Siegfried Mantl

List of Publications by Year
in descending order

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83	1,523	394286	330025
papers	citations	19 h-index	37 g-index

84	84	84	1374
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Inverters With Strained Si Nanowire Complementary Tunnel Field-Effect Transistors. IEEE Electron Device Letters, 2013, 34, 813-815.	2.2	171
2	New method for epitaxial heterostructure layer growth. Applied Physics Letters, 1992, 61, 267-269.	1.5	95
3	A vibrational study of ethanol adsorption on Si(100). Journal of Chemical Physics, 1997, 106, 9889-9898.	1.2	79
4	X-ray reflectivity and diffuse-scattering study ofCoSi2layers in Si produced by ion-beam synthesis. Physical Review B, 1993, 47, 4385-4393.	1.1	74
5	Strained Si and SiGe Nanowire Tunnel FETs for Logic and Analog Applications. IEEE Journal of the Electron Devices Society, 2015, 3, 103-114.	1.2	70
6	Impact of TFET Unidirectionality and Ambipolarity on the Performance of 6T SRAM Cells. IEEE Journal of the Electron Devices Society, 2015, 3, 223-232.	1.2	68
7	Diffusion of iron in aluminum studied by MÃ¶ssbauer spectroscopy. Physical Review B, 1983, 27, 5313-5331.	1.1	67
8	Reduced Pressure CVD Growth of Ge and Ge_{1â^'x}Sn_xAlloys. ECS Journal of Solid State Science and Technology, 2013, 2, N99-N102.	0.9	67
9	Molecular beam allotaxy: a new approach to epitaxial heterostructures. Journal Physics D: Applied Physics, 1998, 31, 1-17.	1.3	61
10	Electronic structure of buried Î±-FeSi2and Î²-FeSi2layers: Soft-x-ray-emission and -absorption studies compared to band-structure calculations. Physical Review B, 1994, 50, 18330-18340.	1.1	58
11	Interdiffusion and thermally induced strain relaxation in strainedSi1â^'xGex/Si superlattices. Physical Review B, 1992, 46, 6975-6981.	1.1	52
12	Silicon Nanowire Tunneling Field-Effect Transistor Arrays: Improving Subthreshold Performance Using Excimer Laser Annealing. IEEE Transactions on Electron Devices, 2011, 58, 1822-1829.	1.6	47
13	$Omega$-Gated Silicon and Strained Silicon Nanowire Array Tunneling FETs. IEEE Electron Device Letters, 2012, 33, 1535-1537.	2.2	42
14	Schottky barrier height modulation using dopant segregation in schottky-barrier SOI-MOSFETs. , 0, , .		37
15	Zn nanoparticles irradiated with swift heavy ions at low fluences: Optically-detected shape elongation induced by nonoverlapping ion tracks. Physical Review B, 2011, 83, .	1.1	35
16	Tunneling field-effect transistor with a strained Si channel and a Si0.5Ge0.5 source. Solid-State Electronics, 2012, 74, 97-101.	0.8	27
17	Dislocation-Based Si-Nanodevices. Japanese Journal of Applied Physics, 2010, 49, 04DJ02.	0.8	26
18	An infrared study of H8Si8O12 cluster adsorption on Si(100) surfaces. Journal of Chemical Physics, 1998, 108, 8680-8688.	1.2	23

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19	Radio-Frequency Study of Dopant-Segregated n-Type SB-MOSFETs on Thin-Body SOI. IEEE Electron Device Letters, 2010, 31, 537-539.	2.2	23
20	Unipolar behavior of asymmetrically doped strained Si0.5Ge0.5 tunneling field-effect transistors. Applied Physics Letters, 2012, 101, .	1.5	21
21	NiSi2/Si interface chemistry and epitaxial growth mode. Acta Materialia, 2009, 57, 232-236.	3.8	19
22	Study of metallic glasses by measuring the Doppler broadening of the positron annihilation Î³-radiation and the electrical resistivity. Physica Status Solidi A, 1980, 58, 77-82.	1.7	18
23	Diffuse x-ray scattering from thin films with defects. Physical Review B, 1995, 51, 12223-12227.	1.1	16
24	Fabrication of Schottky barrier MOSFETs on SOI by a self-assembly CoSi2-patterning method. Solid-State Electronics, 2003, 47, 1183-1186.	0.8	16
25	Hole Mobilities of $hbox{Si/Si}_{0.5}hbox{Ge}_{0.5}$ Quantum-Well Transistor on SOI and Strained SOI. IEEE Electron Device Letters, 2012, 33, 758-760.	2.2	15
26	Field electron emission based on resonant tunneling in diamond/CoSi2/Si quantum well nanostructures. Scientific Reports, 2012, 2, 746.	1.6	14
27	Improved NiSi0.8Ge0.2/Si0.8Ge0.2 Contacts by C+ Pre-Implantation. Electrochemical and Solid-State Letters, 2011, 14, H261.	2.2	13
28	Electrical characterization of Î©-gated uniaxial tensile strained Si nanowire-array metal-oxide-semiconductor field effect transistors with <100>- and <110> channel orientations. Thin Solid Films, 2012, 520, 3332-3336.	0.8	13
29	Modulation phenomena in Si nanowire field-effect transistors characterized using noise spectroscopy and gamma radiation technique. Journal of Applied Physics, 2013, 113, 124503.	1.1	13
30	A Novel Gate-Normal Tunneling Field-Effect Transistor With Dual-Metal Gate. IEEE Journal of the Electron Devices Society, 2018, 6, 1070-1076.	1.2	13
31	Silicon germanium tin alloys formed by pulsed laser induced epitaxy. Applied Physics Letters, 2012, 100, .	1.5	12
32	Positron annihilation studies on an electron irradiated Cu-30 at % Zn alloy. Radiation Effects, 1979, 41, 61-63.	0.4	11
33	Ultrathin epitaxial Ni-silicide contacts on (1 0 0) Si and SiGe: Structural and electrical investigations. Microelectronic Engineering, 2013, 107, 190-195.	1.1	11
34	The use of ion implantation and annealing for the fabrication of strained silicon on thin SiGe virtual substrates. Materials Research Society Symposia Proceedings, 2004, 809, B1.6.1.	0.1	10
35	Scanning spreading resistance microscopy of two-dimensional diffusion of boron implanted in free-standing silicon nanostructures. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 76.	1.6	10
36	Subthreshold Behavior of Floating-Gate MOSFETs With Ferroelectric Capacitors. IEEE Transactions on Electron Devices, 2018, 65, 4641-4645.	1.6	10

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37	Electronic-structure determination of ion-beam-synthesizedCoSi2using photon-inâ€“photon-out spectroscopies. Physical Review B, 1993, 48, 5042-5048.	1.1	9
38	Compound formation by ion beam synthesis and a comparison with alternative methods such as deposition and growth or wafer bonding. Nuclear Instruments & Methods in Physics Research B, 1995, 106, 355-363.	0.6	9
39	GaAs photodetectors prepared by high-energy and high-dose nitrogen implantation. Applied Physics Letters, 2006, 89, 091103.	1.5	9
40	Fabrication, characterization and modeling of strained SOI MOSFETs with very large effective mobility. , 2007, , .		9
41	High Temperature Ion Implantation: a Solution for n-Type Junctions in Strained Silicon. ECS Transactions, 2009, 19, 95-103.	0.3	9
42	Physicochemical and Electrical Properties of LaLuO[sub 3]/Ge(100) Structures Submitted to Postdeposition Annealings. Electrochemical and Solid-State Letters, 2010, 13, G37.	2.2	9
43	Rare-Earth Scandate/TiN Gate Stacks in SOI MOSFETs Fabricated With a Full Replacement Gate Process. IEEE Transactions on Electron Devices, 2011, 58, 617-622.	1.6	9
44	Electrical and Structural Properties of Ternary Rare-Earth Oxides on Si and Higher Mobility Substrates and their Integration as High-k Gate Dielectrics in MOSFET Devices. ECS Transactions, 2011, 35, 461-479.	0.3	9
45	Hole Transport in Strained $hbox{Si}_{0.5} hbox{Ge}_{0.5}$ QW-MOSFETs With $langlehbox{110}angle$ and $langlehbox{100}angle$ Channel Orientations. IEEE Electron Device Letters, 2012, 33, 1105-1107.	2.2	9
46	Experimental I â€“ $V(T)$ and C â€“ V Analysis of Si Planar p-TFETs on Ultrathin Body. IEEE Transactions on Electron Devices, 2016, 63, 5036-5040.	1.6	9
47	Amorphous Lanthanum Lutetium Oxide Thin Films as an Alternative High-k Material. ECS Transactions, 2007, 11, 311-318.	0.3	8
48	Nanoscale strain characterisation for ultimate CMOS and beyond. Materials Science in Semiconductor Processing, 2008, 11, 271-278.	1.9	8
49	Strained Silicon Single Nanowire Gate-All-Around TFETs with Optimized Tunneling Junctions. Applied Sciences (Switzerland), 2018, 8, 670.	1.3	7
50	Atomic layer deposition of HfO2 and Al2O3 layers on 300 mm Si wafers for gate stack technology. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01A301.	0.6	6
51	Lattice location and hardness of Ta-implanted Ni3Al. Journal of Materials Research, 1991, 6, 1200-1206.	1.2	5
52	Schottky-barrier height tuning of Ni and Pt germanide/n-Ge contacts using dopant segregation. , 2008, , .		5
53	Flash Lamp Activation of n- and p-type Dopants in Strained and Unstrained SOI and HOI. ECS Transactions, 2009, 19, 79-86.	0.3	5
54	Comparison of strained SiGe heterostructure-on-insulator (001) and (110) PMOSFETs: Câ€“V characteristics, mobility, and ON current. Solid-State Electronics, 2011, 65-66, 64-71.	0.8	4

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55	High performance Schottky barrier MOSFETs on UTB SOI. , 2009, , .		3
56	Performance enhancement of uniaxially-tensile strained Si NW-nFETs fabricated by lateral strain relaxation of SSOI. , 2009, , .		3
57	Rare-earth oxide/TiN gate stacks on high mobility strained silicon on insulator for fully depleted metal-oxide-semiconductor field-effect transistors. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01A903.	0.6	3
58	Effective attenuation length for lanthanum lutetium oxide between 7 and 13â€‰keV. Applied Physics Letters, 2013, 102, .	1.5	3
59	Experimental Investigation of ${C}$ â€“ ${V}$ Characteristics of Si Tunnel FETs. IEEE Electron Device Letters, 2017, 38, 818-821.	2.2	3
60	Patterning of Silicide Layers by Local Oxidation. Materials Research Society Symposia Proceedings, 1995, 402, 549.	0.1	2
61	Ultrafast Si-based MSM mesa photodetectors with optical waveguide connection. Materials Science in Semiconductor Processing, 2000, 3, 399-403.	1.9	2
62	Schottky-barrier height tuning using dopant segregation in Schottky-barrier MOSFETs on fully-depleted SOI. Materials Research Society Symposia Proceedings, 2006, 913, 1.	0.1	2
63	Variability in SOI Schottky barrier MOSFETs. , 2008, , .		2
64	NiSi nano-contacts to strained and unstrained silicon nanowires. , 2011, , .		2
65	NANOSIL network of excellenceâ€”silicon-based nanostructures and nanodevices for long-term nanoelectronics applications. Materials Science in Semiconductor Processing, 2008, 11, 148-159.	1.9	1
66	Si based tunnel FETs : Status and perspectives. , 2014, , .		1
67	Growth, Properties and Applications of Epitaxial Silicides. , 1993, , 445-469.		1
68	Ion Scattering Studies of Defects In Gan Thin Films on C-Oriented Sapphire. Materials Research Society Symposia Proceedings, 1998, 512, 543.	0.1	0
69	Nanopatterning of Thin Cobaltdisilicide Layers by Local Oxidation. Materials Research Society Symposia Proceedings, 1998, 514, 163.	0.1	0
70	Ultrafast Silicon Based Internal Photoemission Detectors. Materials Research Society Symposia Proceedings, 1999, 558, 167.	0.1	0
71	Fabrication of nanometer Schottky-tunneling MOSFETs by a novel silicide nanopatterning method. , 1999, , .		0
72	Self-Assembly CoSi2-Nanostructures for Fabrication of Schottky Barrier MOSFETs on SOI. Materials Research Society Symposia Proceedings, 2001, 686, 1.	0.1	0

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73	Nucleation and Movement of Dislocations during Relaxation of He Implanted SixGe1-x/Six Heterostructures. ECS Transactions, 2006, 3, 1039-1046.	0.3	0
74	Nickel silicidation on sulfur implanted Si(100). , 2008, , .		0
75	Electrical Characterization of TbScO3/TiN Gate Stacks of MOS Capacitors and MOSFETs on Strained and Unstrained SOI. ECS Transactions, 2010, 33, 195-202.	0.3	0
76	Non-linear analysis of n-type Schottky-Barrier MOSFETs. , 2010, , .		0
77	Nanoanalysis of lanthanum scandate MOS capacitors addressing reliability after local current flow. , 2011, , .		0
78	Noise spectroscopy of traps in silicon nanowire field-effect transistors. , 2011, , .		0
79	Formation of NiSiGe on compressivly strained SiGe thin layers. , 2012, , .		0
80	Epitaxial growth and properties of NiSiGe. , 2012, , .		0
81	ION BEAM SYNTHESIS, MOLECULAR BEAM ALLOTAXY AND SELF-ASSEMBLED PATTERNING OF EPITAXIAL SILICIDES. , 2000, , .		0
82	Strain relaxation of SiGe/Si heterostructures by helium ion implantation and subsequent annealing: Helium precipitates acting as dislocation sources. Springer Proceedings in Physics, 2005, , 97-102.	0.1	0
83	Compound formation by ion beam synthesis and a comparison with alternative methods such as deposition and growth or wafer bonding. , 1996, , 355-363.		0