

Rs Gupta

List of Publications by Year in descending order

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52
papers

1,253
citations

331538

21
h-index

434063

31
g-index

52
all docs

52
docs citations

52
times ranked

610
citing authors

#	ARTICLE	IF	CITATIONS
1	An accurate charge control model for spontaneous and piezoelectric polarization dependent two-dimensional electron gas sheet charge density of lattice-mismatched AlGa _n /Ga _n HEMTs. Solid-State Electronics, 2002, 46, 621-630.	0.8	137
2	Physics-based analytical modeling of potential and electrical field distribution in dual material gate (DMG)-MOSFET for improved hot electron effect and carrier transport efficiency. IEEE Transactions on Electron Devices, 2002, 49, 1928-1938.	1.6	89
3	Analytical model for threshold voltage and I_{d-sat} characteristics of fully depleted short channel cylindrical/surrounding gate MOSFET. Microelectronic Engineering, 2001, 56, 241-259.	1.1	79
4	Variable time step methods for one-dimensional stefan problem with mixed boundary condition. International Journal of Heat and Mass Transfer, 1981, 24, 251-259.	2.5	76
5	Impact of gate material engineering(GME) on analog/RF performance of nanowire Schottky-barrier gate all around (GAA) MOSFET for low power wireless applications: 3D T-CAD simulation. Microelectronics Journal, 2014, 45, 1508-1514.	1.1	73
6	An analytical drain current model for dual material engineered cylindrical/surrounded gate MOSFET. Microelectronics Journal, 2012, 43, 17-24.	1.1	71
7	Polarization dependent analysis of AlGa _n /Ga _n HEMT for high power applications. Solid-State Electronics, 2007, 51, 130-135.	0.8	70
8	A modified variable time step method for the one-dimensional stefan problem. Computer Methods in Applied Mechanics and Engineering, 1980, 23, 101-109.	3.4	54
9	Drain current model for a gate all around (GAA) $\text{p}^{\text{n}}\text{-n}^{\text{+}}\text{-p}^{\text{n}}$ tunnel FET. Microelectronics Journal, 2013, 44, 479-488.	1.1	49
10	Modeling and simulation of a nanoscale three-region tri-material gate stack (TRIMGAS) MOSFET for improved carrier transport efficiency and reduced hot-electron effects. IEEE Transactions on Electron Devices, 2006, 53, 1623-1633.	1.6	45
11	Impact of graded channel (GC) design in fully depleted cylindrical/surrounding gate MOSFET (FD) Tj ETQq1 1 0.784314 rgBT /Overloc 2007, 51, 398-404.	0.8	40
12	An analytical subthreshold current modeling of cylindrical gate all around (CGAA) MOSFET incorporating the influence of device design engineering. Microelectronics Journal, 2014, 45, 408-415.	1.1	40
13	An analytical drain current model for graded channel cylindrical/surrounding gate MOSFET. Microelectronics Journal, 2007, 38, 352-359.	1.1	39
14	An accurate 2D analytical model for short channel thin film fully depleted cylindrical/surrounding gate (CGT/SGT) MOSFET. Microelectronics Journal, 2001, 32, 305-313.	1.1	31
15	Physics based analytical model for surface potential and subthreshold current of cylindrical Schottky Barrier gate all around MOSFET with high-k gate stack. Superlattices and Microstructures, 2016, 90, 215-226.	1.4	28
16	Comprehensive analysis of small-signal parameters of fully strained and partially relaxed high Al-content lattice mismatched Al/sub m/Ga/sub 1-m/N/Ga _n HEMTs. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 607-617.	2.9	27
17	Intermodulation distortion and linearity performance assessment of 50-nm gate length L-DUMGAC MOSFET for RFIC design. Superlattices and Microstructures, 2008, 44, 143-152.	1.4	27
18	Design considerations for novel device architecture: hetero-material double-gate (HEM-DG) MOSFET with sub-100 nm gate length. Solid-State Electronics, 2004, 48, 1169-1174.	0.8	25

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19	Laterally amalgamated Dual Material Gate Concave (L-DUMGAC) MOSFET for ULSI. Microelectronic Engineering, 2008, 85, 566-576.	1.1	25
20	Analytical Modeling and Simulation for Dual Metal Gate Stack Architecture (DMGSA) Cylindrical/Surrounded Gate MOSFET. Journal of Semiconductor Technology and Science, 2012, 12, 458-466.	0.1	24
21	Impact of strain relaxation of Al _{0.15} Ga _{0.85} N layer on 2-DEG sheet charge density and current voltage characteristics of lattice mismatched Al _{0.15} Ga _{0.85} N/GaN HEMTs. Microelectronics Journal, 2002, 33, 205-212.	1.1	21
22	Analytical two-dimensional modeling for potential distribution and threshold voltage of the short-channel fully depleted SOI (silicon-on-insulator) MOSFET. Solid-State Electronics, 1994, 37, 1537-1542.	0.8	19
23	Two-dimensional analytical threshold voltage model for DMG Epi-MOSFET. IEEE Transactions on Electron Devices, 2005, 52, 23-29.	1.6	19
24	Two-dimensional C-V model of AlGaAs/GaAs modulation doped field effect transistor (MODFET) for high frequency applications. IEEE Transactions on Electron Devices, 1999, 46, 1818-1823.	1.6	18
25	An Accurate Small Signal Modeling of Cylindrical/Surrounded Gate MOSFET for High Frequency Applications. Journal of Semiconductor Technology and Science, 2012, 12, 377-387.	0.1	14
26	Design and optimization of thin film fully depleted vertical surrounding gate (VSG) MOSFETs for enhanced short channel immunity. Solid-State Electronics, 2002, 46, 1333-1338.	0.8	13
27	A compact C ^{ac} -V model for 120nm AlGaIn/GaN HEMT with modified field dependent mobility for high frequency applications. Microelectronics Journal, 2007, 38, 848-854.	1.1	13
28	Modeling and analysis of fully strained and partially relaxed lattice mismatched AlGaIn/GaN HEMT for high temperature applications. Superlattices and Microstructures, 2008, 44, 781-793.	1.4	13
29	Analytical modeling simulation and characterization of short channel Junctionless Accumulation Mode Surrounding Gate (JLAMSG) MOSFET for improved analog/RF performance. Superlattices and Microstructures, 2016, 100, 1263-1275.	1.4	13
30	Dielectric Modulated Triple Metal Gate All Around MOSFET (TMGAA) for DNA Bio-Molecule Detection. , 2018, , .		13
31	Ambipolarity reduction in DMG asymmetric vacuum dielectric Schottky Barrier GAA MOSFET to improve hot carrier reliability. Superlattices and Microstructures, 2017, 111, 10-22.	1.4	8
32	Applicability of Field Plate in Double Channel GaN HEMT for Radio-Frequency and Power-Electronic Applications. Silicon, 0, , 1.	1.8	8
33	Sheet carrier concentration and threshold voltage modeling of asymmetrically doped AlGaIn/GaN/AlGaIn double heterostructure HEMT. , 2017, , .		7
34	Capacitance modeling of gate material engineered cylindrical/surrounded gate MOSFETs for sensor applications. Superlattices and Microstructures, 2015, 88, 271-280.	1.4	6
35	Asymmetric Gate Stack Surrounding gate Transistor (ASYMGAS SGT): 2-D Analytical Threshold Voltage Model. , 2007, , .		3
36	GaN based Junctionless Double Surrounding Gate (JLD SG) MOSFET for high power, high voltage and high frequency applications. , 2016, , .		3

#	ARTICLE	IF	CITATIONS
37	Oxide Stack Engineered Double Surrounding Gate (OSE-DSC) MOSFET for Submillimeter Analog Application. , 2018, , .		3
38	Asymmetric Vacuum Gate Dielectric Schottky Barrier Gate all around MOSFET for ambipolarity reduction and improved hot carrier reliability. , 2015, , .		2
39	Carrier concentration dependence of ballistic mobility and mean free path in a nano-dimensional InAlAs/InGaAs single gate HEMT. , 2016, , .		2
40	Investigation of Analog/RF performance of High-k spacer Junctionless Accumulation-Mode Cylindrical Gate All Around (JLAM-CGAA) MOSFET. , 2016, , .		2
41	Impact of laterally asymmetric channel and gate stack design on device performance of surrounding gate MOSFETs : A modeling and simulation study. , 2008, , .		1
42	Gate Material Engineered-Trapezoidal Recessed Channel MOSFET (GME-TRC) for Ultra Large Scale Integration (ULSI). , 2008, , .		1
43	Capacitance modeling of 120nm AlGaIn/GaN HEMT for microwave and high speed circuit applications. , 2008, , .		1
44	Analysis and simulation of Si/GaAs/GaN MESFET to study the impact of localised charges on device performance. , 2011, , .		1
45	Two dimensional analytical modeling of multi-layered dielectric G⁴ MOSFET-A novel design. , 2008, , .		0
46	Asymmetric Multilayered Gate Dielectric (AMGAD) surrounding gate MOSFET: A new structural concept for enhanced device performance. , 2008, , .		0
47	Nano-modeling of the doping profiles for a symmetric double gate InAlAs/InGaAs/InP HEMT. , 2012, , .		0
48	Impact of localised charges present in the interfacial layer of the schottky contact in SOI MESFET. , 2012, , .		0
49	Impact of noise temperature constant and diffusion coefficient on the minimum noise figure and minimum noise temperature of InAlAs/InGaAs DGHEMT. , 2012, , .		0
50	Simulation of Enhanced Gate Control in a Double Gate Quantum Domain InAlAs/InGaAs/InP HEMT. , 2012, , .		0
51	Laterally-asymmetric-channel-insulated-shallow-extension-silicon-on-nothing LAC-ISE-SON MOSFET for improved reliability and digital circuit simulation. , 2012, , .		0
52	AC analysis of Junctionless Double Surrounding Gate (JLDSC) MOSFET for Tera Hertz applications. , 2016, , .		0