Mingwei Hong

List of Publications by Year
in descending order

87 papers	2,984 citations	218677 26 h-index	168389 53 g-index
89 all docs	89 docs citations	89 times ranked	2016 citing authors

#	Article	IF	Citations
1	Surface passivation of III-V compound semiconductors using atomic-layer-deposition-grown Al2O3. Applied Physics Letters, 2005, 87, 252104.	3.3	371
2	GaAs MOSFET with oxide gate dielectric grown by atomic layer deposition. IEEE Electron Device Letters, 2003, 24, 209-211.	3.9	223
3	Effect of temperature on Ga2O3(Gd2O3)/GaN metalâ€“oxideâ€“semiconductor field-effect transistors. Applied Physics Letters, 1998, 73, 3893-3895.	3.3	217
4	Demonstration of enhancement-mode p- and n-channel GaAs MOSFETS with Ga2O3(Gd2O3) As gate oxide. Solid-State Electronics, 1997, 41, 1751-1753.	1.4	151
5	Ga2O3(Gd2O3)/InGaAs enhancement-mode n-channel MOSFETs. IEEE Electron Device Letters, 1998, 19, 309-311.	3.9	135
6	High-performance self-aligned inversion-channel In0.53Ga0.47As metal-oxide-semiconductor field-effect-transistor with Al2O3â^•Ga2O3(Gd2O3) as gate dielectrics. Applied Physics Letters, 2008, 93, .	3.3	120
7	Interfacial self-cleaning in atomic layer deposition of HfO2 gate dielectric on In0.15Ga0.85As. Applied Physics Letters, 2006, 89, 242911.	3.3	117
8	Atomic-layer-deposited HfO2 on In0.53Ga0.47As: Passivation and energy-band parameters. Applied Physics Letters, 2008, 92, .	3.3	109
9	Recombination velocity at oxideâ€“GaAs interfaces fabricated by in situ molecular beam epitaxy. Applied Physics Letters, 1996, 68, 3605-3607.	3.3	71
10	Energy-band parameters of atomic layer deposited Al2O3 and HfO2 on InxGa1â^'xAs. Applied Physics Letters, 2009, 94, .	3.3	66
11	Effective reduction of interfacial traps in Al2O3/GaAs (001) gate stacks using surface engineering and thermal annealing. Applied Physics Letters, 2010, 97, 112901.	3.3	66
12	Strongly exchange-coupled and surface-state-modulated magnetization dynamics in Bi2Se3/yttrium iron garnet heterostructures. Nature Communications, 2018, 9, 223.	12.8	63
13	Achieving a low interfacial density of states in atomic layer deposited Al2O3 on In0.53Ga0.47As. Applied Physics Letters, 2008, 93, 202903.	3.3	60
14	Thermodynamic stability of Ga2O3(Gd2O3)â^•GaAs interface. Applied Physics Letters, 2005, 86, 191905.	3.3	56
15	Inversion-channel GaN metal-oxide-semiconductor field-effect transistor with atomic-layer-deposited Al2O3 as gate dielectric. Applied Physics Letters, 2008, 93, .	3.3	55
16	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, .	3.3	53
17	Advances in GaAs Mosfet's Using Ga₂O₃(Gd₂O₃) as Gate Oxide. Materials Research Society Symposia Proceedings, 1999, 573, 219.	0.1	49
18	Achieving 1nm capacitive effective thickness in atomic layer deposited HfO2 on In0.53Ga0.47As. Applied Physics Letters, 2008, 92, 252908.	3.3	48

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19	High-quality thulium iron garnet films with tunable perpendicular magnetic anisotropy by off-axis sputtering â€“ correlation between magnetic properties and film strain. Scientific Reports, 2018, 8, 11087.	3.3	48
20	1 nm equivalent oxide thickness in Ga2O3(Gd2O3)âˆ•In0.2Ga0.8As metal-oxide-semiconductor capacitors. Applied Physics Letters, 2008, 92, .	3.3	47
21	Realization of high-quality HfO2 on In0.53Ga0.47As by <i>in-situ</i> atomic-layer-deposition. Applied Physics Letters, 2012, 100, .	3.3	47
22	Cubic HfO2 doped with Y2O3 epitaxial films on GaAs (001) of enhanced dielectric constant. Applied Physics Letters, 2007, 90, 152908.	3.3	43
23	InGaAs Metal Oxide Semiconductor Devices with Ga₂O₃(Gd₂O₃) High-Îº Dielectrics for Science and Technology beyond Si CMOS. MRS Bulletin, 2009, 34, 514-521.	3.5	35
24	Ga2O3(Gd2O3) on Ge without interfacial layers: Energy-band parameters and metal oxide semiconductor devices. Applied Physics Letters, 2009, 94, 202108.	3.3	30
25	Electrical properties and interfacial chemical environments of in situ atomic layer deposited Al2O3 on freshly molecular beam epitaxy grown GaAs. Microelectronic Engineering, 2011, 88, 440-443.	2.4	29
26	Effective passivation of In0.2Ga0.8As by HfO2 surpassing Al2O3 via <i>in-situ</i> atomic layer deposition. Applied Physics Letters, 2012, 101, .	3.3	28
27	High-performance self-aligned inversion-channel In0.53Ga0.47As metal-oxide-semiconductor field-effect-transistors by <i>in-situ</i> atomic-layer-deposited HfO2. Applied Physics Letters, 2013, 103, .	3.3	28
28	High-quality single-crystal thulium iron garnet films with perpendicular magnetic anisotropy by <i>off-axis</i> sputtering. AIP Advances, 2018, 8, .	1.3	27
29	MBE-grown high gate dielectrics of HfO2 and (Hfâ€“Al)O2 for Si and IIIâ€“V semiconductors nano-electronics. Journal of Crystal Growth, 2005, 278, 619-623.	1.5	26
30	Inversion-channel GaAs(100) metal-oxide-semiconductor field-effect-transistors using molecular beam deposited Al2O3 as a gate dielectric on different reconstructed surfaces. Applied Physics Letters, 2013, 102, .	3.3	25
31	Structure of HfO2 films epitaxially grown on GaAs (001). Applied Physics Letters, 2006, 89, 122907.	3.3	24
32	Attainment of low interfacial trap density absent of a large midgap peak in In0.2Ga0.8As by Ga2O3(Gd2O3) passivation. Applied Physics Letters, 2011, 98, 062108.	3.3	23
33	Detection of inverse spin Hall effect in epitaxial ferromagnetic Fe3Si films with normal metals Au and Pt. Journal of Applied Physics, 2013, 113, .	2.5	23
34	Evidence for exchange Dirac gap in magnetotransport of topological insulatorâ€“magnetic insulator heterostructures. Physical Review B, 2019, 100, .	3.2	23
35	Molecular beam epitaxy, atomic layer deposition, and multiple functions connected via ultra-high vacuum. Journal of Crystal Growth, 2019, 512, 223-229.	1.5	21
36	Single-crystal atomic layer deposited Y2O3 on GaAs(0 0 1) â€“ growth, structural, and electrical characterization. Microelectronic Engineering, 2015, 147, 310-313.	2.4	20

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37	Van der Waals epitaxy of topological insulator Bi2Se3 on single layer transition metal dichalcogenide MoS2. Applied Physics Letters, 2017, 111, .	3.3	19
38	Topological insulator interfaced with ferromagnetic insulators: Bi2Te3 thin films on magnetite and iron garnets. Physical Review Materials, 2020, 4, .	2.4	19
39	Single-Crystal Y2O3 Epitaxially on GaAs(001) and (111) Using Atomic Layer Deposition. Materials, 2015, 8, 7084-7093.	2.9	18
40	Molecular beam epitaxy grown template for subsequent atomic layer deposition of high Îº dielectrics. Applied Physics Letters, 2006, 89, 222906.	3.3	17
41	Structural and compositional investigation of yttrium-doped HfO2 films epitaxially grown on Si (111). Applied Physics Letters, 2007, 91, 202909.	3.3	17
42	Nanometer thick single crystal Y2O3 films epitaxially grown on Si (111) with structures approaching perfection. Applied Physics Letters, 2008, 92, 061914.	3.3	15
43	The Growth of an Epitaxial ZnO Film on Si(111) with a Gd2O3(Ga2O3) Buffer Layer. Crystal Growth and Design, 2011, 11, 2846-2851.	3.0	15
44	Growth mechanism of atomic layer deposited Al2O3 on GaAs(001)-4â€‰Ã—â€‰6 surface with trimethylaluminum and water as precursors. Applied Physics Letters, 2012, 101, 212101.	3.3	15
45	Perfecting the Al2O3/In0.53Ga0.47As interfacial electronic structure in pushing metal-oxide-semiconductor field-effect-transistor device limits using <i>in-situ</i> atomic-layer-deposition. Applied Physics Letters, 2017, 111, .	3.3	15
46	Topological insulator Bi2Se3 films on rare earth iron garnets and their high-quality interfaces. Applied Physics Letters, 2019, 114, .	3.3	14
47	Greatly improved interfacial passivation of <i>in-situ</i> high Îº dielectric deposition on freshly grown molecule beam epitaxy Ge epitaxial layer on Ge(100). Applied Physics Letters, 2014, 104, 202102.	3.3	13
48	Analysis of border and interfacial traps in ALD-Y2O3 and -Al2O3 on GaAs via electrical responses - A comparative study. Microelectronic Engineering, 2017, 178, 199-203.	2.4	13
49	The influence of dislocations on optical and electrical properties of epitaxial ZnO on Si (111) using a Î³-Al₂O₃buffer layer. CrystEngComm, 2012, 14, 1665-1671.	2.6	12
50	Research advances on IIIâ€“V MOSFET electronics beyond Si CMOS. Journal of Crystal Growth, 2009, 311, 1944-1949.	1.5	11
51	Atomic-scale determination of band offsets at the Gd2O3/GaAs (100) hetero-interface using scanning tunneling spectroscopy. Applied Physics Letters, 2011, 99, .	3.3	11
52	Synchrotron radiation photoemission study of interfacial electronic structure of HfO2 on In0.53Ga0.47As(001)-4â€‰Ã—â€‰2 from atomic layer deposition. Applied Physics Letters, 2014, 104, .	3.3	11
53	Oxide scalability in Al[sub 2]O[sub 3]â^•Ga[sub 2]O[sub 3](Gd[sub 2]O[sub 3])â^•In[sub 0.20]Ga[sub 0.80]Asâ^•GaAs heterostructures. Journal of Vacuum Science & Technology B, 2008, 26, 1132.	1.3	10
54	Inelastic electron tunneling spectroscopy study of metal-oxide-semiconductor diodes based on high-Îº gate dielectrics. Applied Physics Letters, 2008, 92, 012113.	3.3	10

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55	Thermal annealing and grain boundary effects on ferromagnetism in Y2O3:Co diluted magnetic oxide nanocrystals. Applied Physics Letters, 2011, 98, 031906.	3.3	10
56	High-resolution core-level photoemission study of CF4-treated Gd2O3(Ga2O3) gate dielectric on Ge probed by synchrotron radiation. Applied Physics Letters, 2011, 98, .	3.3	10
57	Ultra-high thermal stability and extremely low D on HfO2/p-GaAs(001) interface. Microelectronic Engineering, 2017, 178, 154-157.	2.4	10
58	Transmission electron microscopy characterization of HfO2/GaAs(001) heterostructures grown by molecular beam epitaxy. Applied Physics A: Materials Science and Processing, 2008, 91, 585-589.	2.3	9
59	Interfacial electronic structure of trimethyl-aluminum and water on an In0.20Ga0.80As(001)-4â€‰Ã—â€‰2 surface: A high-resolution core-level photoemission study. Journal of Applied Physics, 2013, 113, .	2.5	8
60	GaAs metal-oxide-semiconductor push with molecular beam epitaxy Y2O3 â€" In comparison with atomic layer deposited Al2O3. Journal of Crystal Growth, 2017, 477, 179-182.	1.5	8
61	Room temperature ferromagnetic behavior in cluster free, Co doped Y2O3 dilute magnetic oxide films. Applied Physics Letters, 2012, 101, 162403.	3.3	7
62	Correlation between oxygen vacancies and magnetism in Mn-doped Y2O3 nanocrystals investigated by defect engineering techniques. Applied Physics Letters, 2012, 101, .	3.3	7
63	A new stable, crystalline capping material for topological insulators. APL Materials, 2018, 6, 066108.	5.1	7
64	Single-crystal epitaxial europium iron garnet films with strain-induced perpendicular magnetic anisotropy: Structural, strain, magnetic, and spin transport properties. Physical Review Materials, 2022, 6, .	2.4	7
65	MBEâ€"Enabling technology beyond Si CMOS. Journal of Crystal Growth, 2011, 323, 511-517.	1.5	6
66	Thickness-dependent lattice relaxation and the associated optical properties of ZnO epitaxial films grown on Si (111). CrystEngComm, 2012, 14, 8103.	2.6	6
67	<i>In situ</i> Y2O3 on <i>p</i>-In0.53Ga0.47Asâ€"Attainment of low interfacial trap density and thermal stability at high temperatures. Applied Physics Letters, 2021, 118, .	3.3	6
68	Magnetization reversal processes of epitaxial Fe3Si films on GaAs(001). Journal of Applied Physics, 2011, 109, 07D508.	2.5	5
69	Exciton Localization of High-Quality ZnO/Mg_{<i>x</i>}Zn_{1â€"<i>x</i>}O Multiple Quantum Wells on Si (111) with a Y₂O₃ Buffer Layer. ACS Applied Nano Materials, 2018, 1, 3829-3836.	5.0	5
70	InAs MOS devices passivated with molecular beam epitaxy-grown Gd2O3 dielectrics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 02B118.	1.2	4
71	Ferromagnetism in cluster free, transition metal doped high Îº dilute magnetic oxides: Films and nanocrystals. Journal of Applied Physics, 2013, 113, 17C309.	2.5	4
72	Thickness-dependent topological phase transition and Rashba-like preformed topological surface states of Î±-Sn(001) thin films on InSb(001). Physical Review B, 2022, 105, .	3.2	4

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73	Structure of Sc2O3 Films Epitaxially Grown on Î±-Al2O3 (111). Materials Research Society Symposia Proceedings, 2004, 811, 49.	0.1	3
74	Self-aligned inversion-channel and D-mode InGaAs MOSFET using		