

Jiangwei Wang

List of Publications by Year in descending order

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citing authors

#	ARTICLE	IF	CITATIONS
1	Anisotropic Swelling and Fracture of Silicon Nanowires during Lithiation. <i>Nano Letters</i> , 2011, 11, 3312-3318.	9.1	691
2	Nanoscale origins of the damage tolerance of the high-entropy alloy CrMnFeCoNi. <i>Nature Communications</i> , 2015, 6, 10143.	12.8	608
3	In situ atomic-scale imaging of electrochemical lithiation in silicon. <i>Nature Nanotechnology</i> , 2012, 7, 749-756.	31.5	533
4	Microstructural Evolution of Tin Nanoparticles during In Situ Sodium Insertion and Extraction. <i>Nano Letters</i> , 2012, 12, 5897-5902.	9.1	491
5	Ultrafast Electrochemical Lithiation of Individual Si Nanowire Anodes. <i>Nano Letters</i> , 2011, 11, 2251-2258.	9.1	379
6	Two-Phase Electrochemical Lithiation in Amorphous Silicon. <i>Nano Letters</i> , 2013, 13, 709-715.	9.1	377
7	Formation of monatomic metallic glasses through ultrafast liquid quenching. <i>Nature</i> , 2014, 512, 177-180.	27.8	365
8	Harnessing the concurrent reaction dynamics in active Si and Ge to achieve high performance lithium-ion batteries. <i>Energy and Environmental Science</i> , 2018, 11, 669-681.	30.8	329
9	Tailoring Pore Size of Nitrogen-Doped Hollow Carbon Nanospheres for Confining Sulfur in Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2015, 5, 1401752.	19.5	273
10	In Situ Transmission Electron Microscopy Study of Electrochemical Sodiation and Potassiation of Carbon Nanofibers. <i>Nano Letters</i> , 2014, 14, 3445-3452.	9.1	263
11	In situ atomic-scale observation of twinning-dominated deformation in nanoscale body-centred cubic tungsten. <i>Nature Materials</i> , 2015, 14, 594-600.	27.5	250
12	Near-ideal theoretical strength in gold nanowires containing angstrom scale twins. <i>Nature Communications</i> , 2013, 4, 1742.	12.8	226
13	High rate and long cycle life porous carbon nanofiber paper anodes for potassium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 19237-19244.	10.3	195
14	Defect-free potassium manganese hexacyanoferrate cathode material for high-performance potassium-ion batteries. <i>Nature Communications</i> , 2021, 12, 2167.	12.8	153
15	Reaction and Capacity-Fading Mechanisms of Tin Nanoparticles in Potassium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2017, 121, 12652-12657.	3.1	150
16	Lithiation-Induced Embrittlement of Multiwalled Carbon Nanotubes. <i>ACS Nano</i> , 2011, 5, 7245-7253.	14.6	122
17	Lithium-tellurium batteries based on tellurium/porous carbon composite. <i>Journal of Materials Chemistry A</i> , 2014, 2, 12201-12207.	10.3	121
18	Size-Dependent Brittle-to-Ductile Transition in Silica Glass Nanofibers. <i>Nano Letters</i> , 2016, 16, 105-113.	9.1	120

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19	Growth of environmentally stable transition metal selenide films. <i>Nature Materials</i> , 2019, 18, 602-607.	27.5	116
20	In situ atomistic observation of disconnection-mediated grain boundary migration. <i>Nature Communications</i> , 2019, 10, 156.	12.8	98
21	Structural Evolution and Pulverization of Tin Nanoparticles during Lithiation-Delithiation Cycling. <i>Journal of the Electrochemical Society</i> , 2014, 161, F3019-F3024.	2.9	96
22	High damage tolerance of electrochemically lithiated silicon. <i>Nature Communications</i> , 2015, 6, 8417.	12.8	96
23	Sandwich structure stabilized atomic Fe catalyst for highly efficient Fenton-like reaction at all pH values. <i>Applied Catalysis B: Environmental</i> , 2021, 282, 119551.	20.2	93
24	Free-Standing Nitrogen-Doped Cup-Stacked Carbon Nanotube Mats for Potassium-Ion Battery Anodes. <i>ACS Applied Energy Materials</i> , 2018, 1, 1703-1707.	5.1	90
25	Study of the failure mechanism of an epoxy coating system under high hydrostatic pressure. <i>Corrosion Science</i> , 2013, 74, 59-70.	6.6	78
26	Sandwich-Lithiation and Longitudinal Crack in Amorphous Silicon Coated on Carbon Nanofibers. <i>ACS Nano</i> , 2012, 6, 9158-9167.	14.6	72
27	Atomic-scale mechanism of the β - α' phase transformation in Al-Cu alloys. <i>Journal of Materials Science and Technology</i> , 2017, 33, 1159-1164.	10.7	63
28	A Nonflammable Electrolyte Enabled High Performance $K_{0.5}MnO_2$ Cathode for Low-Cost Potassium-Ion Batteries. <i>ACS Energy Letters</i> , 2020, 5, 1916-1922.	17.4	61
29	Plasmonic modulation of gold nanotheranostics for targeted NIR-II photothermal-augmented immunotherapy. <i>Nano Today</i> , 2020, 35, 100987.	11.9	55
30	Dual-Additive Assisted Chemical Vapor Deposition for the Growth of Mn-Doped 2D MoS_2 with Tunable Electronic Properties. <i>Small</i> , 2020, 16, e1903181.	10.0	54
31	Metallic nanocrystals with low angle grain boundary for controllable plastic reversibility. <i>Nature Communications</i> , 2020, 11, 3100.	12.8	53
32	Anti-twinning in nanoscale tungsten. <i>Science Advances</i> , 2020, 6, eaay2792.	10.3	49
33	Defect-driven selective metal oxidation at atomic scale. <i>Nature Communications</i> , 2021, 12, 558.	12.8	47
34	Consecutive crystallographic reorientations and superplasticity in body-centered cubic niobium nanowires. <i>Science Advances</i> , 2018, 4, eaas8850.	10.3	46
35	Revealing extreme twin-boundary shear deformability in metallic nanocrystals. <i>Science Advances</i> , 2021, 7, eabe4758.	10.3	46
36	Tuning the Outward to Inward Swelling in Lithiated Silicon Nanotubes via Surface Oxide Coating. <i>Nano Letters</i> , 2016, 16, 5815-5822.	9.1	45

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37	Dispersion-strengthened microparticle silicon composite with high anti-pulverization capability for Li-ion batteries. <i>Energy Storage Materials</i> , 2018, 14, 279-288.	18.0	45
38	Local lattice distortion mediated formation of stacking faults in Mg alloys. <i>Acta Materialia</i> , 2019, 170, 231-239.	7.9	45
39	Strong Hall-Petch Type Behavior in the Elastic Strain Limit of Nanotwinned Gold Nanowires. <i>Nano Letters</i> , 2015, 15, 3865-3870.	9.1	41
40	Unstable twin in body-centered cubic tungsten nanocrystals. <i>Nature Communications</i> , 2020, 11, 2497.	12.8	40
41	High performance potassium-sulfur batteries and their reaction mechanism. <i>Journal of Materials Chemistry A</i> , 2020, 8, 10875-10884.	10.3	40
42	Enhancing the Strength of Graphene by a Denser Grain Boundary. <i>ACS Nano</i> , 2018, 12, 4529-4535.	14.6	39
43	Hydrothermal synthesis and formation mechanism of the single-crystalline $\text{Bi}_4\text{Ti}_3\text{O}_{12}$ nanosheets with dominant (010) facets. <i>CrystEngComm</i> , 2016, 18, 2268-2274.	2.6	38
44	Design principle of all-inorganic halide perovskite-related nanocrystals. <i>Journal of Materials Chemistry C</i> , 2018, 6, 12484-12492.	5.5	38
45	Formation of mixed metal sulfides of $\text{Ni}_x\text{Cu}_{1-x}\text{Co}_2\text{S}_4$ for high-performance supercapacitors. <i>Journal of Electroanalytical Chemistry</i> , 2019, 836, 134-142.	3.8	35
46	Combined quantum tunnelling and dielectrophoretic trapping for molecular analysis at ultra-low analyte concentrations. <i>Nature Communications</i> , 2021, 12, 913.	12.8	34
47	Hierarchical twinning governed by defective twin boundary in metallic materials. <i>Science Advances</i> , 2022, 8, .	10.3	33
48	Hydrothermal synthesis of flower-like LiMnPO_4 nanostructures self-assembled with (010) nanosheets and their application in Li-ion batteries. <i>CrystEngComm</i> , 2015, 17, 6399-6405.	2.6	30
49	Olivine LiFePO_4 nanocrystallites embedded in carbon-coating matrix for high power Li-ion batteries. <i>Electrochimica Acta</i> , 2016, 222, 685-692.	5.2	30
50	Atomistic perspective on in situ nanomechanics. <i>Extreme Mechanics Letters</i> , 2016, 8, 127-139.	4.1	29
51	Bending-induced deformation twinning in body-centered cubic tungsten nanowires. <i>Materials Research Letters</i> , 2019, 7, 210-216.	8.7	29
52	Void-assisted plasticity in Ag nanowires with a single twin structure. <i>Nanoscale</i> , 2014, 6, 9574.	5.6	28
53	Size-dependent dislocation-twin interactions. <i>Nanoscale</i> , 2019, 11, 12672-12679.	5.6	28
54	Highly-efficient MnO_2 /carbon array-type catalytic cathode enabling confined Li_2O_2 growth for long-life Li-O_2 batteries. <i>Energy Storage Materials</i> , 2017, 6, 164-170.	18.0	27

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55	Nanoscale Deformation Analysis With High-Resolution Transmission Electron Microscopy and Digital Image Correlation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015, 82, .	2.2	26
56	Confined seeds derived sodium titanate/graphene composite with synergistic storage ability toward high performance sodium ion capacitors. <i>Chemical Engineering Journal</i> , 2020, 379, 122418.	12.7	23
57	Metal@Organic Framework@Polyacrylonitrile-Derived Potassiophilic Nanoporous Carbon Nanofiber Paper Enables Stable Potassium Metal Anodes. <i>ACS Applied Energy Materials</i> , 2021, 4, 6245-6252.	5.1	23
58	Twinning-assisted dynamic adjustment of grain boundary mobility. <i>Nature Communications</i> , 2021, 12, 6695.	12.8	23
59	Improved Na-storage cycling of amorphous-carbon-sheathed Ni ₃ S ₂ arrays and investigation by in situ TEM characterization. <i>Materials Today Energy</i> , 2017, 5, 99-106.	4.7	22
60	Discrete shear band plasticity through dislocation activities in body-centered cubic tungsten nanowires. <i>Scientific Reports</i> , 2018, 8, 4574.	3.3	22
61	Superplasticity in Gold Nanowires through the Operation of Multiple Slip Systems. <i>Advanced Functional Materials</i> , 2018, 28, 1805258.	14.9	21
62	Discrete twinning dynamics and size-dependent dislocation-to twin transition in body-centred cubic tungsten. <i>Journal of Materials Science and Technology</i> , 2022, 106, 33-40.	10.7	19
63	In situ atomistic observation of the deformation mechanism of Au nanowires with twin-twin intersection. <i>Journal of Materials Science and Technology</i> , 2020, 53, 118-125.	10.7	19
64	Ethylene glycol (EG) solvothermal synthesis of flower-like LiMnPO ₄ nanostructures self-assembled with (010) nanobelts for Li-ion battery positive cathodes. <i>CrystEngComm</i> , 2016, 18, 3282-3288.	2.6	18
65	Deformation-induced interfacial transition zone in Cu/V nanolamellar multilayers. <i>Scripta Materialia</i> , 2019, 159, 104-108.	5.2	17
66	High-performance layered potassium vanadium oxide for K-ion batteries enabled by reduced long-range structural order. <i>Journal of Materials Chemistry A</i> , 2021, 9, 13125-13134.	10.3	17
67	Sulfurized Polyacrylonitrile as a High-Performance and Low-Volume Change Anode for Robust Potassium Storage. <i>ACS Nano</i> , 2021, 15, 18419-18428.	14.6	17
68	Role of intersecting grain boundary on the deformation of twin-twin intersection. <i>Scripta Materialia</i> , 2020, 188, 184-189.	5.2	15
69	Free-Standing Two-Dimensional Gold Membranes Produced by Extreme Mechanical Thinning. <i>ACS Nano</i> , 2020, 14, 17091-17099.	14.6	15
70	Atomic-scale study on the precipitation behavior of an Al-Zn-Mg-Cu alloy during isochronal aging. <i>Journal of Materials Science and Technology</i> , 2022, 108, 281-292.	10.7	15
71	Coordinated grain boundary deformation governed nanograin annihilation in shear cycling. <i>Journal of Materials Science and Technology</i> , 2021, 86, 180-191.	10.7	14
72	Twin-coupled shear bands in an ultrafine-grained CoCrFeMnNi high-entropy alloy deformed at 77K. <i>Materials Research Letters</i> , 2022, 10, 385-391.	8.7	14

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73	In situ nanomechanical testing of twinned metals in a transmission electron microscope. MRS Bulletin, 2016, 41, 305-313.	3.5	13
74	Mechanical property of metallic nanowires: the shorter is stronger and ductile. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 733, 164-169.	5.6	13
75	Role of interfacial transition zones in the fracture of Cu/V nanolamellar multilayers. Materials Research Letters, 2020, 8, 299-306.	8.7	13
76	A geometrical model for grain boundary migration mediated formation of multifold twins. International Journal of Plasticity, 2022, 148, 103128.	8.8	12
77	Hydrothermal synthesis and formation mechanism of single-crystal Auivillius Bi ₄ Ti ₃ O ₁₂ nanosheets with ammonium bismuth citrate (C ₆ H ₁₀ BiNO ₈) as Bi sources. Journal of Crystal Growth, 2017, 476, 31-37.	1.5	10
78	Penta-Twin Destruction by Coordinated Twin Boundary Deformation. Nano Letters, 2021, 21, 8378-8384.	9.1	10
79	Shear band mediated γ phase transformation in Nb single crystals deformed at 77 K. Materials Research Letters, 2021, 9, 523-530.	8.7	10
80	Atomistic dynamics of disconnection-mediated grain boundary plasticity: A case study of gold nanocrystals. Journal of Materials Science and Technology, 2022, 125, 182-191.	10.7	9
81	Fatigue-induced interface damage in Cu/V nanoscale metallic multilayers. Scripta Materialia, 2021, 190, 103-107.	5.2	8
82	Long-term degradation behavior of slurry aluminide coating on Super304H stainless steel at 650 °C. Corrosion Science, 2021, 178, 109054.	6.6	7
83	Shock-induced β martensitic transformation in Nb single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 846, 143274.	5.6	7
84	Tensile Deformation Behaviors of Cu ₅₀ Ni Alloy Processed by Equal Channel Angular Pressing. Advanced Engineering Materials, 2010, 12, 304-311.	3.5	6
85	A comprehensive investigation of phase evolution of Al-Si coating during the prolonged aging at 650 °C. Corrosion Science, 2021, 189, 109605.	6.6	6
86	Directing the deposition of lithium metal to the inner concave surface of graphitic carbon tubes to enable lithium-metal batteries. Journal of Materials Chemistry A, 2021, 9, 16936-16942.	10.3	5
87	Solvent sieving separators implement dual electrolyte for high-voltage lithium-metal batteries. Nano Research, 2023, 16, 4901-4907.	10.4	4
88	Combined effect of Sn addition and pre-ageing on natural secondary and artificial ageing of Al-Mg-Si alloys. Journal of Materials Science, 2022, 57, 2149-2162.	3.7	3
89	Mechanical Properties and Fracture Behavior of Laser Powder-Bed-Fused GH3536 Superalloy. Metals, 2022, 12, 1165.	2.3	3
90	Inclination-governed deformation of dislocation-type grain boundaries. Journal of Materials Research, 2021, 36, 1306-1315.	2.6	2

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91	Bichannel design inspired by membrane pump: a rate booster for the conversion-type anode of sodium-ion battery. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3373-3381.	10.3	2
92	Diffusive crack-grain interplay in freestanding nanocrystalline silver thin film. <i>Materialia</i> , 2021, 17, 101116.	2.7	1
93	Interactions between Dislocations and Penta-Twins in Metallic Nanocrystals. <i>Metals</i> , 2021, 11, 1775.	2.3	1
94	Tuning the Outward to Inward Swelling in Lithiated Silicon Nanotubes via Surface Oxide Coating. <i>Microscopy and Microanalysis</i> , 2017, 23, 2018-2019.	0.4	0