IEEE Transactions on Electron Devices, 2017, 64, 2092-2098.	3.0	22
7	Mixed Hot-Carrier/Bias Temperature Instability Degradation Regimes in Full $\{V_D, V_G\}$ Bias Space: Implications and Peculiarities. IEEE Transactions on Electron Devices, 2020, 67, 3315-3322.	3.0	20
8	Superior NBTI in High- k SiGe Transistorsâ€”Part II: Theory. IEEE Transactions on Electron Devices, 2017, 64, 2099-2105.	3.0	13
9	A Compact Physics Analytical Model for Hot-Carrier Degradation. , 2020, , .		11
10	Characterization of Interface Defects With Distributed Activation Energies in GaN-Based MIS-HEMTs. IEEE Transactions on Electron Devices, 2017, 64, 1045-1052.	3.0	10
11	Dynamics of carrier transport via AlGa _N barrier in AlGa _N /GaN MIS-HEMTs. Applied Physics Letters, 2017, 110, 173502.	3.3	9
12	Bi-Modal Variability of nFinFET Characteristics During Hot-Carrier Stress: A Modeling Approach. IEEE Electron Device Letters, 2019, 40, 1579-1582.	3.9	9
13	Modeling and Understanding the Compact Performance of hâ€œBN Dualâ€œGated ReS ₂ Transistor. Advanced Functional Materials, 2021, 31, 2100625.	14.9	9
14	Millikelvin temperature cryo-CMOS multiplexer for scalable quantum device characterisation. Quantum Science and Technology, 2022, 7, 015004.	5.8	9
15	Hot-Electron-Induced Punch-Through (HEIP) Effect in p-MOSFET Enhanced by Mechanical Stress. IEEE Electron Device Letters, 2021, 42, 1424-1427.	3.9	9
16	Characterization and modeling of single defects in GaN/AlGa _N fin-MIS-HEMTs. , 2017, , .		7
17	Stochastic Modeling of the Impact of Random Dopants on Hot-Carrier Degradation in n-FinFETs. IEEE Electron Device Letters, 2019, 40, 870-873.	3.9	6
18	Electrostatic Coupling and Identification of Single-Defects in GaN/AlGa _N Fin-MIS-HEMTs. Solid-State Electronics, 2019, 156, 41-47.	1.4	6

#	ARTICLE	IF	CITATIONS
19	The impact of self-heating and its implications on hot-carrier degradation – A modeling study. Microelectronics Reliability, 2021, 122, 114156.	1.7	6
20	Efficient Modeling of Charge Trapping at Cryogenic Temperatures – Part I: Theory. IEEE Transactions on Electron Devices, 2021, 68, 6365-6371.	3.0	6
21	Gate-Induced-Drain-Leakage (GIDL) in CMOS Enhanced by Mechanical Stress. IEEE Transactions on Electron Devices, 2022, 69, 2214-2217.	3.0	6
22	On the impact of mechanical stress on gate oxide trapping. , 2020, , .		5
23	Advanced Electrical Characterization of Single Oxide Defects Utilizing Noise Signals. , 2020, , 229-257.		5
24	Quantum Mechanical Charge Trap Modeling to Explain BTI at Cryogenic Temperatures. , 2020, , .		4
25	Cyclic Thermal Effects on Devices of Two-Dimensional Layered Semiconducting Materials. Advanced Electronic Materials, 2021, 7, 2100348.	5.1	4
26	Understanding and Modeling Opposite Impacts of Self-Heating on Hot-Carrier Degradation in n- and p-Channel Transistors. , 2022, , .		4
27	Border Trap Based Modeling of SiC Transistor Transfer Characteristics. , 2018, , .		3
28	Impact of the Device Geometric Parameters on Hot-Carrier Degradation in FinFETs. Semiconductors, 2018, 52, 1738-1742.	0.5	3
29	Analysis of the Features of Hot-Carrier Degradation in FinFETs. Semiconductors, 2018, 52, 1298-1302.	0.5	3
30	Efficient Modeling of Charge Trapping at Cryogenic Temperatures – Part II: Experimental. IEEE Transactions on Electron Devices, 2021, 68, 6372-6378.	3.0	3
31	Modeling the Hysteresis of Current-Voltage Characteristics in 4H-SiC Transistors. , 2020, , .		3
32	Impact of Defect-Induced Strain on Device Properties. Advanced Engineering Materials, 2017, 19, 1600736.	3.5	2
33	Temperature Dependent Mismatch and Variability in a Cryo-CMOS Array with 30k Transistors. , 2022, , .		2
34	Linking Room- and Low-Temperature Electrical Performance of MOS Gate Stacks for Cryogenic Applications. IEEE Electron Device Letters, 2022, 43, 674-677.	3.9	2
35	Investigation of quantum transport in nanoscaled GaN high electron mobility transistors. , 2014, , .		1
36	TCAD Modeling of Temperature Activation of the Hysteresis Characteristics of Lateral 4H-SiC MOSFETs. IEEE Transactions on Electron Devices, 2022, 69, 3290-3295.	3.0	1

#	ARTICLE	IF	CITATIONS
37	Significant Enhancement of HCD and TDDB in CMOS FETs by Mechanical Stress. , 2022, , .		1
38	On Superior Hot Carrier Robustness of Dynamically-Doped Field-Effect-Transistors. , 2022, , .		1