Noriyuki Miyata

List of Publications by Year
in descending order

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107	2,003	24	39
papers	citations	h-index	g-index
		257101	301761

107	107	107	1609
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electrically induced change in HfO2/1-monolayer TiO2/SiO2 metal-oxide-semiconductor stacks: capacitanceâ€“voltage and hard X-ray photoelectron spectroscopy studies. Applied Physics Express, 2021, 14, 071005.	1.1	2
2	Topologically protected spin diffusion and spin generator using chalcogenide superlattices. Npj 2D Materials and Applications, 2020, 4, .	3.9	8
3	Thermal stability of interface dipole modulation in atomic layer-deposited HfO2/SiO2 multi-stack structures. AIP Advances, 2020, 10, 085114.	0.6	2
4	Effects of electric and magnetic fields on the resistive switching operation of iPCM. Applied Physics Letters, 2020, 116, 201903.	1.5	1
5	Highâ€Speed Bipolar Switching of Sputtered Geâ€“Te/Sbâ€“Te Superlattice iPCM with Enhanced Cyclability. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900105.	1.2	14
6	Resistive switching characteristics of interfacial phase-change memory at elevated temperature. Japanese Journal of Applied Physics, 2018, 57, 04FE06.	0.8	7
7	Interface Dipole Modulation in HfO<inf>2</inf>/SiO<inf>2</inf> MOS Stack Structures. , 2018, , .		1
8	Low temperature preparation of HfO2/SiO2 stack structure for interface dipole modulation. Applied Physics Letters, 2018, 113, .	1.5	14
9	<i>(Invited) </i>Sputter Growth of Chalcogenide Superlattice Films for Future Phase Change Memory Applications. ECS Transactions, 2018, 86, 49-54.	0.3	5
10	Electric-field-controlled interface dipole modulation for Si-based memory devices. Scientific Reports, 2018, 8, 8486.	1.6	18
11	A Magnetoresistance Induced by a Nonzero Berry Phase in GeTe/Sb 2 Te 3 Chalcogenide Superlattices. Advanced Functional Materials, 2017, 27, 1702243.	7.8	24
12	Compact model of ferroelectric-gate field-effect transistor for circuit simulation based on multidomain Landauâ€“Kalathnikov theory. Japanese Journal of Applied Physics, 2017, 56, 04CE07.	0.8	7
13	A two-step process for growth of highly oriented Sb2Te3 using sputtering. AIP Advances, 2016, 6, .	0.6	47
14	Effect of hot implantation on ON-current enhancement utilizing isoelectronic trap in Si-based tunnel field-effect transistors. Applied Physics Express, 2015, 8, 036503.	1.1	9
15	Wafer-scale layer transfer of GaAs and Ge onto Si wafers using patterned epitaxial lift-off. Japanese Journal of Applied Physics, 2015, 54, 036505.	0.8	17
16	Study of gate leakage current paths in p-channel tunnel field-effect transistor by current separation measurement and device simulation. Japanese Journal of Applied Physics, 2015, 54, 034202.	0.8	1
17	Study of tunneling transport in Si-based tunnel field-effect transistors with ON current enhancement utilizing isoelectronic trap. Applied Physics Letters, 2015, 106, .	1.5	54
18	Unexpected equivalent-oxide-thickness dependence of the subthreshold swing in tunnel field-effect transistors. Applied Physics Express, 2014, 7, 024201.	1.1	35

#	Article	IF	Citations
19	Band-to-band tunneling current enhancement utilizing isoelectronic trap and its application to TFETs. , 2014, , .		22
20	Electrical characteristics and thermal stability of HfO2 metal-oxide-semiconductor capacitors fabricated on clean reconstructed GaSb surfaces. Applied Physics Letters, 2014, 104, .	1.5	20
21	Heteroepitaxy of GaSb on Si(111) and fabrication of HfO2/GaSb metal-oxide-semiconductor capacitors. Applied Physics Letters, 2014, 104, .	1.5	11
22	Self-limiting growth of ultrathin Ga₂O₃for the passivation of Al₂O₃/InGaAs interfaces. Applied Physics Express, 2014, 7, 011201.	1.1	22
23	Experimental Study on Electron Mobility in In_xGa_{1-x}As-on-Insulator Metal-Oxide-Semiconductor Field-Effect Transistors With In Content Modulation and MOS Interface Buffer Engineering. IEEE Nanotechnology Magazine, 2013, 12, 621-628.	1.1	28
24	Effect of interfacial Si oxidation on interface dipoles in HfO₂/Si structures. Journal Physics D: Applied Physics, 2013, 46, 315304.	1.3	2
25	Electron Mobility Enhancement of Extremely Thin Body In$_{0.7}$Ga$_{0.3}$As-on-Insulator Metalâ€"Oxideâ€"Semiconductor Field-Effect Transistors on Si Substrates by Metalâ€"Oxideâ€"Semiconductor Interface Buffer Layers. Applied Physics Express, 2012, 5, 014201.	1.1	26
26	Controlling Anion Composition at Metalâ€"Insulatorâ€"Semiconductor Interfaces on IIIâ€"V Channels by Plasma Processing. Japanese Journal of Applied Physics, 2012, 51, 065701.	0.8	2
27	Initial Processes of Atomic Layer Deposition of Al2O3 on InGaAs: Interface Formation Mechanisms and Impact on Metal-Insulator-Semiconductor Device Performance. Materials, 2012, 5, 404-414.	1.3	18
28	Study of Direct-Contact HfO2/Si Interfaces. Materials, 2012, 5, 512-527.	1.3	53
29	Controlling Anion Composition at Metalâ€"Insulatorâ€"Semiconductor Interfaces on IIIâ€"V Channels by Plasma Processing. Japanese Journal of Applied Physics, 2012, 51, 065701.	0.8	2
30	Impact of Cation Surface Termination on the Electrical Characteristics of HfO$_{2}$/InGaAs(001) Metalâ€"Oxideâ€"Semiconductor Capacitors. Japanese Journal of Applied Physics, 2011, 50, 10PD01.	0.8	2
31	Electron Mobility Degradation and Interface Dipole Formation in Direct-Contact HfO$_{2}$/Si Metalâ€"Oxideâ€"Semiconductor Field-Effect Transistors. Applied Physics Express, 2011, 4, 101101.	1.1	6
32	Origin of electron mobility enhancement in (1 1 1)-oriented InGaAs channel metalâ€"insulatorâ€"semiconductor field-effect-transistors. Microelectronic Engineering, 2011, 88, 3459-3461.	1.1	9
33	On the mechanisms limiting mobility in InP/InGaAs buried channel nMISFETs. Microelectronic Engineering, 2011, 88, 1076-1078.	1.1	2
34	AC response analysis of Câ€"V curves and quantitative analysis of conductance curves in Al2O3/InP interfaces. Microelectronic Engineering, 2011, 88, 1087-1090.	1.1	16
35	Self-aligned metal source/drain InP n-metal-oxide-semiconductor field-effect transistors using Niâ€"InP metallic alloy. Applied Physics Letters, 2011, 98, 243501.	1.5	21
36	Kelvin probe study on formation of electric dipole at direct-contact HfO2/Si interfaces. Journal of Applied Physics, 2011, 110, .	1.1	14

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37	High Performance Extremely Thin Body InGaAs-on-Insulator Metalâ€“Oxideâ€“Semiconductor Field-Effect Transistors on Si Substrates with Niâ€“InGaAs Metal Source/Drain. Applied Physics Express, 2011, 4, 114201.	1.1	28
38	Self-Aligned Metal Source/Drain In_{<i>x</i>}Ga_{1-<i>x</i>}As n-Metalâ€“Oxideâ€“Semiconductor Field-Effect Transistors Using Niâ€“InGaAs Alloy. Applied Physics Express, 2011, 4, 024201.	1.1	53
39	Impact of Cation Surface Termination on the Electrical Characteristics of HfO₂/InGaAs(001) Metalâ€“Oxideâ€“Semiconductor Capacitors. Japanese Journal of Applied Physics, 2011, 50, 10PD01.	0.8	2
40	Kelvin Probe Study of Dipole Formation and Annihilation at the HfO₂/Si Interface. Applied Physics Express, 2010, 3, 054101.	1.1	16
41	Effect of Interface Oxidation on the Electrical Characteristics of HfO₂/Ultrathin-Epitaxial-Ge/GaAs(100) Structures. Applied Physics Express, 2010, 3, 035701.	1.1	2
42	Self-aligned metal source/drain In<inf>x</inf>Ga<inf>1−x</inf>As n-MOSFETs using Ni-InGaAs alloy. , 2010, , .		15
43	Correlation between channel mobility improvements and negative V<inf>th</inf> shifts in III–V MISFETs: Dipole fluctuation as new scattering mechanism. , 2010, , .		10
44	Structural degradation of thin HfO2 film on Ge during the postdeposition annealing. Journal of Applied Physics, 2010, 107, .	1.1	13
45	Front-gate InGaAs-on-Insulator metal-insulator-semiconductor field-effect transistors. Applied Physics Letters, 2010, 97, 253502.	1.5	18
46	Reduction of Accumulation Capacitance in Direct-Contact HfO2/p-Type Si Metalâ€“Oxideâ€“Semiconductor Capacitors. Japanese Journal of Applied Physics, 2010, 49, 060202.	0.8	1
47	III-V-semiconductor-on-insulator n-channel metal-insulator-semiconductor field-effect transistors with buried Al2O3 layers and sulfur passivation: Reduction in carrier scattering at the bottom interface. Applied Physics Letters, 2010, 96, 142106.	1.5	64
48	High mobility III–V-on-insulator MOSFETs on Si with ALD-Al<inf>2</inf>O<inf>3</inf> BOX layers. , 2010, , .		3
49	III-V-semiconductor-on-insulator MISFETs on Si with buried SiO<inf>2</inf> and Al<inf>2</inf>O<inf>3</inf> layers by direct wafer bonding. , 2010, , .		2
50	Relationships between Interface Structures and Electrical Properties in the High-k/IIIâ€“V System. Materials Research Society Symposia Proceedings, 2009, 1194, 68.	0.1	2
51	High Electron Mobility Metalâ€“Insulatorâ€“Semiconductor Field-Effect Transistors Fabricated on (111)-Oriented InGaAs Channels. Applied Physics Express, 2009, 2, 121101.	1.1	49
52	Anisotropic kinetics on growing Ge(0 0 1) surfaces. Surface Science, 2009, 603, 826-830.	0.8	6
53	Effect of Oxide Charge Trapping on X-ray Photoelectron Spectroscopy of HfO2/SiO2/Si Structures. Japanese Journal of Applied Physics, 2009, 48, 041201.	0.8	20
54	Influence of initial surface reconstruction on the interface structure of HfO2/GaAs. Applied Surface Science, 2008, 254, 7565-7568.	3.1	16

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55	Ge-induced<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>(</mml:mo><mml:mn>1</mml:mn><mml:mo>Ã—</mml:mo><mml:mn>2</mml:mn><mml:mo reconstruction on GaAs(001): A precursor to As segregation. Physical Review B, 2008, 77, .	1.1	2
56	Comparison between Direct-Contact HfO₂/Ge and HfO₂/GeO₂/Ge Stack Structures: Physical and Electrical Properties. ECS Transactions, 2008, 16, 375-385.	0.3	12
57	Dipole formation at direct-contact HfO2â^•Si interface. Applied Physics Letters, 2007, 90, 172906.	1.5	41
58	Two-step behavior of initial oxidation at HfO2â^•Si interface. Applied Physics Letters, 2006, 89, 102903.	1.5	42
59	Pure germanium nitride formation by atomic nitrogen radicals for application to Ge metal-insulator-semiconductor structures. Journal of Applied Physics, 2006, 100, 014101.	1.1	63
60	Study on Oxynitride Buffer Layers in HfO2Metalâ€"Insulatorâ€"Semiconductor Structures for Improving Metalâ€"Insulatorâ€"Semiconductor Field-Effect Transistor Performance. Japanese Journal of Applied Physics, 2005, 44, 1698-1703.	0.8	6
61	Two-dimensional void growth during thermal decomposition of thinHfO2films on Si. Physical Review B, 2005, 71, .	1.1	17
62	Correlation between scanning-probe-induced spots and fixed positive charges in thin HfO2 films. Applied Physics Letters, 2005, 86, 112906.	1.5	9
63	Nanometer-scale crystallization of thin HfO2 films studied by HF-chemical etching. Applied Physics Letters, 2005, 86, 212907.	1.5	18
64	Decomposition of SiN interlayer during thermal annealing of HfAlOxâ^•SiNâ^•Si(001) structure. Applied Physics Letters, 2004, 84, 5326-5328.	1.5	5
65	Ge metal-insulator-semiconductor structures with Ge3N4 dielectrics by direct nitridation of Ge substrates. Applied Physics Letters, 2004, 85, 3181-3183.	1.5	89
66	Formation of ultrahigh density Ge nanodots on oxidized Ge/Si(111) surfaces. Journal of Applied Physics, 2004, 95, 5014-5018.	1.1	28
67	Scanning-probe-induced defects in thinSiO2film onSi: Comparison withSiclusters. Physical Review B, 2004, 70, .	1.1	11
68	Effect of precursor concentration in atomic layer deposition of Al2O3. Journal of Applied Physics, 2003, 94, 6411-6416.	1.1	51
69	Interface stability during the growth of Al2O3 films on Si(001). Journal of Applied Physics, 2003, 93, 1498-1504.	1.1	15
70	Effect of Al2O3 capping layer on suppression of interfacial SiO2 growth in HfO2/ultrathin SiO2/Si(001) structure. Applied Physics Letters, 2003, 82, 3442-3444.	1.5	22
71	Void nucleation in thin HfO2 layer on Si. Applied Physics Letters, 2003, 82, 3880-3882.	1.5	28
72	Thermal Stability of a Thin HfO2/Ultrathin SiO2/Si Structure: Interfacial Si Oxidation and Silicidation. Japanese Journal of Applied Physics, 2003, 42, L138-L140.	0.8	66

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73	Investigation of the effect of high-temperature annealing on stability of ultrathin Al2O3 films on Si(001). Journal of Applied Physics, 2002, 92, 1914-1921.	1.1	20
74	Effect of oxygen pressure on the structure and thermal stability of ultrathin Al[sub 2]O[sub 3] films on Si(001). Journal of Applied Physics, 2002, 91, 492.	1.1	14
75	Electrical damage of an ultrathin Si oxynitride layer induced by scanning tunneling spectroscopy. Journal of Applied Physics, 2002, 92, 1850-1857.	1.1	2
76	Oxidation of hafnium on Si(001): Silicate formation by Si migration. Physical Review B, 2002, 66, .	1.1	16
77	Observation of oscillating behavior in the reflectance difference spectra of oxidized Si(001) surfaces. Journal of Applied Physics, 2002, 91, 3637-3643.	1.1	19
78	Optical Anisotropy of Oxidized Si(001) Surfaces and Its Oscillation in the Layer-By-Layer Oxidation Process. Physical Review Letters, 2001, 87, 037403.	2.9	49
79	Electrical Characterization of Atomic-Scale Defects in an Ultrathin Si Oxynitride Layer. Japanese Journal of Applied Physics, 2001, 40, L1271-L1273.	0.8	4
80	Study of ultrathin Al2O3/Si(001) interfaces by using scanning reflection electron microscopy and x-ray photoelectron spectroscopy. Applied Physics Letters, 2001, 78, 1517-1519.	1.5	44
81	Selective thermal desorption of ultrathin aluminum oxide layers induced by electron beams. Applied Physics Letters, 2001, 79, 842-844.	1.5	1
82	Layer-by-Layer Oxidation of Si(001) Surfaces. Springer Series in Materials Science, 2001, , 89-105.	0.4	2
83	Selective growth of nanocrystalline Si dots using an ultrathin-Si-oxide/oxynitride mask. Applied Physics Letters, 2000, 77, 1620-1622.	1.5	4
84	Thermal Decomposition of an Ultrathin Si Oxide Layer around a Si(001)-(2Ã—1)Window. Physical Review Letters, 2000, 84, 1043-1046.	2.9	75
85	Initial oxynitridation of a Si(001)-2Ã—1 surface by NO. Applied Physics Letters, 2000, 76, 3561-3563.	1.5	21
86	Nanometer-scale Si-selective epitaxial growth using an ultrathin SiO[sub 2] mask. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 978.	1.6	14
87	Layer-By-Layer Oxidation of Silicon Surfaces. Materials Research Society Symposia Proceedings, 1999, 567, 189.	0.1	2
88	Initial Oxynitridation of a Si(001)-2Ã—1 Surface by NO. Materials Research Society Symposia Proceedings, 1999, 592, 240.	0.1	1
89	Preservation of atomic flatness at SiO2/Si(111) interfaces during thermal oxidation in a furnace. Applied Physics Letters, 1998, 72, 1715-1717.	1.5	23
90	Atomic-scale structure ofSiO2/Siinterface formed by furnace oxidation. Physical Review B, 1998, 58, 13670-13676.	1.1	44

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91	HF-chemical etching of the oxide layer near a SiO2/Si(111) interface. Applied Physics Letters, 1998, 73, 3923-3925.	1.5	14
92	Infrared and Raman study of H-terminated Si(100) surfaces produced by etching solutions. Applied Surface Science, 1997, 117-118, 26-31.	3.1	7
93	Resistivity of Heavily Doped Polycrystalline Silicon Subjected to Furnace Annealing. Japanese Journal of Applied Physics, 1995, 34, 1748-1752.	0.8	10
94	Thermal decomposition of native oxide on Si(100). Journal of Applied Physics, 1993, 74, 5275-5276.	1.1	22
95	Intermittent ultraviolet irradiation for silicon selective epitaxial growth. Applied Physics Letters, 1993, 62, 588-590.	1.5	3
96	Investigation of Thermal Removal of Native Oxide from Si (100) Surfaces in Hydrogen for Lowâ€Temperature Si CVD Epitaxy. Journal of the Electrochemical Society, 1992, 139, 1175-1180.	1.3	25
97	Optical absorption in ultrathin silicon oxide films near theSiO2/Si interface. Physical Review B, 1992, 46, 2312-2318.	1.1	23
98	Silicon-silicon bonds in the oxide near the SiO2/Si interface. Applied Surface Science, 1992, 56-58, 832-835.	3.1	3
99	Silicon-hydrogen bonds in silicon oxide near the SiO2/Si interface. Applied Surface Science, 1992, 56-58, 836-840.	3.1	24
100	Optical Absorption in Silicon Oxide Film Near the SiO2/Si Interface. Japanese Journal of Applied Physics, 1990, 29, L2398-L2400.	0.8	6
101	Optical constants of cubic boron nitride. Physical Review B, 1989, 40, 12028-12029.	1.1	100
102	Optical Absorption in Ultrathin Silicon Oxide Film. Japanese Journal of Applied Physics, 1989, 28, 2072-2074.	0.8	13
103	Constraint of contacting points in cooperative handling. , 0, , .		1
104	Effect of oxygen pressure on the structure and thermal stability of ultrathin Al/sub 2/O/sub 3/ film. , 0, , .		0
105	N-induced interfacial roughness and defects in ultrathin Si oxynitride layers. , 0, , .		0
106	Photoassisted Scanning Tunneling Spectroscopy Study on the Local Spot Strucutres in Thin HfO₂Film on Si. Applied Physics Express, 0, 1, 051602.	1.1	1
107	Conductance Spectroscopy Study on Interface Electronic States of HfO₂/Si Structures: Comparison with Interface Dipole. Applied Physics Express, 0, 2, 035502.	1.1	9