Robert M Wallace

List of Publications by Year
in descending order

414 papers	38,038 citations	7672 79 h-index	3595 187 g-index
419 all docs	419 docs citations	419 times ranked	39181 citing authors

#	Article	IF	Citations
1	In situ isotope study of indium diffusion in InP/Al2O3 stacks. Applied Physics Letters, 2022, 120, .	1.5	3
2	Morphology-dependent fluorescence of europium-doped cerium oxide nanomaterials. Nanoscale Advances, 2021, 3, 3563-3572.	2.2	7
3	Controlling the Pd Metal Contact Polarity to Trigonal Tellurium by Atomic Hydrogenâ€Removal of the Native Tellurium Oxide. Advanced Materials Interfaces, 2021, 8, 2002050.	1.9	10
4	Interface Chemistry and Band Alignment Study of Ni and Ag Contacts on MoS₂. ACS Applied Materials & Interfaces, 2021, 13, 15802-15810.	4.0	22
5	Passivation of IIIâ€“V surfaces with crystalline oxidation. Applied Physics Reviews, 2021, 8, .	5.5	23
6	Understanding and optimization of graphene gas sensors. Applied Physics Letters, 2021, 119, 013104.	1.5	27
7	Surface and interfacial study of atomic layer deposited Al₂O₃ on MoTe₂ and WTe₂. Nanotechnology, 2020, 31, 055704.	1.3	9
8	Scalable BEOL compatible 2D tungsten diselenide. 2D Materials, 2020, 7, 015029.	2.0	41
9	Atomic Layer Deposition of Layered Boron Nitride for Large-Area 2D Electronics. ACS Applied Materials & Interfaces, 2020, 12, 36688-36694.	4.0	22
10	Dielectric breakdown in epitaxial BaTiO3 thin films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, 044007.	0.6	3
11	Modification of the Electronic Transport in Atomically Thin WSe₂ by Oxidation. Advanced Materials Interfaces, 2020, 7, 2000422.	1.9	11
12	Origins of Fermi Level Pinning between Tungsten Dichalcogenides (WS2, WTe2) and Bulk Metal Contacts: Interface Chemistry and Band Alignment. Journal of Physical Chemistry C, 2020, 124, 14550-14563.	1.5	19
13	Atomically Controlled Tunable Doping in Highâ€Performance WSe₂ Devices. Advanced Electronic Materials, 2020, 6, 1901304.	2.6	46
14	Doping Induced Schottky Barrier Realignment For Unipolar and High Hole Current WSe2 Devices with > 10 8 On/off Ratio. IEEE Electron Device Letters, 2020, , 1-1.	2.2	6
15	Giant renormalization of dopant impurity levels in 2D semiconductor MoS2. Scientific Reports, 2020, 10, 4938.	1.6	8
16	In situ exfoliated 2D molybdenum disulfide analyzed by XPS. Surface Science Spectra, 2020, 27, .	0.3	21
17	Impact of Etch Processes on the Chemistry and Surface States of the Topological Insulator Bi₂Se₃. ACS Applied Materials & Interfaces, 2019, 11, 32144-32150.	4.0	9
18	Origins of Fermi-Level Pinning between Molybdenum Dichalcogenides (MoSe₂,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 Td Physical Chemistry C, 2019, 123, 23919-23930.	1.5	20

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19	Contact Engineering High-Performance n-Type MoTe₂ Transistors. Nano Letters, 2019, 19, 6352-6362.	4.5	87
20	WSe _(2â" x) Te _x alloys grown by molecular beam epitaxy. 2D Materials, 2019, 6, 045027.	2.0	20
21	Understanding the Impact of Annealing on Interface and Border Traps in the Cr/HfO₂/Al₂O₃/MoS₂ System. ACS Applied Electronic Materials, 2019, 1, 1372-1377.	2.0	16
22	Engineering the interface chemistry for scandium electron contacts in WSe₂ transistors and diodes. 2D Materials, 2019, 6, 045020.	2.0	13
23	Enhancing Interconnect Reliability and Performance by Converting Tantalum to 2D Layered Tantalum Sulfide at Low Temperature. Advanced Materials, 2019, 31, e1902397.	11.1	35
24	Relatively Low-Temperature Processing and Its Impact on Device Performance and Reliability. ECS Transactions, 2019, 90, 89-97.	0.3	1
25	High-Î² Dielectric on ReS2: In-Situ Thermal Versus Plasma-Enhanced Atomic Layer Deposition of Al2O3. Materials, 2019, 12, 1056.	1.3	14
26	Unusual oxidation-induced core-level shifts at the HfO2/InP interface. Scientific Reports, 2019, 9, 1462.	1.6	9
27	2D bismuth telluride analyzed by XPS. Surface Science Spectra, 2019, 26, .	0.3	6
28	2D topological insulator bismuth selenide analyzed by in situ XPS. Surface Science Spectra, 2019, 26, 024014.	0.3	3
29	Strategic Selection of the Oxygen Source for Low Temperatureâ€Atomic Layer Deposition of Al₂O₃ Thin Film. Advanced Electronic Materials, 2019, 5, 1800680.	2.6	13
30	Contact Engineering for Dual-Gate MoS₂ Transistors Using O₂ Plasma Exposure. ACS Applied Electronic Materials, 2019, 1, 210-219.	2.0	40
31	Engineering the Palladiumâ€"WSe2 Interface Chemistry for Field Effect Transistors with High-Performance Hole Contacts. ACS Applied Nano Materials, 2019, 2, 75-88.	2.4	24
32	UV-Ozone Functionalization of 2D Materials. Jom, 2019, 71, 224-237.	0.9	19
33	Using photoelectron spectroscopy in the integration of 2D materials for advanced devices. Journal of Electron Spectroscopy and Related Phenomena, 2019, 231, 94-103.	0.8	5
34	(Invited) 2D Materials for Nanoelectronics: Prospects and Materials Integration Challenges. ECS Meeting Abstracts, 2019, , .	0.0	0
35	One dimensional metallic edges in atomically thin WSe ₂ induced by air exposure. 2D Materials, 2018, 5, 025017.	2.0	47
36	Interface chemistry and surface morphology evolution study for InAs/Al2O3 stacks upon in situ ultrahigh vacuum annealing. Applied Surface Science, 2018, 443, 567-574.	3.1	7

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37	2D Materials: Tuning the Electronic and Photonic Properties of Monolayer MoS2 via In Situ Rhenium Substitutional Doping (Adv. Funct. Mater. 16/2018). Advanced Functional Materials, 2018, 28, 1870105.	7.8	1
38	Tuning the Electronic and Photonic Properties of Monolayer MoS₂ via In Situ Rhenium Substitutional Doping. Advanced Functional Materials, 2018, 28, 1706950.	7.8	137
39	Covalent nitrogen doping in molecular beam epitaxy-grown and bulk WSe2. APL Materials, 2018, 6, .	2.2	21
40	Realizing Large-Scale, Electronic-Grade Two-Dimensional Semiconductors. ACS Nano, 2018, 12, 965-975.	7.3	172
41	Evaluation of border traps and interface traps in HfO ₂ /MoS ₂ gate stacks by capacitanceâ€“voltage analysis. 2D Materials, 2018, 5, 031002.	2.0	63
42	MBE growth of few-layer 2H-MoTe2 on 3D substrates. Journal of Crystal Growth, 2018, 482, 61-69.	0.7	43
43	Investigation of the Physical Properties of Plasma Enhanced Atomic Layer Deposited Silicon Nitride as Etch Stopper. ACS Applied Materials & Interfaces, 2018, 10, 44825-44833.	4.0	26
44	Molecular Beam Epitaxy of Transition Metal Dichalcogenides. , 2018, , 515-531.		19
45	Dislocation driven spiral and non-spiral growth in layered chalcogenides. Nanoscale, 2018, 10, 15023-15034.	2.8	24
46	Sensitivity of high-k encapsulated MoS<inf>2</inf> transistors to I-V measurement execution time. , 2018, , .		0
47	Highâ€Mobility Helical Tellurium Fieldâ€Effect Transistors Enabled by Transferâ€Free, Lowâ€Temperature Direct Growth. Advanced Materials, 2018, 30, e1803109.	11.1	71
48	Electrical characterization of process induced effects on non-silicon devices. , 2018, , .		0
49	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. APL Materials, 2018, 6, .	2.2	30
50	Fermi Level Manipulation through Native Doping in the Topological Insulator Bi₂Se₃. ACS Nano, 2018, 12, 6310-6318.	7.3	37
51	Dual-gate MoS2 transistors with sub-10â€‰nm top-gate high-k dielectrics. Applied Physics Letters, 2018, 112, .	1.5	42
52	Electronic transport across metal-graphene edge contact. 2D Materials, 2017, 4, 025033.	2.0	4
53	Effects of annealing on top-gated MoS2 transistors with HfO2 dielectric. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	31
54	Wâ€‰Te ₂ thin films grown by beam-interrupted molecular beam epitaxy. 2D Materials, 2017, 4, 025044.	2.0	48

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55	New Mo₆Te₆ Subâ€Nanometerâ€Diameter Nanowire Phase from 2Hâ€MoTe₂. Advanced Materials, 2017, 29, 1606264.	11.1	64
56	Electrical characterization of top-gated molybdenum disulfide field-effect-transistors with high-k dielectrics. Microelectronic Engineering, 2017, 178, 190-193.	1.1	26
57	WSe ₂ -contact metal interface chemistry and band alignment under high vacuum and ultra high vacuum deposition conditions. 2D Materials, 2017, 4, 025084.	2.0	77
58	Systematic study of electronic structure and band alignment of monolayer transition metal dichalcogenides in Van der Waals heterostructures. 2D Materials, 2017, 4, 015026.	2.0	160
59	Impurity and silicate formation dependence on O3 pulse time and the growth temperature in atomic-layer-deposited La2O3 thin films. Journal of Chemical Physics, 2017, 146, 052821.	1.2	3
60	(Invited) Integration of 2D Materials for Advanced Devices: Challenges and Opportunities. ECS Transactions, 2017, 79, 11-20.	0.3	7
61	Computational Study of MoS₂/HfO₂ Defective Interfaces for Nanometer-Scale Electronics. ACS Omega, 2017, 2, 2827-2834.	1.6	16
62	Carbon-assisted chemical vapor deposition of hexagonal boron nitride. 2D Materials, 2017, 4, 025117.	2.0	54
63	A crystalline oxide passivation on In0.53Ga0.47As (100). Journal of Applied Physics, 2017, 121, .	1.1	9
64	Intrinsic air stability mechanisms of two-dimensional transition metal dichalcogenide surfaces: basal versus edge oxidation. 2D Materials, 2017, 4, 025050.	2.0	87
65	(Invited) Investigation of Critical Interfaces in Few-Layer MoS2Field Effect Transistors with High-k Dielectrics. ECS Transactions, 2017, 80, 219-225.	0.3	3
66	Interface Chemistry of Contact Metals and Ferromagnets on the Topological Insulator Bi₂Se₃. Journal of Physical Chemistry C, 2017, 121, 23551-23563.	1.5	71
67	(Invited) High-K Dielectrics: A Perspective on Applications from Silicon to 2D Materials. ECS Transactions, 2017, 80, 17-27.	0.3	2
68	Schottky Barrier Height of Pd/MoS₂ Contact by Large Area Photoemission Spectroscopy. ACS Applied Materials & Interfaces, 2017, 9, 38977-38983.	4.0	36
69	Sub-10 nm Tunable Hybrid Dielectric Engineering on MoS₂ for Two-Dimensional Material-Based Devices. ACS Nano, 2017, 11, 10243-10252.	7.3	28
70	Al2O3 on WSe2 by ozone based atomic layer deposition: Nucleation and interface study. APL Materials, 2017, 5, .	2.2	11
71	Nucleation and growth of WSe ₂ : enabling large grain transition metal dichalcogenides. 2D Materials, 2017, 4, 045019.	2.0	96
72	In Situ Heating Study of 2H-MoTe2 to Mo6Te6 Nanowire Phase Transition. Microscopy and Microanalysis, 2017, 23, 1764-1765.	0.2	2

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73	A kinetic Monte Carlo simulation method of van der Waals epitaxy for atomistic nucleation-growth processes of transition metal dichalcogenides. Scientific Reports, 2017, 7, 2977.	1.6	72
74	Improvement in top-gate MoS2 transistor performance due to high quality backside Al2O3 layer. Applied Physics Letters, 2017, 111, .	1.5	56
75	Defects and Surface Structural Stability of MoTe₂ Under Vacuum Annealing. ACS Nano, 2017, 11, 11005-11014.	7.3	117
76	Probing Interface Defects in Top-Gated MoS₂ Transistors with Impedance Spectroscopy. ACS Applied Materials & Interfaces, 2017, 9, 24348-24356.	4.0	38
77	Test structures for understanding the impact of ultra-high vacuum metal deposition on top-gate MoS<inf>2</inf> field-effect-transistors. , 2017, , .		1
78	Reduction of Fermi level pinning at Auâ€“MoS ₂ interfaces by atomic passivation on Au surface. 2D Materials, 2017, 4, 015019.	2.0	40
79	Dielectric Materials for Microelectronics. Springer Handbooks, 2017, , 1-1.	0.3	15
80	(Invited) High-K Dielectrics: A Perspective on Applications from Silicon to 2D Materials. ECS Meeting Abstracts, 2017, , .	0.0	0
81	(Invited) Investigation of Critical Interfaces in Few-Layer MoS2 Field Effect Transistors with High-k Dielectrics. ECS Meeting Abstracts, 2017, , .	0.0	0
82	Remote Plasma Oxidation and Atomic Layer Etching of MoS₂. ACS Applied Materials & Interfaces, 2016, 8, 19119-19126.	4.0	145
83	(Invited) Evaluation of Few-Layer MoS2 Transistors with a Top Gate and HfO2 Dielectric. ECS Transactions, 2016, 75, 153-162.	0.3	10
84	In situ surface and interface study of crystalline (3Ã—1)-O on InAs. Applied Physics Letters, 2016, 109, .	1.5	8
85	Band alignments between SmTiO3, GdTiO3, and SrTiO3. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	6
86	Atomic and Electronic Structures of WTe₂ Probed by High Resolution Electron Microscopy and ab Initio Calculations. Journal of Physical Chemistry C, 2016, 120, 8364-8369.	1.5	37
87	Tuning electronic transport in epitaxial graphene-based van der Waals heterostructures. Nanoscale, 2016, 8, 8947-8954.	2.8	21
88	Atomically-thin layered films for device applications based upon 2D TMDC materials. Thin Solid Films, 2016, 616, 482-501.	0.8	104
89	Covalent Nitrogen Doping and Compressive Strain in MoS₂ by Remote N₂ Plasma Exposure. Nano Letters, 2016, 16, 5437-5443.	4.5	323
90	Superacid Passivation of Crystalline Silicon Surfaces. ACS Applied Materials & Interfaces, 2016, 8, 24205-24211.	4.0	38

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91	Two-dimensional gallium nitride realized via grapheneÂencapsulation. Nature Materials, 2016, 15, 1166-1171.	13.3	626
92	Surface Analysis of WSe₂ Crystals: Spatial and Electronic Variability. ACS Applied Materials & Interfaces, 2016, 8, 26400-26406.	4.0	73
93	Controllable growth of layered selenide and telluride heterostructures and superlattices using molecular beam epitaxy. Journal of Materials Research, 2016, 31, 900-910.	1.2	85
94	Charge Mediated Reversible Metalâ€“Insulator Transition in Monolayer MoTe₂ and W_xMo_{1â€“x}Te₂ Alloy. ACS Nano, 2016, 10, 7370-7375.	7.3	133
95	Electronic properties of MoS2/MoOx interfaces: Implications in Tunnel Field Effect Transistors and Hole Contacts. Scientific Reports, 2016, 6, 33562.	1.6	40
96	Formation of a ZnO/ZnS interface passivation layer on (NH4)2S treated In0.53Ga0.47As: Electrical and in-situ X-ray photoelectron spectroscopy characterization. Japanese Journal of Applied Physics, 2016, 55, 08PC02.	0.8	10
97	Contact Metalâ€“MoS₂ Interfacial Reactions and Potential Implications on MoS₂-Based Device Performance. Journal of Physical Chemistry C, 2016, 120, 14719-14729.	1.5	114
98	First principles kinetic Monte Carlo study on the growth patterns of WSe ₂ monolayer. 2D Materials, 2016, 3, 025029.	2.0	59
99	Top-gated MoS2 capacitors and transistors with high-k dielectrics for interface study. , 2016, , .		3
100	Reduced impurities and improved electrical properties of atomic-layer-deposited HfO2 film grown at a low temperature (100 Â°C) by Al2O3 incorporation. Applied Surface Science, 2016, 371, 360-364.	3.1	4
101	Partially Fluorinated Graphene: Structural and Electrical Characterization. ACS Applied Materials & Interfaces, 2016, 8, 5002-5008.	4.0	82
102	MoS₂â€“Titanium Contact Interface Reactions. ACS Applied Materials & Interfaces, 2016, 8, 8289-8294.	4.0	108
103	Recombination Kinetics and Effects of Superacid Treatment in Sulfur- and Selenium-Based Transition Metal Dichalcogenides. Nano Letters, 2016, 16, 2786-2791.	4.5	233
104	Origin of Indium Diffusion in High-k Oxide HfO₂. ACS Applied Materials & Interfaces, 2016, 8, 7595-7600.	4.0	28
105	Theoretical Demonstration of the Ionic Barristor. Nano Letters, 2016, 16, 2090-2095.	4.5	9
106	Toward Atomic-Scale Patterned Atomic Layer Deposition: Reactions of Al₂O₃ Precursors on a Si(001) Surface with Mixed Functionalizations. Journal of Physical Chemistry C, 2016, 120, 2628-2641.	1.5	17
107	(Invited) TMD Materials Challenges: Defects, Impurities, Passivation and Interfaces. ECS Meeting Abstracts, 2016, , .	0.0	0
108	(Invited) Evaluation of Few-Layer MoS2 Transistors with a Top Gate and HfO2 Dielectric. ECS Meeting Abstracts, 2016, , .	0.0	0

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109	In situ plasma enhanced atomic layer deposition half cycle study of Al2O3 on AlGaN/GaN high electron mobility transistors. Applied Physics Letters, 2015, 107, .	1.5	18
110	Materials Design on the Origin of Gap States in a High-Îº/GaAs Interface. Engineering, 2015, 1, 372-377.	3.2	3
111	Atomically Traceable Nanostructure Fabrication. Journal of Visualized Experiments, 2015, , e52900.	0.2	2
112	Phase stability of transition metal dichalcogenide by competing ligand field stabilization and charge density wave. 2D Materials, 2015, 2, 035019.	2.0	29
113	Surface Defects on Natural MoS₂. ACS Applied Materials & Interfaces, 2015, 7, 11921-11929.	4.0	303
114	(Invited) Excellent Wetting Behavior of Yttria on 2D Materials. ECS Transactions, 2015, 69, 325-336.	0.3	2
115	GaN as an Interfacial Passivation Layer: Tuning Band Offset and Removing Fermi Level Pinning for IIIâ€“V MOS Devices. ACS Applied Materials & Interfaces, 2015, 7, 5141-5149.	4.0	41
116	Highly Scalable, Atomically Thin WSe₂ Grown via Metalâ€“Organic Chemical Vapor Deposition. ACS Nano, 2015, 9, 2080-2087.	7.3	339
117	Seeding Atomic Layer Deposition of Alumina on Graphene with Yttria. ACS Applied Materials & Interfaces, 2015, 7, 2082-2087.	4.0	15
118	Line shape and composition of the In 3d5/2 core-level photoemission for the interface analysis of In-containing IIIâ€“V semiconductors. Applied Surface Science, 2015, 329, 371-375.	3.1	5
119	HfO ₂ on UVâ€“O ₃ exposed transition metal dichalcogenides: interfacial reactions study. 2D Materials, 2015, 2, 014004.	2.0	98
120	Al₂O₃ on Black Phosphorus by Atomic Layer Deposition: An in Situ Interface Study. ACS Applied Materials & Interfaces, 2015, 7, 13038-13043.	4.0	81
121	Atomically thin resonant tunnel diodes built from synthetic van der Waals heterostructures. Nature Communications, 2015, 6, 7311.	5.8	382
122	Surface oxidation energetics and kinetics on MoS2 monolayer. Journal of Applied Physics, 2015, 117, .	1.1	202
123	A comparative study of atomic layer deposition of Al2O3 and HfO2 on AlGaN/GaN. Journal of Materials Science: Materials in Electronics, 2015, 26, 4638-4643.	1.1	25
124	Comprehensive structural and optical characterization of MBE grown MoSe ₂ on graphite, CaF ₂ and graphene. 2D Materials, 2015, 2, 024007.	2.0	120
125	Low temperature synthesis of graphite on Ni films using inductively coupled plasma enhanced CVD. Journal of Materials Chemistry C, 2015, 3, 5192-5198.	2.7	34
126	Surface and interfacial study of half cycle atomic layer deposited Al2O3 on black phosphorus. Microelectronic Engineering, 2015, 147, 1-4.	1.1	15

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127	Oxidation of GaSb(100) and its control studied by scanning tunneling microscopy and spectroscopy. Applied Physics Letters, 2015, 107, 061601.	1.5	8
128	Impurities and Electronic Property Variations of Natural MoS₂Crystal Surfaces. ACS Nano, 2015, 9, 9124-9133.	7.3	240
129	In-situ XPS study of ALD ZnO passivation of p-In0.53Ga0.47As. Electronic Materials Letters, 2015, 11, 769-774.	1.0	9
130	Manganese Doping of Monolayer MoS₂: The Substrate Is Critical. Nano Letters, 2015, 15, 6586-6591.	4.5	357
131	Near-unity photoluminescence quantum yield in MoS ₂. Science, 2015, 350, 1065-1068.	6.0	993
132	In Situ TEM Characterization of Shear-Stress-Induced Interlayer Sliding in the Cross Section View of Molybdenum Disulfide. ACS Nano, 2015, 9, 1543-1551.	7.3	93
133	HfSe₂ Thin Films: 2D Transition Metal Dichalcogenides Grown by Molecular Beam Epitaxy. ACS Nano, 2015, 9, 474-480.	7.3	195
134	High-K materials and metal gates for CMOS applications. Materials Science and Engineering Reports, 2015, 88, 1-41.	14.8	542
135	Correlating interface chemistry and device behavior. , 2014, , .		0
136	High quality HfO2/p-GaSb(001) metal-oxide-semiconductor capacitors with 0.8â€‰nm equivalent oxide thickness. Applied Physics Letters, 2014, 105, .	1.5	20
137	MoS2 functionalization for ultra-thin atomic layer deposited dielectrics. Applied Physics Letters, 2014, 104, .	1.5	171
138	In situ x-ray photoelectron spectroscopy and capacitance voltage characterization of plasma treatments for Al2O3/AlGaN/GaN stacks. Applied Physics Letters, 2014, 105, .	1.5	20
139	Diffusion of In0.53Ga0.47As elements through hafnium oxide during post deposition annealing. Applied Physics Letters, 2014, 104, .	1.5	23
140	A crystalline oxide passivation for Al2O3/AlGaN/GaN. Applied Physics Letters, 2014, 105, .	1.5	57
141	Pattern transfer of hydrogen depassivation lithography patterns into silicon with atomically traceable placement and size control. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	16
142	Electronic properties of InP (001)/HfO2 (001) interface: Band offsets and oxygen dependence. Journal of Applied Physics, 2014, 115, .	1.1	15
143	Accumulation capacitance frequency dispersion of III-V metal-insulator-semiconductor devices due to disorder induced gap states. Journal of Applied Physics, 2014, 116, .	1.1	63
144	In-situ characterization of 2D materials for beyond CMOS applications. , 2014, , .		0

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145	Scaling of HfO2 dielectric on CVD graphene. Applied Surface Science, 2014, 294, 95-99.	3.1	21
146	Defect-Dominated Doping and Contact Resistance in MoS₂. ACS Nano, 2014, 8, 2880-2888.	7.3	690
147	Selectivity of metal oxide atomic layer deposition on hydrogen terminated and oxidized Si(001)-(2Ã—1) surface. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	40
148	Hole Contacts on Transition Metal Dichalcogenides: Interface Chemistry and Band Alignments. ACS Nano, 2014, 8, 6265-6272.	7.3	173
149	Effects of growth temperature and oxidant feeding time on residual C- and N-related impurities and Si diffusion behavior in atomic-layer-deposited La2O3 thin films. Applied Surface Science, 2014, 292, 880-885.	3.1	10
150	Hole Selective MoO_x Contact for Silicon Solar Cells. Nano Letters, 2014, 14, 967-971.	4.5	476
151	Realistic Metalâ€“Graphene Contact Structures. ACS Nano, 2014, 8, 642-649.	7.3	93
152	Rigid substrate process to achieve high mobility in graphene field-effect transistors on a flexible substrate. Carbon, 2014, 68, 791-797.	5.4	23
153	In-Situ Studies on 2D Materials. ECS Transactions, 2014, 64, 109-116.	0.3	25
154	Triangular-Pulse Measurement for Hysteresis of High-Performance and Flexible Graphene Field-Effect Transistors. IEEE Electron Device Letters, 2014, 35, 277-279.	2.2	1
155	Atomically Thin Heterostructures Based on Single-Layer Tungsten Diselenide and Graphene. Nano Letters, 2014, 14, 6936-6941.	4.5	132
156	Air Stable p-Doping of WSe₂ by Covalent Functionalization. ACS Nano, 2014, 8, 10808-10814.	7.3	208
157	Impact of intrinsic atomic defects on the electronic structure of MoS₂monolayers. Nanotechnology, 2014, 25, 375703.	1.3	244
158	MoS₂ P-type Transistors and Diodes Enabled by High Work Function MoO_x Contacts. Nano Letters, 2014, 14, 1337-1342.	4.5	487
159	Atomic Layer Deposition of a High-k Dielectric on MoS₂ Using Trimethylaluminum and Ozone. ACS Applied Materials & Interfaces, 2014, 6, 11834-11838.	4.0	105
160	Silicon Interfacial Passivation Layer Chemistry for High-k/InP Interfaces. ACS Applied Materials & Interfaces, 2014, 6, 7340-7345.	4.0	14
161	Digermane Deposition on Si(100) and Ge(100): from Adsorption Mechanism to Epitaxial Growth. Journal of Physical Chemistry C, 2014, 118, 482-493.	1.5	6
162	GaSb oxide thermal stability studied by dynamic-XPS. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, 041201.	0.6	18

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163	The Unusual Mechanism of Partial Fermi Level Pinning at Metalâ€“MoS₂ Interfaces. Nano Letters, 2014, 14, 1714-1720.	4.5	629
164	Ab Initio Study of H2 Associative Desorption on Ad-Dimer Reconstructed Si(001) and Ge(001)-(2Ã—1) Surfaces. Journal of Physical Chemistry C, 2014, 118, 10088-10096.	1.5	5
165	New insights in the passivation of high-k/InP through interface characterization and metalâ€“oxideâ€“semiconductor field effect transistor demonstration: Impact of crystal orientation. Journal of Applied Physics, 2013, 113, .	1.1	15
166	Electrical and chemical characteristics of Al2O3/InP metal-oxide-semiconductor capacitors. Applied Physics Letters, 2013, 102, 132903.	1.5	37
167	Band alignment of two-dimensional transition metal dichalcogenides: Application in tunnel field effect transistors. Applied Physics Letters, 2013, 103, .	1.5	657
168	Interfacial graphene growth in the Ni/SiO₂ system using pulsed laser deposition. Applied Physics Letters, 2013, 103, 134102.	1.5	20
169	Controlling the Atomic Layer Deposition of Titanium Dioxide on Silicon: Dependence on Surface Termination. Journal of Physical Chemistry C, 2013, 117, 20250-20259.	1.5	58
170	Metal Contacts on Physical Vapor Deposited Monolayer MoS₂. ACS Nano, 2013, 7, 11350-11357.	7.3	275
171	HfO₂ on MoS₂ by Atomic Layer Deposition: Adsorption Mechanisms and Thickness Scalability. ACS Nano, 2013, 7, 10354-10361.	7.3	237
172	Effect of ALD oxidant and channel doping on positive bias stress characteristics of surface channel In<inf>0.53</inf>Ga<inf>0.47</inf>As nMOSFETs. , 2013, , .		1
173	The Characterization and Passivation of Fixed Oxide Charges and Interface States in the $hbox{Al}_{2}hbox{O}_{3}/ hbox{InGaAs}$ MOS System. IEEE Transactions on Device and Materials Reliability, 2013, 13, 429-443.	1.5	43
174	Interfacial bonding and electronic structure of HfO2/GaSb interfaces: A first principles study. Applied Physics Letters, 2013, 102, 022901.	1.5	18
175	Graphene Growth and Device Integration. Proceedings of the IEEE, 2013, 101, 1536-1556.	16.4	46
176	Encapsulation of high frequency organic Schottky diodes. Thin Solid Films, 2013, 531, 509-512.	0.8	6
177	Surface and interfacial reaction study of half cycle atomic layer deposited HfO2 on chemically treated GaSb surfaces. Applied Physics Letters, 2013, 102, .	1.5	25
178	Investigation of arsenic and antimony capping layers, and half cycle reactions during atomic layer deposition of Al2O3 on GaSb(100). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	10
179	Rapid Selective Etching of PMMA Residues from Transferred Graphene by Carbon Dioxide. Journal of Physical Chemistry C, 2013, 117, 23000-23008.	1.5	89
180	A density-functional theory study of tip electronic structures in scanning tunneling microscopy. Nanotechnology, 2013, 24, 105201.	1.3	7

#	Article	IF	Citations
181	Measurement of Schottky barrier height tuning using dielectric dipole insertion method at metalâ€“semiconductor interfaces by photoelectron spectroscopy and electrical characterization techniques. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	0.6	14
182	Impact of N2 and forming gas plasma exposure on the growth and interfacial characteristics of Al2O3 on AlGaN. Applied Physics Letters, 2013, 103, .	1.5	29
183	(Invited) III-V/High-k Defects: DIGS vs. Border Traps. ECS Transactions, 2013, 53, 161-167.	0.3	6
184	Low-Temperature Atomic-Layer-Deposited High-Î¹ Dielectric for p-Channel In_{0.7}Ga_{0.3}As/GaAs_{0.35}Sb_{0.65}Heterojunction Tunneling Field-Effect Transistor. Applied Physics Express, 2013, 6, 101201.	1.1	8
185	In situ study of the role of substrate temperature during atomic layer deposition of HfO2 on InP. Journal of Applied Physics, 2013, 114, 154105.	1.1	14
186	Surface and interfacial reaction study of InAs(100)-crystalline oxide interface. Applied Physics Letters, 2013, 102, .	1.5	14
187	Indium diffusion through high-k dielectrics in high-k/InP stacks. Applied Physics Letters, 2013, 103, .	1.5	32
188	In situ atomic layer deposition study of HfO2 growth on NH4OH and atomic hydrogen treated Al0.25Ga0.75N. Journal of Applied Physics, 2013, 113, .	1.1	14
189	In situ study of e-beam Al and Hf metal deposition on native oxide InP (100). Journal of Applied Physics, 2013, 114, .	1.1	9
190	In situstudy of atomic layer deposition Al₂O₃on GaP (100). Applied Physics Letters, 2013, 103, 121604.	1.5	10
191	In situ study of HfO2 atomic layer deposition on InP(100). Applied Physics Letters, 2013, 102, .	1.5	19
192	First principles study on InP (001)-(2 Ã— 4) surface oxidation. Journal of Applied Physics, 2013, 113, 103705.	1.1	18
193	Chemical and electrical characterization of the HfO2/InAlAs interface. Journal of Applied Physics, 2013, 114, .	1.1	22
194	Atomically-precise three-dimensional top down fabrication. , 2013, , .		2
195	Optimization of the ammonium sulfide (NH4)2S passivation process on InSb(111)A. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 04E103.	0.6	23
196	Investigation of interfacial oxidation control using sacrificial metallic Al and La passivation layers on InGaAs. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 04E104.	0.6	6
197	In situ atomic layer deposition half cycle study of Al₂O₃ growth on AlGaN. Applied Physics Letters, 2012, 101, 211604.	1.5	37
198	Interfacial oxide re-growth in thin film metal oxide III-V semiconductor systems. Applied Physics Letters, 2012, 100, .	1.5	47

#	Article	IF	Citations
199	In situ surface pre-treatment study of GaAs and In0.53Ga0.47As. Applied Physics Letters, 2012, 100, .	1.5	28
200	Low temperature fabrication and characterization of nickel germanide Schottky source/drain contacts for implant-less germanium p-channel metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2012, 100, .	1.5	11
201	Trimethyl-aluminum and ozone interactions with graphite in atomic layer deposition of Al2O3. Journal of Applied Physics, 2012, 112, 104110.	1.1	30
202	Large Area Mapping of Graphene Grain Structure and Orientation. ECS Transactions, 2012, 45, 79-82.	0.3	1
203	(Invited) In Situ XPS Study on ALD (Atomic Layer Deposition) of High-k Dielectrics: La₂O₃ Using La-Formidinate and Ozone. ECS Transactions, 2012, 45, 95-101.	0.3	7
204	Reducing Extrinsic Performance-Limiting Factors in Graphene Grown by Chemical Vapor Deposition. ACS Nano, 2012, 6, 3224-3229.	7.3	216
205	In situ X-ray photoelectron spectroscopy characterization of Al2O3/InSb interface evolution from atomic layer deposition. Applied Surface Science, 2012, 258, 5522-5525.	3.1	10
206	Nitrogen doping of graphene and its effect on quantum capacitance, and a new insight on the enhanced capacitance of N-doped carbon. Energy and Environmental Science, 2012, 5, 9618.	15.6	376
207	Low-Îº organic layer as a top gate dielectric for graphene field effect transistors. Applied Physics Letters, 2012, 100, 193117.	1.5	13
208	Uniform Wafer-Scale Chemical Vapor Deposition of Graphene on Evaporated Cu (111) Film with Quality Comparable to Exfoliated Monolayer. Journal of Physical Chemistry C, 2012, 116, 24068-24074.	1.5	69
209	Toward the Controlled Synthesis of Hexagonal Boron Nitride Films. ACS Nano, 2012, 6, 6378-6385.	7.3	295
210	Inâ€situ Xâ€ray photoelectron spectroscopy of trimethyl aluminum and water halfâ€cycle treatments on HFâ€treated and O₃â€oxidized GaN substrates. Physica Status Solidi - Rapid Research Letters, 2012, 6, 22-24.	1.2	22
211	Metalâ€“Grapheneâ€“Metal Sandwich Contacts for Enhanced Interface Bonding and Work Function Control. ACS Nano, 2012, 6, 5381-5387.	7.3	114
212	Atomic Layer Deposition of Dielectrics on Graphene Using Reversibly Physisorbed Ozone. ACS Nano, 2012, 6, 2722-2730.	7.3	115
213	Surface characterization of nickel germanides for Schottky source/drain contacts to germanium p-MOSFETs. , 2011, , .		0
214	Si₂H₆ Dissociative Chemisorption and Dissociation on Si(100)-(2Ã—1) and Ge(100)-(2Ã—1). Journal of Physical Chemistry C, 2011, 115, 24534-24548.	1.5	9
215	Si passivation effects on atomic bonding and electronic properties at HfO2/GaAs interface: A first-principles study. Journal of Applied Physics, 2011, 109, 063704.	1.1	9
216	Sulfur passivation effect on HfO2/GaAs interface: A first-principles study. Applied Physics Letters, 2011, 98, 232113.	1.5	24

#	Article	IF	Citations
217	The Role of Oxygen during Thermal Reduction of Graphene Oxide Studied by Infrared Absorption Spectroscopy. Journal of Physical Chemistry C, 2011, 115, 19761-19781.	1.5	776
218	The effect of chemical residues on the physical and electrical properties of chemical vapor deposited graphene transferred to SiO2. Applied Physics Letters, 2011, 99, .	1.5	829
219	A systematic study of (NH4)2S passivation (22%, 10%, 5%, or 1%) on the interface properties of the Al2O3/In0.53Ga0.47As/InP system for n-type and p-type In0.53Ga0.47As epitaxial layers. Journal of Applied Physics, 2011, 109, .	1.1	113
220	Interfacial chemistry of oxides on InxGa(1â^'x)As and implications for MOSFET applications. Current Opinion in Solid State and Materials Science, 2011, 15, 188-207.	5.6	119
221	First-principles study of GaAs(001)-Î²2(2Ã—4) surface oxidation. Microelectronic Engineering, 2011, 88, 3419-3423.	1.1	11
222	Investigation of Tunneling Current in $hbox{SiO}_{2}/ hbox{HfO}_{2}$ Gate Stacks for Flash Memory Applications. IEEE Transactions on Electron Devices, 2011, 58, 4189-4195.	1.6	5
223	Instrument-related geometrical factors affecting the intensity in XPS and ARXPS experiments. Journal of Electron Spectroscopy and Related Phenomena, 2011, 184, 487-500.	0.8	35
224	Carbon-Based Supercapacitors Produced by Activation of Graphene. Science, 2011, 332, 1537-1541.	6.0	5,528
225	Optimisation of the ammonium sulphide (NH4)2S passivation process on In0.53Ga0.47As. Applied Surface Science, 2011, 257, 4082-4090.	3.1	71
226	In situ X-ray photoelectron spectroscopy characterization of Al2O3/GaSb interface evolution. Applied Surface Science, 2011, 257, 8747-8751.	3.1	49
227	Is interfacial chemistry correlated to gap states for high-k/IIIâ€“V interfaces?. Microelectronic Engineering, 2011, 88, 1061-1065.	1.1	62
228	Strain-induced ferromagnetism in LaCoO3: Theory and growth on Si (100). Microelectronic Engineering, 2011, 88, 1444-1447.	1.1	15
229	Epitaxial integration of ferromagnetic correlated oxide LaCoO3 with Si (100). Applied Physics Letters, 2011, 98, .	1.5	64
230	On the calculation of effective electric field in In0.53Ga0.47As surface channel metal-oxide-semiconductor field-effect-transistors. Applied Physics Letters, 2011, 98, 193501.	1.5	5
231	Contact Resistance Reduction to FinFET Source/Drain Using Novel Dielectric Dipole Schottky Barrier Height Modulation Method. IEEE Electron Device Letters, 2011, 32, 862-864.	2.2	27
232	First-principles study of initial growth of GaXO layer on GaAs-Î²2(2â€‰Ã—â€‰4) surface and interface passivation by F. Journal of Applied Physics, 2011, 110, .	1.1	13
233	As-Received,Ozone Cleaned and Ar+ Sputtered Surfaces of Hafnium Oxide Grown by Atomic Layer Deposition and Studied by XPS. Surface Science Spectra, 2011, 18, 46-57.	0.3	20
234	Dielectric dipole mitigated Schottky barrier height tuning using atomic layer deposited aluminum oxide for contact resistance reduction. Applied Physics Letters, 2011, 99, 102108.	1.5	12

#	Article	IF	Citations
235	Effect of post deposition anneal on the characteristics of HfO2/InP metal-oxide-semiconductor capacitors. Applied Physics Letters, 2011, 99, .	1.5	51
236	In-situ characterization of Ga2O passivation of In0.53Ga0.47As prior to high-k dielectric atomic layer deposition. Applied Physics Letters, 2011, 99, .	1.5	15
237	Reduction of Residual C and N-Related Impurities by Al2O3 Insertion in Atomic-Layer-Deposited La2O3 Thin Films. Electrochemical and Solid-State Letters, 2011, 14, G23.	2.2	3
238	High-k Oxide Growth on III-V Surfaces: Chemical Bonding and MOSFET Performance. ECS Transactions, 2011, 35, 403-413.	0.3	6
239	Surface and Interfacial Reaction Study of Half Cycle Atomic Layer Deposited Al$_{2}$O$_{3}$ on Chemically Treated InP Surfaces. Applied Physics Express, 2011, 4, 125701.	1.1	36
240	Structure of Ultra-Thin Diamond-Like Carbon Films Grown with Filtered Cathodic Arc on Si(001). Analytical Sciences, 2010, 26, 267-272.	0.8	21
241	Origin of HfO2/GaAs interface states and interface passivation: A first principles study. Applied Surface Science, 2010, 256, 6569-6573.	3.1	30
242	(Invited) Electrical and Physical Properties of High-k Gate Dielectrics on In_xGa_{1-x}As. ECS Transactions, 2010, 28, 209-219.	0.3	3
243	Band Offset Control by Interfacial Oxygen Content at GaAs:HfO2 interfaces. Materials Research Society Symposia Proceedings, 2010, 1252, 4.	0.1	0
244	The effect of graphite surface condition on the composition of Al2O3 by atomic layer deposition. Applied Physics Letters, 2010, 97, .	1.5	42
245	Effects of O3 and H2O oxidants on C and N-related impurities in atomic-layer-deposited La2O3 films observed by in situ x-ray photoelectron spectroscopy. Applied Physics Letters, 2010, 97, .	1.5	19
246	First-principles study of GaAs(001)-Î²2(2Ã—4) surface oxidation and passivation with H, Cl, S, F, and GaO. Journal of Applied Physics, 2010, 107, .	1.1	74
247	Fermi level unpinning of GaSb(100) using Plasma Enhanced ALD Al<inf>2</inf>O<inf>3</inf> dielectric. , 2010, , .		5
248	An in situ examination of atomic layer deposited alumina/InAs(100) interfaces. Applied Physics Letters, 2010, 96, .	1.5	47
249	Reduced Metal Contamination in Atomic-Layer-Deposited HfO[sub 2] Films Grown on Si Using O[sub 3] Oxidant Generated Without N[sub 2] Assistance. Electrochemical and Solid-State Letters, 2010, 13, G65.	2.2	12
250	(NH4)2S Passivation of High-k/In0.53Ga0.47As Interfaces: A Systematic Study of (NH4)2S Concentration. ECS Transactions, 2010, 28, 231-238.	0.3	6
251	Characteristics of high-k Al2O3 dielectric using ozone-based atomic layer deposition for dual-gated graphene devices. Applied Physics Letters, 2010, 97, .	1.5	108
252	First-principles study of metalâ€“graphene interfaces. Journal of Applied Physics, 2010, 108, .	1.1	358

#	Article	IF	Citations
253	First-Principles and Quantum Transport Studies of Metal-Graphene End Contacts. Materials Research Society Symposia Proceedings, 2010, 1259, 1.	0.1	2
254	Comparison of the sputter rates of oxide films relative to the sputter rate of SiO2. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 1060-1072.	0.9	122
255	Impact of Interfacial Oxygen Content on Bonding, Stability, Band Offsets, and Interface States of GaAs:HfO₂ Interfaces. Journal of Physical Chemistry C, 2010, 114, 22610-22618.	1.5	82
256	Contact resistance reduction to FinFET source/drain using dielectric dipole mitigated Schottky barrier height tuning. , 2010, , .		5
257	Fermi level unpinning of GaSb (100) using plasma enhanced atomic layer deposition of Al2O3. Applied Physics Letters, 2010, 97, 143502.	1.5	97
258	Interfacial Chemistry of Oxides on III-V Compound Semiconductors. , 2010, , 131-172.		2
259	Thermal stability of lanthanum in hafnium-based gate stacks. Journal of Applied Physics, 2009, 106, .	1.1	14
260	In situ studies of Al2O3 and HfO2 dielectrics on graphite. Applied Physics Letters, 2009, 95, .	1.5	59
261	Materials Science of Graphene for Novel Device Applications. ECS Transactions, 2009, 19, 185-199.	0.3	2
262	The significance of core-level electron binding energies on the proper analysis of InGaAs interfacial bonding. Applied Physics Letters, 2009, 95, 151905.	1.5	50
263	Physical and optoelectronic characterization of reactively sputtered molybdenum-silicon-nitride alloy metal gate electrodes. Journal of Applied Physics, 2009, 105, 024517.	1.1	4
264	Near band edge Schottky barrier height modulation using high-Î¹ dielectric dipole tuning mechanism. Applied Physics Letters, 2009, 95, .	1.5	46
265	Characterization of the â€œclean-upâ€•of the oxidized Ge(100) surface by atomic layer deposition. Applied Physics Letters, 2009, 95, .	1.5	39
266	In-situ Studies of Atomic Layer Deposition Studies on High-Mobility Channel Materials. ECS Transactions, 2009, 25, 115-122.	0.3	0
267	Atomic Layer Deposition of Dielectrics on Ge and IIIâ€“V Materials for Ultrahigh Performance Transistors. MRS Bulletin, 2009, 34, 493-503.	1.7	105
268	Contact Resistance Studies of Metal on HOPG and Graphene Stacks. , 2009, , .		6
269	Half-Cycle Atomic Layer Deposition Reaction Study Using O[sub 3] and H[sub 2]O Oxidation of Al[sub 2]O[sub 3] on In[sub 0.53]Ga[sub 0.47]As. Electrochemical and Solid-State Letters, 2009, 12, H205.	2.2	34
270	First-Principles study of HfO2/:GaAs interface passivation by Si and Ge. Materials Research Society Symposia Proceedings, 2009, 1155, 1.	0.1	0

#	Article	IF	Citations
271	Atomic-Layer-Deposited Al2O3 as Gate Dielectrics for Graphene-Based Devices. ECS Transactions, 2009, 19, 225-230.	0.3	14
272	Report on the 47th IUVSTA Workshop â€˜Angleâ€Resolved XPS: the current status and future prospects for angleâ€resolved XPS of nano and subnano filmsâ€™. Surface and Interface Analysis, 2009, 41, 840-857.	0.8	40
273	A novel thermally-stable zirconium amidinate ALD precursor for ZrO2 thin films. Microelectronic Engineering, 2009, 86, 272-276.	1.1	75
274	Role of lanthanum in the gate stack: Co-sputtered TaLaN metal gates on Hf-based dielectrics. Microelectronic Engineering, 2009, 86, 235-239.	1.1	5
275	Electrical properties of atomic-layer-deposited La2O3 films using a novel La formamidinate precursor and ozone. Microelectronic Engineering, 2009, 86, 1658-1661.	1.1	43
276	Surface passivation and implications on high mobility channel performance (Invited Paper). Microelectronic Engineering, 2009, 86, 1544-1549.	1.1	41
277	Copperâ€'Metal Deposition on Self Assembled Monolayer for Making Top Contacts in Molecular Electronic Devices. Journal of the American Chemical Society, 2009, 131, 18159-18167.	6.6	91
278	Interfacial engineering of InGaAs/high-k metal-oxide-semiconductor field effect transistors (MOSFETs). , 2009, , .		0
279	Detection of Ga suboxides and their impact on III-V passivation and Fermi-level pinning. Applied Physics Letters, 2009, 94, .	1.5	250
280	Surface Studies of III-V Materials: Oxidation Control and Device Implications. ECS Transactions, 2009, 19, 387-403.	0.3	24
281	In-situ Studies of High-Îº Dielectrics for Graphene-Based Device. ECS Transactions, 2009, 19, 215-224.	0.3	9
282	New insight into Fermi-level unpinning on GaAs: Impact of different surface orientations. , 2009, , .		15
283	Impact of surface preparations on the transport characteristics of In<inf>x</inf>Ga<inf>1−x</inf>As metal-oxide-semiconductor field effect transistors (MOSFETs). , 2009, , .		0
284	Structural and Electrical Properties of HfO2/n-In_xGa_{1-x}As structures (x: 0,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.3	20
285	High rate gas dosing for tip based nanofabrication processes. Journal of Vacuum Science & Technology B, 2009, 27, 2769.	1.3	2
286	Dopant effects on the thermal stability of FUSI NiSi. Microelectronic Engineering, 2008, 85, 54-60.	1.1	9
287	Half-cycle atomic layer deposition reaction studies of Al2O3 on (NH4)2S passivated GaAs(100) surfaces. Applied Physics Letters, 2008, 93, .	1.5	94
288	Conformal Al2O3 dielectric layer deposited by atomic layer deposition for graphene-based nanoelectronics. Applied Physics Letters, 2008, 92, .	1.5	245

#	Article	IF	Citations
289	S passivation of GaAs and band bending reduction upon atomic layer deposition of HfO2/Al2O3 nanolaminates. Applied Physics Letters, 2008, 93, .	1.5	54
290	XPS and AFM Study of GaAs Surface Treatment. , 2008, , .		0
291	Performance enhancement of n-channel inversion type InxGa1â^'xAs metal-oxide-semiconductor field effect transistor using ex situ deposited thin amorphous silicon layer. Applied Physics Letters, 2008, 93, .	1.5	54
292	GaAs interfacial self-cleaning by atomic layer deposition. Applied Physics Letters, 2008, 92, .	1.5	354
293	In situ study of surface reactions of atomic layer deposited LaxAl2â^'xO3 films on atomically clean In0.2Ga0.8As. Applied Physics Letters, 2008, 93, .	1.5	31
294	Thermal stability of nitrogen in nitrided HfSiO2/SiO2/Si(001) ultrathin films. Journal of Applied Physics, 2008, 104, .	1.1	23
295	Indium stability on InGaAs during atomic H surface cleaning. Applied Physics Letters, 2008, 92, .	1.5	62
296	Comparison of n-type and p-type GaAs oxide growth and its effects on frequency dispersion characteristics. Applied Physics Letters, 2008, 93, 113506.	1.5	55
297	Work Function Tuning of MoxSiyNz metal gate electrode for Advanced CMOS Technology. Materials Research Society Symposia Proceedings, 2008, 1073, 1.	0.1	0
298	Half-cycle atomic layer deposition reaction studies of Al2O3 on In0.2Ga0.8As (100) surfaces. Applied Physics Letters, 2008, 93, .	1.5	138
299	In-Situ Studies of Interfacial Bonding of High-k Dielectrics for CMOS Beyond 22nm. ECS Transactions, 2008, 16, 255-271.	0.3	92
300	Fabrication Process for Double Barrier Si-Based Quantum Well Resonant Tunneling Diodes (RTD) by UHV Wafer Bonding. ECS Transactions, 2008, 16, 525-530.	0.3	0
301	C-V measurements of micron diameter metal-oxide-semiconductor capacitors using a scanning-electron-microscope-based nanoprobe. Review of Scientific Instruments, 2007, 78, 104702.	0.6	0
302	Thermal stability studies of fully silicided NiSi on Si-oxynitride and Hf-based high-Î¹ gate stacks. Journal of Applied Physics, 2007, 101, 053504.	1.1	6
303	14MHz organic diodes fabricated using photolithographic processes. Applied Physics Letters, 2007, 90, 262105.	1.5	34
304	Effect of composition on the thermal stability of sputter deposited hafnium aluminate and nitrided hafnium aluminate dielectrics on Si (100). Journal of Applied Physics, 2007, 101, 114108.	1.1	25
305	Frequency dispersion reduction and bond conversion on n-type GaAs by in situ surface oxide removal and passivation. Applied Physics Letters, 2007, 91, 163512.	1.5	88
306	Oxygen species in HfO2 films: An in situ x-ray photoelectron spectroscopy study. Journal of Applied Physics, 2007, 102, .	1.1	22

#	Article	IF	Citations
307	Interface studies of GaAs metal-oxide-semiconductor structures using atomic-layer-deposited HfO2âˆ•Al2O3 nanolaminate gate dielectric. Applied Physics Letters, 2007, 91, 142122.	1.5	58
308	Oxygen Species in HfO2 Films: An in Situ X-Ray Photoelectron Spectroscopy Study. ECS Transactions, 2007, 11, 91-102.	0.3	2
309	Alumina as a Hydrogen Barrier Layer for FeRAM Devices. , 2007, , .		0
310	Dipole Moment Model Explaining nFET V<inf>t</inf> Tuning Utilizing La, Sc, Er, and Sr Doped HfSiON Dielectrics. , 2007, , .		41
311	Higher Permittivity Rare Earth-Doped HfO2 and ZrO2 Dielectrics for Logic and Memory Applications. , 2007, , .		2
312	X-ray photoelectron spectroscopy study of the oxidation of Se passivated Si(001). Journal of Applied Physics, 2007, 102, .	1.1	10
313	Patterning effects on poly (3-hexylthiophene) organic thin film transistors using photolithographic processes. Organic Electronics, 2007, 8, 44-50.	1.4	21
314	Quantification of pinhole density in ultrathin diamondâ€like carbon films. Surface and Interface Analysis, 2007, 39, 904-907.	0.8	14
315	Systematic Gate Stack Optimization to Maximize Mobility with HfSiON EOT Scaling. , 2006, , .		0
316	Relationship of HfO2 Material Properties and Transistor Performance. International Power Modulator Symposium and High-Voltage Workshop, 2006, , .	0.0	3
317	Electrical Characterization of a Single TiO2 Nanotube by Using Modified FIB/SEM. Microscopy and Microanalysis, 2006, 12, 1272-1273.	0.2	3
318	Stabilization of Au quantum point contacts by self-assembled monolayers. Applied Surface Science, 2006, 252, 8261-8263.	3.1	1
319	Characterization of conductance under finite bias for a self-assembled monolayer coated Au quantized point contact. Applied Surface Science, 2006, 253, 1265-1268.	3.1	4
320	Gate induced leakage and drain current offset in organic thin film transistors. Organic Electronics, 2006, 7, 16-21.	1.4	47
321	Materials and Processes for High k Gate Stacks: Results from the FEP Transition Center. ECS Transactions, 2006, 3, 389-415.	0.3	2
322	Si-Based Resonant Tunneling Devices Using UHV Wafer Bonding. ECS Transactions, 2006, 3, 75-75.	0.3	0
323	Ni Diffusion Studies from Fully-Silicided NiSi into Si. Electrochemical and Solid-State Letters, 2006, 9, G111.	2.2	6
324	Interface Layers for High-k/Ge Gate Stacks: Are They Necessary?. ECS Transactions, 2006, 3, 519-530.	0.3	14

#	Article	IF	Citations
325	Comparison of electrical and chemical characteristics of ultrathin HfON versus HfSiON dielectrics. Applied Physics Letters, 2006, 89, 032904.	1.5	31
326	Effect of thickness on the crystallization of ultrathin HfSiON gate dielectrics. Applied Physics Letters, 2006, 88, 032901.	1.5	41
327	Composition dependence of the work function of Ta1âˆ'xAlxNy metal gates. Applied Physics Letters, 2006, 88, 072108.	1.5	38
328	Effect of nitrogen incorporation on the thermal stability of sputter deposited lanthanum aluminate dielectrics on Si (100). Applied Physics Letters, 2006, 89, 152903.	1.5	10
329	Effect of poly (3-hexylthiophene) film thickness on organic thin film transistor properties. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1228-1232.	0.9	64
330	Electrical characterization of amorphous lanthanum aluminate thin films grown by molecular-beam deposition on silicon. Applied Physics Letters, 2006, 88, 112907.	1.5	54
331	Mobility and charge trapping comparison for crystalline and amorphous HfON and HfSiON gate dielectrics. Applied Physics Letters, 2006, 89, 242909.	1.5	22
332	Band Edge n-MOSFETs with High-k/Metal Gate Stacks Scaled to EOT=0.9nm with Excellent Carrier Mobility and High Temperature Stability. , 2006, , .		18
333	Interaction of HfO2âˆ•SiO2âˆ•Si structures with deuterium gas. Applied Physics Letters, 2006, 88, 041918.	1.5	12
334	Thermal stability of lanthanum scandate dielectrics on Si(100). Applied Physics Letters, 2006, 89, 242907.	1.5	14
335	Science and Technology of High-Dielectric Constant (K) Thin Films for Next Generation CMOS. , 2005, , 79-126.		4
336	Atomic transport and chemical stability of nitrogen in ultrathin HfSiON gate dielectrics. Applied Physics A: Materials Science and Processing, 2005, 80, 1045-1047.	1.1	2
337	High Resolution Profiling Using Ion Scattering and Resonant Nuclear Reactions. AIP Conference Proceedings, 2005, , .	0.3	2
338	Thermally Stable MoXSiYNZ as a Metal Gate Electrode for Advanced CMOS Devices. AIP Conference Proceedings, 2005, , .	0.3	1
339	Thermal Stability Studies of Advanced Gate Stack Structures on Si (100). AIP Conference Proceedings, 2005, , .	0.3	1
340	HRTEM for Nano-Electronic Materials Research. AIP Conference Proceedings, 2005, , .	0.3	2
341	High sensitivity gas permeability measurement system for thin plastic films. Review of Scientific Instruments, 2005, 76, 013902.	0.6	25
342	Outdiffusion of La and Al from amorphous LaAlO3 in direct contact with Si (001). Applied Physics Letters, 2005, 86, 201901.	1.5	64

#	Article	IF	Citations
343	Dopant penetration studies through Hf silicate. Journal of Applied Physics, 2005, 97, 043508.	1.1	36
344	Adsorption Kinetics ofp-Nitrobenzenethiol Self-Assembled Monolayers on a Gold Surface. Langmuir, 2005, 21, 950-955.	1.6	42
345	Ultrascaled hafnium silicon oxynitride gate dielectrics with excellent carrier mobility and reliability. Applied Physics Letters, 2005, 87, 262902.	1.5	36
346	Growth and characterization of hafnium silicate films prepared by UV/ozone oxidation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 395-400.	0.9	6
347	Underpotential Deposition of Copper on Electrochemically Prepared Conductive Ruthenium Oxide Surface. Electrochemical and Solid-State Letters, 2004, 7, C107.	2.2	23
348	Deposition of Hfâ€“silicate gate dielectric on Si[sub x]Ge[sub 1â^'x](100): Detection of interfacial layer growth. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 616.	0.9	5
349	Diffusion Studies of Copper on Ruthenium Thin Film. Electrochemical and Solid-State Letters, 2004, 7, G154.	2.2	153
350	Low-Temperature Deposition of Hafnium Silicate Gate Dielectrics. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 89-100.	1.9	15
351	The electrical properties and stability of the hafnium silicate/Si0.8Ge0.2(100) interface. Journal of Electronic Materials, 2004, 33, 1016-1021.	1.0	1
352	Fabrication and Optical Properties of Erbium-Doped Germanium Nanowires. Advanced Materials, 2004, 16, 1444-1448.	11.1	33
353	Low temperature UV/ozone oxidation formation of HfSiON gate dielectric. Thin Solid Films, 2004, 460, 242-246.	0.8	25
354	Thermal stability of Hf-based high-k dielectric films on silicon for advanced CMOS devices. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 112, 134-138.	1.7	14
355	Challenges for the characterization and integration of high-Îº dielectrics. Applied Surface Science, 2004, 231-232, 543-551.	3.1	15
356	Hydrogen and deuterium incorporation and transport in hafnium-based dielectric films on silicon. Applied Physics Letters, 2004, 85, 3540-3542.	1.5	16
357	Nano Patterning and Manipulation of Genetically Engineered Virus Nanoblocks. Microscopy and Microanalysis, 2004, 10, 26-27.	0.2	2
358	Microstructure study and hyper frequency electromagnetic characterization of novel hexagonal compounds. Microelectronics Journal, 2003, 34, 281-287.	1.1	6
359	The effect of small-signal AC voltages on Câ€“V characterization and parameter extraction of SiO2 thin films. Microelectronics Reliability, 2003, 43, 1981-1985.	0.9	1
360	Hafnium silicate formation by ultra-violet/ozone oxidation of hafnium silicide. Thin Solid Films, 2003, 425, 68-71.	0.8	33

#	Article	IF	Citations
361	High-Î¤ Dielectric Materials for Microelectronics. Critical Reviews in Solid State and Materials Sciences, 2003, 28, 231-285.	6.8	183
362	Effect of N incorporation on boron penetration from p+ polycrystalline-Si through HfSixOy films. Applied Physics Letters, 2003, 82, 4669-4671.	1.5	58
363	X-ray photoelectron spectroscopy study of electrodeposited nanostructured CeO[sub 2] films. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 1169.	1.6	96
364	Boron penetration studies from p+ polycrystalline Si through HfSixOy. Applied Physics Letters, 2002, 81, 1074-1076.	1.5	47
365	Phosphorus and arsenic penetration studies through HfSixOy and HfSixOyNz films. Applied Physics Letters, 2002, 81, 1609-1611.	1.5	38
366	Interdiffusion studies for HfSixOy and ZrSixOy on Si. Journal of Applied Physics, 2002, 92, 3540-3550.	1.1	51
367	Alternative Gate Dielectrics for Microelectronics. MRS Bulletin, 2002, 27, 186-191.	1.7	132
368	Wet chemical etching studies of Zr and Hf-silicate gate dielectrics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1891.	0.9	29
369	Interfacial Diffusion Studies of Hf and Zr into Si from Thermally Annealed Hf and Zr Silicates. Materials Research Society Symposia Proceedings, 2001, 686, 1.	0.1	1
370	Proton trapping and diffusion in SiO2 thin films: a first-principles study. Applied Surface Science, 2001, 172, 41-46.	3.1	8
371	High-Î¤ gate dielectrics: Current status and materials properties considerations. Journal of Applied Physics, 2001, 89, 5243-5275.	1.1	5,466
372	Thermally induced Zr incorporation into Si from zirconium silicate thin films. Applied Physics Letters, 2001, 79, 2958-2960.	1.5	41
373	Hafnium interdiffusion studies from hafnium silicate into silicon. Applied Physics Letters, 2001, 79, 4192-4194.	1.5	79
374	Stable zirconium silicate gate dielectrics deposited directly on silicon. Applied Physics Letters, 2000, 76, 112-114.	1.5	316
375	Hafnium and zirconium silicates for advanced gate dielectrics. Journal of Applied Physics, 2000, 87, 484-492.	1.1	931
376	Dry oxidation resistance of ultrathin nitride films: Ordered and amorphous silicon nitride on Si(111). Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 970.	1.6	17
377	Interaction of H[sub 2]O with active Spindt-type molybdenum field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 303.	1.6	13
378	Deuterium sintering of silicon-on-insulator structures: D diffusion and replacement reactions at the SiO[sub 2]/Si interface. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 2153.	1.6	8

#	Article	IF	Citations
379	Deuterium transport through device structures. Journal of Applied Physics, 1999, 86, 2237-2244.	1.1	23
380	Electrical properties of hafnium silicate gate dielectrics deposited directly on silicon. Applied Physics Letters, 1999, 74, 2854-2856.	1.5	499
381	Evaluating the minimum thickness of gate oxide on silicon using first-principles method. Applied Surface Science, 1998, 135, 137-142.	3.1	61
382	Poisoning of Spindt-type molybdenum field emitter arrays by CO[sub 2]. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2866.	1.6	15
383	Effect of O[sub 2] on the electron emission characteristics of active molybdenum field emission cathode arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2859.	1.6	55
384	Effect of CH[sub 4] on the electron emission characteristics of active molybdenum field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 3073.	1.6	14
385	Chemical kinetics of mobile-proton generation and annihilation in SiO2 thin films. Applied Physics Letters, 1998, 73, 674-676.	1.5	24
386	Examination of deuterium transport through device structures. Applied Physics Letters, 1998, 73, 3441-3443.	1.5	28
387	Thermal properties of perfluorinated n-alkanoic acids self-assembled on native aluminum oxide surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 700-706.	0.9	13
388	Microscopic characterization of hot-electron spreading and trapping in SiO2 films using ballistic electron emission microscopy. Applied Physics Letters, 1998, 73, 1871-1873.	1.5	7
389	Electrical and physical characterization of deuterium sinter on submicron devices. Applied Physics Letters, 1998, 72, 1721-1723.	1.5	30
390	Hydrogen/Deuterium Interaction With CMOS Transistor Device Structure: Sintering Process Studied by Sims. Materials Research Society Symposia Proceedings, 1998, 513, 325.	0.1	5
391	Silicon surface preparation for two-dimensional dopant characterization. , 1998, , .		6
392	In situSi flux cleaning technique for producing atomically flat Si(100) surfaces at low temperature. Applied Physics Letters, 1997, 70, 2288-2290.	1.5	33
393	Controlled growth of SiO2 tunnel barrier and crystalline Si quantum wells for Si resonant tunneling diodes. Journal of Applied Physics, 1997, 81, 6415-6424.	1.1	37
394	Energetics of void enlargement in thermally grown ultrathin Si-oxide on Si(001). Surface Science, 1997, 387, L1057-L1061.	0.8	4
395	SiO2 film thickness metrology by x-ray photoelectron spectroscopy. Applied Physics Letters, 1997, 71, 2764-2766.	1.5	216
396	Void formation on ultrathin thermal silicon oxide films on the Si(100) surface. Applied Physics Letters, 1996, 69, 1270-1272.	1.5	77

#	Article	IF	Citations
397	Adsorption of perfluorinated nâ€alkanoic acids on native aluminum oxide surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 1345-1350.	0.9	28
398	Patterning and etching of amorphous teflon films. Journal of Electronic Materials, 1994, 23, 827-830.	1.0	45
399	Hydrocarbon surface chemistry on Si(100). Thin Solid Films, 1993, 225, 196-202.	0.8	64
400	An evaluation of the sessile drop technique for the study of (Hg, Cd)Te surfaces. Semiconductor Science and Technology, 1993, 8, 916-921.	1.0	6
401	<title>Controlling polymer formation during polysilicon etching in a magnetically enhanced reactive ion etcher</title>. , 1993, 1803, 36.		1
402	Adsorption and decomposition of acetylene on silicon(100)-(2.times.1). Journal of the American Chemical Society, 1992, 114, 6754-6760.	6.6	173
403	Adsorption and thermal behavior of ethylene on Si(100)-(2 Ã— 1). Surface Science, 1992, 268, 205-216.	0.8	199
404	Dissociative adsorption of PH3 on Si(111)-(7 Ã— 7): a high resolution electron energy loss spectroscopy study. Surface Science, 1991, 244, 177-184.	0.8	25
405	Background effects in electron stimulated desorption ion angular distribution (ESDIAD) measurements on Si(111)â€(7Ã—7). Review of Scientific Instruments, 1991, 62, 720-724.	0.6	3
406	Ni impurity effecÌ€ts on hydrogen surface chemistry and etching of Si(111). Applied Surface Science, 1990, 45, 201-206.	3.1	23
407	PH3surface chemistry on Si(111)â€(7Ã—7): A study by Auger spectroscopy and electron stimulated desorption methods. Journal of Applied Physics, 1990, 68, 3669-3678.	1.1	16
408	Direct determination of absolute monolayer coverages of chemisorbed C2H2and C2H4on Si(100). Journal of Applied Physics, 1990, 67, 3693-3699.	1.1	145
409	The adsorption and thermal decomposition of PH3 on Si(111)-(7 Ã— 7). Surface Science, 1990, 238, 1-12.	0.8	22
410	An ESDIAD study of chemisorbed hydrogen on clean and H-exposed Si(111)-(7 Ã— 7). Surface Science, 1990, 239, 1-12.	0.8	26
411	The adsorption and decomposition of NH3 ON Si(100)â€"detection of the NH2(a) species. Surface Science, 1989, 218, 75-107.	0.8	141
412	The dissociative adsorption of ammonia on Si(100). Surface Science, 1989, 215, L286-L292.	0.8	52
413	Sub-micron calibration for ion beam milling of thin films. Nuclear Instruments & Methods in Physics Research B, 1984, 5, 523-524.	0.6	0
414	<i>In Situ</i> Studies of III-V Surfaces and High-K Atomic Layer Deposition. Solid State Phenomena, 0, 195, 90-94.	0.3	3