Xin-Wei Wang

List of Publications by Citations

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	Kinetics Tuning of Li-Ion Diffusion in Layered Li(NixMnyCoz)O2. *Journal of the American Chemical Society*, **2015**, 137, 8364-7	16.4	209
103	Kinetics of initial lithiation of crystalline silicon electrodes of lithium-ion batteries. *Nano Letters*, **2012**, 12, 5039-47	11.5	175
102	Vapor-Phase Atomic Layer Deposition of Co9S8 and Its Application for Supercapacitors. *Nano Letters*, **2015**, 15, 6689-95	11.5	154
101	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. *ACS Applied Materials & Interfaces*, **2015**, 7, 25105-12	9.5	136
100	Optimized Temperature Effect of Li-Ion Diffusion with Layer Distance in Li(NixMnyCoz)O2 Cathode Materials for High Performance Li-Ion Battery. *Advanced Energy Materials*, **2016**, 6, 1501309	21.8	134
99	Tuning Electronic Structure of Single Layer MoS through Defect and Interface Engineering. *ACS Nano*, **2018**, 12, 2569-2579	16.7	133
98	Vapor-Phase Atomic Layer Deposition of Nickel Sulfide and Its Application for Efficient Oxygen-Evolution Electrocatalysis. *Chemistry of Materials*, **2016**, 28, 1155-1164	9.6	123
97	Atomic layer deposition for nanomaterial synthesis and functionalization in energy technology. *Materials Horizons*, **2017**, 4, 133-154	14.4	119
96	Glass-encapsulated light harvesters: more efficient dye-sensitized solar cells by deposition of self-aligned, conformal, and self-limited silica layers. *Journal of the American Chemical Society*, **2012** , 134, 9537-40	16.4	98
95	Electric energy generation in single track-etched nanopores. *Applied Physics Letters*, **2008**, 93, 163116	3.4	96
94	Improving the Activity for Oxygen Evolution Reaction by Tailoring Oxygen Defects in Double Perovskite Oxides. *Advanced Functional Materials*, **2019**, 29, 1901783	15.6	90
93	Uncovering the Effect of Lattice Strain and Oxygen Deficiency on Electrocatalytic Activity of Perovskite Cobaltite Thin Films. *Advanced Science*, **2019**, 6, 1801898	13.6	85
92	Defect Engineering in Single-Layer MoS Using Heavy Ion Irradiation. *ACS Applied Materials & Interfaces*, **2018**, 10, 42524-42533	9.5	79
91	Atomic-layer-deposited ultrathin Co9S8 on carbon nanotubes: an efficient bifunctional electrocatalyst for oxygen evolution/reduction reactions and rechargeable Zn□ir batteries. *Journal of Materials Chemistry A*, **2017**, 5, 21353-21361	13	75
90	A core-shell nanohollow-□Fe2O3@graphene hybrid prepared through the Kirkendall process as a high performance anode material for lithium ion batteries. *Chemical Communications*, **2015**, 51, 7855-8	5.8	69
89	Atomic layer deposition of nickel carbide for supercapacitors and electrocatalytic hydrogen evolution. *Journal of Materials Chemistry A*, **2018**, 6, 4297-4304	13	69
88	Heteroepitaxy of La2O3 and La(2-x)Y(x)O3 on GaAs (111)A by atomic layer deposition: achieving low interface trap density. *Nano Letters*, **2013**, 13, 594-9	11.5	67

87	Atomic Layer Deposition of the Metal Pyrites FeS , CoS , and NiS. *Angewandte Chemie - International Edition*, **2018**, 57, 5898-5902	16.4	66
86	A Novel Hybrid-Layered Organic Phototransistor Enables Efficient Intermolecular Charge Transfer and Carrier Transport for Ultrasensitive Photodetection. *Advanced Materials*, **2019**, 31, e1900763	24	61
85	How the geometric configuration and the surface charge distribution influence the ionic current rectification in nanopores. *Journal Physics D: Applied Physics*, **2007**, 40, 7077-7084	3	56
84	Mechanism of the defect formation in supported graphene by energetic heavy ion irradiation: the substrate effect. *Scientific Reports*, **2015**, 5, 9935	4.9	54
83	Low-Temperature Atomic Layer Deposition of High Purity, Smooth, Low Resistivity Copper Films by Using Amidinate Precursor and Hydrogen Plasma. *Chemistry of Materials*, **2015**, 27, 5988-5996	9.6	51
82	Rational Bottom-Up Engineering of Electrocatalysts by Atomic Layer Deposition: A Case Study of FexCo1−xSy-Based Catalysts for Electrochemical Hydrogen Evolution. *ACS Energy Letters*, **2017**, 2, 2778-2785	20.1	50
81	Atomic layer deposition modified track-etched conical nanochannels for protein sensing. *Analytical Chemistry*, **2015**, 87, 8227-33	7.8	48
80	Improving the Electrocatalytic Activity and Durability of the LaSrCoFeO Cathode by Surface Modification. *ACS Applied Materials & Interfaces*, **2018**, 10, 39785-39793	9.5	40
79	Transporting an ionic-liquid/water mixture in a conical nanochannel: a nanofluidic memristor. *Chemical Communications*, **2017**, 53, 6125-6127	5.8	37
78	Towards printed perovskite solar cells with cuprous oxide hole transporting layers: a theoretical design. *Semiconductor Science and Technology*, **2015**, 30, 054004	1.8	37
77	A wearable system based on core-shell structured peptide-Co9S8 supercapacitor and triboelectric nanogenerator. *Nano Energy*, **2019**, 66, 104149	17.1	36
76	Atomic layer deposition of Sc2O3 for passivating AlGaN/GaN high electron mobility transistor devices. *Applied Physics Letters*, **2012**, 101, 232109	3.4	36
75	Atomic Layer Deposition of Iron Sulfide and Its Application as a Catalyst in the Hydrogenation of Azobenzenes. *Angewandte Chemie - International Edition*, **2017**, 56, 3226-3231	16.4	35
74	Nanofluidic diode generated by pH gradient inside track-etched conical nanopore. *Radiation Measurements*, **2009**, 44, 1119-1122	1.5	31
73	An atomically-thin graphene reverse electrodialysis system for efficient energy harvesting from salinity gradient. *Nano Energy*, **2019**, 57, 783-790	17.1	31
72	Magnetic Order-Induced Polarization Anomaly of Raman Scattering in 2D Magnet CrI. *Nano Letters*, **2020**, 20, 729-734	11.5	29
71	Efficient Charge Injection in Organic Field-Effect Transistors Enabled by Low-Temperature Atomic Layer Deposition of Ultrathin VOx Interlayer. *Advanced Functional Materials*, **2016**, 26, 4456-4463	15.6	28
70	Tuning peptide self-assembly by an in-tether chiral center. *Science Advances*, **2018**, 4, eaar5907	14.3	28

69	Facile, cost-effective plasma synthesis of self-supportive FeSx on Fe foam for efficient electrochemical reduction of N2 under ambient conditions. *Journal of Materials Chemistry A*, **2019**, 7, 19977-19983	13	28
68	Surface modification of single track-etched nanopores with surfactant CTAB. *Langmuir*, **2009**, 25, 8870-4	4	28
67	Epitaxial Growth of MgCaO on GaN by Atomic Layer Deposition. *Nano Letters*, **2016**, 16, 7650-7654	11.5	26
66	III-V gate-all-around nanowire MOSFET process technology: From 3D to 4D **2012**,		24
65	Size-tunable synthesis of monodisperse thorium dioxide nanoparticles and their performance on the adsorption of dye molecules. *CrystEngComm*, **2014**, 16, 10469-10475	3.3	23
64	Synthesis of vanadium dioxide thin films on conducting oxides and metal□nsulator transition characteristics. *Journal of Crystal Growth*, **2012**, 338, 96-102	1.6	23
63	Interface Energy Alignment of Atomic-Layer-Deposited VO on Pentacene: an in Situ Photoelectron Spectroscopy Investigation. *ACS Applied Materials & Interfaces*, **2017**, 9, 1885-1890	9.5	22
62	Generating Sub-nanometer Pores in Single-Layer MoS by Heavy-Ion Bombardment for Gas Separation: A Theoretical Perspective. *ACS Applied Materials & Interfaces*, **2018**, 10, 28909-28917	9.5	22
61	Nanoscale Ni(OH)x Films on Carbon Cloth Prepared by Atomic Layer Deposition and Electrochemical Activation for Glucose Sensing. *ACS Applied Nano Materials*, **2019**, 2, 4427-4434	5.6	22
60	Effects of forming gas anneal on ultrathin InGaAs nanowire metal-oxide-semiconductor field-effect transistors. *Applied Physics Letters*, **2013**, 102, 093505	3.4	21
59	Initial Growth and Agglomeration during Atomic Layer Deposition of Nickel Sulfide. *Chemistry of Materials*, **2019**, 31, 445-453	9.6	21
58	Atomic Layer Deposition of Nickel Carbide from a Nickel Amidinate Precursor and Hydrogen Plasma. *ACS Applied Materials & Interfaces*, **2018**, 10, 8384-8390	9.5	20
57	Impact of Strain-Induced Changes in Defect Chemistry on Catalytic Activity of NdNiO Electrodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 36926-36932	9.5	20
56	Rectification and tunneling effects enabled by Al2O3 atomic layer deposited on back contact of CdTe solar cells. *Applied Physics Letters*, **2015**, 107, 013907	3.4	19
55	Raman spectroscopy evidence for dimerization and Mott collapse in □uCl3 under pressures. *Physical Review Materials*, **2019**, 3,	3.2	19
54	Atomic layer deposition of vanadium oxide thin films from tetrakis(dimethylamino)vanadium precursor. *Journal of Materials Research*, **2017**, 32, 37-44	2.5	18
53	Surface Chemistry during Atomic-Layer Deposition of Nickel Sulfide from Nickel Amidinate and H2S. *Journal of Physical Chemistry C*, **2018**, 122, 21514-21520	3.8	18
52	Deposition of silicon oxide coatings by atmospheric pressure plasma jet for oxygen diffusion barrier applications. *Thin Solid Films*, **2016**, 615, 63-68	2.2	17

51	20[illegible]80nm Channel length InGaAs gate-all-around nanowire MOSFETs with EOT=1.2nm and lowest SS=63mV/dec **2012**,		16
50	High-Quality Epitaxy of Ruthenium Dioxide, RuO2, on Rutile Titanium Dioxide, TiO2, by Pulsed Chemical Vapor Deposition. *Crystal Growth and Design*, **2013**, 13, 1316-1321	3.5	16
49	Atomic-layer-deposited ultra-thin VOx film as a hole transport layer for perovskite solar cells. *Semiconductor Science and Technology*, **2018**, 33, 115016	1.8	16
48	Template-free synthesis and mechanistic study of porous three-dimensional hierarchical uranium-containing and uranium oxide microspheres. *Chemistry - A European Journal*, **2014**, 20, 12655-62	4.8	15
47	Ultrathin and Ultrasensitive Direct X-ray Detector Based on Heterojunction Phototransistors. *Advanced Materials*, **2021**, 33, e2101717	24	15
46	Synthesis of Thin-Film Metal Pyrites by an Atomic Layer Deposition Approach. *Chemistry - A European Journal*, **2018**, 24, 18568-18574	4.8	14
45	Fabrication of nanofluidic diodes with polymer nanopores modified by atomic layer deposition. *Biomicrofluidics*, **2014**, 8, 052111	3.2	14
44	Smooth, Low-Resistance, Pinhole-Free, Conformal Ruthenium Films by Pulsed Chemical Vapor Deposition. *ECS Journal of Solid State Science and Technology*, **2013**, 2, N41-N44	2	13
43	Inorganic Surface Coating with Fast Wetting-Dewetting Transitions for Liquid Manipulations. *ACS Applied Materials & Interfaces*, **2018**, 10, 19182-19188	9.5	13
42	Atomic Layer Deposition of Iron Sulfide and Its Application as a Catalyst in the Hydrogenation of Azobenzenes. *Angewandte Chemie*, **2017**, 129, 3274-3279	3.6	12
41	Surface Thermolytic Behavior of Nickel Amidinate and Its Implication on the Atomic Layer Deposition of Nickel Compounds. *Chemistry of Materials*, **2019**, 31, 5172-5180	9.6	12
40	Variability Improvement by Interface Passivation and EOT Scaling of InGaAs Nanowire MOSFETs. *IEEE Electron Device Letters*, **2013**, 34, 608-610	4.4	12
39	GaAs Enhancement-Mode NMOSFETs Enabled by Atomic Layer Epitaxial $hbox{La}_{1.8}hbox{Y}_{0.2}hbox{O}_{3}$ as Dielectric. *IEEE Electron Device Letters*, **2013**, 34, 487-489	4.4	12
38	Current Gain Degradation Model of Displacement Damage for Drift BJTs. *IEEE Transactions on Nuclear Science*, **2019**, 66, 716-723	1.7	11
37	Self-Assembly of Constrained Cyclic Peptides Controlled by Ring Size. *CCS Chemistry*, **2020**, 2, 42-51	7.2	11
36	Organosulfur Precursor for Atomic Layer Deposition of High-Quality Metal Sulfide Films. *Chemistry of Materials*, **2020**, 32, 8885-8894	9.6	11
35	NiSx@MoS2 heterostructure prepared by atomic layer deposition as high-performance hydrogen evolution reaction electrocatalysts in alkaline media. *Journal of Materials Research*, **2020**, 35, 822-830	2.5	10
34	Plasma Modified Polypropylene Membranes as the Lithium-Ion Battery Separators. *Plasma Science and Technology*, **2016**, 18, 424-429	1.5	10

33	Performance Enhancement and Bending Restoration for Flexible Amorphous Indium Gallium Zinc Oxide Thin-Film Transistors by Low-Temperature Supercritical Dehydration Treatment. *ACS Applied Materials & Interfaces*, **2021**, 13, 8584-8594	9.5	10
32	Atomic Layer Deposition of the Metal Pyrites FeS2, CoS2, and NiS2. *Angewandte Chemie*, **2018**, 130, 6000-6004	3.6	9
31	Hysteresis-Free, High-Performance Polymer-Dielectric Organic Field-Effect Transistors Enabled by Supercritical Fluid. *Research*, **2020**, 2020, 6587102	7.8	9
30	Modeling of □-alumina lateral phase transformation with applications to oxidation kinetics of NiAl-based alloys. *Materials and Design*, **2016**, 112, 519-529	8.1	9
29	Atomic Layer Deposition of Cobalt Carbide Thin Films from Cobalt Amidinate and Hydrogen Plasma. *ACS Applied Electronic Materials*, **2019**, 1, 444-453	4	9
28	Fabrication of nickel and nickel carbide thin films by pulsed chemical vapor deposition. *MRS Communications*, **2018**, 8, 88-94	2.7	8
27	Surface passivation of organometal halide perovskites by atomic layer deposition: an investigation of the mechanism of efficient inverted planar solar cells. *Nanoscale Advances*, **2021**, 3, 2305-2315	5.1	8
26	A capacitive-pulse model for nanoparticle sensing by single conical nanochannels. *Nanoscale*, **2016**, 8, 1565-71	7.7	7
25	Nanopores in two-dimensional materials: accurate fabrication. *Materials Horizons*, **2021**, 8, 1390-1408	14.4	7
24	Magnetocaloric properties and universal behavior in electron-doped manganite Ca0.88Dy0.12MnO3. *Journal of Alloys and Compounds*, **2016**, 667, 1-5	5.7	6
23	Atomic Layer Deposition of FeSe2, CoSe2, and NiSe2. *Chemistry of Materials*, **2021**, 33, 2478-2487	9.6	6
22	Band Alignment for Rectification and Tunneling Effects in AlO Atomic-Layer-Deposited on Back Contact for CdTe Solar Cell. *ACS Applied Materials & Interfaces*, **2016**, 8, 28143-28148	9.5	6
21	A colloidal ZnTe quantum dot-based photocathode with a metal□nsulator□emiconductor structure towards solar-driven CO2 reduction to tunable syngas. *Journal of Materials Chemistry A*, **2021**, 9, 3589-3596	13	6
20	Magnetic Raman continuum in single-crystalline H3LiIr2O6. *Physical Review B*, **2020**, 101,	3.3	5
19	Improved electrochemical performance of LiNi0.5Mn0.3Co0.2O2 electrodes coated by atomic-layer-deposited Ta2O5. *Functional Materials Letters*, **2019**, 12, 1850103	1.2	5
18	The Restructuring-Induced CoO Catalyst for Electrochemical Water Splitting.. *Jacs Au*, **2021**, 1, 2216-2223		5
17	A semi-classical model for the charge exchange and energy loss of slow highly charged ions in ultrathin materials. *Matter and Radiation at Extremes*, **2019**, 4, 054401	4.7	4
16	Origin of nonequilibrium 1/f noise in solid-state nanopores. *Nanoscale*, **2020**, 12, 8975-8981	7.7	4

15	Onset voltage shift in the organic thin-film transistor with an atomic-layer-deposited charge-injection interlayer. *Organic Electronics*, **2018**, 62, 248-252	3.5	4
14	Atomic Layer Deposition of Iron, Cobalt, and Nickel Chalcogenides: Progress and Outlook *Chemistry of Materials*, **2021**, 33, 6251-6268	9.6	4
13	Atomic layer deposited nickel sulfide for bifunctional oxygen evolution/reduction electrocatalysis and zinc-air batteries. *Nanotechnology*, **2021**, 32,	3.4	3
12	Applications of Ion Beam Irradiation in Multifunctional Oxide Thin Films: A Review. *ACS Applied Electronic Materials*, **2021**, 3, 1031-1042	4	3
11	Facet-Selective Deposition of Ultrathin Al O on Copper Nanocrystals for Highly Stable CO Electroreduction to Ethylene. *Angewandte Chemie - International Edition*, **2021**, 60, 24838-24843	16.4	3
10	Facet-Selective Deposition of Ultrathin Al2O3 on Copper Nanocrystals for Highly Stable CO2 Electroreduction to Ethylene. *Angewandte Chemie*,	3.6	3
9	Probing the continuum scattering and magnetic collapse in single-crystalline i2IrO3 by Raman spectroscopy. *Physical Review B*, **2020**, 101,	3.3	2
8	Performance enhancement of gate-all-around InGaAs nanowire MOSFETs by raised source and drain structure **2013**,		2
7	Spectroscopic investigation of defects mediated oxidization of single-layer MoS2. *Science China Technological Sciences*, **2021**, 64, 611-619	3.5	2
6	X-ray Sensitive hybrid organic photodetectors with embedded CsPbBr3 perovskite quantum dots. *Organic Electronics*, **2021**, 98, 106306	3.5	2
5	High-Performance Self-Aligned Top-Gate Amorphous InGaZnO TFTs with 4 nm-Thick Atomic-Layer-Deposited AlOx Insulator. *IEEE Electron Device Letters*, **2022**, 1-1	4.4	2
4	Radiation-induced charge trapping in Si-MOS capacitors with HfO2/SiO2 gate dielectrics. *Nuclear Instruments & Methods in Physics Research B*, **2020**, 479, 150-156	1.2	1
3	Ultralow-Power Synaptic Transistors Based on Ta 2 O 5 /Al 2 O 3 Bilayer Dielectric for Algebraic Arithmetic. *Advanced Electronic Materials*,2100922	6.4	1
2	Self-modulated photoluminescence of CrBr 3 flake. *Micro and Nano Letters*, **2020**, 15, 788-792	0.9	1
1	Metal Exchange and Diffusion during Atomic Layer Deposition of Cobalt and Nickel Sulfides. *Chemistry of Materials*, **2021**, 33, 9403-9412	9.6	1