

Siegfried Mantl

List of Publications by Year in descending order

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83
papers

1,523
citations

394286

19
h-index

330025

37
g-index

84
all docs

84
docs citations

84
times ranked

1374
citing authors

#	ARTICLE	IF	CITATIONS
1	Strained Silicon Single Nanowire Gate-All-Around TFETs with Optimized Tunneling Junctions. Applied Sciences (Switzerland), 2018, 8, 670.	1.3	7
2	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
3	Subthreshold Behavior of Floating-Gate MOSFETs With Ferroelectric Capacitors. IEEE Transactions on Electron Devices, 2018, 65, 4641-4645.	1.6	10
4	Experimental Investigation of $I_C \sim V$ Characteristics of Si Tunnel FETs. IEEE Electron Device Letters, 2017, 38, 818-821.	2.2	3
5	Experimental $I \sim V(T)$ and $C \sim V$ Analysis of Si Planar p-TFETs on Ultrathin Body. IEEE Transactions on Electron Devices, 2016, 63, 5036-5040.	1.6	9
6	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
7	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
8	Si based tunnel FETs : Status and perspectives. , 2014, , .		1
9	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
10	Inverters With Strained Si Nanowire Complementary Tunnel Field-Effect Transistors. IEEE Electron Device Letters, 2013, 34, 813-815.	2.2	171
11	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
12	Effective attenuation length for lanthanum lutetium oxide between 7 and 13 keV. Applied Physics Letters, 2013, 102, .	1.5	3
13	Reduced Pressure CVD Growth of Ge and Ge _{1-x} Sn _x Alloys. ECS Journal of Solid State Science and Technology, 2013, 2, N99-N102.	0.9	67
14	Field electron emission based on resonant tunneling in diamond/CoSi ₂ /Si quantum well nanostructures. Scientific Reports, 2012, 2, 746.	1.6	14
15	Formation of NiSiGe on compressively strained SiGe thin layers. , 2012, , .		0
16	Unipolar behavior of asymmetrically doped strained Si _{0.5} Ge _{0.5} tunneling field-effect transistors. Applied Physics Letters, 2012, 101, .	1.5	21
17	Hole Transport in Strained $\text{Si}_{0.5}\text{Ge}_{0.5}$ QW-MOSFETs With $\langle 110 \rangle$ and $\langle 100 \rangle$ Channel Orientations. IEEE Electron Device Letters, 2012, 33, 1105-1107.	2.2	9
18	Epitaxial growth and properties of NiSiGe. , 2012, , .		0

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19	Ω -Gated Silicon and Strained Silicon Nanowire Array Tunneling FETs. IEEE Electron Device Letters, 2012, 33, 1535-1537.	2.2	42
20	Tunneling field-effect transistor with a strained Si channel and a Si _{0.5} Ge _{0.5} source. Solid-State Electronics, 2012, 74, 97-101.	0.8	27
21	Hole Mobilities of $\text{Si}_{0.5}\text{Ge}_{0.5}$ Quantum-Well Transistor on SOI and Strained SOI. IEEE Electron Device Letters, 2012, 33, 758-760.	2.2	15
22	Silicon germanium tin alloys formed by pulsed laser induced epitaxy. Applied Physics Letters, 2012, 100, .	1.5	12
23	Electrical characterization of $\hat{\text{C}}$ -gated uniaxial tensile strained Si nanowire-array metal-oxide-semiconductor field effect transistors with $\hat{\text{C}}$ and $\hat{\text{C}}$ channel orientations. Thin Solid Films, 2012, 520, 3332-3336.	0.8	13
24	NiSi nano-contacts to strained and unstrained silicon nanowires. , 2011, , .		2
25	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
26	Comparison of strained SiGe heterostructure-on-insulator (001) and (110) PMOSFETs: $\hat{\text{C}}$ characteristics, mobility, and ON current. Solid-State Electronics, 2011, 65-66, 64-71.	0.8	4
27	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
28	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
29	Nanoanalysis of lanthanum scandate MOS capacitors addressing reliability after local current flow. , 2011, , .		0
30	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
31	Atomic layer deposition of HfO ₂ and Al ₂ O ₃ 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
32	Improved NiSi _{0.8} Ge _{0.2} /Si _{0.8} Ge _{0.2} Contacts by C ⁺ Pre-Implantation. Electrochemical and Solid-State Letters, 2011, 14, H261.	2.2	13
33	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
34	Noise spectroscopy of traps in silicon nanowire field-effect transistors. , 2011, , .		0
35	Electrical Characterization of TbScO ₃ /TiN Gate Stacks of MOS Capacitors and MOSFETs on Strained and Unstrained SOI. ECS Transactions, 2010, 33, 195-202.	0.3	0
36	Dislocation-Based Si-Nanodevices. Japanese Journal of Applied Physics, 2010, 49, 04DJ02.	0.8	26

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37	Physicochemical and Electrical Properties of LaLuO ₃ /Ge(100) Structures Submitted to Postdeposition Annealings. <i>Electrochemical and Solid-State Letters</i> , 2010, 13, G37.	2.2	9
38	Non-linear analysis of n-type Schottky-Barrier MOSFETs. , 2010, , .		0
39	Radio-Frequency Study of Dopant-Segregated n-Type SB-MOSFETs on Thin-Body SOI. <i>IEEE Electron Device Letters</i> , 2010, 31, 537-539.	2.2	23
40	Flash Lamp Activation of n- and p-type Dopants in Strained and Unstrained SOI and HOI. <i>ECS Transactions</i> , 2009, 19, 79-86.	0.3	5
41	High Temperature Ion Implantation: a Solution for n-Type Junctions in Strained Silicon. <i>ECS Transactions</i> , 2009, 19, 95-103.	0.3	9
42	NiSi ₂ /Si interface chemistry and epitaxial growth mode. <i>Acta Materialia</i> , 2009, 57, 232-236.	3.8	19
43	High performance Schottky barrier MOSFETs on UTB SOI. , 2009, , .		3
44	Performance enhancement of uniaxially-tensile strained Si NW-nFETs fabricated by lateral strain relaxation of SSOI. , 2009, , .		3
45	Nanoscale strain characterisation for ultimate CMOS and beyond. <i>Materials Science in Semiconductor Processing</i> , 2008, 11, 271-278.	1.9	8
46	NANOSIL network of excellence" silicon-based nanostructures and nanodevices for long-term nanoelectronics applications. <i>Materials Science in Semiconductor Processing</i> , 2008, 11, 148-159.	1.9	1
47	Variability in SOI Schottky barrier MOSFETs. , 2008, , .		2
48	Nickel silicidation on sulfur implanted Si(100). , 2008, , .		0
49	Schottky-barrier height tuning of Ni and Pt germanide/n-Ge contacts using dopant segregation. , 2008, , .		5
50	Amorphous Lanthanum Lutetium Oxide Thin Films as an Alternative High-k Material. <i>ECS Transactions</i> , 2007, 11, 311-318.	0.3	8
51	Fabrication, characterization and modeling of strained SOI MOSFETs with very large effective mobility. , 2007, , .		9
52	Nucleation and Movement of Dislocations during Relaxation of He Implanted SixGe _{1-x} /Six Heterostructures. <i>ECS Transactions</i> , 2006, 3, 1039-1046.	0.3	0
53	Schottky-barrier height tuning using dopant segregation in Schottky-barrier MOSFETs on fully-depleted SOI. <i>Materials Research Society Symposia Proceedings</i> , 2006, 913, 1.	0.1	2
54	GaAs photodetectors prepared by high-energy and high-dose nitrogen implantation. <i>Applied Physics Letters</i> , 2006, 89, 091103.	1.5	9

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55	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
56	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
57	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
58	Fabrication of Schottky barrier MOSFETs on SOI by a self-assembly CoSi ₂ -patterning method. Solid-State Electronics, 2003, 47, 1183-1186.	0.8	16
59	Self-Assembly CoSi ₂ -Nanostructures for Fabrication of Schottky Barrier MOSFETs on SOI. Materials Research Society Symposia Proceedings, 2001, 686, 1.	0.1	0
60	Ultrafast Si-based MSM mesa photodetectors with optical waveguide connection. Materials Science in Semiconductor Processing, 2000, 3, 399-403.	1.9	2
61	ION BEAM SYNTHESIS, MOLECULAR BEAM ALLOTAXY AND SELF-ASSEMBLED PATTERNING OF EPITAXIAL SILICIDES. , 2000, , .		0
62	Ultrafast Silicon Based Internal Photoemission Detectors. Materials Research Society Symposia Proceedings, 1999, 558, 167.	0.1	0
63	Fabrication of nanometer Schottky-tunneling MOSFETs by a novel silicide nanopatterning method. , 1999, , .		0
64	Molecular beam allotaxy: a new approach to epitaxial heterostructures. Journal Physics D: Applied Physics, 1998, 31, 1-17.	1.3	61
65	An infrared study of H ₈ Si ₈ O ₁₂ cluster adsorption on Si(100) surfaces. Journal of Chemical Physics, 1998, 108, 8680-8688.	1.2	23
66	Ion Scattering Studies of Defects In Gan Thin Films on C-Oriented Sapphire. Materials Research Society Symposia Proceedings, 1998, 512, 543.	0.1	0
67	Nanopatterning of Thin Cobaltdisilicide Layers by Local Oxidation. Materials Research Society Symposia Proceedings, 1998, 514, 163.	0.1	0
68	A vibrational study of ethanol adsorption on Si(100). Journal of Chemical Physics, 1997, 106, 9889-9898.	1.2	79
69	Compound formation by ion beam synthesis and a comparison with alternative methods such as deposition and growth or wafer bonding. , 1996, , 355-363.		0
70	Patterning of Silicide Layers by Local Oxidation. Materials Research Society Symposia Proceedings, 1995, 402, 549.	0.1	2
71	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
72	Diffuse x-ray scattering from thin films with defects. Physical Review B, 1995, 51, 12223-12227.	1.1	16

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73	Electronic structure of buried $\hat{1}\pm$ -FeSi ₂ and $\hat{1}^2$ -FeSi ₂ layers: Soft-x-ray-emission and -absorption studies compared to band-structure calculations. Physical Review B, 1994, 50, 18330-18340.	1.1	58
74	X-ray reflectivity and diffuse-scattering study of CoSi ₂ layers in Si produced by ion-beam synthesis. Physical Review B, 1993, 47, 4385-4393.	1.1	74
75	Electronic-structure determination of ion-beam-synthesized CoSi ₂ using photon-in-photon-out spectroscopies. Physical Review B, 1993, 48, 5042-5048.	1.1	9
76	Growth, Properties and Applications of Epitaxial Silicides. , 1993, , 445-469.		1
77	Interdiffusion and thermally induced strain relaxation in strained Si _{1-x} Gex/Si superlattices. Physical Review B, 1992, 46, 6975-6981.	1.1	52
78	New method for epitaxial heterostructure layer growth. Applied Physics Letters, 1992, 61, 267-269.	1.5	95
79	Lattice location and hardness of Ta-implanted Ni ₃ Al. Journal of Materials Research, 1991, 6, 1200-1206.	1.2	5
80	Diffusion of iron in aluminum studied by Mössbauer spectroscopy. Physical Review B, 1983, 27, 5313-5331.	1.1	67
81	Study of metallic glasses by measuring the Doppler broadening of the positron annihilation $\hat{1}^3$ -radiation and the electrical resistivity. Physica Status Solidi A, 1980, 58, 77-82.	1.7	18
82	Positron annihilation studies on an electron irradiated Cu-30 at % Zn alloy. Radiation Effects, 1979, 41, 61-63.	0.4	11
83	Schottky barrier height modulation using dopant segregation in schottky-barrier SOI-MOSFETs. , 0, , .		37