

Xin-Wei Wang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

104
papers

3,448
citations

31
h-index

55
g-index

113
ext. papers

4,147
ext. citations

7.8
avg. IF

5.65
L-index

#	Paper	IF	Citations
104	High-Performance Self-Aligned Top-Gate Amorphous InGaZnO TFTs with 4 nm-Thick Atomic-Layer-Deposited AlO _x Insulator. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	2
103	The Restructuring-Induced CoO Catalyst for Electrochemical Water Splitting.. <i>Jacs Au</i> , 2021 , 1, 2216-2223		5
102	Atomic Layer Deposition of FeSe ₂ , CoSe ₂ , and NiSe ₂ . <i>Chemistry of Materials</i> , 2021 , 33, 2478-2487	9.6	6
101	Atomic layer deposited nickel sulfide for bifunctional oxygen evolution/reduction electrocatalysis and zinc-air batteries. <i>Nanotechnology</i> , 2021 , 32,	3.4	3
100	Atomic Layer Deposition of Iron, Cobalt, and Nickel Chalcogenides: Progress and Outlook <i>Chemistry of Materials</i> , 2021 , 33, 6251-6268	9.6	4
99	Spectroscopic investigation of defects mediated oxidization of single-layer MoS ₂ . <i>Science China Technological Sciences</i> , 2021 , 64, 611-619	3.5	2
98	Surface passivation of organometal halide perovskites by atomic layer deposition: an investigation of the mechanism of efficient inverted planar solar cells. <i>Nanoscale Advances</i> , 2021 , 3, 2305-2315	5.1	8
97	Performance Enhancement and Bending Restoration for Flexible Amorphous Indium Gallium Zinc Oxide Thin-Film Transistors by Low-Temperature Supercritical Dehydration Treatment. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 8584-8594	9.5	10
96	Applications of Ion Beam Irradiation in Multifunctional Oxide Thin Films: A Review. <i>ACS Applied Electronic Materials</i> , 2021 , 3, 1031-1042	4	3
95	Ultrathin and Ultrasensitive Direct X-ray Detector Based on Heterojunction Phototransistors. <i>Advanced Materials</i> , 2021 , 33, e2101717	24	15
94	Facet-Selective Deposition of Ultrathin Al ₂ O ₃ on Copper Nanocrystals for Highly Stable CO Electroreduction to Ethylene. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 24838-24843	16.4	3
93	X-ray Sensitive hybrid organic photodetectors with embedded CsPbBr ₃ perovskite quantum dots. <i>Organic Electronics</i> , 2021 , 98, 106306	3.5	2
92	A colloidal ZnTe quantum dot-based photocathode with a metal/insulator/semiconductor structure towards solar-driven CO ₂ reduction to tunable syngas. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 3589-3596	13	6
91	Nanopores in two-dimensional materials: accurate fabrication. <i>Materials Horizons</i> , 2021 , 8, 1390-1408	14.4	7
90	Metal Exchange and Diffusion during Atomic Layer Deposition of Cobalt and Nickel Sulfides. <i>Chemistry of Materials</i> , 2021 , 33, 9403-9412	9.6	1
89	Magnetic Raman continuum in single-crystalline H ₃ LiIr ₂ O ₆ . <i>Physical Review B</i> , 2020 , 101,	3.3	5
88	Origin of nonequilibrium 1/f noise in solid-state nanopores. <i>Nanoscale</i> , 2020 , 12, 8975-8981	7.7	4

87	Radiation-induced charge trapping in Si-MOS capacitors with HfO ₂ /SiO ₂ gate dielectrics. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2020 , 479, 150-156	1.2	1
86	Probing the continuum scattering and magnetic collapse in single-crystalline Bi ₂ IrO ₃ by Raman spectroscopy. <i>Physical Review B</i> , 2020 , 101,	3.3	2
85	Self-modulated photoluminescence of CrBr ₃ flake. <i>Micro and Nano Letters</i> , 2020 , 15, 788-792	0.9	1
84	Self-Assembly of Constrained Cyclic Peptides Controlled by Ring Size. <i>CCS Chemistry</i> , 2020 , 2, 42-51	7.2	11
83	Hysteresis-Free, High-Performance Polymer-Dielectric Organic Field-Effect Transistors Enabled by Supercritical Fluid. <i>Research</i> , 2020 , 2020, 6587102	7.8	9
82	Magnetic Order-Induced Polarization Anomaly of Raman Scattering in 2D Magnet CrI ₃ . <i>Nano Letters</i> , 2020 , 20, 729-734	11.5	29
81	Ni _x S _y @MoS ₂ heterostructure prepared by atomic layer deposition as high-performance hydrogen evolution reaction electrocatalysts in alkaline media. <i>Journal of Materials Research</i> , 2020 , 35, 822-830	2.5	10
80	Organosulfur Precursor for Atomic Layer Deposition of High-Quality Metal Sulfide Films. <i>Chemistry of Materials</i> , 2020 , 32, 8885-8894	9.6	11
79	A semi-classical model for the charge exchange and energy loss of slow highly charged ions in ultrathin materials. <i>Matter and Radiation at Extremes</i> , 2019 , 4, 054401	4.7	4
78	Surface Thermolytic Behavior of Nickel Amidinate and Its Implication on the Atomic Layer Deposition of Nickel Compounds. <i>Chemistry of Materials</i> , 2019 , 31, 5172-5180	9.6	12
77	Improving the Activity for Oxygen Evolution Reaction by Tailoring Oxygen Defects in Double Perovskite Oxides. <i>Advanced Functional Materials</i> , 2019 , 29, 1901783	15.6	90
76	Current Gain Degradation Model of Displacement Damage for Drift BJTs. <i>IEEE Transactions on Nuclear Science</i> , 2019 , 66, 716-723	1.7	11
75	A Novel Hybrid-Layered Organic Phototransistor Enables Efficient Intermolecular Charge Transfer and Carrier Transport for Ultrasensitive Photodetection. <i>Advanced Materials</i> , 2019 , 31, e1900763	24	61
74	Uncovering the Effect of Lattice Strain and Oxygen Deficiency on Electrocatalytic Activity of Perovskite Cobaltite Thin Films. <i>Advanced Science</i> , 2019 , 6, 1801898	13.6	85
73	Improved electrochemical performance of LiNi _{0.5} Mn _{0.3} Co _{0.2} O ₂ electrodes coated by atomic-layer-deposited Ta ₂ O ₅ . <i>Functional Materials Letters</i> , 2019 , 12, 1850103	1.2	5
72	Facile, cost-effective plasma synthesis of self-supportive Fe _x on Fe foam for efficient electrochemical reduction of N ₂ under ambient conditions. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 19977-19983	13	28
71	Nanoscale Ni(OH) _x Films on Carbon Cloth Prepared by Atomic Layer Deposition and Electrochemical Activation for Glucose Sensing. <i>ACS Applied Nano Materials</i> , 2019 , 2, 4427-4434	5.6	22
70	A wearable system based on core-shell structured peptide-Co ₉ S ₈ supercapacitor and triboelectric nanogenerator. <i>Nano Energy</i> , 2019 , 66, 104149	17.1	36

69	Raman spectroscopy evidence for dimerization and Mott collapse in BiCl_3 under pressures. <i>Physical Review Materials</i> , 2019 , 3,	3.2	19
68	Atomic Layer Deposition of Cobalt Carbide Thin Films from Cobalt Amidinate and Hydrogen Plasma. <i>ACS Applied Electronic Materials</i> , 2019 , 1, 444-453	4	9
67	An atomically-thin graphene reverse electro dialysis system for efficient energy harvesting from salinity gradient. <i>Nano Energy</i> , 2019 , 57, 783-790	17.1	31
66	Initial Growth and Agglomeration during Atomic Layer Deposition of Nickel Sulfide. <i>Chemistry of Materials</i> , 2019 , 31, 445-453	9.6	21
65	Fabrication of nickel and nickel carbide thin films by pulsed chemical vapor deposition. <i>MRS Communications</i> , 2018 , 8, 88-94	2.7	8
64	Atomic Layer Deposition of the Metal Pyrites FeS_2 , CoS_2 , and NiS_2 . <i>Angewandte Chemie</i> , 2018 , 130, 6000-6004	9	9
63	Atomic Layer Deposition of the Metal Pyrites FeS , CoS , and NiS . <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 5898-5902	16.4	66
62	Tuning Electronic Structure of Single Layer MoS through Defect and Interface Engineering. <i>ACS Nano</i> , 2018 , 12, 2569-2579	16.7	133
61	Atomic Layer Deposition of Nickel Carbide from a Nickel Amidinate Precursor and Hydrogen Plasma. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 8384-8390	9.5	20
60	Generating Sub-nanometer Pores in Single-Layer MoS by Heavy-Ion Bombardment for Gas Separation: A Theoretical Perspective. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 28909-28917	9.5	22
59	Synthesis of Thin-Film Metal Pyrites by an Atomic Layer Deposition Approach. <i>Chemistry - A European Journal</i> , 2018 , 24, 18568-18574	4.8	14
58	Tuning peptide self-assembly by an in-tether chiral center. <i>Science Advances</i> , 2018 , 4, eaar5907	14.3	28
57	Onset voltage shift in the organic thin-film transistor with an atomic-layer-deposited charge-injection interlayer. <i>Organic Electronics</i> , 2018 , 62, 248-252	3.5	4
56	Atomic layer deposition of nickel carbide for supercapacitors and electrocatalytic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 4297-4304	13	69
55	Defect Engineering in Single-Layer MoS Using Heavy Ion Irradiation. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 42524-42533	9.5	79
54	Impact of Strain-Induced Changes in Defect Chemistry on Catalytic Activity of NdNiO Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 36926-36932	9.5	20
53	Improving the Electrocatalytic Activity and Durability of the LaSrCoFeO Cathode by Surface Modification. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 39785-39793	9.5	40
52	Atomic-layer-deposited ultra-thin VO_x film as a hole transport layer for perovskite solar cells. <i>Semiconductor Science and Technology</i> , 2018 , 33, 115016	1.8	16

51	Surface Chemistry during Atomic-Layer Deposition of Nickel Sulfide from Nickel Amidinate and H ₂ S. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 21514-21520	3.8	18
50	Inorganic Surface Coating with Fast Wetting-Dewetting Transitions for Liquid Manipulations. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 19182-19188	9.5	13
49	Interface Energy Alignment of Atomic-Layer-Deposited VO on Pentacene: an in Situ Photoelectron Spectroscopy Investigation. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 1885-1890	9.5	22
48	Atomic Layer Deposition of Iron Sulfide and Its Application as a Catalyst in the Hydrogenation of Azobenzenes. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 3226-3231	16.4	35
47	Atomic Layer Deposition of Iron Sulfide and Its Application as a Catalyst in the Hydrogenation of Azobenzenes. <i>Angewandte Chemie</i> , 2017 , 129, 3274-3279	3.6	12
46	Transporting an ionic-liquid/water mixture in a conical nanochannel: a nanofluidic memristor. <i>Chemical Communications</i> , 2017 , 53, 6125-6127	5.8	37
45	Atomic layer deposition for nanomaterial synthesis and functionalization in energy technology. <i>Materials Horizons</i> , 2017 , 4, 133-154	14.4	119
44	Atomic layer deposition of vanadium oxide thin films from tetrakis(dimethylamino)vanadium precursor. <i>Journal of Materials Research</i> , 2017 , 32, 37-44	2.5	18
43	Atomic-layer-deposited ultrathin Co ₉ S ₈ on carbon nanotubes: an efficient bifunctional electrocatalyst for oxygen evolution/reduction reactions and rechargeable Zn air batteries. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 21353-21361	13	75
42	Rational Bottom-Up Engineering of Electrocatalysts by Atomic Layer Deposition: A Case Study of Fe _x Co _{1-x} Sy-Based Catalysts for Electrochemical Hydrogen Evolution. <i>ACS Energy Letters</i> , 2017 , 2, 2778-2785	20.1	50
41	Deposition of silicon oxide coatings by atmospheric pressure plasma jet for oxygen diffusion barrier applications. <i>Thin Solid Films</i> , 2016 , 615, 63-68	2.2	17
40	Efficient Charge Injection in Organic Field-Effect Transistors Enabled by Low-Temperature Atomic Layer Deposition of Ultrathin VO _x Interlayer. <i>Advanced Functional Materials</i> , 2016 , 26, 4456-4463	15.6	28
39	Magnetocaloric properties and universal behavior in electron-doped manganite Ca _{0.88} Dy _{0.12} MnO ₃ . <i>Journal of Alloys and Compounds</i> , 2016 , 667, 1-5	5.7	6
38	Vapor-Phase Atomic Layer Deposition of Nickel Sulfide and Its Application for Efficient Oxygen-Evolution Electrocatalysis. <i>Chemistry of Materials</i> , 2016 , 28, 1155-1164	9.6	123
37	A capacitive-pulse model for nanoparticle sensing by single conical nanochannels. <i>Nanoscale</i> , 2016 , 8, 1565-71	7.7	7
36	Plasma Modified Polypropylene Membranes as the Lithium-Ion Battery Separators. <i>Plasma Science and Technology</i> , 2016 , 18, 424-429	1.5	10
35	Optimized Temperature Effect of Li-Ion Diffusion with Layer Distance in Li(NixMnyCoz)O ₂ Cathode Materials for High Performance Li-Ion Battery. <i>Advanced Energy Materials</i> , 2016 , 6, 1501309	21.8	134
34	Epitaxial Growth of MgCaO on GaN by Atomic Layer Deposition. <i>Nano Letters</i> , 2016 , 16, 7650-7654	11.5	26

33	Modeling of α -Alumina lateral phase transformation with applications to oxidation kinetics of NiAl-based alloys. <i>Materials and Design</i> , 2016 , 112, 519-529	8.1	9
32	Band Alignment for Rectification and Tunneling Effects in AlO Atomic-Layer-Deposited on Back Contact for CdTe Solar Cell. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 28143-28148	9.5	6
31	Atomic layer deposition modified track-etched conical nanochannels for protein sensing. <i>Analytical Chemistry</i> , 2015 , 87, 8227-33	7.8	48
30	Kinetics Tuning of Li-Ion Diffusion in Layered Li(NixMnyCoz)O2. <i>Journal of the American Chemical Society</i> , 2015 , 137, 8364-7	16.4	209
29	Towards printed perovskite solar cells with cuprous oxide hole transporting layers: a theoretical design. <i>Semiconductor Science and Technology</i> , 2015 , 30, 054004	1.8	37
28	A core-shell nanohollow-Fe2O3@graphene hybrid prepared through the Kirkendall process as a high performance anode material for lithium ion batteries. <i>Chemical Communications</i> , 2015 , 51, 7855-8	5.8	69
27	Enhancing the High-Voltage Cycling Performance of LiNi(0.5)Mn(0.3)Co(0.2)O2 by Retarding Its Interfacial Reaction with an Electrolyte by Atomic-Layer-Deposited Al2O3. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 25105-12	9.5	136
26	Vapor-Phase Atomic Layer Deposition of Co9S8 and Its Application for Supercapacitors. <i>Nano Letters</i> , 2015 , 15, 6689-95	11.5	154
25	Low-Temperature Atomic Layer Deposition of High Purity, Smooth, Low Resistivity Copper Films by Using Amidinate Precursor and Hydrogen Plasma. <i>Chemistry of Materials</i> , 2015 , 27, 5988-5996	9.6	51
24	Rectification and tunneling effects enabled by Al2O3 atomic layer deposited on back contact of CdTe solar cells. <i>Applied Physics Letters</i> , 2015 , 107, 013907	3.4	19
23	Mechanism of the defect formation in supported graphene by energetic heavy ion irradiation: the substrate effect. <i>Scientific Reports</i> , 2015 , 5, 9935	4.9	54
22	Template-free synthesis and mechanistic study of porous three-dimensional hierarchical uranium-containing and uranium oxide microspheres. <i>Chemistry - A European Journal</i> , 2014 , 20, 12655-62	4.8	15
21	Fabrication of nanofluidic diodes with polymer nanopores modified by atomic layer deposition. <i>Biomicrofluidics</i> , 2014 , 8, 052111	3.2	14
20	Size-tunable synthesis of monodisperse thorium dioxide nanoparticles and their performance on the adsorption of dye molecules. <i>CrystEngComm</i> , 2014 , 16, 10469-10475	3.3	23
19	Variability Improvement by Interface Passivation and EOT Scaling of InGaAs Nanowire MOSFETs. <i>IEEE Electron Device Letters</i> , 2013 , 34, 608-610	4.4	12
18	Heteroepitaxy of La2O3 and La(2-x)Y(x)O3 on GaAs (111)A by atomic layer deposition: achieving low interface trap density. <i>Nano Letters</i> , 2013 , 13, 594-9	11.5	67
17	High-Quality Epitaxy of Ruthenium Dioxide, RuO2, on Rutile Titanium Dioxide, TiO2, by Pulsed Chemical Vapor Deposition. <i>Crystal Growth and Design</i> , 2013 , 13, 1316-1321	3.5	16
16	Performance enhancement of gate-all-around InGaAs nanowire MOSFETs by raised source and drain structure 2013 ,		2

15	Effects of forming gas anneal on ultrathin InGaAs nanowire metal-oxide-semiconductor field-effect transistors. <i>Applied Physics Letters</i> , 2013 , 102, 093505	3.4	21
14	GaAs Enhancement-Mode NMOSFETs Enabled by Atomic Layer Epitaxial $\text{La}_{1.8}\text{Y}_{0.2}\text{O}_3$ as Dielectric. <i>IEEE Electron Device Letters</i> , 2013 , 34, 487-489	4.4	12
13	Smooth, Low-Resistance, Pinhole-Free, Conformal Ruthenium Films by Pulsed Chemical Vapor Deposition. <i>ECS Journal of Solid State Science and Technology</i> , 2013 , 2, N41-N44	2	13
12	2080nm Channel length InGaAs gate-all-around nanowire MOSFETs with EOT=1.2nm and lowest SS=63mV/dec 2012 ,		16
11	Kinetics of initial lithiation of crystalline silicon electrodes of lithium-ion batteries. <i>Nano Letters</i> , 2012 , 12, 5039-47	11.5	175
10	Synthesis of vanadium dioxide thin films on conducting oxides and metal-insulator transition characteristics. <i>Journal of Crystal Growth</i> , 2012 , 338, 96-102	1.6	23
9	Glass-encapsulated light harvesters: more efficient dye-sensitized solar cells by deposition of self-aligned, conformal, and self-limited silica layers. <i>Journal of the American Chemical Society</i> , 2012 , 134, 9537-40	16.4	98
8	III-V gate-all-around nanowire MOSFET process technology: From 3D to 4D 2012 ,		24
7	Atomic layer deposition of Sc ₂ O ₃ for passivating AlGaIn/GaN high electron mobility transistor devices. <i>Applied Physics Letters</i> , 2012 , 101, 232109	3.4	36
6	Nanofluidic diode generated by pH gradient inside track-etched conical nanopore. <i>Radiation Measurements</i> , 2009 , 44, 1119-1122	1.5	31
5	Surface modification of single track-etched nanopores with surfactant CTAB. <i>Langmuir</i> , 2009 , 25, 8870-44		28
4	Electric energy generation in single track-etched nanopores. <i>Applied Physics Letters</i> , 2008 , 93, 163116	3.4	96
3	How the geometric configuration and the surface charge distribution influence the ionic current rectification in nanopores. <i>Journal Physics D: Applied Physics</i> , 2007 , 40, 7077-7084	3	56
2	Ultralow-Power Synaptic Transistors Based on Ta ₂ O ₅ /Al ₂ O ₃ Bilayer Dielectric for Algebraic Arithmetic. <i>Advanced Electronic Materials</i> , 2100922	6.4	1
1	Facet-Selective Deposition of Ultrathin Al ₂ O ₃ on Copper Nanocrystals for Highly Stable CO ₂ Electroreduction to Ethylene. <i>Angewandte Chemie</i> ,	3.6	3