Samares Kar

List of Publications by Year in descending order

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45 papers	956 citations	516710 16 h-index	434195 31 g-index
45 all docs	45 docs citations	45 times ranked	424 citing authors

#	Article	IF	Citations
1	On the Characteristics of Traps and Charges in the Si/SiO₂/HfO₂/TaN High-k Gate Stacks. ECS Journal of Solid State Science and Technology, 2014, 3, N30-N38.	1.8	4
2	Introduction to High-k Gate Stacks. Springer Series in Advanced Microelectronics, 2013, , 1-45.	0.3	1
3	MOSFET: Basics, Characteristics, and Characterization. Springer Series in Advanced Microelectronics, 2013, , 47-152.	0.3	3
4	Closed-Form Model for High-k MOSFET Channel Parameters: Reflecting Non-Saturating Inversion Surface Potential, Gate Stack Traps, and Work Function Anomaly. ECS Journal of Solid State Science and Technology, 2012, 1, Q79-Q85.	1.8	1
5	Study of siliconâ€“organic interfaces by admittance spectroscopy. Applied Surface Science, 2006, 252, 3961-3967.	6.1	14
6	Parameter extraction using novel phenomena in nano-MOSFETs with ultra-thin (EOT=0.46â€“1.93 nm) high-K gate dielectrics. Thin Solid Films, 2006, 504, 178-182.	1.8	3
7	Characterization of Accumulation Layer Capacitance for Extracting Data on High-<tex>$kappa$</tex>Gate Dielectrics. IEEE Transactions on Electron Devices, 2005, 52, 1187-1193.	3.0	25
8	Determination of the Gate Dielectric Capacitance of Ultrathin High-k Layers. Journal of the Electrochemical Society, 2004, 151, G476.	2.9	1
9	Extraction of the capacitance of ultrathin high-K gate dielectrics. IEEE Transactions on Electron Devices, 2003, 50, 2112-2119.	3.0	42
10	Properties of electronic traps at silicon/1-octadecene interfaces. Applied Physics Letters, 2001, 78, 1288-1290.	3.3	55
11	Low Trap Density Nonleaky SiGe Quantum Well MOS Structures:Fabrication and Characteristics. Journal of the Electrochemical Society, 2001, 148, G535.	2.9	1
12	Ultimate gate oxide thinness set by recombination-tunneling of electrons via Siâ€“SiO2 interface traps. Journal of Applied Physics, 2000, 88, 2693-2695.	2.5	4
13	Characteristics of ultrathin [4â€“7 nm] gate oxides for SiGe quantum well MOS structures. Microelectronic Engineering, 1999, 48, 83-86.	2.4	0
14	Novel features in the strain profile and gate oxide capacitance of through-gate-oxide implanted structures. Applied Physics Letters, 1997, 71, 3102-3104.	3.3	0
15	Investigation of roomâ€temperature ion beam hydrogenation for the removal of traps in silicon ion beam damaged metalâ€oxideâ€silicon structures. Journal of Applied Physics, 1993, 73, 2187-2195.	2.5	13
16	Effects of Processâ€Induced Damage on Metal Oxide Semiconductor Structures with 115 Ã... Thin Gate Oxides. Journal of the Electrochemical Society, 1992, 139, 2026-2032.	2.9	6
17	Passivation of ionâ€beam damage in metalâ€oxideâ€silicon structures by roomâ€temperature hydrogenation. Applied Physics Letters, 1992, 60, 3001-3003.	3.3	5
18	Ion beam modification of the dielectric properties of thin silicon dioxide films. Applied Surface Science, 1991, 48-49, 264-268.	6.1	7

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19	Ion-dosage-dependent room-temperature hysteresis in MOS structures with thin oxides. IEEE Transactions on Electron Devices, 1991, 38, 316-322.	3.0	11
20	Interface Characteristics of Metalâ€Oxideâ€Semiconductor Capacitors with Ultrathin Oxides. Journal of the Electrochemical Society, 1991, 138, 2046-2049.	2.9	2
21	Remote plasma hydrogenation of ion beam amorphized silicon. Applied Physics Letters, 1991, 59, 718-720.	3.3	6
22	Characteristics of the Siâ€SiO2interface states in thin (70â€“230 Ã…) oxide structures. Journal of Applied Physics, 1987, 61, 5353-5359.	2.5	48
23	An investigation of optically activated Siâ€”SiO2interface states in metal-oxide-silicon structures. IEEE Transactions on Electron Devices, 1987, 34, 420-426.	3.0	2
24	Determination of siliconâ€silicon dioxide interface state properties from admittance measurements under illumination. Journal of Applied Physics, 1985, 58, 4256-4266.	2.5	68
25	Dependence of Siâ€SiO2interface state density on oxide thickness in structures with ultrathin (79â€“227) Tj ETQq1 1 0.784314 rgBT /O	3.3	10
26	Electrical characteristics of siliconâ€tin oxide heterojunctions prepared by chemical vapor deposition. Journal of Applied Physics, 1984, 56, 2812-2822.	2.5	37
27	The effect of illumination of inversion layer formation in metalâ€thin oxideâ€silicon devices. Journal of Applied Physics, 1983, 54, 1124-1127.	2.5	3
28	Determination of semiconductor quasiâ€Fermi level separation under illumination. Journal of Applied Physics, 1983, 54, 1988-1990.	2.5	7
29	Electrical, optical, and structural properties of semitransparent metallic layers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1983, 1, 1420-1424.	2.1	8
30	Interface investigation using transparent conductorâ€oxideâ€silicon structures. Journal of Applied Physics, 1982, 53, 7039-7043.	2.5	5
31	On the mechanism of degradation in Si/SiOx/Ag metal oxide semiconductor solar cells. Journal of Applied Physics, 1982, 53, 4435-4440.	2.5	7
32	On the mechanism of carrier transport in metal-thin-oxide semiconductor diodes on Polycrystalline silicon. IEEE Transactions on Electron Devices, 1982, 29, 1839-1845.	3.0	31
33	Evidence of tunnelâ€assisted transport in nondegenerate MOS and semiconductorâ€oxideâ€semiconductor diodes at room temperature. Journal of Applied Physics, 1980, 51, 3417-3421.	2.5	35
34	The role of interface states in photoelectrochemical cells. , 1980, , .		0
35	On the design and operation of electrochemical solar cells. Solar Energy, 1979, 23, 129-139.	6.1	19
36	Effects of barrier metal, optical concentration, and grain boundary on polysilicon MOS solar cells. , 1979, , .		0

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37	On the role of interface states in MOS solar cells. Journal of Applied Physics, 1978, 49, 5278-5283.	2.5	13
38	Effects of interface states, tunneling, and metal in silicon MOS solar cells. , 1977, , .		2
39	Determination of Si-metal work function differences by MOS capacitance technique. Solid-State Electronics, 1975, 18, 169-181.	1.4	46
40	Interface charge characteristics of MOS structures with different metals on steam grown oxides. Solid-State Electronics, 1975, 18, 723-732.	1.4	21
41	Determination of the semiconductor doping profile right up to its surface using the MIS capacitor. Solid-State Electronics, 1975, 18, 189-198.	1.4	72
42	Determination of minority carrier lifetime using MIS tunnel diodes. Applied Physics Letters, 1974, 25, 587-589.	3.3	20
43	Potentials and direct current in Si-(20 to 40 Ã...)SiO2-metal structures. Solid-State Electronics, 1972, 15, 869-875.	1.4	36
44	Interface states in MOS structures with 20â€“40 Ã... thick SiO2 films on nondegenerate Si. Solid-State Electronics, 1972, 15, 221-237.	1.4	227
45	METALâ€ÐEPENDENT INTERFACE STATES IN THIN MOS STRUCTURES. Applied Physics Letters, 1971, 18, 401-403.	3.3	35