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	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
2	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
3	<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
4	Topological insulator interfaced with ferromagnetic insulators: Bi2Te3 thin films on magnetite and iron garnets. Physical Review Materials, 2020, 4, .	2.4	19
5	Fundamental Understanding of Oxide Defects in HfO2 and Y2O3 on GaAs(001) with High Thermal Stability. , 2019, , .		1
6	Evidence for exchange Dirac gap in magnetotransport of topological insulatorâ€"magnetic insulator heterostructures. Physical Review B, 2019, 100, .	3.2	23
7	Topological insulator Bi2Se3 films on rare earth iron garnets and their high-quality interfaces. Applied Physics Letters, 2019, 114, .	3.3	14
8	BTI Characterization of MBE Si-Capped Ge Gate Stack and Defect Reduction via Forming Gas Annealing. , 2019, , .		3
9	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
10	Strongly exchange-coupled and surface-state-modulated magnetization dynamics in Bi2Se3/yttrium iron garnet heterostructures. Nature Communications, 2018, 9, 223.	12.8	63
11	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
12	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
13	A new stable, crystalline capping material for topological insulators. APL Materials, 2018, 6, 066108.	5.1	7
14	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
15	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
16	Ultra-high thermal stability and extremely low D on HfO2/p-GaAs(001) interface. Microelectronic Engineering, 2017, 178, 154-157.	2.4	10
17	Enhancement of effective dielectric constant using high-temperature mixed and sub-nano-laminated atomic layer deposited Y2O3/Al2O3 on GaAs(001). Microelectronic Engineering, 2017, 178, 271-274.	2.4	2
18	Relevance of GaAs(001) surface electronic structure for high frequency dispersion on n-type accumulation capacitance. Applied Physics Letters, 2017, 110, 052107.	3.3	3

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19	Van der Waals epitaxy of topological insulator Bi2Se3 on single layer transition metal dichalcogenide MoS2. Applied Physics Letters, 2017, 111, .	3.3	19
20	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
21	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
22	Single-Crystal Y2O3 Epitaxially on GaAs(001) and (111) Using Atomic Layer Deposition. Materials, 2015, 8, 7084-7093.	2.9	18
23	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
24	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
25	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
26	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
27	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
28	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
29	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
30	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
31	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
32	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
33	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
34	Room temperature ferromagnetic behavior in cluster free, Co doped Y2O3 dilute magnetic oxide films. Applied Physics Letters, 2012, 101, 162403.	3.3	7
35	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
36	Thickness-dependent lattice relaxation and the associated optical properties of ZnO epitaxial films grown on Si (111). CrystEngComm, 2012, 14, 8103.	2.6	6

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37	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
38	Correlation between oxygen vacancies and magnetism in Mn-doped Y2O3 nanocrystals investigated by defect engineering techniques. Applied Physics Letters, 2012, 101, .	3.3	7
39	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
40	Thermal annealing and grain boundary effects on ferromagnetism in Y2O3:Co diluted magnetic oxide nanocrystals. Applied Physics Letters, 2011, 98, 031906.	3.3	10
41	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
42	Electronic structures of Ga2O3(Gd2O3) gate dielectric on <i>n</i>-Ge(001) as grown and after CF4 plasma treatment: A synchrotron-radiation photoemission study. Journal of Applied Physics, 2011, 109, .	2.5	3
43	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
44	MBEâ€"Enabling technology beyond Si CMOS. Journal of Crystal Growth, 2011, 323, 511-517.	1.5	6
45	Magnetization reversal processes of epitaxial Fe3Si films on GaAs(001). Journal of Applied Physics, 2011, 109, 07D508.	2.5	5
46	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
47	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
48	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
49	InGaAs and Ge MOSFETs with a common high κ gate dielectric. , 2010, , .		0
50	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
51	Energy-band parameters of atomic layer deposited Al2O3 and HfO2 on InxGa1âˆ’xAs. Applied Physics Letters, 2009, 94, .	3.3	66
52	Ga2O3(Gd2O3) on Ge without interfacial layers: Energy-band parameters and metal oxide semiconductor devices. Applied Physics Letters, 2009, 94, 202108.	3.3	30
53	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
54	Research advances on IIIâ€"V MOSFET electronics beyond Si CMOS. Journal of Crystal Growth, 2009, 311, 1944-1949.	1.5	11

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55	Nano-electronics of high κ dielectrics on InGaAs for key technologies beyond Si CMOS. , 2009, , .		2
56	Inversion-channel GaN MOSFET using atomic-layer-deposited Al<inf>2</inf>O<inf>3</inf> as gate dielectric. , 2009, , .		1
57	High performance Ga<inf>2</inf>O<inf>3</inf>(Gd<inf>2</inf>O<inf>3</inf>)/Ge MOS devices without interfacial layers. , 2009, , .		0
58	Self-aligned inversion-channel In<inf>0.75</inf>Ga<inf>0.25</inf>As MOSFETs using MBE-Al<inf>2</inf>O<inf>3</inf>/Ga<inf>2</inf>O<inf>3</inf>(Gd<inf>2</inf>O&l and ALD-Al<inf>2</inf>O<inf>3</inf> as gate dielectrics. , 2009, , .		0
59	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
60	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
61	Atomic-layer-deposited HfO2 on In0.53Ga0.47As: Passivation and energy-band parameters. Applied Physics Letters, 2008, 92, .	3.3	109
62	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
63	Sub-nanometer EOT scaling on In<inf>0.53</inf>Ga<inf>0.47</inf>As with atomic layer deposited HfO<inf>2</inf> as gate dielectric. International Power Modulator Symposium and High-Voltage Workshop, 2008, , .	0.0	0
64	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
65	Inversion n-channel GaN MOSFETs with atomic-layer-deposited A1<inf>2</inf>O<inf>3</inf> as gate dielectrics. , 2008, , .		0
66	Self-aligned inversion-channel and D-mode InGaAs MOSFET using		

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73	Structural and compositional investigation of yttrium-doped HfO2 films epitaxially grown on Si (111). Applied Physics Letters, 2007, 91, 202909.	3.3	17
74	Interfacial self-cleaning in atomic layer deposition of HfO2 gate dielectric on In0.15Ga0.85As. Applied Physics Letters, 2006, 89, 242911.	3.3	117
75	Molecular beam epitaxy grown template for subsequent atomic layer deposition of high Îº dielectrics. Applied Physics Letters, 2006, 89, 222906.	3.3	17
76	Structure of HfO2 films epitaxially grown on GaAs (001). Applied Physics Letters, 2006, 89, 122907.	3.3	24
77	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
78	Thermodynamic stability of Ga2O3(Gd2O3)âˆ•GaAs interface. Applied Physics Letters, 2005, 86, 191905.	3.3	56
79	Surface passivation of III-V compound semiconductors using atomic-layer-deposition-grown Al2O3. Applied Physics Letters, 2005, 87, 252104.	3.3	371
80	Epitaxial Growth and Structure of Thin Single Crystal Î³-Al₂O₃ Films on Si (111) Using e-Beam Evaporation of Sapphire in Ultra-High Vacuum. Materials Research Society Symposia Proceedings, 2004, 811, 369.	0.1	2
81	Structure of Sc2O3 Films Epitaxially Grown on Î±-Al2O3 (111). Materials Research Society Symposia Proceedings, 2004, 811, 49.	0.1	3
82	GaAs MOSFET with oxide gate dielectric grown by atomic layer deposition. IEEE Electron Device Letters, 2003, 24, 209-211.	3.9	223
83	Advances in GaAs Mosfet's Using Ga₂O₃(Gd₂O₃) as Gate Oxide. Materials Research Society Symposia Proceedings, 1999, 573, 219.	0.1	49
84	Ga2O3(Gd2O3)/InGaAs enhancement-mode n-channel MOSFETs. IEEE Electron Device Letters, 1998, 19, 309-311.	3.9	135
85	Effect of temperature on Ga2O3(Gd2O3)/GaN metalâ€“oxideâ€“semiconductor field-effect transistors. Applied Physics Letters, 1998, 73, 3893-3895.	3.3	217
86	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
87	Recombination velocity at oxideâ€“GaAs interfaces fabricated by in situ molecular beam epitaxy. Applied Physics Letters, 1996, 68, 3605-3607.	3.3	71