

Hong-Liang Lu

List of Publications by Year in descending order

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113
papers

3,472
citations

136740

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174990

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113
all docs

113
docs citations

113
times ranked

4133
citing authors

#	ARTICLE	IF	CITATIONS
1	GaN-Based Micro-Light-Emitting Diode Driven by a Monolithic Integrated Ultraviolet Phototransistor. IEEE Electron Device Letters, 2022, 43, 80-83.	2.2	13
2	A Fully Flexible Intelligent Thermal Touch Panel Based on Intrinsically Plastic Ag ₂ S Semiconductor. Advanced Materials, 2022, 34, e2107479.	11.1	23
3	Self-limiting nitrogen/hydrogen plasma radical chemistry in plasma-enhanced atomic layer deposition of cobalt. Nanoscale, 2022, 14, 4712-4725.	2.8	5
4	A stretchable hardness sensor for systemic sclerosis diagnosis. Nano Energy, 2022, 98, 107242.	8.2	13
5	A Heterostructured Graphene Quantum Dots/ Ga_2O_3 Solar-Blind Photodetector with Enhanced Photoresponsivity. ACS Applied Materials & Interfaces, 2022, 14, 16846-16855.	4.0	22
6	Investigation of stretchable strain sensor based on CNT/AgNW applied in smart wearable devices. Nanotechnology, 2022, 33, 255501.	1.3	23
7	Pt Nanoparticle-Modified SnO_2 "ZnO Core" Shell Nanosheets on Microelectromechanical Systems for Enhanced H ₂ S Detection. ACS Applied Nano Materials, 2022, 5, 6627-6636.	2.4	11
8	Effective Suppression of MIS Interface Defects Using Boron Nitride toward High-Performance Ta-Doped Ga_2O_3 MISFETs. Journal of Physical Chemistry Letters, 2022, 13, 3377-3381.	2.1	5
9	Investigation of a Macromolecular Additive on the Decrease of the Aluminum Horizontal Etching Rate in the Wet Etching Process. Metals, 2022, 12, 813.	1.0	0
10	Highly sensitive and stable MEMS acetone sensors based on well-designed $\text{Fe}_2\text{O}_3/\text{C}$ mesoporous nanorods. Journal of Colloid and Interface Science, 2022, 622, 156-168.	5.0	17
11	A high-performance self-powered photodetector based on WSe_2 "graphene" MoTe_2 van der Waals heterojunctions. Journal of Materials Chemistry C, 2022, 10, 9401-9406.	2.7	15
12	Dual $\text{Al}_2\text{O}_3/\text{HfO}_2$ Stack Thin Films for Improved Ferroelectricity and Reliability. IEEE Electron Device Letters, 2022, 43, 1235-1238.	2.2	11
13	High responsivity and flexible deep-UV phototransistor based on Ta-doped Ga_2O_3 . Npj Flexible Electronics, 2022, 6, .	5.1	28
14	A Co-Optimization Method of Actuators/Sensors Placement and LQG Controller for Vibration Suppression. IEEE Access, 2021, 9, 29482-29489.	2.6	1
15	Reactions of ruthenium cyclopentadienyl precursor in the metal precursor pulse of Ru atomic layer deposition. Journal of Materials Chemistry C, 2021, 9, 2919-2932.	2.7	5
16	Modulation of perovskite crystallization processes towards highly efficient and stable perovskite solar cells with MXene quantum dot-modified SnO_2 . Energy and Environmental Science, 2021, 14, 3447-3454.	15.6	115
17	Fabrication of 1D Te/2D ReS_2 Mixed-Dimensional van der Waals <i>p-n</i> Heterojunction for High-Performance Phototransistor. ACS Nano, 2021, 15, 3241-3250.	7.3	91
18	Spider Web-like Flexible Tactile Sensor for Pressure-Strain Simultaneous Detection. ACS Applied Materials & Interfaces, 2021, 13, 10428-10436.	4.0	37

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19	Strategies for High-Performance Large-Area Perovskite Solar Cells toward Commercialization. <i>Crystals</i> , 2021, 11, 295.	1.0	23
20	Dual-gate MoS ₂ phototransistor with atomic-layer-deposited HfO ₂ as top-gate dielectric for ultrahigh photoresponsivity. <i>Nanotechnology</i> , 2021, 32, 215203.	1.3	9
21	Preparation of single crystalline AlN thin films on ZnO nanostructures by atomic layer deposition at low temperature. <i>Nanotechnology</i> , 2021, 32, 275704.	1.3	4
22	Nonlinear growth of zinc tin oxide thin films prepared by atomic layer deposition. <i>Ceramics International</i> , 2021, 47, 22760-22767.	2.3	2
23	Hollow MXene Sphere-Based Flexible E-Skin for Multiplex Tactile Detection. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 45924-45934.	4.0	34
24	Advance on flexible pressure sensors based on metal and carbonaceous nanomaterial. <i>Nano Energy</i> , 2021, 87, 106181.	8.2	86
25	Nb ₂ C MXenes modified SnO ₂ as high quality electron transfer layer for efficient and stability perovskite solar cells. <i>Nano Energy</i> , 2021, 89, 106455.	8.2	40
26	High optoelectronic performance of a local-back-gate ReS ₂ /ReSe ₂ heterojunction phototransistor with hafnium oxide dielectric. <i>Nanoscale</i> , 2021, 13, 14435-14441.	2.8	7
27	Improved electro-optical and photoelectric performance of GaN-based micro-LEDs with an atomic layer deposited AlN passivation layer. <i>Optics Express</i> , 2021, 29, 36559.	1.7	15
28	A skin-like sensor for intelligent Braille recognition. <i>Nano Energy</i> , 2020, 68, 104346.	8.2	87
29	Facile synthesis of $\hat{1}\pm$ -Fe ₂ O ₃ /ZnO core-shell nanowires for enhanced H ₂ S sensing. <i>Sensors and Actuators B: Chemical</i> , 2020, 307, 127617.	4.0	54
30	Investigation of Light-Stimulated $\hat{1}\pm$ -IGZO Based Photoelectric Transistors for Neuromorphic Applications. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 3141-3145.	1.6	10
31	Fabrication of a Nb-Doped $\hat{1}\pm$ -Ga ₂ O ₃ Nanobelt Field-Effect Transistor and Its Low-Temperature Behavior. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 8437-8445.	4.0	18
32	ZnO branched p-Cu _x O @n-ZnO heterojunction nanowires for improving acetone gas sensing performance. <i>Sensors and Actuators B: Chemical</i> , 2020, 324, 128729.	4.0	39
33	Hierarchical highly ordered SnO ₂ nanobowl branched ZnO nanowires for ultrasensitive and selective hydrogen sulfide gas sensing. <i>Microsystems and Nanoengineering</i> , 2020, 6, 30.	3.4	47
34	High-energy x-ray radiation effects on the exfoliated quasi-two-dimensional $\hat{1}\pm$ -Ga ₂ O ₃ nanoflake field-effect transistors. <i>Nanotechnology</i> , 2020, 31, 345206.	1.3	7
35	Atomic Layer Deposition of Ga ₂ O ₃ /ZnO Composite Films for High-Performance Forming-Free Resistive Switching Memory. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 30538-30547.	4.0	37
36	Hofmeister Effect-Guided Ionohydrogel Design as Printable Bioelectronic Devices. <i>Advanced Materials</i> , 2020, 32, e2000189.	11.1	31

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37	Flexible Poly(Vinyl Alcohol)â€“Graphene Oxide Hybrid Nanocomposite Based Cognitive Memristor with Pavlovianâ€“Conditioned Reflex Activities. <i>Advanced Electronic Materials</i> , 2020, 6, 1901402.	2.6	31
38	Ultrahigh-Sensitive Finlike Double-Sided E-Skin for Force Direction Detection. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 14136-14144.	4.0	44
39	Highly stretchable and self-healing strain sensors for motion detection in wireless human-machine interface. <i>Nano Energy</i> , 2020, 76, 105064.	8.2	118
40	Effect of rapid thermal annealing on the properties of zinc tin oxide films prepared by plasma-enhanced atomic layer deposition. <i>Ceramics International</i> , 2020, 46, 13033-13039.	2.3	7
41	Modification of 1D TiO ₂ nanowires with GaO _x N _y by atomic layer deposition for TiO ₂ @GaO _x N _y coreâ€“shell nanowires with enhanced photoelectrochemical performance. <i>Nanoscale</i> , 2020, 12, 7159-7173.	2.8	22
42	Fabrication of a Micro-Electromechanical System-Based Acetone Gas Sensor Using CeO ₂ Nanodot-Decorated WO ₃ Nanowires. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 14095-14104.	4.0	124
43	Precise preparation of WO ₃ @SnO ₂ core shell nanosheets for efficient NH ₃ gas sensing. <i>Journal of Colloid and Interface Science</i> , 2020, 568, 81-88.	5.0	86
44	Threshold-Tunable, Spike-Rate-Dependent Plasticity Originating from Interfacial Proton Gating for Pattern Learning and Memory. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 7833-7839.	4.0	41
45	Nanoscale All-Oxide-Heterostructured Bio-inspired Optoresponsive Nociceptor. <i>Nano-Micro Letters</i> , 2020, 12, 83.	14.4	33
46	ALD-based hydrothermal facile synthesis of a dense WO ₃ @TiO ₂ â€“Fe ₂ O ₃ nanodendrite array with enhanced photoelectrochemical properties. <i>Journal of Materials Chemistry C</i> , 2020, 8, 6756-6762.	2.7	13
47	Geometric Structure and Electronic Polarization Synergistically Boost Hydrogen Evolution Kinetics in Alkaline Medium. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3436-3442.	2.1	18
48	Reaction Mechanism of the Metal Precursor Pulse in Plasma-Enhanced Atomic Layer Deposition of Cobalt and the Role of Surface Facets. <i>Journal of Physical Chemistry C</i> , 2020, 124, 11990-12000.	1.5	4
49	Effects of X-ray Irradiation on Vertical GaN-on-GaN Schottky Barrier Diode Biased on the Applied Voltage. , 2020, , .		0
50	Investigation of the Mechanism for Ohmic Contact Formation in Ti/Al/Ni/Au Contacts to Î²-Ga ₂ O ₃ Nanobelt Field-Effect Transistors. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 32127-32134.	4.0	31
51	Facile Synthesis and Photoluminescence Mechanism of ZnO Nanowires Decorated with Cu Nanoparticles Grown by Atomic Layer Deposition. <i>ACS Applied Electronic Materials</i> , 2019, 1, 1616-1625.	2.0	12
52	Chemical Vapor Deposition of Vertically Aligned Carbon Nanotube Arrays: Critical Effects of Oxide Buffer Layers. <i>Nanoscale Research Letters</i> , 2019, 14, 106.	3.1	8
53	The photoemission study of InSb/HfO ₂ stacks upon N ₂ rapid thermal annealing. <i>Vacuum</i> , 2019, 168, 108815.	1.6	0
54	Atomic Layer Deposition of Buffer Layers for the Growth of Vertically Aligned Carbon Nanotube Arrays. <i>Nanoscale Research Letters</i> , 2019, 14, 119.	3.1	4

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55	Composition and Properties Control Growth of High-Quality GaO _x N _y Film by One-Step Plasma-Enhanced Atomic Layer Deposition. <i>Chemistry of Materials</i> , 2019, 31, 7405-7416.	3.2	15
56	Low-temperature epitaxial growth of high-quality GaON films on ZnO nanowires for superior photoelectrochemical water splitting. <i>Nano Energy</i> , 2019, 66, 104089.	8.2	23
57	Systematic Study of the SiO _x Film with Different Stoichiometry by Plasma-Enhanced Atomic Layer Deposition and Its Application in SiO _x /SiO ₂ Super-Lattice. <i>Nanomaterials</i> , 2019, 9, 55.	1.9	52
58	Investigation of growth characteristics, compositions, and properties of atomic layer deposited amorphous Zn-doped Ga ₂ O ₃ films. <i>Applied Surface Science</i> , 2019, 476, 733-740.	3.1	71
59	Sub-nanosecond pulse programming and device design strategy for analog resistive switching in HfO _x -based resistive random access memory. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	4
60	Sonochemical functionalization of the low-dimensional surface oxide of Galinstan for heterostructured optoelectronic applications. <i>Journal of Materials Chemistry C</i> , 2019, 7, 5584-5595.	2.7	26
61	Fabrication of heterostructured p-CuO/n-SnO ₂ core-shell nanowires for enhanced sensitive and selective formaldehyde detection. <i>Sensors and Actuators B: Chemical</i> , 2019, 290, 233-241.	4.0	106
62	Atomic Layer Deposition of Inorganic Films for the Synthesis of Vertically Aligned Carbon Nanotube Arrays and Their Hybrids. <i>Coatings</i> , 2019, 9, 806.	1.2	4
63	Chemical, optical, and electrical characterization of Ga ₂ O ₃ thin films grown by plasma-enhanced atomic layer deposition. <i>Current Applied Physics</i> , 2019, 19, 72-81.	1.1	57
64	High-Performance On-Chip Supercapacitors Based on Mesoporous Silicon Coated with Ultrathin Atomic Layer-Deposited In ₂ O ₃ Films. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 747-752.	4.0	25
65	Effects of Al ₂ O ₃ Capping and Post-Annealing on the Conduction Behavior in Few-Layer Black Phosphorus Field-Effect Transistors. <i>IEEE Journal of the Electron Devices Society</i> , 2018, 6, 320-324.	1.2	6
66	Investigation of the optical and electrical properties of ZnO/Cu/ZnO multilayers grown by atomic layer deposition. <i>Journal of Alloys and Compounds</i> , 2018, 744, 381-385.	2.8	33
67	Field Effect Transistors Based on In Situ Fabricated Graphene Scaffold@ZrO ₂ Nanofilms. <i>Advanced Electronic Materials</i> , 2018, 4, 1700424.	2.6	4
68	Significant Improvement on Electrochemical Performance of LiMn ₂ O ₄ at Elevated Temperature by Atomic Layer Deposition of TiO ₂ Nanocoating. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 7890-7901.	3.2	47
69	Water assisted atomic layer deposition of yttrium oxide using tris(<i>N</i> , <i>N</i> -diisopropyl-2-dimethylamido-guanidinato) yttrium(<i>iii</i>): process development, film characterization and functional properties. <i>RSC Advances</i> , 2018, 8, 4987-4994.	1.7	38
70	Band alignment of SiO ₂ /(Al Ga _{1-x}) ₂ O ₃ (0 ≤ x ≤ 0.49) determined by X-ray photoelectron spectroscopy. <i>Applied Surface Science</i> , 2018, 434, 440-444.	3.1	38
71	Atomic Layer Deposition of Nickel on ZnO Nanowire Arrays for High-Performance Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 468-476.	4.0	30
72	The role of Anderson's rule in determining electronic, optical and transport properties of transition metal dichalcogenide heterostructures. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 30351-30364.	1.3	47

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73	Precise control of the microstructural, optical, and electrical properties of ultrathin Ga ₂ O ₃ film through nanomixing with few atom-thick SiO ₂ interlayer via plasma enhanced atomic layer deposition. <i>Journal of Materials Chemistry C</i> , 2018, 6, 12518-12528.	2.7	26
74	Enhanced piezoelectric performance of the ZnO/AlN stacked nanofilm nanogenerator grown by atomic layer deposition. <i>APL Materials</i> , 2018, 6, 121109.	2.2	10
75	Measurements of Microstructural, Chemical, Optical, and Electrical Properties of Silicon-Oxygen-Nitrogen Films Prepared by Plasma-Enhanced Atomic Layer Deposition. <i>Nanomaterials</i> , 2018, 8, 1008.	1.9	20
76	Surface-enhanced Raman scattering using nanoporous gold on suspended silicon nitride waveguides. <i>Optics Express</i> , 2018, 26, 24614.	1.7	13
77	Room-Temperature Bound Exciton with Long Lifetime in Monolayer GaN. <i>ACS Photonics</i> , 2018, 5, 4081-4088.	3.2	30
78	Band alignment of AlN/Ga ₂ O ₃ heterojunction interface measured by x-ray photoelectron spectroscopy. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	37
79	Oxygen-deficient WO ₃ @TiO ₂ core-shell nanosheets for efficient photoelectrochemical oxidation of neutral water solutions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 14697-14706.	5.2	68
80	Band Offsets and Interfacial Properties of HfAlO Gate Dielectric Grown on InP by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2017, 12, 339.	3.1	12
81	Top-Down Integration of Molybdenum Disulfide Transistors with Wafer-Scale Uniformity and Layer Controllability. <i>Small</i> , 2017, 13, 1603157.	5.2	45
82	Stability and strength of atomically thin borophene from first principles calculations. <i>Materials Research Letters</i> , 2017, 5, 399-407.	4.1	172
83	Synthesis of WO ₃ @ZnWO ₄ @ZnO-ZnO hierarchical nanocactus arrays for efficient photoelectrochemical water splitting. <i>Nano Energy</i> , 2017, 41, 543-551.	8.2	61
84	Low-Temperature One-Step Growth of AlON Thin Films with Homogenous Nitrogen-Doping Profile by Plasma-Enhanced Atomic Layer Deposition. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 38662-38669.	4.0	28
85	Novel Core-Shell Photodetector with High Ultraviolet Selectivity and Enhanced Responsivity. <i>Advanced Functional Materials</i> , 2017, 27, 1704477.	7.8	29
86	Elemental diffusion study of Ge/Al ₂ O ₃ and Ge/AlN/Al ₂ O ₃ interfaces upon post deposition annealing. <i>Surfaces and Interfaces</i> , 2017, 9, 51-57.	1.5	2
87	Effects of Post Annealing Treatments on the Interfacial Chemical Properties and Band Alignment of AlN/Si Structure Prepared by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2017, 12, 102.	3.1	13
88	First-principles study on the electronic, optical, and transport properties of monolayer I_{\pm} - and I^2 -GeSe. <i>Physical Review B</i> , 2017, 96, .	1.1	81
89	Realizing a facile and environmental-friendly fabrication of high-performance multi-crystalline silicon solar cells by employing ZnO nanostructures and an Al ₂ O ₃ passivation layer. <i>Scientific Reports</i> , 2016, 6, 38486.	1.6	7
90	Photoluminescence enhancement of ZnO nanowire arrays by atomic layer deposition of ZrO ₂ layers and thermal annealing. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16377-16385.	1.3	15

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91	Surface-plasmon mediated photoluminescence enhancement of Pt-coated ZnO nanowires by inserting an atomic-layer-deposited Al ₂ O ₃ spacer layer. Nanotechnology, 2016, 27, 165705.	1.3	28
92	Low-Cost and High-Productivity Three-Dimensional Nanocapacitors Based on Stand-Up ZnO Nanowires for Energy Storage. Nanoscale Research Letters, 2016, 11, 213.	3.1	18
93	Influence of NH ₃ annealing on the chemical states of HfO ₂ /Al ₂ O ₃ stacks studied by X-ray photoelectron spectroscopy. Vacuum, 2016, 124, 60-64.	1.6	3
94	Enhanced photovoltaic performance of inverted pyramid-based nanostructured black-silicon solar cells passivated by an atomic-layer-deposited Al ₂ O ₃ layer. Nanoscale, 2015, 7, 15142-15148.	2.8	23
95	Bandgap narrowing and conductivity evolution of atomic-layer-deposited ZnO:Cu thin films under rapid thermal annealing. Journal of Alloys and Compounds, 2015, 638, 133-135.	2.8	17
96	Facile synthesis and enhanced luminescent properties of ZnO/HfO ₂ core-shell nanowires. Nanoscale, 2015, 7, 15462-15468.	2.8	23
97	Growth and interfacial properties of atomic layer deposited Al _{0.7} Ti _{0.3} O ₃ y high-k dielectric on Ge substrate. Applied Physics A: Materials Science and Processing, 2014, 117, 1479-1484.	1.1	2
98	Band alignment and interfacial structure of ZnO/Si heterojunction with Al ₂ O ₃ and HfO ₂ as interlayers. Applied Physics Letters, 2014, 104, .	1.5	39
99	Impact of rapid thermal annealing on structural and electrical properties of ZnO thin films grown atomic layer deposition on GaAs substrates. Vacuum, 2014, 103, 1-4.	1.6	13
100	Effect of ozone treatment on the optical and electrical properties of HfSiO thin films. Applied Physics A: Materials Science and Processing, 2014, 116, 259-263.	1.1	2
101	Structural, electrical, and optical properties of Ti-doped ZnO films fabricated by atomic layer deposition. Nanoscale Research Letters, 2013, 8, 108.	3.1	92
102	Structural, optical, and electrical properties of Hf-doped ZnO films deposited by atomic layer deposition. Surface and Coatings Technology, 2013, 232, 41-45.	2.2	30
103	Effects of rapid thermal annealing on Hf-doped ZnO films grown by atomic layer deposition. Journal of Alloys and Compounds, 2013, 577, 340-344.	2.8	22
104	Optical and microstructural properties of ZnO/TiO ₂ nanolaminates prepared by atomic layer deposition. Nanoscale Research Letters, 2013, 8, 107.	3.1	32
105	Effects of Rapid Thermal Annealing on Structural, Luminescent, and Electrical Properties of Al-Doped ZnO Films Grown by Atomic Layer Deposition. ECS Journal of Solid State Science and Technology, 2012, 1, N45-N48.	0.9	17
106	Influence of Al Doping on the Properties of ZnO Thin Films Grown by Atomic Layer Deposition. Journal of Physical Chemistry C, 2011, 115, 12317-12321.	1.5	88
107	Density Functional Theory Study on the Reaction Mechanisms of Bis(cyclopentadienyl)magnesium with Hydrogenated and Hydroxylated Si(100)-(2 \times 1) Surfaces. Journal of Physical Chemistry A, 2009, 113, 8791-8794.	1.1	10
108	X-ray reflectometry and spectroscopic ellipsometry characterization of Al ₂ O ₃ atomic layer deposition on HF-last and NH ₃ plasma pretreatment Si substrates. Journal of Materials Research, 2007, 22, 1214-1218.	1.2	4

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109	DFT calculations of NH ₃ adsorption and dissociation on gallium-rich GaAs(001)-4Å ⁻² surface. Chemical Physics Letters, 2007, 445, 188-192.	1.2	7
110	Quantum chemical study of the initial surface reactions of HfO ₂ atomic layer deposition on the hydroxylated GaAs(001)-4Å ⁻² surface. Applied Physics Letters, 2006, 89, 162905.	1.5	16
111	Quantum Chemical Study of Adsorption and Dissociation of H ₂ S on the Gallium-Rich GaAs (001)-4 Å ⁻² Surface. Journal of Physical Chemistry B, 2006, 110, 9529-9533.	1.2	9
112	Spectroscopic and electrical properties of atomic layer deposition Al ₂ O ₃ gate dielectric on surface pretreated Si substrate. Journal of Applied Physics, 2006, 99, 074109.	1.1	26
113	Characterization of atomic-layer-deposited Al ₂ O ₃ -GaAs interface improved by NH ₃ plasma pretreatment. Applied Physics Letters, 2006, 89, 152910.	1.5	75