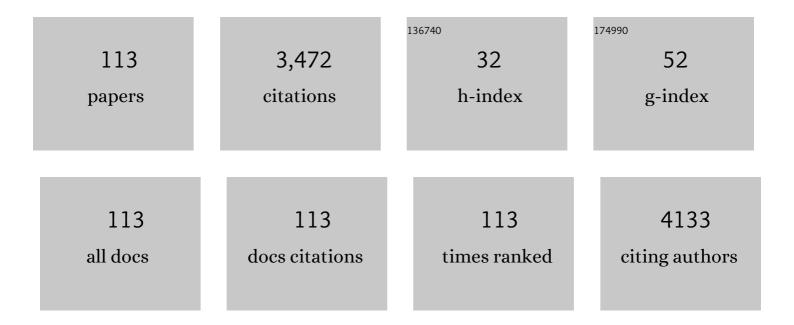
List of Publications by Year in descending order

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HONG-LIANG LU

#	Article	IF	CITATIONS
1	Stability and strength of atomically thin borophene from first principles calculations. Materials Research Letters, 2017, 5, 399-407.	4.1	172
2	Fabrication of a Micro-Electromechanical System-Based Acetone Gas Sensor Using CeO ₂ Nanodot-Decorated WO ₃ Nanowires. ACS Applied Materials & Interfaces, 2020, 12, 14095-14104.	4.0	124
3	Highly stretchable and self-healing strain sensors for motion detection in wireless human-machine interface. Nano Energy, 2020, 76, 105064.	8.2	118
4	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
5	Fabrication of heterostructured p-CuO/n-SnO2 core-shell nanowires for enhanced sensitive and selective formaldehyde detection. Sensors and Actuators B: Chemical, 2019, 290, 233-241.	4.0	106
6	Structural, electrical, and optical properties of Ti-doped ZnO films fabricated by atomic layer deposition. Nanoscale Research Letters, 2013, 8, 108.	3.1	92
7	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
8	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
9	A skin-like sensor for intelligent Braille recognition. Nano Energy, 2020, 68, 104346.	8.2	87
10	Precise preparation of WO3@SnO2 core shell nanosheets for efficient NH3 gas sensing. Journal of Colloid and Interface Science, 2020, 568, 81-88.	5.0	86
11	Advance on flexible pressure sensors based on metal and carbonaceous nanomaterial. Nano Energy, 2021, 87, 106181.	8.2	86
12	First-principles study on the electronic, optical, and transport properties of monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>l±</mml:mi> - and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>l²</mml:mi> -GeSe. Physical Review B, 2017, 96, .</mml:math </mml:math 	1.1	81
13	Characterization of atomic-layer-deposited Al2O3â^•GaAs interface improved by NH3 plasma pretreatment. Applied Physics Letters, 2006, 89, 152910.	1.5	75
14	Investigation of growth characteristics, compositions, and properties of atomic layer deposited amorphous Zn-doped Ga2O3 films. Applied Surface Science, 2019, 476, 733-740.	3.1	71
15	Oxygen-deficient WO _{3â^'x} @TiO _{2â^'x} core–shell nanosheets for efficient photoelectrochemical oxidation of neutral water solutions. Journal of Materials Chemistry A, 2017, 5, 14697-14706.	5.2	68
16	Synthesis of WO3@ZnWO4@ZnO-ZnO hierarchical nanocactus arrays for efficient photoelectrochemical water splitting. Nano Energy, 2017, 41, 543-551.	8.2	61
17	Chemical, optical, and electrical characterization of Ga2O3 thin films grown by plasma-enhanced atomic layer deposition. Current Applied Physics, 2019, 19, 72-81.	1.1	57
18	Facile synthesis of α-Fe2O3/ZnO core-shell nanowires for enhanced H2S sensing. Sensors and Actuators B: Chemical, 2020, 307, 127617.	4.0	54

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19	Systematic Study of the SiOx Film with Different Stoichiometry by Plasma-Enhanced Atomic Layer Deposition and Its Application in SiOx/SiO2 Super-Lattice. Nanomaterials, 2019, 9, 55.	1.9	52
20	Significant Improvement on Electrochemical Performance of LiMn ₂ O ₄ at Elevated Temperature by Atomic Layer Deposition of TiO ₂ Nanocoating. ACS Sustainable Chemistry and Engineering, 2018, 6, 7890-7901.	3.2	47
21	The role of Anderson's rule in determining electronic, optical and transport properties of transition metal dichalcogenide heterostructures. Physical Chemistry Chemical Physics, 2018, 20, 30351-30364.	1.3	47
22	Hierarchical highly ordered SnO2 nanobowl branched ZnO nanowires for ultrasensitive and selective hydrogen sulfide gas sensing. Microsystems and Nanoengineering, 2020, 6, 30.	3.4	47
23	Topâ€Down Integration of Molybdenum Disulfide Transistors with Waferâ€Scale Uniformity and Layer Controllability. Small, 2017, 13, 1603157.	5.2	45
24	Ultrahigh-Sensitive Finlike Double-Sided E-Skin for Force Direction Detection. ACS Applied Materials & Interfaces, 2020, 12, 14136-14144.	4.0	44
25	Threshold-Tunable, Spike-Rate-Dependent Plasticity Originating from Interfacial Proton Gating for Pattern Learning and Memory. ACS Applied Materials & Interfaces, 2020, 12, 7833-7839.	4.0	41
26	Nb2C MXenes modified SnO2 as high quality electron transfer layer for efficient and stability perovskite solar cells. Nano Energy, 2021, 89, 106455.	8.2	40
27	Band alignment and interfacial structure of ZnO/Si heterojunction with Al2O3 and HfO2 as interlayers. Applied Physics Letters, 2014, 104, .	1.5	39
28	ZnO branched p-CuxO @n-ZnO heterojunction nanowires for improving acetone gas sensing performance. Sensors and Actuators B: Chemical, 2020, 324, 128729.	4.0	39
29	Water assisted atomic layer deposition of yttrium oxide using tris(<i>N</i> , <i>N</i> ′-diisopropyl-2-dimethylamido-guanidinato) yttrium(<scp>iii</scp>): process development, film characterization and functional properties. RSC Advances, 2018, 8, 4987-4994.	1.7	38
30	Band alignment of SiO2/(Al Ga1-)2O3 (0 ≤≤0.49) determined by X-ray photoelectron spectroscopy. Applied Surface Science, 2018, 434, 440-444.	3.1	38
31	Band alignment of AlN/ <i>\hat{l}^2-</i> Ga2O3 heterojunction interface measured by x-ray photoelectron spectroscopy. Applied Physics Letters, 2018, 112, .	1.5	37
32	Atomic Layer Deposition of Ga ₂ O ₃ /ZnO Composite Films for High-Performance Forming-Free Resistive Switching Memory. ACS Applied Materials & Interfaces, 2020, 12, 30538-30547.	4.0	37
33	Spider Web-like Flexible Tactile Sensor for Pressure-Strain Simultaneous Detection. ACS Applied Materials & amp; Interfaces, 2021, 13, 10428-10436.	4.0	37
34	Hollow MXene Sphere-Based Flexible E-Skin for Multiplex Tactile Detection. ACS Applied Materials & Interfaces, 2021, 13, 45924-45934.	4.0	34
35	Investigation of the optical and electrical properties of ZnO/Cu/ZnO multilayers grown by atomic layer deposition. Journal of Alloys and Compounds, 2018, 744, 381-385.	2.8	33
36	Nanoscale All-Oxide-Heterostructured Bio-inspired Optoresponsive Nociceptor. Nano-Micro Letters, 2020, 12, 83.	14.4	33

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37	Optical and microstructural properties of ZnO/TiO2 nanolaminates prepared by atomic layer deposition. Nanoscale Research Letters, 2013, 8, 107.	3.1	32
38	Investigation of the Mechanism for Ohmic Contact Formation in Ti/Al/Ni/Au Contacts to β-Ga ₂ O ₃ Nanobelt Field-Effect Transistors. ACS Applied Materials & Interfaces, 2019, 11, 32127-32134.	4.0	31
39	Hofmeisterâ€Effectâ€Guided Ionohydrogel Design as Printable Bioelectronic Devices. Advanced Materials, 2020, 32, e2000189.	11.1	31
40	Flexible Poly(Vinyl Alcohol)–Graphene Oxide Hybrid Nanocomposite Based Cognitive Memristor with Pavlovian onditioned Reflex Activities. Advanced Electronic Materials, 2020, 6, 1901402.	2.6	31
41	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
42	Atomic Layer Deposition of Nickel on ZnO Nanowire Arrays for High-Performance Supercapacitors. ACS Applied Materials & Interfaces, 2018, 10, 468-476.	4.0	30
43	Room-Temperature Bound Exciton with Long Lifetime in Monolayer GaN. ACS Photonics, 2018, 5, 4081-4088.	3.2	30
44	Novel Ωâ€5haped Core–Shell Photodetector with High Ultraviolet Selectivity and Enhanced Responsivity. Advanced Functional Materials, 2017, 27, 1704477.	7.8	29
45	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
46	Low-Temperature One-Step Growth of AlON Thin Films with Homogenous Nitrogen-Doping Profile by Plasma-Enhanced Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2017, 9, 38662-38669.	4.0	28
47	High responsivity and flexible deep-UV phototransistor based on Ta-doped β-Ga2O3. Npj Flexible Electronics, 2022, 6, .	5.1	28
48	Spectroscopic and electrical properties of atomic layer deposition Al2O3 gate dielectric on surface pretreated Si substrate. Journal of Applied Physics, 2006, 99, 074109.	1.1	26
49	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 <i>via</i> plasma enhanced atomic layer deposition. Journal of Materials Chemistry C, 2018, 6. 12518-12528.	2.7	26
50	Sonochemical functionalization of the low-dimensional surface oxide of Galinstan for heterostructured optoelectronic applications. Journal of Materials Chemistry C, 2019, 7, 5584-5595.	2.7	26
51	High-Performance On-Chip Supercapacitors Based on Mesoporous Silicon Coated with Ultrathin Atomic Layer-Deposited In ₂ O ₃ Films. ACS Applied Materials & Interfaces, 2019, 11, 747-752.	4.0	25
52	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
53	Facile synthesis and enhanced luminescent properties of ZnO/HfO ₂ core–shell nanowires. Nanoscale, 2015, 7, 15462-15468.	2.8	23
54	Low-temperature epitaxial growth of high-quality GaON films on ZnO nanowires for superior photoelectrochemical water splitting. Nano Energy, 2019, 66, 104089.	8.2	23

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55	Strategies for High-Performance Large-Area Perovskite Solar Cells toward Commercialization. Crystals, 2021, 11, 295.	1.0	23
56	A Fully Flexible Intelligent Thermal Touch Panel Based on Intrinsically Plastic Ag ₂ S Semiconductor. Advanced Materials, 2022, 34, e2107479.	11.1	23
57	Investigation of stretchable strain sensor based on CNT/AgNW applied in smart wearable devices. Nanotechnology, 2022, 33, 255501.	1.3	23
58	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
59	Modification of 1D TiO ₂ nanowires with GaO _x N _y by atomic layer deposition for TiO ₂ @GaO _x N _y core–shell nanowires with enhanced photoelectrochemical performance. Nanoscale, 2020, 12, 7159-7173.	2.8	22
60	A Heterostructured Graphene Quantum Dots/β-Ga ₂ O ₃ Solar-Blind Photodetector with Enhanced Photoresponsivity. ACS Applied Materials & Interfaces, 2022, 14, 16846-16855.	4.0	22
61	Measurements of Microstructural, Chemical, Optical, and Electrical Properties of Silicon-Oxygen-Nitrogen Films Prepared by Plasma-Enhanced Atomic Layer Deposition. Nanomaterials, 2018, 8, 1008.	1.9	20
62	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
63	Fabrication of a Nb-Doped β-Ga ₂ O ₃ Nanobelt Field-Effect Transistor and Its Low-Temperature Behavior. ACS Applied Materials & Interfaces, 2020, 12, 8437-8445.	4.0	18
64	Geometric Structure and Electronic Polarization Synergistically Boost Hydrogen Evolution Kinetics in Alkaline Medium. Journal of Physical Chemistry Letters, 2020, 11, 3436-3442.	2.1	18
65	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
66	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
67	Highly sensitive and stable MEMS acetone sensors based on well-designed α-Fe2O3/C mesoporous nanorods. Journal of Colloid and Interface Science, 2022, 622, 156-168.	5.0	17
68	Quantum chemical study of the initial surface reactions of HfO2 atomic layer deposition on the hydroxylated GaAs(001)-4×2 surface. Applied Physics Letters, 2006, 89, 162905.	1.5	16
69	Photoluminescence enhancement of ZnO nanowire arrays by atomic layer deposition of ZrO ₂ layers and thermal annealing. Physical Chemistry Chemical Physics, 2016, 18, 16377-16385.	1.3	15
70	Composition and Properties Control Growth of High-Quality GaO _{<i>x</i>} N _{<i>y</i>} Film by One-Step Plasma-Enhanced Atomic Layer Deposition. Chemistry of Materials, 2019, 31, 7405-7416.	3.2	15
71	Improved electro-optical and photoelectric performance of GaN-based micro-LEDs with an atomic layer deposited AlN passivation layer. Optics Express, 2021, 29, 36559.	1.7	15
72	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

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73	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
74	Effects of Post Annealing Treatments on the Interfacial Chemical Properties and Band Alignment of AlN/Si Structure Prepared by Atomic Layer Deposition. Nanoscale Research Letters, 2017, 12, 102.	3.1	13
75	Surface-enhanced Raman scattering using nanoporous gold on suspended silicon nitride waveguides. Optics Express, 2018, 26, 24614.	1.7	13
76	ALD-based hydrothermal facile synthesis of a dense WO ₃ @TiO ₂ –Fe ₂ O ₃ nanodendrite array with enhanced photoelectrochemical properties. Journal of Materials Chemistry C, 2020, 8, 6756-6762.	2.7	13
77	GaN-Based Micro-Light-Emitting Diode Driven by a Monolithic Integrated Ultraviolet Phototransistor. IEEE Electron Device Letters, 2022, 43, 80-83.	2.2	13
78	A stretchable hardness sensor for systemic sclerosis diagnosis. Nano Energy, 2022, 98, 107242.	8.2	13
79	Band Offsets and Interfacial Properties of HfAlO Gate Dielectric Grown on InP by Atomic Layer Deposition. Nanoscale Research Letters, 2017, 12, 339.	3.1	12
80	Facile Synthesis and Photoluminescence Mechanism of ZnO Nanowires Decorated with Cu Nanoparticles Grown by Atomic Layer Deposition. ACS Applied Electronic Materials, 2019, 1, 1616-1625.	2.0	12
81	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
82	Dual Alâ"Oâ,ƒ/Hfâ,€.â,Zrâ,€.â,Oâ", Stack Thin Films for Improved Ferroelectricity and Reliability. IEEE Electron Letters, 2022, 43, 1235-1238.	Device 2.2	11
83	Density Functional Theory Study on the Reaction Mechanisms of Bis(cyclopentadienyl)magnesium with Hydrogenated and Hydroxylated Si(100)-(2×1) Surfaces. Journal of Physical Chemistry A, 2009, 113, 8791-8794.	1.1	10
84	Enhanced piezoelectric performance of the ZnO/AlN stacked nanofilm nanogenerator grown by atomic layer deposition. APL Materials, 2018, 6, 121109.	2.2	10
85	Investigation of Light-Stimulated α-IGZO Based Photoelectric Transistors for Neuromorphic Applications. IEEE Transactions on Electron Devices, 2020, 67, 3141-3145.	1.6	10
86	Quantum Chemical Study of Adsorption and Dissociation of H2S on the Gallium-Rich GaAs (001)-4 × 2 Surface. Journal of Physical Chemistry B, 2006, 110, 9529-9533.	1.2	9
87	Dual-gate MoS ₂ phototransistor with atomic-layer-deposited HfO ₂ as top-gate dielectric for ultrahigh photoresponsivity. Nanotechnology, 2021, 32, 215203.	1.3	9
88	Chemical Vapor Deposition of Vertically Aligned Carbon Nanotube Arrays: Critical Effects of Oxide Buffer Layers. Nanoscale Research Letters, 2019, 14, 106.	3.1	8
89	DFT calculations of NH3 adsorption and dissociation on gallium-rich GaAs(001)-4×2 surface. Chemical Physics Letters, 2007, 445, 188-192.	1.2	7
90	Realizing a facile and environmental-friendly fabrication of high-performance multi-crystalline silicon solar cells by employing ZnO nanostructures and an Al2O3 passivation layer. Scientific Reports, 2016, 6, 38486.	1.6	7

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91	High-energy x-ray radiation effects on the exfoliated quasi-two-dimensional <i>\î2</i> -Ga ₂ O ₃ nanoflake field-effect transistors. Nanotechnology, 2020, 31, 345206.	1.3	7
92	Effect of rapid thermal annealing on the properties of zinc tin oxide films prepared by plasma-enhanced atomic layer deposition. Ceramics International, 2020, 46, 13033-13039.	2.3	7
93	High optoelectronic performance of a local-back-gate ReS ₂ /ReSe ₂ heterojunction phototransistor with hafnium oxide dielectric. Nanoscale, 2021, 13, 14435-14441.	2.8	7
94	Effects of Al ₂ O ₃ Capping and Post-Annealing on the Conduction Behavior in Few-Layer Black Phosphorus Field-Effect Transistors. IEEE Journal of the Electron Devices Society, 2018, 6, 320-324.	1.2	6
95	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
96	Self-limiting nitrogen/hydrogen plasma radical chemistry in plasma-enhanced atomic layer deposition of cobalt. Nanoscale, 2022, 14, 4712-4725.	2.8	5
97	Effective Suppression of MIS Interface Defects Using Boron Nitride toward High-Performance Ta-Doped-β-Ga ₂ O ₃ MISFETs. Journal of Physical Chemistry Letters, 2022, 13, 3377-3381.	2.1	5
98	X-ray reflectometry and spectroscopic ellipsometry characterization of Al2O3 atomic layer deposition on HF-last and NH3 plasma pretreatment Si substrates. Journal of Materials Research, 2007, 22, 1214-1218.	1.2	4
99	Field Effect Transistors Based on In Situ Fabricated Graphene Scaffold–ZrO ₂ Nanofilms. Advanced Electronic Materials, 2018, 4, 1700424.	2.6	4
100	Atomic Layer Deposition of Buffer Layers for the Growth of Vertically Aligned Carbon Nanotube Arrays. Nanoscale Research Letters, 2019, 14, 119.	3.1	4
101	Sub-nanosecond pulse programming and device design strategy for analog resistive switching in HfOx-based resistive random access memory. Applied Physics Letters, 2019, 114, .	1.5	4
102	Atomic Layer Deposition of Inorganic Films for the Synthesis of Vertically Aligned Carbon Nanotube Arrays and Their Hybrids. Coatings, 2019, 9, 806.	1.2	4
103	Preparation of single crystalline AlN thin films on ZnO nanostructures by atomic layer deposition at low temperature. Nanotechnology, 2021, 32, 275704.	1.3	4
104	Reaction Mechanism of the Metal Precursor Pulse in Plasma-Enhanced Atomic Layer Deposition of Cobalt and the Role of Surface Facets. Journal of Physical Chemistry C, 2020, 124, 11990-12000.	1.5	4
105	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
106	Growth and interfacial properties of atomic layer deposited Al0.7Ti0.3O y high-k dielectric on Ge substrate. Applied Physics A: Materials Science and Processing, 2014, 117, 1479-1484.	1.1	2
107	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
108	Elemental diffusion study of Ge/Al2O3 and Ge/AlN/Al2O3 interfaces upon post deposition annealing. Surfaces and Interfaces, 2017, 9, 51-57.	1.5	2

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109	Nonlinear growth of zinc tin oxide thin films prepared by atomic layer deposition. Ceramics International, 2021, 47, 22760-22767.	2.3	2
110	A Co-Optimization Method of Actuators/Sensors Placement and LQG Controller for Vibration Suppression. IEEE Access, 2021, 9, 29482-29489.	2.6	1
111	The photoemission study of InSb/HfO2 stacks upon N2 rapid thermal annealing. Vacuum, 2019, 168, 108815.	1.6	0
112	Effects of X-ray Irradiation on Vertical GaN-on-GaN Schottky Barrier Diode Biased on the Applied Voltage. , 2020, , .		0
113	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