Sarit Dhar

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

105	2,733	30	50
papers	citations	h-index	g-index

122	2,995	2.5	4.92
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
105	Analytical electron microscopy of (2 01) Ga_2O_3/SiO_2 and (2 01) Ga_2O_3/Al_2O_3 interface structures in MOS capacitors. *Journal of Applied Physics*, **2021**, 129, 195705	2.5	1
104	Electron beam-induced crystallization of AlO gate layer on GaO MOS capacitors. *Micron*, **2021**, 140, 102954	2.3	5
103	Effect of surface treatments on ALD Al_2O_3/4H-SiC metaloxidesemiconductor field-effect transistors. *Journal of Applied Physics*, **2021**, 129, 075702	2.5	4
102	High dose gamma irradiation effects on properties of active layers in ZnO thin film transistors. *Semiconductor Science and Technology*, **2021**, 36, 105011	1.8	1
101	High temperature characteristics of nitric oxide annealed p-channel 4H-SiC metal oxide semiconductor field effect transistors. *Journal of Applied Physics*, **2021**, 130, 225701	2.5	0
100	Characterization of Near-Interface Traps at Dielectric/SiC Interfaces Using CCDLTS. *Materials Science Forum*, **2019**, 963, 217-221	0.4	
99	Delivery of lethal dsRNAs in insect diets by branched amphiphilic peptide capsules. *Journal of Controlled Release*, **2018**, 273, 139-146	11.7	37
98	Mechanism of phosphorus passivation of near-interface oxide traps in 4HSiC MOS devices investigated by CCDLTS and DFT calculation. *Semiconductor Science and Technology*, **2018**, 33, 065005	1.8	5
97	Interface trapping in (201) Ga_2O_3 MOS capacitors with deposited dielectrics. *Applied Physics Letters*, **2018**, 112, 192108	3.4	26
96	Thermal characterization of gallium oxide Schottky barrier diodes. *Review of Scientific Instruments*, **2018**, 89, 114903	1.7	29
95	Analysis of the electronic and chemical structure in boron and phosphorus passivated 4H-SiC/SiO_2 interfaces using HRTEM and STEM-EELS. *Applied Physics Letters*, **2018**, 113, 193503	3.4	5
94	Enhancement of electrical characteristics of a-ZTO TFTs based on channel layers produced with alternating precursor concentration. *Electronics Letters*, **2018**, 54, 1298-1300	1.1	2
93	Borosilicate Glass (BSG) as Gate Dielectric for 4H-SiC MOSFETs. *Materials Science Forum*, **2018**, 924, 502-505	0.4	1
92	Isotropic Oxidation by Plasma Oxidation and Investigation of RIE Induced Effects for Development of 4H-SiC Trench MOSFETs. *Materials Science Forum*, **2018**, 924, 444-448	0.4	3
91	Interface Trap Profiles in 4H- and 6H-SiC MOS Capacitors with Nitrogen- and Phosphorus-Doped Gate Oxides. *Journal of Electronic Materials*, **2017**, 46, 2296-2300	1.9	3
90	4H-SiC MOSFETs With Borosilicate Glass Gate Dielectric and Antimony Counter-Doping. *IEEE Electron Device Letters*, **2017**, 38, 1433-1436	4.4	10
89	Tuning the threshold voltage from depletion to enhancement mode in a multilayer MoS_2 transistor via oxygen adsorption and desorption. *Physical Chemistry Chemical Physics*, **2016**, 18, 685-9	3.6	17

(2015-2016)

88	Investigation of defects in Gd doped GaN using thermally stimulated current spectroscopy. *Solid State Communications*, **2016**, 226, 25-28	1.6	6
87	Dual-Gate MoS2 FET With a Coplanar-Gate Engineering. *IEEE Transactions on Electron Devices*, **2016**, 63, 573-577	2.9	8
86	Effects of antimony (Sb) on electron trapping near SiO2/4H-SiC interfaces. *Journal of Applied Physics*, **2016**, 120, 034503	2.5	4
85	Role of self-trapped holes in the photoconductive gain of �gallium oxide Schottky diodes. *Journal of Applied Physics*, **2016**, 119, 103102	2.5	118
84	Phospho-silicate glass gated 4H-SiC metal-oxide-semiconductor devices: Phosphorus concentration dependence. *Journal of Applied Physics*, **2016**, 119, 155705	2.5	16
83	Analysis of temperature dependent forward characteristics of Ni/$(bar{2}01)$�Ga2O3Schottky diodes. *Semiconductor Science and Technology*, **2016**, 31, 115002	1.8	45
82	SPICE Modeling of Advanced Silicon Carbide High Temperature Integrated Circuits. *Materials Science Forum*, **2016**, 858, 1070-1073	0.4	0
81	Characterization of fast interface states in nitrogen- and phosphorus-treated 4H-SiC MOS capacitors. *Semiconductor Science and Technology*, **2015**, 30, 075011	1.8	8
80	Silicon carbide: A unique platform for metal-oxide-semiconductor physics. *Applied Physics Reviews*, **2015**, 2, 021307	17.3	176
79	Hall-effect characterization of electron transport at SiO2/4H-SiC MOS interfaces. *Microelectronic Engineering*, **2015**, 147, 137-140	2.5	4
78	Deuterium absorption from the D2O exposure of oxidized 4H-SiC (0001), (0001�), and (112�0) surfaces. *Applied Physics Letters*, **2015**, 106, 123502	3.4	1
77	Channel Mobility Improvement in 4H-SiC MOSFETs Using a Combination of Surface Counter-Doping and NO Annealing. *Materials Science Forum*, **2015**, 821-823, 693-696	0.4	9
76	High-Mobility SiC MOSFETs with Chemically Modified Interfaces. *Materials Science Forum*, **2015**, 821-823, 749-752	0.4	14
75	Effects and mechanisms of RIE on SiC inversion layer mobility and its recovery. *Applied Surface Science*, **2015**, 324, 30-34	6.7	11
74	Concentration, chemical bonding, and etching behavior of P and N at the SiO2/SiC(0001) interface. *Journal of Applied Physics*, **2015**, 118, 235303	2.5	7
73	Chitosan solid electrolyte as electric double layer in multilayer MoS2 transistor for low-voltage operation. *Physica Status Solidi (A) Applications and Materials Science*, **2015**, 212, 2219-2225	1.6	21
72	Atomic origin of high-temperature electron trapping in metal-oxide-semiconductor devices. *Applied Physics Letters*, **2015**, 106, 143504	3.4	18
71	Channel mobility and threshold voltage characterization of 4H-SiC MOSFET with antimony channel implantation **2015**,		3

70	High Channel Mobility 4H-SiC MOSFETs by Antimony Counter-Doping. *IEEE Electron Device Letters*, **2014**, 35, 894-896	4.4	46
69	Nitrogen Plasma Processing of SiO2/4H-SiC Interfaces. *Journal of Electronic Materials*, **2014**, 43, 857-862	1.9	14
68	Kinetics of nitrogen incorporation at the SiO2/4H-SiC interface during an NO passivation. *Applied Surface Science*, **2014**, 317, 593-597	6.7	19
67	Water absorption in thermally grown oxides on SiC and Si: Bulk oxide and interface properties. *Applied Physics Letters*, **2014**, 105, 191602	3.4	3
66	High mobility 4H-SiC (0001) transistors using alkali and alkaline earth interface layers. *Applied Physics Letters*, **2014**, 105, 182107	3.4	56
65	Roughness of the SiC/SiO2 vicinal interface and atomic structure of the transition layers. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2014**, 32, 060603	2.9	12
64	Thin PSG Process for 4H-SiC MOSFET. *Materials Science Forum*, **2014**, 778-780, 513-516	0.4	
63	Stable Phosphorus Passivated SiO2/4H-SiC Interface Using Thin Oxides. *Materials Science Forum*, **2014**, 806, 139-142	0.4	1
62	Advancements in SiC Power Devices Using Novel Interface Passivation Processes. *Environmental Science and Engineering*, **2014**, 47-52	0.2	2
61	Enhanced Inversion Mobility on 4H-SiC $(hbox{11}overline{hbox{2}} hbox{0})$ Using Phosphorus and Nitrogen Interface Passivation. *IEEE Electron Device Letters*, **2013**, 34, 181-183	4.4	85
60	Origins of Low-Frequency Noise and Interface Traps in 4H-SiC MOSFETs. *IEEE Electron Device Letters*, **2013**, 34, 117-119	4.4	28
59	High-Mobility Stable 4H-SiC MOSFETs Using a Thin PSG Interfacial Passivation Layer. *IEEE Electron Device Letters*, **2013**, 34, 175-177	4.4	62
58	. *IEEE Transactions on Electron Devices*, **2013**, 60, 2361-2367	2.9	42
57	Channel Transport in 4H-SiC MOSFETs: A Brief Review. *ECS Transactions*, **2013**, 58, 51-60	1	1
56	. *IEEE Transactions on Device and Materials Reliability*, **2012**, 12, 391-398	1.6	22
55	Static Performance of 20 A, 1200 V 4H-SiC Power MOSFETs at Temperatures of [illegible]187℃ to 300℃. *Journal of Electronic Materials*, **2012**, 41, 910-914	1.9	33
54	Effects of N Incorporation on Electron Traps at SiO2/SiC Interfaces. *Materials Science Forum*, **2012**, 717-720, 717-720	0.4	
53	4H-SiC MOSFETs with Si-Like Low-Frequency Noise Characteristics. *Materials Science Forum*, **2012**, 717-720, 1105-1108	0.4	

52	Temperature Dependence of Inversion Layer Carrier Concentration and Hall Mobility in 4H-SiC MOSFETs. *Materials Science Forum*, **2012**, 717-720, 713-716	0.4	13
51	Development of 1200 V, 3.7 m□cm^2 4H-SiC DMOSFETs for Advanced Power Applications. *Materials Science Forum*, **2012**, 717-720, 1059-1064	0.4	10
50	Sodium, Rubidium and Cesium in the Gate Oxides of SiC MOSFETs. *Materials Science Forum*, **2012**, 717-720, 453-456	0.4	3
49	Development of 15 kV 4H-SiC IGBTs. *Materials Science Forum*, **2012**, 717-720, 1135-1138	0.4	42
48	Bias-Temperature Instabilities and Radiation Effects on SiC MOSFETs. *ECS Transactions*, **2011**, 35, 369-380		4
47	Electron trapping in 4H-SiC MOS capacitors fabricated by pre-oxidation nitrogen implantation. *Journal of Applied Physics*, **2011**, 109, 114505	2.5	19
46	High electron mobility due to sodium ions in the gate oxide of SiC-metal-oxide-semiconductor field-effect transistors. *Journal of Applied Physics*, **2011**, 109, 023702	2.5	27
45	Effects of Bias on the Irradiation and Annealing Responses of 4H-SiC MOS Devices. *IEEE Transactions on Nuclear Science*, **2011**, 58, 2925-2929	1.7	28
44	3.7 m□cm^2, 1500 V 4H-SiC DMOSFETs for advanced high power, high frequency applications **2011**,		6
43	Atomic-scale origins of bias-temperature instabilities in SiC□SiO_2 structures. *Applied Physics Letters*, **2011**, 98, 063507	3.4	27
42	Si-like low-frequency noise characteristics of 4H-SiC MOSFETs. *Semiconductor Science and Technology*, **2011**, 26, 085015	1.8	7
41	Effect of Band-Edge Interface Traps and Transition Region Mobility on Transport in 4H-SiC MOSFETs. *Materials Science Forum*, **2010**, 645-648, 975-978	0.4	6
40	Effect of NO Annealing on 6H- and 4H-SiC MOS Interface States. *Materials Science Forum*, **2010**, 645-648, 499-502	0.4	8
39	Performance, Reliability, and Robustness of 4H-SiC Power DMOSFETs. *Materials Science Forum*, **2010**, 645-648, 969-974	0.4	39
38	Near-interface traps in n-type SiO_2/SiC MOS capacitors from energy-resolved CCDLTS. *Materials Research Society Symposia Proceedings*, **2010**, 1246, 1		1
37	Inversion layer carrier concentration and mobility in 4H□SiC metal-oxide-semiconductor field-effect transistors. *Journal of Applied Physics*, **2010**, 108, 054509	2.5	83
36	A Study on Pre-Oxidation Nitrogen Implantation for the Improvement of Channel Mobility in 4H-SiC MOSFETs. *IEEE Transactions on Electron Devices*, **2010**, 57, 1195-1200	2.9	31
35	High-mobility enhancement-mode 4H-SiC lateral field-effect transistors utilizing atomic layer deposited Al_2O_3 gate dielectric. *Applied Physics Letters*, **2009**, 95, 152113	3.4	32

34	Critical Issues for MOS Based Power Devices in 4H-SiC. *Materials Science Forum*, **2009**, 615-617, 743-748	0.4	37
33	Density of interface states, electron traps, and hole traps as a function of the nitrogen density in SiO2 on SiC. *Journal of Applied Physics*, **2009**, 105, 124506	2.5	136
32	Gate Stack Reliability of high-Mobility 4H-SiC Lateral MOSFETs with Deposited Al2O3 Gate Dielectric. *Materials Research Society Symposia Proceedings*, **2009**, 1195, 155		
31	Chemical properties of oxidized silicon carbide surfaces upon etching in hydrofluoric acid. *Journal of the American Chemical Society*, **2009**, 131, 16808-13	16.4	100
30	3300 V, 30 A 4H-SiC power DMOSFETs **2009**,		1
29	Effective Channel Mobility in Epitaxial and Implanted 4H-SiC Lateral MOSFETs. *Materials Research Society Symposia Proceedings*, **2008**, 1069, 1		2
28	Ultrashallow defect states at SiO2/4H-SiC interfaces. *Applied Physics Letters*, **2008**, 92, 102112	3.4	42
27	Pressure dependence of SiO2 growth kinetics and electrical properties on SiC. *Journal of Applied Physics*, **2008**, 103, 023522	2.5	46
26	Increase in oxide hole trap density associated with nitrogen incorporation at the SiO2/SiC interface. *Journal of Applied Physics*, **2008**, 103, 124513	2.5	53
25	Electron capture and emission properties of interface states in thermally oxidized and NO-annealed SiO2/4H-SiC. *Journal of Applied Physics*, **2008**, 103, 033701	2.5	48
24	Synthesis and characterization of porous TiO2 with wormhole-like framework structure. *Journal of Porous Materials*, **2008**, 15, 21-27	2.4	8
23	Silicon Dioxide/Silicon Carbide Interfaces **2008**,		1
22	Bonding at the SiC-SiO2 interface and the effects of nitrogen and hydrogen. *Physical Review Letters* , **2007**, 98, 026101	7.4	156
21	Nitridation of the SiO2/4H-SiC interface studied by surface-enhanced Raman spectroscopy. *Applied Surface Science*, **2007**, 253, 5411-5414	6.7	11
20	Suppression of interface state generation upon electron injection in nitrided oxides grown on 4H-SiC. *Applied Physics Letters*, **2007**, 91, 153503	3.4	29
19	A novel technique for the fabrication of nanostructures on silicon carbide using amorphization and oxidation. *Nanotechnology*, **2006**, 17, 4514-4518	3.4	10
18	Nitrogen and Hydrogen Induced Trap Passivation at the SiO2/4H-SiC Interface. *Materials Science Forum*, **2006**, 527-529, 949-954	0.4	26
17	Si/SiO2 and SiC/SiO2 Interfaces for MOSFETs - Challenges and Advances. *Materials Science Forum*, **2006**, 527-529, 935-948	0.4	43

16	Total Dose Radiation Response of Nitrided and Non-nitrided SiO$_{2}$/4H-SiC MOS Capacitors. *IEEE Transactions on Nuclear Science*, **2006**, 53, 3687-3692	1.7	27
15	Depth profiles, surface damage and lattice location of boron/deuterium co-doped diamond. *Diamond and Related Materials*, **2005**, 14, 1600-1604	3.5	4
14	Interface trap passivation for SiO2(0001) C-terminated 4H-SiC. *Journal of Applied Physics*, **2005**, 98, 014902	2.5	66
13	Formation of carbon nanoclusters by implantation of keV carbon ions in fused silica followed by thermal annealing **2005**, 5650, 35		
12	Interface Passivation for Silicon Dioxide Layers on Silicon Carbide. *MRS Bulletin*, **2005**, 30, 288-292	3.2	67
11	Modification of the Oxide/Semiconductor Interface by High Temperature NO Treatments: A Combined EPR, NRA and XPS Study on Oxidized Porous and Bulk n-Type 4H-SiC. *Materials Science Forum*, **2005**, 483-485, 277-280	0.4	5
10	High-resolution elemental profiles of the silicon dioxide/4H-silicon carbide interface. *Journal of Applied Physics*, **2005**, 97, 104920	2.5	43
9	Nitridation anisotropy in SiO2/4H-SiC. *Journal of Applied Physics*, **2005**, 97, 074902	2.5	27
8	Graphitic features on SiC surface following oxidation and etching using surface enhanced Raman spectroscopy. *Applied Physics Letters*, **2004**, 85, 3495-3497	3.4	44
7	Effect of nitric oxide annealing on the interface trap density near the conduction bandedge of 4H-SiC at the oxide/(112 0) 4H-SiC interface. *Applied Physics Letters*, **2004**, 84, 1498-1500	3.4	64
6	Modified Deal Grove model for the thermal oxidation of silicon carbide. *Journal of Applied Physics*, **2004**, 95, 4953-4957	2.5	182
5	Passivation of Oxide Layers on 4H-SiC Using Sequential Anneals in Nitric Oxide and Hydrogen. *Materials Research Society Symposia Proceedings*, **2003**, 786, 811		1
4	Determination of energetic distribution of interface states between gate metal and semiconductor in sub-micron devices from current-voltage characteristics. *IEEE Transactions on Electron Devices*, **2000**, 47, 282-287	2.9	10
3	Synthesis of some newer formazans and tetrazolium salts and their effect on Ranikhet disease virus and the vaccinia virus. *Die Pharmazie*, **1980**, 35, 585-6	1.5	6
2	Interface passivation of Silicon Dioxide layers on Silicon Carbide		3
1	Nitrogen-Induced Changes in the Electronic and Structural Properties of 4H-SiC (0001)/SiO2 Interfaces. *Physica Status Solidi (B): Basic Research*,2100224	1.3	0