

Raphael Clerc

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3475870/publications.pdf>

Version: 2024-02-01

102
papers

1,356
citations

411340

20
h-index

445137

33
g-index

106
all docs

106
docs citations

106
times ranked

1375
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of UV-Vis-NIR optical constants of encapsulant for accurate determination of absorption and backscattering losses in photovoltaics modules. Solar Energy Materials and Solar Cells, 2022, 240, 111717.	3.0	2
2	On the minimum thickness of doped electron/hole transport layers in organic semiconductor devices. Journal of Applied Physics, 2021, 130, 125502.	1.1	0
3	Indirect avalanche event detection of Single Photon Avalanche Diode implemented in CMOS FDSOI technology. Solid-State Electronics, 2020, 163, 107636.	0.8	6
4	Analysis of edge losses on silicon heterojunction half solar cells. Solar Energy Materials and Solar Cells, 2020, 204, 110213.	3.0	23
5	Unraveling the mechanism behind air instability in thin semiconducting polymer layers p-doped with molybdenum dithiolene complexes. Synthetic Metals, 2020, 260, 116251.	2.1	6
6	Physics of trap assisted photomultiplication in vertical organic photoresistors. Journal of Applied Physics, 2020, 127, .	1.1	23
7	Evaluating edge loss in the reflectance measurement of translucent materials. Applied Optics, 2020, 59, 8939.	0.9	5
8	SPAD FDSOI cell optimization for lower dark count rate achievement. , 2020, , .		3
9	Evaluation of indoor photovoltaic power production under directional and diffuse lighting conditions. Solar Energy Materials and Solar Cells, 2019, 200, 110010.	3.0	37
10	Body-biasing considerations with SPAD FDSOI: advantages and drawbacks. , 2019, , .		6
11	Three-dimensional maps of human skin properties on full face with shadows using 3-D hyperspectral imaging. Journal of Biomedical Optics, 2019, 24, 1.	1.4	14
12	Hyperspectral imaging and spatial frequency domain imaging: combined acquisition for full face skin analysis. , 2019, , .		2
13	On the front and back side quantum efficiency differences in semi-transparent organic solar cells and photodiodes. Journal of Applied Physics, 2018, 123, .	1.1	5
14	Vulnerability and Hardening Studies of Optical and Illumination Systems at MGy Dose Levels. IEEE Transactions on Nuclear Science, 2018, 65, 132-140.	1.2	11
15	Insights into the Failure Mechanisms of Organic Photodetectors. Advanced Electronic Materials, 2018, 4, 1700526.	2.6	17
16	Integration of SPAD in 28nm FDSOI CMOS technology. , 2018, , .		12
17	Device modeling of solution-processed organic solar cells, photodiodes and photo-resistances Invited paper. , 2018, , .		0
18	Three-dimensional hyperspectral imaging: a new method for human face acquisition. IS&T International Symposium on Electronic Imaging, 2018, 30, 152-1-152-10.	0.3	6

#	ARTICLE	IF	CITATIONS
19	Theoretical analysis and characterization of the energy conversion and storage efficiency of photo-supercapacitors. Solar Energy Materials and Solar Cells, 2017, 172, 202-212.	3.0	15
20	Model-based Skin Pigment Cartography by High-Resolution Hyperspectral Imaging. Journal of Imaging Science and Technology, 2016, 60, 060404-1-060404-7.	0.3	5
21	Current status and challenges of the modeling of organic photodiodes and solar cells. , 2016, , .		3
22	Evidence of band bending induced by hole trapping at MAPbI ₃ /perovskite/metal interface. Journal of Materials Chemistry A, 2016, 4, 17529-17536.	5.2	26
23	Impact of Blend Morphology on Interface State Recombination in Bulk Heterojunction Organic Solar Cells. Advanced Functional Materials, 2015, 25, 1090-1101.	7.8	29
24	Semi-analytic Modeling for Hot Carriers in Electron Devices. , 2015, , 151-196.		2
25	Physics of the frequency response of rectifying organic Schottky diodes. Journal of Applied Physics, 2014, 115, 064509.	1.1	11
26	Effective field and universal mobility in high-k metal gate UTBB-FDSOI devices. , 2014, , .		3
27	ANALYTICAL MODELS AND ELECTRICAL CHARACTERISATION OF ADVANCED MOSFETs IN THE QUASI BALLISTIC REGIME. Selected Topics in Electornics and Systems, 2014, , 33-58.	0.2	0
28	Impact of quantum effects on the short channel effects of III-V nMOSFETs in weak and strong inversion regimes. Solid-State Electronics, 2013, 88, 43-48.	0.8	1
29	Multi-scale strategy for high-k/metal-gate UTBB-FDSOI devices modeling with emphasis on back bias impact on mobility. Journal of Computational Electronics, 2013, 12, 675-684.	1.3	9
30	ANALYTICAL MODELS AND ELECTRICAL CHARACTERISATION OF ADVANCED MOSFETs IN THE QUASI BALLISTIC REGIME. International Journal of High Speed Electronics and Systems, 2013, 22, 1350002.	0.3	9
31	Mobility in high-K metal gate UTBB-FDSOI devices: From NEGF to TCAD perspectives. , 2013, , .		5
32	Limits and improvements of TCAD piezoresistive models in FDSOI transistors. , 2013, , .		3
33	Origins of the short channel effects increase in III-V nMOSFET technologies. , 2012, , .		6
34	An improved procedure to extract the limiting carrier velocity in ultra scaled CMOS devices. , 2012, , .		1
35	An Efficient Nonlocal Hot Electron Model Accounting for Electron- α Electron Scattering. IEEE Transactions on Electron Devices, 2012, 59, 983-993.	1.6	8
36	Characterization and modelling of gate current injection in embedded non-volatile flash memory. , 2011, , .		3

#	ARTICLE	IF	CITATIONS
37	Time-Dependent Many-Particle Simulation for Resonant Tunneling Diodes: Interpretation of an Analytical Small-Signal Equivalent Circuit. IEEE Transactions on Electron Devices, 2011, 58, 2104-2112.	1.6	27
38	Characterization and 3D TCAD simulation of NOR-type flash non-volatile memories with emphasis on corner effects. Solid-State Electronics, 2011, 63, 158-162.	0.8	4
39	Analytical modeling of the contact resistance in top gate/bottom contacts organic thin film transistors. Organic Electronics, 2011, 12, 897-902.	1.4	16
40	Impact of carrier heating on backscattering in inversion layers. Journal of Applied Physics, 2011, 110, .	1.1	9
41	Recent Findings in Electrical Behavior of CMOS High-K Dielectric/Metal Gate Stacks. ECS Transactions, 2011, 35, 773-804.	0.3	1
42	Analytical modeling of organic solar cells and photodiodes. Applied Physics Letters, 2011, 99, .	1.5	37
43	On the accuracy of current TCAD hot carrier injection models in nanoscale devices. Solid-State Electronics, 2010, 54, 1669-1674.	0.8	19
44	HfO ₂ -based gate stacks transport mechanisms and parameter extraction. Solid-State Electronics, 2010, 54, 972-978.	0.8	1
45	Performance and analytical modeling of Metal-Insulator-Metal Field Controlled Tunnel Transistors. Solid-State Electronics, 2010, 54, 1525-1531.	0.8	3
46	A compact drain current model of short-channel cylindrical gate-all-around MOSFETs. Semiconductor Science and Technology, 2009, 24, 075017.	1.0	40
47	Analytical modeling of tunneling current through SiO ₂ /HfO ₂ stacks in metal oxide semiconductor structures. Journal of Vacuum Science & Technology B, 2009, 27, 338.	1.3	10
48	Performances comparison of Si and GaAs based resonant tunneling diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1408-1411.	0.8	1
49	Non-metallic effects in silicided gate MOSFETs. Solid-State Electronics, 2009, 53, 1313-1317.	0.8	0
50	Experimental investigation of transport mechanisms through HfO ₂ gate stacks in nMOS transistors. , 2009, , .		2
51	Vertical transport in spin coated ultra thin polycrystalline pentacene organic stacks. , 2009, , .		0
52	On the accuracy of current TCAD hot carrier injection models for the simulation of degradation phenomena in nanoscale devices. , 2009, , .		0
53	Quantization effects in silicided and metal gate MOSFETs. , 2009, , .		0
54	Challenges and prospects of RF oscillators using silicon resonant tunneling diodes. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
55	Intrinsic cut off frequency of Si and GaAs based Resonant Tunneling Diodes. , 2009, , .		2
56	Challenges and prospects of RF oscillators using silicon resonant tunneling diodes. , 2009, , .		1
57	Semi-analytical modelling of short channel effects in Si double gate, tri-gate and gate all-around MOSFETs. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3605-3608.	0.8	1
58	Impact of channel orientation on ballistic current of nDGFETs with alternative channel materials. Solid-State Electronics, 2008, 52, 540-547.	0.8	14
59	Impact of source-to-drain tunnelling on the scalability of arbitrary oriented alternative channel material nMOSFETs. Solid-State Electronics, 2008, 52, 1474-1481.	0.8	26
60	NANOSIL network of excellence“silicon-based nanostructures and nanodevices for long-term nanoelectronics applications. Materials Science in Semiconductor Processing, 2008, 11, 148-159.	1.9	1
61	Semianalytical Modeling of Short-Channel Effects in Lightly Doped Silicon Trigate MOSFETs. IEEE Transactions on Electron Devices, 2008, 55, 2623-2631.	1.6	67
62	Threshold Voltage Model for Short-Channel Undoped Symmetrical Double-Gate MOSFETs. IEEE Transactions on Electron Devices, 2008, 55, 2512-2516.	1.6	82
63	Electrical Characterization and Compact Modeling of MOSFET body effect. , 2008, , .		4
64	Back-Scattering in Quasi Ballistic NanoMOSFETs: The role of non thermal carrier distributions. , 2008, , .		0
65	Theoretical investigation and analytical modelling of Metal Insulator Metal gate controlled tunnelling Transistor. , 2008, , .		0
66	The Quantization Impact of Accumulated Carriers in Silicide-Gated MOSFETs. IEEE Electron Device Letters, 2008, 29, 628-631.	2.2	4
67	Session 35: CMOS devices and technology - alternative MOSFET device architectures and materials. , 2008, , .		0
68	Source-to-Drain vs. Band-to-Band Tunneling in Ultra-Scaled DG nMOSFETs with Alternative Channel Materials. , 2008, , .		2
69	Impact of source to drain tunneling on the I_{on}/I_{off} trade-off of alternative channel material MOSFETs. , 2007, , .		1
70	Quasi Ballistic Transport in Advanced MOSFET Devices. Semiconductor Conference, 2009 CAS 2009 International, 2007, , .	0.0	1
71	CMOS Devices - Physics and Technologies of Mobility Enhancement. , 2007, , .		0
72	Conventional Technological Boosters for Injection Velocity in Ultrathin-Body MOSFETs. IEEE Nanotechnology Magazine, 2007, 6, 613-621.	1.1	15

#	ARTICLE	IF	CITATIONS
73	Low-Frequency Series-Resistance Analytical Modeling of Three-Dimensional Metal-Insulator-Metal Capacitors. IEEE Transactions on Electron Devices, 2007, 54, 742-751.	1.6	9
74	Semi-Analytical Modeling of Short-Channel Effects in Si and Ge Symmetrical Double-Gate MOSFETs. IEEE Transactions on Electron Devices, 2007, 54, 1943-1952.	1.6	87
75	Ultra-thin fully-depleted SOI MOSFETs: Special charge properties and coupling effects. Solid-State Electronics, 2007, 51, 239-244.	0.8	121
76	Multi-Subband-Monte-Carlo investigation of the mean free path and of the kT layer in degenerated quasi ballistic nanoMOSFETs. , 2006, , .		18
77	Saturation Drain Current analytical modeling of Single Gate Fully Depleted SOI or SON MOSFETs in the Quasi Ballistic Regime of Transport. SOI Conference, Proceedings of the IEEE International, 2006, , .	0.0	2
78	Impact of TiN post-treatment on metal insulator metal capacitor performances. Microelectronic Engineering, 2006, 83, 2189-2194.	1.1	12
79	Analytical model for quantization on strained and unstrained bulk nMOSFET and its impact on quasi-ballistic current. Solid-State Electronics, 2006, 50, 69-77.	0.8	15
80	Modeling and optimization of series resistance of planar MIM capacitors. Solid-State Electronics, 2006, 50, 1244-1251.	0.8	4
81	On the physical understanding of the kT -layer concept in quasi-ballistic regime of transport in nanoscale devices. IEEE Transactions on Electron Devices, 2006, 53, 1634-1640.	1.6	40
82	Analytical Compact Model for Quantization in Undoped Double-Gate Metal Oxide Semiconductor Field Effect Transistors and Its Impact on Quasi-Ballistic Current. Japanese Journal of Applied Physics, 2006, 45, 3088-3096.	0.8	4
83	Magnetoresistance characterization of nanometer Si metal-oxide-semiconductor transistors. Journal of Applied Physics, 2004, 96, 5761-5765.	1.1	64
84	Characterization of effective mobility by split $C(V)$ technique in N-MOSFETs with ultra-thin gate oxides. Solid-State Electronics, 2003, 47, 1147-1153.	0.8	41
85	Theory of direct tunneling current in metal-oxide-semiconductor structures. Journal of Applied Physics, 2002, 91, 1400-1409.	1.1	60
86	Investigation on Convergence and Stability of Self-Consistent Monte Carlo Device Simulations. , 2002, , .		2
87	An analytical model for flat-band polysilicon quantization in MOS devices. IEEE Transactions on Electron Devices, 2002, 49, 1314-1316.	1.6	9
88	Electrical characterization and modeling of MOS structures with an ultra-thin oxide. Solid-State Electronics, 2002, 46, 407-416.	0.8	25
89	Bardeen's approach for tunneling evaluation in MOS structures. Solid-State Electronics, 2002, 46, 1039-1044.	0.8	12
90	Oxide thickness extraction methods in the nanometer range for statistical measurements. Solid-State Electronics, 2002, 46, 1849-1854.	0.8	7

#	ARTICLE	IF	CITATIONS
91	Ultra-thin oxides grown on silicon (1 0 0) by rapid thermal oxidation for CMOS and advanced devices. Applied Surface Science, 2001, 175-176, 726-733.	3.1	41
92	A physical compact model for direct tunneling from NMOS inversion layers. Solid-State Electronics, 2001, 45, 1705-1716.	0.8	30
93	Direct tunnelling models for circuit simulation. Microelectronics Reliability, 2001, 41, 951-957.	0.9	2
94	Electrical characterization and quantum modeling of MOS capacitors with ultra-thin oxides (1.4×10^{-3} Tj ETQq0 0 0 rgt /Overlock 10 Tf	0.9	8
95	Extraction of oxide thickness in the nanometer range using C(V) characteristics. Microelectronic Engineering, 2001, 59, 277-283.	1.1	3
96	Impact of gate tunneling leakage on the operation of NMOS transistors with ultra-thin gate oxides. Microelectronic Engineering, 2001, 59, 119-125.	1.1	8
97	Capacitance-Voltage (C-V) characterization of 20 Å... thick gate oxide: parameter extraction and modeling. Microelectronics Reliability, 2000, 40, 571-575.	0.9	10
98	Gate dielectrics for ultimate CMOS technologies - Limitations and alternative solutions. Comptes Rendus Physique, 2000, 1, 911-927.	0.1	2
99	A Comparative Study of Surface and Buried P-Channel 0.10um MOSFETs. , 2000, , .		0
100	Carrier quantization in SOI MOSFETs using an effective potential based Monte-Carlo tool. , 0, , .		8
101	Analytical model for quantum well to quantum dot tunneling. , 0, , .		2
102	An analytical solution for McIntyre's model of avalanche triggering probability for SPAD compact modeling and performance exploration. Semiconductor Science and Technology, 0, , .	1.0	2