Keng-Yung Lin

List of Publications by Year
in descending order

65 papers	3,348 citations	257450 24 h-index	144013 57 g-index
65 all docs	65 docs citations	65 times ranked	2426 citing authors

#	Article	IF	Citations
1	Epitaxial Cubic Gadolinium Oxide as a Dielectric for Gallium Arsenide Passivation. Science, 1999, 283, 1897-1900.	12.6	398
2	Surface passivation of III-V compound semiconductors using atomic-layer-deposition-grown Al2O3. Applied Physics Letters, 2005, 87, 252104.	3.3	371
3	GaAs metalâ€“oxideâ€“semiconductor field-effect transistor with nanometer-thin dielectric grown by atomic layer deposition. Applied Physics Letters, 2003, 83, 180-182.	3.3	287
4	High Îµ gate dielectrics Gd2O3 and Y2O3 for silicon. Applied Physics Letters, 2000, 77, 130-132.	3.3	255
5	IIIâ€“V compound semiconductor transistorsâ€"from planar to nanowire structures. MRS Bulletin, 2014, 39, 668-677.	3.5	251
6	Properties of high Îº gate dielectrics Gd2O3 and Y2O3 for Si. Journal of Applied Physics, 2001, 89, 3920-3927.	2.5	250
7	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
8	Ga2O3(Gd2O3)/InGaAs enhancement-mode n-channel MOSFETs. IEEE Electron Device Letters, 1998, 19, 309-311.	3.9	135
9	High-performance self-aligned inversion-channel In0.53Ga0.47As metal-oxide-semiconductor field-effect-transistor with Al2O3âˆ•Ga2O3(Gd2O3) as gate dielectrics. Applied Physics Letters, 2008, 93, .	3.3	120
10	Interfacial self-cleaning in atomic layer deposition of HfO2 gate dielectric on In0.15Ga0.85As. Applied Physics Letters, 2006, 89, 242911.	3.3	117
11	Growth of rareâ€earth single crystals by molecular beam epitaxy: The epitaxial relationship between hcp rare earth and bcc niobium. Applied Physics Letters, 1986, 49, 319-321.	3.3	105
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	Nanometerâ€Thick Singleâ€Crystal Hexagonal Gd₂O₃ on GaN for Advanced Complementary Metalâ€Oxideâ€Semiconductor Technology. Advanced Materials, 2009, 21, 4970-4974.	21.0	61
14	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
15	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
16	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
17	New frontiers of molecular beam epitaxy with in-situ processing. Journal of Crystal Growth, 1995, 150, 277-284.	1.5	37
18	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

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19	Self-aligned inversion-channel In0.75Ga0.25As metalâ€“oxideâ€“semiconductor field-effect-transistors using UHV-Al2O3/Ga2O3(Gd2O3) and ALD-Al2O3 as gate dielectrics. Solid-State Electronics, 2010, 54, 919-924.	1.4	33
20	Self-Aligned Inversion-Channel In$_{0.53}$Ga$_{0.47}$As Metalâ€“Oxideâ€“Semiconductor Field-Effect Transistors with<i>In-situ</i>Deposited Al$_{2}$O$_{3}$/Y$_{2}$O$_{3}$ as Gate Dielectrics. Applied Physics Express, 2011, 4, 114202.	2.4	30
21	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
22	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
23	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
24	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
25	Evidence for exchange Dirac gap in magnetotransport of topological insulatorâ€“magnetic insulator heterostructures. Physical Review B, 2019, 100, .	3.2	23
26	Phase Transformation of Molecular Beam Epitaxy-Grown Nanometer-Thick Gd₂O₃ and Y₂O₃ on GaN. ACS Applied Materials & Interfaces, 2013, 5, 1436-1441.	8.0	21
27	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
28	Surface atoms core-level shifts in single crystal GaAs surfaces: Interactions with trimethylaluminum and water prepared by atomic layer deposition. Applied Surface Science, 2013, 284, 601-610.	6.1	19
29	Van der Waals epitaxy of topological insulator Bi2Se3 on single layer transition metal dichalcogenide MoS2. Applied Physics Letters, 2017, 111, .	3.3	19
30	Topological insulator interfaced with ferromagnetic insulators: Bi2Te3 thin films on magnetite and iron garnets. Physical Review Materials, 2020, 4, .	2.4	19
31	Structure of Gd2O3films epitaxially grown on GaAs(100) and GaN(0001) surfaces. Surface and Interface Analysis, 2002, 34, 441-444.	1.8	17
32	MBE grown high-quality Gd2O3/Si(111) hetero-structure. Journal of Crystal Growth, 2007, 301-302, 386-389.	1.5	17
33	In situ atomic layer deposition and synchrotron-radiation photoemission study of Al2O3 on pristine n-GaAs(001)-4Ã—6 surface. Microelectronic Engineering, 2011, 88, 1101-1104.	2.4	16
34	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
35	Topological insulator Bi2Se3 films on rare earth iron garnets and their high-quality interfaces. Applied Physics Letters, 2019, 114, .	3.3	14
36	<i>In</i>-<i>situ</i> atomic layer deposition of <i>tri</i>-methylaluminum and water on pristine single-crystal (In)GaAs surfaces: electronic and electric structures. Nanotechnology, 2015, 26, 164001.	2.6	13

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37	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
38	Strongly enhanced spin current in topological insulator/ferromagnetic metal heterostructures by spin pumping. Journal of Applied Physics, 2015, 117, .	2.5	12
39	Surface exciton polariton in monoclinic HfO₂: an electron energy-loss spectroscopy study. New Journal of Physics, 2009, 11, 103009.	2.9	11
40	Surface-Atom Core-Level Shift in GaAs(111)A-2Ã—2. Journal of the Physical Society of Japan, 2012, 81, 064603.	1.6	11
41	Atom-to-atom interactions for atomic layer deposition of trimethylaluminum on Ga-rich GaAs(001)-4â€‰Ã—â€‰6 and As-rich GaAs(001)-2â€‰Ã—â€‰4 surfaces: a synchrotron radiation photoemission study. Nanoscale Research Letters, 2013, 8, 169.	5.7	11
42	Optimization of Ohmic metal contacts for advanced GaAs-based CMOS device. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 02B123.	1.2	10
43	Single crystal Gd₂O₃epitaxially on GaAs(111)A. CrystEngComm, 2014, 16, 8457.	2.6	10
44	Challenges of Topological Insulator Research: Bi₂Te₃ Thin Films and Magnetic Heterostructures. Physica Status Solidi (B): Basic Research, 2021, 258, 2000346.	1.5	10
45	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
46	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
47	Atomic Nature of the Growth Mechanism of Atomic Layer Deposited High-Îº Y₂O₃ on GaAs(001)-4 Ã— 6 Based on in Situ Synchrotron Radiation Photoelectron Spectroscopy. ACS Omega, 2018, 3, 2111-2118.	3.5	8
48	Low-Temperature-Grown Single-Crystal Si Epitaxially on Ge, Followed by Direct Deposition of High-Îº Dielectricsâ€“Attainment of Low Interfacial Traps and Highly Reliable Ge MOS. ACS Applied Electronic Materials, 2021, 3, 2164-2169.	4.3	8
49	A new stable, crystalline capping material for topological insulators. APL Materials, 2018, 6, 066108.	5.1	7
50	<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
51	Enormous Berry-Curvature-Based Anomalous Hall Effect in Topological Insulator (Bi,Sb)₂Te₃ on Ferrimagnetic Europium Iron Garnet beyond 400 K. ACS Nano, 2022, 16, 2369-2380.	14.6	6
52	Microscopic Views of Atomic and Molecular Oxygen Bonding with epi Ge(001)-2 Ã— 1 Studied by High-Resolution Synchrotron Radiation Photoemission. Nanomaterials, 2019, 9, 554.	4.1	5
53	Unraveling the electronic structures in different phases of gadolinium sesquioxides performed by electron energy loss spectroscopy. AIP Advances, 2020, 10, .	1.3	4
54	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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55	Self-aligned inversion channel In<inf>0.53</inf>Ga<inf>0.47</inf>As N-MOSFETs with ALD-Al<inf>2</inf>O<inf>3</inf> and MBE-Al<inf>2</inf>O<inf>3</inf>/Ga<inf>2</inf>O<inf>3</inf>(Gd<inf>2</inf>O<inf>3</inf>) as gate dielectrics. , 2009, , .		3
56	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
57	BTI Characterization of MBE Si-Capped Ge Gate Stack and Defect Reduction via Forming Gas Annealing. , 2019, , .		3
58	A Synchrotron Radiation Photoemission Study of SiGe(001)-2Ã—1 Grown on Ge and Si Substrates: The Surface Electronic Structure for Various Ge Concentrations. Nanomaterials, 2022, 12, 1309.	4.1	2
59	Fundamental Understanding of Oxide Defects in HfO2 and Y2O3 on GaAs(001) with High Thermal Stability. , 2019, , .		1
60	Protected long-time storage of a topological insulator. AIP Advances, 2021, 11, 025245.	1.3	1
61	Scavenging Segregated Ge on Thin Single-Crystal Si Epitaxially Grown on Ge. ACS Applied Electronic Materials, 0, , .	4.3	1
62	Low thermal budget epitaxial lift off (ELO) for Ge (111)-on-insulator structure. Japanese Journal of Applied Physics, 2022, 61, SC1024.	1.5	1
63	High-Ge-Content Si_{1<i>â€“x</i>}Ge_{<i>x</i>} Gate Stacks with Low-Temperature Deposited Ultrathin Epitaxial Si: Growth, Structures, Low Interfacial Traps, and Reliability. ACS Applied Electronic Materials, 2022, 4, 2641-2647.	4.3	1
64	Epitaxy from a Periodic Yâ€“O Monolayer: Growth of Single-Crystal Hexagonal YAlO3 Perovskite. Nanomaterials, 2020, 10, 1515.	4.1	0
65	Oxidation and hydrogenation of SiGe(0 0 1)-2ÂÃ—Â1 at room temperature and in situ annealing: A synchrotron radiation photoemission study. Applied Surface Science, 2021, 569, 150962.	6.1	0