Marc Heyns

List of Publications by Year
in descending order

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327 papers	7,867 citations	57681 46 h-index	93651 72 g-index
330 all docs	330 docs citations	330 times ranked	7936 citing authors

#	Article	IF	Citations
1	On the Correct Extraction of Interface Trap Density of MOS Devices With High-Mobility Semiconductor Substrates. IEEE Transactions on Electron Devices, 2008, 55, 547-556.	1.6	339
2	Effective electrical passivation of Ge(100) for high-k gate dielectric layers using germanium oxide. Applied Physics Letters, 2007, 91, .	1.5	254
3	Ultimate Scaling of CMOS Logic Devices with Ge and IIIâ€“V Materials. MRS Bulletin, 2009, 34, 485-492.	1.7	168
4	Undoped and in-situ B doped GeSn epitaxial growth on Ge by atmospheric pressure-chemical vapor deposition. Applied Physics Letters, 2011, 99, .	1.5	168
5	Characterization of ALCVD-Al2O3 and ZrO2 layer using X-ray photoelectron spectroscopy. Journal of Non-Crystalline Solids, 2002, 303, 83-87.	1.5	163
6	Polarity effect on the temperature dependence of leakage current through HfO2/SiO2 gate dielectric stacks. Applied Physics Letters, 2002, 80, 1975-1977.	1.5	157
7	Island growth in the atomic layer deposition of zirconium oxide and aluminum oxide on hydrogen-terminated silicon: Growth mode modeling and transmission electron microscopy. Journal of Applied Physics, 2004, 96, 4878-4889.	1.1	132
8	Spatially resolved electrical measurements of SiO2 gate oxides using atomic force microscopy. Applied Physics Letters, 1993, 62, 786-788.	1.5	113
9	Passivation and interface state density of SiO2/HfO2-based/polycrystalline-Si gate stacks. Applied Physics Letters, 2003, 83, 533-535.	1.5	109
10	Capacitance-voltage characterization of GaAsâ€“Al2O3 interfaces. Applied Physics Letters, 2008, 93, 183504.	1.5	109
11	Deposition of HfO2 on germanium and the impact of surface pretreatments. Applied Physics Letters, 2004, 85, 3824-3826.	1.5	104
12	Crystalline Properties and Strain Relaxation Mechanism of CVD Grown GeSn. ECS Journal of Solid State Science and Technology, 2013, 2, P134-P137.	0.9	102
13	Measuring the electrical resistivity and contact resistance of vertical carbon nanotube bundles for application as interconnects. Nanotechnology, 2011, 22, 085302.	1.3	101
14	Site Selective Integration of IIIâ€“V Materials on Si for Nanoscale Logic and Photonic Devices. Crystal Growth and Design, 2012, 12, 4696-4702.	1.4	100
15	On the interface state density at In0.53Ga0.47As/oxide interfaces. Applied Physics Letters, 2009, 95, .	1.5	99
16	Electrical study of sulfur passivated In0.53Ga0.47As MOS capacitor and transistor with ALD Al2O3 as gate insulator. Microelectronic Engineering, 2009, 86, 1554-1557.	1.1	98
17	Temperature and frequency dependent electrical characterization of HfO2/InxGa1â^'xAs interfaces using capacitance-voltage and conductance methods. Applied Physics Letters, 2009, 94, .	1.5	96
18	Figure of merit for and identification of sub-60â€‰mV/decade devices. Applied Physics Letters, 2013, 102, .	1.5	95

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19	Characteristic trapping lifetime and capacitance-voltage measurements of GaAs metal-oxide-semiconductor structures. Applied Physics Letters, 2007, 91, 133510.	1.5	94
20	Characterisation of ALCVD Al2O3â€“ZrO2 nanolaminates, link between electrical and structural properties. Journal of Non-Crystalline Solids, 2002, 303, 123-133.	1.5	92
21	Optimisation of a thin epitaxial Si layer as Ge passivation layer to demonstrate deep sub-micron n- and p-FETs on Ge-On-Insulator substrates. Microelectronic Engineering, 2005, 80, 26-29.	1.1	92
22	Heteroepitaxy of InP on Si(001) by selective-area metal organic vapor-phase epitaxy in sub-50â€‰nm width trenches: The role of the nucleation layer and the recess engineering. Journal of Applied Physics, 2014, 115, 023710.	1.1	82
23	Low-temperature Ge and GeSn Chemical Vapor Deposition using Ge2H6. Thin Solid Films, 2012, 520, 3211-3215.	0.8	80
24	Plasma-Enhanced Atomic Layer Deposition of Two-Dimensional WS₂ from WF₆, H₂ Plasma, and H₂S. Chemistry of Materials, 2017, 29, 2927-2938.	3.2	74
25	Low temperature deposition of 2D WS₂ layers from WF₆ and H₂S precursors: impact of reducing agents. Chemical Communications, 2015, 51, 15692-15695.	2.2	71
26	Electrical Properties of III-V/Oxide Interfaces. ECS Transactions, 2009, 19, 375-386.	0.3	68
27	Effect of hafnium germanate formation on the interface of HfO2/germanium metal oxide semiconductor devices. Applied Physics Letters, 2006, 88, 141904.	1.5	67
28	Effective reduction of interfacial traps in Al2O3/GaAs (001) gate stacks using surface engineering and thermal annealing. Applied Physics Letters, 2010, 97, 112901.	1.5	66
29	Constant voltage stress induced degradation in HfO[sub 2]/SiO[sub 2] gate dielectric stacks. Journal of Applied Physics, 2002, 91, 10127.	1.1	63
30	Estimation of fixed charge densities in hafnium-silicate gate dielectrics. IEEE Transactions on Electron Devices, 2006, 53, 2627-2633.	1.6	62
31	Controlled Sulfurization Process for the Synthesis of Large Area MoS₂ Films and MoS₂/WS₂ Heterostructures. Advanced Materials Interfaces, 2016, 3, 1500635.	1.9	61
32	Correlation between number of walls and diameter in multiwall carbon nanotubes grown by chemical vapor deposition. Carbon, 2012, 50, 1748-1752.	5.4	60
33	Integration and electrical characterization of carbon nanotube via interconnects. Microelectronic Engineering, 2011, 88, 837-843.	1.1	58
34	A Detailed Study on the Growth of Thin Oxide Layers on Silicon Using Ozonated Solutions. Journal of the Electrochemical Society, 2000, 147, 1124.	1.3	57
35	A Study of Relaxation Current in High-<tex>$kappa$</tex>Dielectric Stacks. IEEE Transactions on Electron Devices, 2004, 51, 402-408.	1.6	57
36	Two-Dimensional Crystal Grain Size Tuning in WS₂ Atomic Layer Deposition: An Insight in the Nucleation Mechanism. Chemistry of Materials, 2018, 30, 7648-7663.	3.2	57

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37	Electrically Driven Unidirectional Optical Nanoantennas. Nano Letters, 2017, 17, 7433-7439.	4.5	56
38	Capacitanceâ€“Voltage Characterization of GaAsâ€“Oxide Interfaces. Journal of the Electrochemical Society, 2008, 155, H945.	1.3	55
39	From the metal to the channel: a study of carrier injection through the metal/2D MoS₂interface. Nanoscale, 2017, 9, 10869-10879.	2.8	54
40	Low interfacial trap density and sub-nm equivalent oxide thickness in In0.53Ga0.47As (001) metal-oxide-semiconductor devices using molecular beam deposited HfO2/Al2O3 as gate dielectrics. Applied Physics Letters, 2011, 99, .	1.5	53
41	An InGaAs/InP quantum well finfet using the replacement fin process integrated in an RMG flow on 300mm Si substrates. , 2014, , .		51
42	Switching mechanism in two-terminal vanadium dioxide devices. Nanotechnology, 2015, 26, 165202.	1.3	51
43	Epitaxial Al₂O₃(0001)/Cu(111) Template Development for CVD Graphene Growth. Journal of Physical Chemistry C, 2016, 120, 297-304.	1.5	51
44	The Fermi-level efficiency method and its applications on high interface trap density oxide-semiconductor interfaces. Applied Physics Letters, 2009, 94, .	1.5	50
45	High FET Performance for a Future CMOS $hbox{GeO}_{2}$ -Based Technology. IEEE Electron Device Letters, 2010, 31, 402-404.	2.2	50
46	Reconfigurable submicrometer spin-wave majority gate with electrical transducers. Science Advances, 2020, 6, .	4.7	50
47	Interfaces of high-k dielectrics on GaAs: Their common features and the relationship with Fermi level pinning (Invited Paper). Microelectronic Engineering, 2009, 86, 1529-1535.	1.1	49
48	Surface preparation and interfacial stability of high-k dielectrics deposited by atomic layer chemical vapor deposition. Microelectronic Engineering, 2003, 65, 259-272.	1.1	48
49	Germanium for advanced CMOS anno 2009: a SWOT analysis. , 2009, , .		48
50	The VO2 interface, the metal-insulator transition tunnel junction, and the metal-insulator transition switch On-Off resistance. Journal of Applied Physics, 2012, 112, .	1.1	47
51	Miscibility of amorphous ZrO2â€“Al2O3 binary alloy. Applied Physics Letters, 2002, 80, 2374-2376.	1.5	46
52	Nanoscale domain wall devices with magnetic tunnel junction read and write. Nature Electronics, 2021, 4, 392-398.	13.1	46
53	Enabling the high-performance InGaAs/Ge CMOS: a common gate stack solution. , 2009, , .		45
54	Investigation of Microwave Loss Induced by Oxide Regrowth in High- Q Niobium Resonators. Physical Review Applied, 2021, 16, .	1.5	45

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55	Stress-Induced Positive Charge in Hf-Based Gate Dielectrics: Impact on Device Performance and a Framework for the Defect. IEEE Transactions on Electron Devices, 2008, 55, 1647-1656.	1.6	44
56	Advancing CMOS beyond the Si roadmap with Ge and III/V devices. , 2011, , .		43
57	Molecular doping of MoS2 transistors by self-assembled oleylamine networks. Applied Physics Letters, 2016, 109, .	1.5	41
58	GaSb molecular beam epitaxial growth onp-InP(001) and passivation within situdeposited Al2O3gate oxide. Journal of Applied Physics, 2011, 109, 073719.	1.1	40
59	Enhancement of cavitation activity and particle removal with pulsed high frequency ultrasound and supersaturation. Ultrasonics Sonochemistry, 2013, 20, 69-76.	3.8	40
60	Highly efficient and stable MoS₂FETs with reversible n-doping using a dehydrated poly(vinyl-alcohol) coating. Nanoscale, 2017, 9, 258-265.	2.8	40
61	On the Characterization and Separation of Trapping and Ferroelectric Behavior in HfZrO FET. IEEE Journal of the Electron Devices Society, 2019, 7, 855-862.	1.2	39
62	Hafnium oxide films by atomic layer deposition for high-Î° gate dielectric applications: Analysis of the density of nanometer-thin films. Applied Physics Letters, 2005, 86, 073116.	1.5	37
63	Direct correlation between the measured electrochemical capacitance, wettability and surface functional groups of CarbonNanosheets. Electrochimica Acta, 2014, 132, 574-582.	2.6	36
64	Removal of Submicrometer Particles from Silicon Wafer Surfaces Using HF-Based Cleaning Mixtures. Journal of the Electrochemical Society, 2001, 148, G683.	1.3	35
65	Thermostability of amorphous zirconium aluminate high-k layers. Journal of Non-Crystalline Solids, 2002, 303, 144-149.	1.5	35
66	Atomic Layer Deposition of Hafnium Oxide on Ge and GaAs Substrates: Precursors and Surface Preparation. Journal of the Electrochemical Society, 2008, 155, H937.	1.3	35
67	Study of interfacial reactions and phase stabilization of mixed Sc, Dy, Hf high-k oxides by attenuated total reflectance infrared spectroscopy. Applied Surface Science, 2009, 255, 7812-7817.	3.1	35
68	Dielectric Response of Ta[sub 2]O[sub 5], Nb[sub 2]O[sub 5], and NbTaO[sub 5] from First-Principles Investigations. Journal of the Electrochemical Society, 2010, 157, G20.	1.3	35
69	Towards an understanding and control of cavitation activity in 1 MHz ultrasound fields. Ultrasonics Sonochemistry, 2013, 20, 77-88.	3.8	35
70	Molecular beam epitaxial growth of BaTiO3 single crystal on Ge-on-Si(001) substrates. Applied Physics Letters, 2011, 98, .	1.5	34
71	Transition metal contacts to graphene. Applied Physics Letters, 2015, 107, .	1.5	34
72	Germanium: The Past and Possibly a Future Material for Microelectronics. ECS Transactions, 2007, 11, 479-493.	0.3	33

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73	Impact of device scaling on the electrical properties of MoS2 field-effect transistors. Scientific Reports, 2021, 11, 6610.	1.6	33
74	Kinetics of the silicon dioxide growth process in afterglows of microwaveâ€induced plasmas. Journal of Applied Physics, 1987, 62, 1450-1458.	1.1	32
75	First-principle calculations on gate/dielectric interfaces: on the origin of work function shifts. Microelectronic Engineering, 2005, 80, 272-279.	1.1	32
76	Electrical characteristics of 8-/spl Aring/ EOT HfO/sub 2//TaN low thermal-budget n-channel FETs with solid-phase epitaxially regrown junctions. IEEE Transactions on Electron Devices, 2006, 53, 1657-1668.	1.6	32
77	Selective area growth of InP in shallow trench isolation on large scale Si(001) wafer using defect confinement technique. Journal of Applied Physics, 2013, 114, .	1.1	32
78	In situ crystallisation in ZrO2 thin films during high temperature X-ray diffraction. Microelectronics Reliability, 2001, 41, 995-998.	0.9	30
79	Selective epitaxial deposition of strained silicon: a simple and effective method for fabricating high performance MOSFET devices. Solid-State Electronics, 2004, 48, 1307-1316.	0.8	30
80	Physical modeling of strain-dependent hole mobility in Ge p-channel inversion layers. Journal of Applied Physics, 2009, 106, .	1.1	30
81	Nucleation mechanism during WS2 plasma enhanced atomic layer deposition on amorphous Al2O3 and sapphire substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	30
82	Reliability of Ultra-Thin Gate Oxide Below 3 nm in the Direct Tunneling Regime. Japanese Journal of Applied Physics, 1997, 36, 1602-1608.	0.8	29
83	GaAs on Ge for CMOS. Thin Solid Films, 2008, 517, 148-151.	0.8	29
84	Ge_{1-x}Sn_xMaterials: Challenges and Applications. ECS Journal of Solid State Science and Technology, 2013, 2, N35-N40.	0.9	29
85	Benchmarking of MoS₂FETs With Multigate Si-FET Options for 5 nm and Beyond. IEEE Transactions on Electron Devices, 2015, 62, 4051-4056.	1.6	29
86	Insight on the Characterization of MoS₂Based Devices and Requirements for Logic Device Integration. ECS Journal of Solid State Science and Technology, 2016, 5, Q3072-Q3081.	0.9	28
87	Controlled III/V Nanowire Growth by Selective-Area Vapor-Phase Epitaxy. Journal of the Electrochemical Society, 2009, 156, H860.	1.3	27
88	BTI reliability of advanced gate stacks for Beyond-Silicon devices: Challenges and opportunities. , 2014, , .		27
89	MoS₂ Functionalization with a Sub-nm Thin SiO₂ Layer for Atomic Layer Deposition of High-Î² Dielectrics. Chemistry of Materials, 2017, 29, 6772-6780.	3.2	27
90	Micromagnetic simulations of magnetoelastic spin wave excitation in scaled magnetic waveguides. Applied Physics Letters, 2017, 111, .	1.5	27

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91	Integration of Vertical Carbon Nanotube Bundles for Interconnects. Journal of the Electrochemical Society, 2010, 157, K211.	1.3	26
92	Ammonium sulfide vapor passivation of In0.53Ga0.47As and InP surfaces. Applied Physics Letters, 2011, 99, .	1.5	26
93	MoS2 synthesis by gas source MBE for transition metal dichalcogenides integration on large scale substrates. Journal of Applied Physics, 2018, 123, .	1.1	26
94	Epitaxy of 2D chalcogenides: Aspects and consequences of weak van der Waals coupling. Applied Materials Today, 2021, 22, 100975.	2.3	25
95	Critical role of degassing for hot aluminum filling. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2091.	1.6	24
96	Modelling mobility degradation due to remote Coulomb scattering from dielectric charges and its impact on MOS device performance. Microelectronics Reliability, 2005, 45, 794-797.	0.9	24
97	Nucleation and Growth Behavior of Atomic Layer Deposited HfO[sub 2] Films on Silicon Oxide Starting Surfaces. Journal of the Electrochemical Society, 2006, 153, F205.	1.3	24
98	Ge nFET with high electron mobility and superior PBTI reliability enabled by monolayer-Si surface passivation and La-induced interface dipole formation. , 2015, , .		24
99	Extended X-ray absorption fine structure investigation of Sn local environment in strained and relaxed epitaxial Ge1â^'xSnx films. Journal of Applied Physics, 2015, 117, .	1.1	24
100	Atomic layer deposition of hafnium silicate gate dielectric layers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 1302-1308.	0.9	23
101	Aqueous solutionâ€“gel preparation of ultrathin ZrO2 films for gate dielectric application. Thin Solid Films, 2008, 516, 8343-8351.	0.8	23
102	Oxide Trapping in the InGaAsâ€“$hbox{Al}_{2} hbox{O}_{3}$ System and the Role of Sulfur in Reducing the $ hbox{Al}_{2}hbox{O}_{3}$ Trap Density. IEEE Electron Device Letters, 2012, 33, 1544-1546.	2.2	23
103	Density and Capture Cross-Section of Interface Traps in GeSnO₂ and GeO₂ Grown on Heteroepitaxial GeSn. ACS Applied Materials & Interfaces, 2016, 8, 13181-13186.	4.0	23
104	Graphene oxide monolayers as atomically thin seeding layers for atomic layer deposition of metal oxides. Nanoscale, 2015, 7, 10781-10789.	2.8	22
105	On the van der Waals Epitaxy of Homo-/Heterostructures of Transition Metal Dichalcogenides. ACS Applied Materials & Interfaces, 2020, 12, 27508-27517.	4.0	22
106	Impact of silicon surface characteristics on MOS device yield for ULSI. Microelectronic Engineering, 1991, 10, 235-257.	1.1	21
107	Atomic Force Microscopy and Infrared Spectroscopy Studies of Hydrogen Baked Si Surfaces. Japanese Journal of Applied Physics, 1993, 32, L1489-L1491.	0.8	21
108	Selective Area Growth of InP and Defect Elimination on Si (001) Substrates. Journal of the Electrochemical Society, 2011, 158, H645.	1.3	21

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109	Suitability of high-k gate oxides for III–V devices: A PBTI study in In<inf>0.53</inf>Ga<inf>0.47</inf>As devices with Al<inf>2</inf>O<inf>3</inf>. , 2014, , .		21
110	Self-limiting electropolymerization of ultrathin, pinhole-free poly(phenylene oxide) films on carbon nanosheets. Carbon, 2015, 88, 42-50.	5.4	21
111	Spin-Wave Emission by Spin-Orbit-Torque Antennas. Physical Review Applied, 2018, 10, .	1.5	21
112	Performance improvement of self-aligned HfO2/TaN and SiON/TaN nMOS transistors. Microelectronics Reliability, 2005, 45, 779-782.	0.9	20
113	Aqueous chemical solution deposition of ultrathin lanthanide oxide dielectric films. Journal of Materials Research, 2007, 22, 3484-3493.	1.2	20
114	Study of the Reliability Impact of Chlorine Precursor Residues in Thin Atomic-Layer-Deposited $hbox{HfO}_{2}$ Layers. IEEE Transactions on Electron Devices, 2007, 54, 752-758.	1.6	20
115	Size-Dependent Characteristics of Indium-Seeded Si Nanowire Growth. Electrochemical and Solid-State Letters, 2008, 11, K98.	2.2	20
116	Silicon and selenium implantation and activation in In0.53Ga0.47As under low thermal budget conditions. Microelectronic Engineering, 2011, 88, 155-158.	1.1	20
117	Time-resolved monitoring of cavitation activity in megasonic cleaning systems. Review of Scientific Instruments, 2012, 83, 034904.	0.6	20
118	The impact of sub monolayers of HfO/sub 2/ on the device performance of high-k based transistors [MOSFETs]. , 0, , .		19
119	Boosting Carrier Mobility of Synthetic Few Layer Graphene on SiO₂ by Interlayer Rotation and Decoupling. Advanced Materials Interfaces, 2018, 5, 1800454.	1.9	19
120	Analysis of admittance measurements of MOS capacitors on CVD grown bilayer MoS ₂. 2D Materials, 2019, 6, 035035.	2.0	19
121	Metallorganic Chemical Vapor Deposition of Dysprosium Scandate High-k Layers Using mmp-Type Precursors. Journal of the Electrochemical Society, 2006, 153, F219.	1.3	18
122	Study of CVD high-k gate oxides on high-mobility Ge and Ge/Si substrates. Thin Solid Films, 2006, 508, 1-5.	0.8	18
123	Extrinsic interface formation of HfO2 and Al2O3âˆ•GeOx gate stacks on Ge (100) substrates. Journal of Applied Physics, 2009, 106, .	1.1	18
124	Atomic Layer Deposition of High-Î¤ Dielectrics on Sulphur-Passivated Germanium. Journal of the Electrochemical Society, 2011, 158, H687.	1.3	18
125	Oxidation of the GaAs(001) surface: Insights from first-principles calculations. Physical Review B, 2012, 85, .	1.1	18
126	Electrical properties of extended defects in strain relaxed GeSn. Applied Physics Letters, 2018, 113, 022102.	1.5	18

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127	Thermal and Plasma Enhanced Atomic Layer Deposition of Al[sub 2]O[sub 3] on GaAs Substrates. Journal of the Electrochemical Society, 2009, 156, H255.	1.3	17
128	Comparison of short-channel effects in monolayer MoS2 based junctionless and inversion-mode field-effect transistors. Applied Physics Letters, 2016, 108, 023506.	1.5	17
129	Peculiar alignment and strain of 2D WSe₂ grown by van der Waals epitaxy on reconstructed sapphire surfaces. Nanotechnology, 2019, 30, 465601.	1.3	17
130	Bulk Properties of MOCVD-Deposited HfO[sub 2] Layers for High k Dielectric Applications. Journal of the Electrochemical Society, 2004, 151, F228.	1.3	16
131	Aqueous Chemical Solution Deposition. Electrochemical and Solid-State Letters, 2007, 10, G15.	2.2	16
132	Surface recombination velocity in GaAs and In0.15Ga0.85As thin films. Applied Physics Letters, 2007, 90, 134102.	1.5	16
133	(Invited) Exploring the ALD Al₂O₃/In_{0.53}Ga_{0.47}As and Al₂O₃/Ge Interface Properties: A Common Gate Stack Approach for Advanced III-V/Ge CMOS. ECS Transactions, 2010, 28, 173-183.	0.3	16
134	Implant-Free SiGe Quantum Well pFET: A novel, highly scalable and low thermal budget device, featuring raised source/drain and high-mobility channel. , 2010, , .		16
135	(Invited) Vanadium Oxide as a Memory Material. ECS Transactions, 2011, 35, 233-243.	0.3	16
136	(Invited) Vanadium Dioxide for Selector Applications. ECS Transactions, 2013, 58, 249-258.	0.3	16
137	Single- and multilayer graphene wires as alternative interconnects. Microelectronic Engineering, 2016, 156, 131-135.	1.1	16
138	Material-Device-Circuit Co-optimization of 2D Material based FETs for Ultra-Scaled Technology Nodes. Scientific Reports, 2017, 7, 5016.	1.6	16
139	Impact of Nitrogen Incorporation in SiOx/HfSiO Gate Stacks on Negative Bias Temperature Instabilities. , 2006, , .		15
140	(Invited) Selective-Area Metal Organic Vapor-Phase Epitaxy of III-V on Si: What About Defect Density?. ECS Transactions, 2014, 64, 513-521.	0.3	15
141	Graphene based Van der Waals contacts on MoS₂ field effect transistors. 2D Materials, 2021, 8, 015003.	2.0	15
142	Electrical Characterization of Capacitors with AVD-Deposited Hafnium Silicates as High-k Gate Dielectric. Journal of the Electrochemical Society, 2005, 152, F185.	1.3	14
143	Device performance of transistors with high-/spl kappa/ dielectrics using cross-wafer-scaled interface-layer thickness. IEEE Electron Device Letters, 2006, 27, 546-548.	2.2	14
144	Novel Device Concepts for Nanotechnology: The Nanowire Pinch-Off FET and Graphene TunnelFET. ECS Transactions, 2010, 28, 15-26.	0.3	14

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145	On the High-Field Transport and Uniaxial Stress Effect in Ge PFETs. IEEE Transactions on Electron Devices, 2011, 58, 384-391.	1.6	14
146	Defects, Junction Leakage and Electrical Performance of Ge pFET Devices. ECS Transactions, 2009, 19, 195-205.	0.3	13
147	Selective Epitaxial Growth of InP in STI Trenches on Off-Axis Si (001) Substrates. ECS Transactions, 2010, 27, 959-964.	0.3	13
148	Evolution of (001) and (111) facets for selective epitaxial growth inside submicron trenches. Journal of Applied Physics, 2014, 115, 023517.	1.1	13
149	Evaluation of Atomic Layer Deposited NbN and NbSiN as Metal Gate Materials. Journal of the Electrochemical Society, 2006, 153, G437.	1.3	12
150	Calculation of phase equilibria for an alloy nanoparticle in contact with a solid nanowire. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2011, 35, 173-182.	0.7	12
151	Doping of graphene for the application in nano-interconnect. Microelectronic Engineering, 2017, 167, 42-46.	1.1	12
152	Benchmarking of monolithic 3D integrated MX<inf>2</inf> FETs with Si FinFETs. , 2017, , .		12
153	Excitation and propagation of spin waves in non-uniformly magnetized waveguides. Journal Physics D: Applied Physics, 2020, 53, 495006.	1.3	12
154	In-Line Electrical Metrology for High-K Gate Dielectrics Deposited by Atomic Layer CVD. Journal of the Electrochemical Society, 2003, 150, F169.	1.3	11
155	High performing 8 /spl Orang/ EOT HfO/sub 2/ / tan low thermal-budget n-channel FETs with solid-phase epitaxially regrown (SPER) junctions. , 0, , .		11
156	Ge deep sub-micron HiK/MG pFETs with superior drive compared to Si HiK/MG state-of-the-art reference. Semiconductor Science and Technology, 2007, 22, S221-S226.	1.0	11
157	Amorphous inclusions during Ge and GeSn epitaxial growth via chemical vapor deposition. Thin Solid Films, 2015, 590, 163-169.	0.8	11
158	Deposition of O atomic layers on Si(100) substrates for epitaxial Si-O superlattices: investigation of the surface chemistry. Applied Surface Science, 2015, 324, 251-257.	3.1	11
159	Chemical vapor deposition of monolayer-thin WS2 crystals from the WF6 and H2S precursors at low deposition temperature. Journal of Chemical Physics, 2019, 150, 104703.	1.2	11
160	Epitaxial registry and crystallinity of MoS2 via molecular beam and metalorganic vapor phase van der Waals epitaxy. Applied Physics Letters, 2020, 117, .	1.5	11
161	A MOS capacitor model for ultra-thin 2D semiconductors: the impact of interface defects and channel resistance. 2D Materials, 2020, 7, 035018.	2.0	11
162	Low dephasing and robust micromagnet designs for silicon spin qubits. Applied Physics Letters, 2021, 119, .	1.5	11

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163	Fundamental limitation of van der Waals homoepitaxy by stacking fault formation in WSe₂. 2D Materials, 2020, 7, 025027.	2.0	11
164	Effectiveness of Nitridation of Hafnium Silicate Dielectrics: A Comparison Between Thermal and Plasma Nitridation. IEEE Transactions on Electron Devices, 2007, 54, 1771-1775.	1.6	10
165	Fundamentals and extraction of velocity saturation in sub-100nm (110)-Si and (100)-Ge. , 2008, , .		10
166	Strontium niobate high-k dielectrics: Film deposition and material properties. Acta Materialia, 2010, 58, 216-225.	3.8	10
167	Trap-Assisted Tunneling in Deep-Submicron Ge pFET Junctions. ECS Transactions, 2010, 28, 143-152.	0.3	10
168	Defect density reduction of the Al2O3/GaAs(001) interface by using H2S molecular beam passivation. Surface Science, 2011, 605, 1778-1783.	0.8	10
169	Biaxial and Uniaxial Compressive Stress Implemented in Ge(Sn) pMOSFET Channels by Advanced Reduced Pressure Chemical Vapor Deposition Developments. ECS Transactions, 2011, 41, 239-248.	0.3	10
170	Electrical Characterization of the MOS (Metal-Oxide-Semiconductor) System: High Mobility Substrates. ECS Transactions, 2011, 34, 1065-1070.	0.3	10
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