

Jörgen Olsson

List of Publications by Year in descending order

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101
papers

1,172
citations

430874

18
h-index

454955

30
g-index

101
all docs

101
docs citations

101
times ranked

1193
citing authors

#	ARTICLE	IF	CITATIONS
1	On the thermal stability of atomic layer deposited TiN as gate electrode in MOS devices. IEEE Electron Device Letters, 2003, 24, 550-552.	3.9	96
2	Optimizing Ga-profiles for highly efficient Cu(In, Ga)Se ₂ thin film solar cells in simple and complex defect models. Journal Physics D: Applied Physics, 2014, 47, 485104.	2.8	87
3	Variable work function in MOS capacitors utilizing nitrogen-controlled TiNx gate electrodes. Microelectronic Engineering, 2004, 75, 389-396.	2.4	70
4	Anisotropic dry etching of boron doped single crystal CVD diamond. Carbon, 2005, 43, 1839-1842.	10.3	53
5	Combining strong interface recombination with bandgap narrowing and short diffusion length in Cu ₂ ZnSnS ₄ device modeling. Solar Energy Materials and Solar Cells, 2016, 144, 364-370.	6.2	52
6	Electrical characterization of aln mis and mim structures. IEEE Transactions on Electron Devices, 2003, 50, 1214-1219.	3.0	51
7	Deposition of HfO ₂ Thin Films in Hf ₄ -Based Processes. Journal of the Electrochemical Society, 2002, 149, F139.	2.9	42
8	SB-MOSFETs in UTB-SOI Featuring PtSi Source/Drain With Dopant Segregation. IEEE Electron Device Letters, 2008, 29, 125-127.	3.9	37
9	Investigation of the Thermal Stability of Reactively Sputter-Deposited TiN MOS Gate Electrodes. IEEE Transactions on Electron Devices, 2005, 52, 2349-2352.	3.0	32
10	A self-aligned lateral bipolar transistor realized on SIMOX-material. IEEE Transactions on Electron Devices, 1993, 40, 2359-2360.	3.0	28
11	A novel strained Si _{0.7} /Ge _{0.3} surface-channel pMOSFET with an ALD TiN/Al ₂ O ₃ /HfAlO _x /Al ₂ O ₃ gate stack. IEEE Electron Device Letters, 2003, 24, 171-173.	3.9	27
12	1 W/mm RF power density at 3.2 GHz for a dual-layer RESURF LDMOS transistor. IEEE Electron Device Letters, 2002, 23, 206-208.	3.9	26
13	Self-heating effects in SOI bipolar transistors. Microelectronic Engineering, 2001, 56, 339-352.	2.4	23
14	Low-resistivity ZrNx metal gate in MOS devices. Solid-State Electronics, 2005, 49, 1410-1413.	1.4	23
15	Protein Sensing Beyond the Debye Length Using Graphene Field-Effect Transistors. IEEE Sensors Journal, 2018, 18, 6497-6503.	4.7	23
16	Drift region optimization of lateral RESURF devices. Solid-State Electronics, 2002, 46, 1177-1184.	1.4	22
17	A novel high-frequency high-voltage LDMOS transistor using an extended gate RESURF technology. , 0, , ,		21
18	Low-frequency noise and Coulomb scattering in Si _{0.8} Ge _{0.2} surface channel pMOSFETs with ALD Al ₂ O ₃ gate dielectrics. Solid-State Electronics, 2005, 49, 907-914.	1.4	20

#	ARTICLE	IF	CITATIONS
19	A two-in-one process for reliable graphene transistors processed with photo-lithography. Applied Physics Letters, 2015, 107, .	3.3	19
20	Small-signal and power evaluation of novel BiCMOS-compatible short-channel LDMOS technology. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 1052-1056.	4.6	18
21	Substrate resistance modeling for noise coupling analysis. , 0, , .		17
22	Transient Measurements of Heat Distribution in Devices Fabricated on Silicon-On-Diamond Material. Japanese Journal of Applied Physics, 1995, 34, 4706-4714.	1.5	15
23	Simulation of forward bias injection in proton irradiated silicon pn-junctions. Solid-State Electronics, 1996, 39, 1087-1092.	1.4	14
24	Analysis and design of a low-voltage high-frequency LDMOS transistor. IEEE Transactions on Electron Devices, 2002, 49, 976-980.	3.0	14
25	Membrane covered electrically isolated through-wafer via holes. Journal of Micromechanics and Microengineering, 2001, 11, 344-347.	2.6	13
26	Iodide-Based Atomic Layer Deposition of ZrO ₂ : Aspects of Phase Stability and Dielectric Properties. Chemical Vapor Deposition, 2002, 8, 105-109.	1.3	13
27	Effect of dopants on chemical mechanical polishing of silicon. Microelectronic Engineering, 2002, 60, 149-155.	2.4	13
28	LDMOS-transistors on semi-insulating silicon-on-polycrystalline-silicon carbide substrates for improved RF and thermal properties. Solid-State Electronics, 2012, 70, 14-19.	1.4	13
29	Integration of high voltage devices on thick SOI substrates for automotive applications. Solid-State Electronics, 2001, 45, 629-632.	1.4	11
30	Vacancy related defect profiles in MeV cluster-ion irradiated silicon. Nuclear Instruments & Methods in Physics Research B, 1995, 106, 233-236.	1.4	10
31	Low Resistivity SOI for Substrate Crosstalk Reduction. IEEE Transactions on Electron Devices, 2005, 52, 1920-1922.	3.0	10
32	Electrical characterization of wurtzite (Al,B)N thin films. Vacuum, 2011, 86, 466-470.	3.5	9
33	An Empirical High-Frequency Large-Signal Model for High-Voltage LDMOS Transistors. , 1998, , .		8
34	A capacitance-voltage measurement method for DMOS transistor channel length extraction. , 0, , .		8
35	Channel length extraction for DMOS transistors using capacitance-voltage measurements. IEEE Transactions on Electron Devices, 2001, 48, 1454-1459.	3.0	8
36	Impact of Al-, Ni-, TiN-, and Mo-metal gates on MOCVD-grown HfO ₂ and ZrO ₂ high- ϵ dielectrics. Microelectronics Reliability, 2007, 47, 536-539.	1.7	8

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37	A computational load-pull method with harmonic loading for high-efficiency investigations. Solid-State Electronics, 2009, 53, 86-94.	1.4	8
38	Resistance Electric Field Dependence and Time Drift of Piezoresistive Single Crystalline Silicon Nanofilms. Procedia Chemistry, 2009, 1, 80-83.	0.7	8
39	Influence of tantalum/tantalum nitride barriers and caps on the high-temperature properties of copper metallization for wide-band gap applications. Microelectronic Engineering, 2015, 137, 37-42.	2.4	8
40	Advancing the Understanding of Reverse Breakdown in Cu(In,Ga)Se ₂ Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 1136-1142.	2.5	8
41	Very high current gain enhancement by substrate biasing of lateral bipolar transistors on thin SOI. Microelectronic Engineering, 1993, 22, 379-382.	2.4	7
42	Simulation and dielectric characterization of reactive dc magnetron cosputtered (Ta ₂ O ₅) _{Tj} ETQq0 0 0 rgBT /Overlock 10 Tf 50 of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 855.	1.6	7
43	High-power SOI vertical DMOS transistors with lateral drain contacts: Process developments, characterization, and modeling. IEEE Transactions on Electron Devices, 2004, 51, 790-796.	3.0	7
44	Processing and evaluation of metal gate/high- ϵ /Si capacitors incorporating Al, Ni, TiN, and Mo as metal gate, and ZrO ₂ and HfO ₂ as high- ϵ dielectric. Microelectronic Engineering, 2007, 84, 1635-1638.	2.4	7
45	Electrical properties of Ag/Ta and Ag/TaN thin-films. Microelectronic Engineering, 2014, 120, 257-261.	2.4	7
46	Integration of a novel high-voltage Giga-Hertz DMOS transistor into a standard CMOS process. , 0, , .		6
47	A CMOS Compatible Power MOSFET for Low Voltage GHz Operation. , 1999, , .		6
48	Power Characteristics of High Voltage LDMOS Transistors. , 2000, , .		6
49	Vertical High Voltage Devices on Thick SOI with Back-end Trench Formation. , 2002, , .		6
50	Investigating Reliability and Stress Mechanisms of DC and Large-Signal Stressed CMOS 65-nm RF-LDMOS by Gate Current Characterization. IEEE Transactions on Device and Materials Reliability, 2015, 15, 191-197.	2.0	6
51	Electromigration behavior of Cu metallization interfacing with Ta versus TaN at high temperatures. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2016, 34, 060603.	1.2	6
52	Feedback compensated 10 kW solid-state pulsed power amplifier at 352 MHz for particle accelerators. Review of Scientific Instruments, 2019, 90, 104707.	1.3	6
53	Electrical investigation of the silicon/diamond interface. Microelectronic Engineering, 1997, 36, 245-248.	2.4	5
54	Unclamped inductive switching behaviour of high power SOI vertical DMOS transistors with lateral drain contacts. Solid-State Electronics, 2002, 46, 2105-2110.	1.4	5

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55	Electrothermal simulations of high-power SOI vertical DMOS transistors with lateral drain contacts under unclamped inductive switching test. <i>Solid-State Electronics</i> , 2004, 48, 1119-1126.	1.4	5
56	Metal gate work function extraction using Fowler-Nordheim tunneling techniques. <i>Microelectronic Engineering</i> , 2005, 80, 280-283.	2.4	5
57	Investigation of SOI-LDMOS for RF-Power Applications Using Computational Load Pull. <i>IEEE Transactions on Electron Devices</i> , 2009, 56, 505-511.	3.0	5
58	Oxygen out-diffusion from buried layers in SOI and SiCâ€“SOI substrates. <i>Solid-State Electronics</i> , 2010, 54, 153-157.	1.4	5
59	A new latch-free LIGBT on SOI with very high current density and low drive voltage. <i>Solid-State Electronics</i> , 2016, 115, 179-184.	1.4	5
60	High current gain hybrid lateral bipolar operation of DMOS transistors. <i>IEEE Transactions on Electron Devices</i> , 1995, 42, 1628-1635.	3.0	4
61	Investigation of the non-linear input capacitance in LDMOS transistors and its contribution to IMD and phase distortion. <i>Solid-State Electronics</i> , 2008, 52, 1024-1031.	1.4	4
62	Optimisation of a smooth multilayer nickel silicide surface for ALN growth. <i>Journal of Physics: Conference Series</i> , 2008, 100, 042014.	0.4	4
63	Large-signal analysis of substrate effects in RF-power SOI-LDMOS transistors. <i>Solid-State Electronics</i> , 2010, 54, 171-177.	1.4	4
64	Fabrication and Characterization of 150-mm Silicon-on-Polycrystalline Silicon Carbide Substrates. <i>Journal of Electronic Materials</i> , 2012, 41, 480-487.	2.2	4
65	Dynamics of SiO ₂ Buried Layer Removal from Si-SiO ₂ -Si and Si-SiO ₂ -SiC Bonded Substrates by Annealing in Ar. <i>Journal of Electronic Materials</i> , 2014, 43, 541-547.	2.2	4
66	Time domain characterization of high power solid state amplifiers for the next generation linear accelerators. <i>Microwave and Optical Technology Letters</i> , 2018, 60, 163-171.	1.4	4
67	Interface-Dependent Effective Mobility in Graphene Field-Effect Transistors. <i>Journal of Electronic Materials</i> , 2018, 47, 1757-1761.	2.2	4
68	Investigation of the current-voltage behavior of a combined Schottky-p-n diode. <i>Solid-State Electronics</i> , 1992, 35, 1229-1231.	1.4	3
69	Electrical characterisation of silicon pn-junctions terminated with diamond. <i>Diamond and Related Materials</i> , 1996, 5, 1457-1461.	3.9	3
70	Integration of Silicon and Diamond, Aluminum Nitride or Aluminum Oxide for Electronic Materials. <i>Materials Research Society Symposia Proceedings</i> , 1998, 535, 133.	0.1	3
71	Improved Output Conductance for Low-Voltage Microwave LDMOS Transistors. , 2000, , .		3
72	Modeling and characterization of capacitive coupling in trench-isolated structures on SOI substrates. <i>Solid-State Electronics</i> , 2004, 48, 43-49.	1.4	3

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73	Simulation and modeling of the substrate contribution to the output resistance for RF-LDMOS power transistors. Solid-State Electronics, 2004, 48, 789-797.	1.4	3
74	A Computational Load-Pull Method for TCAD Optimization of RF-Power Transistors in Bias-Modulation Applications. , 2008, , .		3
75	Morphological instability of Ag films caused by phase transition in the underlying Ta barrier layer. Applied Physics Letters, 2014, 105, 071604.	3.3	3
76	Analysis of the specific on-resistance of vertical high-voltage dmosfets on soi. IEEE Transactions on Electron Devices, 2003, 50, 1416-1419.	3.0	2
77	Novel Silicon-on-SiC Substrate with Superior Thermal and RF Performance. SOI Conference, Proceedings of the IEEE International, 2007, , .	0.0	2
78	Buried aluminum nitride insulator for improving thermal conduction in SOI. , 2008, , .		2
79	Oxide-Free Silicon to Silicon Carbide Heterobond. ECS Transactions, 2008, 16, 377-383.	0.5	2
80	RF losses, crosstalk and temperature dependence for SOI and Si/SiC hybrid substrates. Solid-State Electronics, 2014, 97, 59-65.	1.4	2
81	On the Extraction of Doping Concentration From Capacitance-Voltage: A Cu ₂ ZnSnS ₄ and ZnS Sandwich Structure. IEEE Journal of Photovoltaics, 2017, 7, 1421-1425.	2.5	2
82	A Lateral Bipolar Transistor Concept Tested on Simox- and Bsoi Materials. , 0, , .		1
83	ALD metal-gate/high- ϵ gate stack for Si and Si/sub 0.7/Ge/sub 0.3/ surface-channel pMOSFETs. , 0, , .		1
84	Role of Si implantation in control of underlap length in Schottky-barrier source/drain MOSFETs on ultrathin body SOI. , 2008, , .		1
85	LDMOS transistors on Si-on-SiC hybrid substrates having crystalline or poly-crystalline SiC - electrical and thermal characterization. , 2009, , .		1
86	Thermal Characterization of Polycrystalline SiC. Journal of Electronic Materials, 2014, 43, 1150-1153.	2.2	1
87	A Systematic Study of Light-On-Bias Behavior in Cu(In,Ga)Se ₂ Solar Cells With Varying Absorber Compositions. IEEE Journal of Photovoltaics, 2017, 7, 882-891.	2.5	1
88	Comparison between Si-LDMOS and GaN-based microwave power transistors. , 0, , .		0
89	Effects of low-temperature water vapor annealing of strained SiGe surface-channel pMOSFETs with high- ϵ dielectric. , 0, , .		0
90	Analysis and improvements of high frequency substrate losses for RF MOSFETs. , 2003, , .		0

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91	Efficient crosstalk reduction using very low resistivity SOI substrate. , 0, , .		0
92	Comparative Study On The Impact Of TiN And Mo Metal Gates On MOCVD-Grown HfO2 And ZrO2 High- ϵ^o Dielectrics For CMOS Technology. AIP Conference Proceedings, 2007, , .	0.4	0
93	Thermal characterization of Silicon-on-SiC substrates. , 2008, , .		0
94	Thick NiSi Electrodes for AlN Electroacoustic Applications. Electrochemical and Solid-State Letters, 2009, 12, H182.	2.2	0
95	Electrical and thermal characterization of 150 mm Silicon-on-polycrystalline-Silicon Carbide hybrid substrates. , 2010, , .		0
96	Mobility profiles and thermal characterization of SOI and Si-on-SiC hybrid substrates. , 2011, , .		0
97	A new latch-free LIGBT on SOI. , 2015, , .		0
98	Power performance of 65Ånm CMOS integrated LDMOS transistors at WLAN and X-band frequencies. International Journal of Microwave and Wireless Technologies, 2016, 8, 135-141.	1.9	0
99	High-Voltage SOI Devices for Automotive Applications. , 2005, , 155-166.		0
100	Kilowatt Power Amplifier With Improved Power Back-Off Efficiency for Cyclotron Application. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 1401-1409.	4.6	0
101	Taper Transmission Line Based Measurementâ€™A Thru-Only De-Embedding Approach. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 4199-4210.	4.6	0