

Hai-Yan Wang

List of Publications by Year in descending order

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670
papers

29,157
citations

7568

77
h-index

11607

135
g-index

680
all docs

680
docs citations

680
times ranked

19088
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly anisotropic and robust excitons in monolayer black phosphorus. <i>Nature Nanotechnology</i> , 2015, 10, 517-521.	31.5	1,204
2	Strongly enhanced current densities in superconducting coated conductors of YBa ₂ Cu ₃ O _{7-x} + BaZrO ₃ . <i>Nature Materials</i> , 2004, 3, 439-443.	27.5	1,118
3	Materials science challenges for high-temperature superconducting wire. <i>Nature Materials</i> , 2007, 6, 631-642.	27.5	670
4	Stainless steel as bipolar plate material for polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2003, 115, 243-251.	7.8	606
5	Deformation behavior and plastic instabilities of ultrafine-grained titanium. <i>Applied Physics Letters</i> , 2001, 79, 611-613.	3.3	413
6	Strain control and spontaneous phase ordering in vertical nanocomposite heteroepitaxial thin films. <i>Nature Materials</i> , 2008, 7, 314-320.	27.5	334
7	A ferroelectric semiconductor field-effect transistor. <i>Nature Electronics</i> , 2019, 2, 580-586.	26.0	317
8	Polymer-assisted deposition of metal-oxide films. <i>Nature Materials</i> , 2004, 3, 529-532.	27.5	308
9	Radiation damage in nanostructured materials. <i>Progress in Materials Science</i> , 2018, 96, 217-321.	32.8	307
10	Strain hardening and large tensile elongation in ultrahigh-strength nano-twinned copper. <i>Applied Physics Letters</i> , 2004, 85, 4932-4934.	3.3	304
11	Giant optical anisotropy in a quasi-one-dimensional crystal. <i>Nature Photonics</i> , 2018, 12, 392-396.	31.4	269
12	Enhanced hardening in Cu/330 stainless steel multilayers by nanoscale twinning. <i>Acta Materialia</i> , 2004, 52, 995-1002.	7.9	263
13	Enhanced tensile ductility and toughness in nanostructured Cu. <i>Applied Physics Letters</i> , 2002, 80, 2395-2397.	3.3	254
14	Angular-dependent vortex pinning mechanisms in YBa ₂ Cu ₃ O ₇ coated conductors and thin films. <i>Applied Physics Letters</i> , 2004, 84, 2121-2123.	3.3	254
15	Thermal stability of sputtered Cu films with nanoscale growth twins. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	231
16	Thick lead-free ferroelectric films with high Curie temperatures through nanocomposite-induced strain. <i>Nature Nanotechnology</i> , 2011, 6, 491-495.	31.5	220
17	Nanoscale-twinning-induced strengthening in austenitic stainless steel thin films. <i>Applied Physics Letters</i> , 2004, 84, 1096-1098.	3.3	217
18	High-strength sputter-deposited Cu foils with preferred orientation of nanoscale growth twins. <i>Applied Physics Letters</i> , 2006, 88, 173116.	3.3	209

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19	Mechanical properties of highly textured Cu/Ni multilayers. <i>Acta Materialia</i> , 2011, 59, 1924-1933.	7.9	202
20	Epitaxial nanotwinned Cu films with high strength and high conductivity. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	192
21	Interface enabled defects reduction in helium ion irradiated Cu/V nanolayers. <i>Journal of Nuclear Materials</i> , 2010, 407, 178-188.	2.7	189
22	Controlled Growth of a Large-Size 2D Selenium Nanosheet and Its Electronic and Optoelectronic Applications. <i>ACS Nano</i> , 2017, 11, 10222-10229.	14.6	189
23	Overcoming the barrier to 1000Å ² ·cm width superconducting coatings. <i>Applied Physics Letters</i> , 2005, 87, 162505.	3.3	182
24	He ion irradiation damage in Fe/W nanolayer films. <i>Journal of Nuclear Materials</i> , 2009, 389, 233-238.	2.7	179
25	Temperature and strain rate effects on the strength and ductility of nanostructured copper. <i>Applied Physics Letters</i> , 2003, 83, 3165-3167.	3.3	176
26	Rectifying current-voltage characteristics of BiFeO ₃ ·Nb-doped SrTiO ₃ heterojunction. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	176
27	Reviewing Metallic PEMFC Bipolar Plates. <i>Fuel Cells</i> , 2010, 10, 510-519.	2.4	176
28	Tunable Low-Field Magnetoresistance in (La _{0.7} Sr _{0.3} MnO ₃) _{0.5} :(ZnO) _{0.5} Self-Assembled Vertically Aligned Nanocomposite Thin Films. <i>Advanced Functional Materials</i> , 2011, 21, 2423-2429.	14.9	174
29	Structural, electrical, and terahertz transmission properties of VO ₂ thin films grown on c-, r-, and m-plane sapphire substrates. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	172
30	Preferential thermal nitridation to form pin-hole free Cr-nitrides to protect proton exchange membrane fuel cell metallic bipolar plates. <i>Scripta Materialia</i> , 2004, 50, 1017-1022.	5.2	168
31	Removal of stacking-fault tetrahedra by twin boundaries in nanotwinned metals. <i>Nature Communications</i> , 2013, 4, 1377.	12.8	155
32	Radiation damage in helium ion irradiated nanocrystalline Fe. <i>Journal of Nuclear Materials</i> , 2012, 425, 140-146.	2.7	154
33	Microstructure, vertical strain control and tunable functionalities in self-assembled, vertically aligned nanocomposite thin films. <i>Acta Materialia</i> , 2013, 61, 2783-2792.	7.9	153
34	Mechanical properties of sputtered Cu/V and Al/Nb multilayer films. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 493, 283-287.	5.6	145
35	Strongly enhanced oxygen ion transport through samarium-doped CeO ₂ nanopillars in nanocomposite films. <i>Nature Communications</i> , 2015, 6, 8588.	12.8	145
36	High strength, epitaxial nanotwinned Ag films. <i>Acta Materialia</i> , 2011, 59, 93-101.	7.9	144

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37	Thermally nitrated stainless steels for polymer electrolyte membrane fuel cell bipolar plates. Journal of Power Sources, 2004, 138, 79-85.	7.8	142
38	On the origin of ultrahigh cryogenic strength of nanocrystalline metals. Applied Physics Letters, 2004, 85, 2750-2752.	3.3	136
39	Systematic enhancement of in-field critical current density with rare-earth ion size variance in superconducting rare-earth barium cuprate films. Applied Physics Letters, 2004, 84, 5329-5331.	3.3	127
40	Raman response and transport properties of tellurium atomic chains encapsulated in nanotubes. Nature Electronics, 2020, 3, 141-147.	26.0	126
41	Nanostructured Cu/Nb multilayers subjected to helium ion-irradiation. Nuclear Instruments & Methods in Physics Research B, 2007, 261, 1129-1132.	1.4	125
42	Oxygen concentration and its effect on the leakage current in BiFeO ₃ thin films. Applied Physics Letters, 2010, 96, .	3.3	124
43	Thermally nitrated stainless steels for polymer electrolyte membrane fuel cell bipolar plates. Journal of Power Sources, 2004, 138, 86-93.	7.8	120
44	Strongly coupled critical current density values achieved in Y ₁ Ba ₂ Cu ₃ O _{7-δ} coated conductors with near-single-crystal texture. Applied Physics Letters, 2003, 82, 4519-4521.	3.3	115
45	Studies of deformation mechanisms in ultra-fine-grained and nanostructured Zn. Acta Materialia, 2002, 50, 4823-4830.	7.9	113
46	Self-assembled, rare earth tantalate pyrochlore nanoparticles for superior flux pinning in YBa ₂ Cu ₃ O _{7-δ} films. Superconductor Science and Technology, 2009, 22, 022001.	3.5	109
47	Stacking fault and partial dislocation dominated strengthening mechanisms in highly textured Cu/Co multilayers. International Journal of Plasticity, 2013, 49, 152-163.	8.8	109
48	In situ nanoindentation study on plasticity and work hardening in aluminium with incoherent twin boundaries. Nature Communications, 2014, 5, 4864.	12.8	107
49	Size dependent enhancement of helium ion irradiation tolerance in sputtered Cu/V nanolaminates. Journal of Nuclear Materials, 2009, 385, 629-632.	2.7	104
50	Microstructure and strengthening mechanisms in Cu/Fe multilayers. Acta Materialia, 2012, 60, 6312-6321.	7.9	104
51	Identification of Intrinsic ab-Plane Pinning in $YBa_2Cu_3O_{7-x}$ Thin Films and Coated Conductors. IEEE Transactions on Applied Superconductivity, 2005, 15, 2808-2811.	1.7	103
52	In situ Evidence of Defect Cluster Absorption by Grain Boundaries in Kr Ion Irradiated Nanocrystalline Ni. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 1966-1974.	2.2	103
53	Vertically Aligned Nanocomposite Thin Films as a Cathode/Electrolyte Interface Layer for Thin-Film Solid Oxide Fuel Cells. Advanced Functional Materials, 2009, 19, 3868-3873.	14.9	101
54	Why In ₂ O ₃ Can Make 0.7 nm Atomic Layer Thin Transistors. Nano Letters, 2021, 21, 500-506.	9.1	99

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55	Interfacial coupling in heteroepitaxial vertically aligned nanocomposite thin films: From lateral to vertical control. <i>Current Opinion in Solid State and Materials Science</i> , 2014, 18, 6-18.	11.5	98
56	Scaled indium oxide transistors fabricated using atomic layer deposition. <i>Nature Electronics</i> , 2022, 5, 164-170.	26.0	98
57	Nanotwins and stacking faults in high-strength epitaxial Ag/Al multilayer films. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	97
58	Damage-tolerant nanotwinned metals with nanovoids under radiation environments. <i>Nature Communications</i> , 2015, 6, 7036.	12.8	97
59	High-strength Nanotwinned Al Alloys with 9R Phase. <i>Advanced Materials</i> , 2018, 30, 1704629.	21.0	93
60	High power density thin film SOFCs with YSZ/GDC bilayer electrolyte. <i>Electrochimica Acta</i> , 2011, 56, 5472-5477.	5.2	92
61	Interface lattice displacement measurement to 1pm by geometric phase analysis on aberration-corrected HAADF STEM images. <i>Acta Materialia</i> , 2013, 61, 5646-5663.	7.9	91
62	Self-Assembled Epitaxial Au-Oxide Vertically Aligned Nanocomposites for Nanoscale Metamaterials. <i>Nano Letters</i> , 2016, 16, 3936-3943.	9.1	91
63	In Situ Study of Defect Migration Kinetics and Self-Healing of Twin Boundaries in Heavy Ion Irradiated Nanotwinned Metals. <i>Nano Letters</i> , 2015, 15, 2922-2927.	9.1	90
64	Ionic Conductivity Increased by Two Orders of Magnitude in Micrometer-Thick Vertical Yttria-Stabilized ZrO ₂ Nanocomposite Films. <i>Nano Letters</i> , 2015, 15, 7362-7369.	9.1	90
65	Strong oxygen pressure dependence of ferroelectricity in BaTiO ₃ /SrRuO ₃ /SrTiO ₃ epitaxial heterostructures. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	88
66	Vertical Interface Effect on the Physical Properties of Self-Assembled Nanocomposite Epitaxial Films. <i>Advanced Materials</i> , 2009, 21, 3794-3798.	21.0	87
67	Continuous Tuning of Phase Transition Temperature in VO ₂ Thin Films on c-Cut Sapphire Substrates via Strain Variation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 5319-5327.	8.0	87
68	High temperature deformability of ductile flash-sintered ceramics via in-situ compression. <i>Nature Communications</i> , 2018, 9, 2063.	12.8	87
69	Thick YBa ₂ Cu ₃ O _{7-x} +BaSnO ₃ films with enhanced critical current density at high magnetic fields. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	86
70	New epitaxy paradigm in epitaxial self-assembled oxide vertically aligned nanocomposite thin films. <i>Journal of Materials Research</i> , 2017, 32, 4054-4066.	2.6	86
71	Evidence for the formation mechanism of nanoscale microstructures in cryomilled Zn powder. <i>Acta Materialia</i> , 2001, 49, 1319-1326.	7.9	85
72	Understanding High Critical Currents in YBa ₂ Cu ₃ O ₇ Thin Films and Coated Conductors. <i>Journal of Low Temperature Physics</i> , 2004, 135, 87-98.	1.4	84

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73	Superior radiation-resistant nanoengineered austenitic 304L stainless steel for applications in extreme radiation environments. <i>Scientific Reports</i> , 2015, 5, 7801.	3.3	82
74	Nanoscale stacking fault-assisted room temperature plasticity in flash-sintered TiO ₂ . <i>Science Advances</i> , 2019, 5, eaaw5519.	10.3	82
75	Self-assembled oxide films with tailored nanoscale ionic and electronic channels for controlled resistive switching. <i>Nature Communications</i> , 2016, 7, 12373.	12.8	81
76	Formation Mechanisms of High-density Growth Twins in Aluminum with High Stacking-Fault Energy. <i>Materials Research Letters</i> , 2013, 1, 51-60.	8.7	80
77	In situ Nanoindentation Study of Plastic Co-deformation in Al-TiN Nanocomposites. <i>Scientific Reports</i> , 2014, 4, 6633.	3.3	80
78	Role of scaffold network in controlling strain and functionalities of nanocomposite films. <i>Science Advances</i> , 2016, 2, e1600245.	10.3	80
79	Surface Functionalization of Layered Molybdenum Disulfide for the Selective Detection of Volatile Organic Compounds at Room Temperature. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 34135-34143.	8.0	79
80	Enhanced radiation tolerance of ultrafine grained Fe-Cr-Ni alloy. <i>Journal of Nuclear Materials</i> , 2012, 420, 235-240.	2.7	78
81	A New Class of Room-Temperature Multiferroic Thin Films with Bismuth-Based Supercell Structure. <i>Advanced Materials</i> , 2013, 25, 1028-1032.	21.0	78
82	He ion irradiation damage in Al ¹⁰⁰ Nb multilayers. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	77
83	Ultrafast measurements of polarization switching dynamics on ferroelectric and anti-ferroelectric hafnium zirconium oxide. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	77
84	Influence of crystalline texture on vortex pinning near the ab-plane in YBa ₂ Cu ₃ O ₇ thin films and coated conductors. <i>Physica C: Superconductivity and Its Applications</i> , 2004, 412-414, 976-982.	1.2	76
85	A roadmap for tailoring the strength and ductility of ferritic/martensitic T91 steel via thermo-mechanical treatment. <i>Acta Materialia</i> , 2016, 112, 361-377.	7.9	76
86	VO ₂ multidomain heteroepitaxial growth and terahertz transmission modulation. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	75
87	Novel Electroforming-Free Nanoscaffold Memristor with Very High Uniformity, Tunability, and Density. <i>Advanced Materials</i> , 2014, 26, 6284-6289.	21.0	75
88	Unusual size-dependent strengthening mechanisms in helium ion-irradiated immiscible coherent Cu/Co nanolayers. <i>Acta Materialia</i> , 2015, 84, 393-404.	7.9	75
89	In-situ observation of oxygen mobility and abnormal lattice expansion in ceria during flash sintering. <i>Ceramics International</i> , 2018, 44, 15362-15369.	4.8	75
90	Tensile elongation (110%) observed in ultrafine-grained Zn at room temperature. <i>Applied Physics Letters</i> , 2002, 81, 823-825.	3.3	72

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91	In situ studies of irradiation-induced twin boundary migration in nanotwinned Ag. Scripta Materialia, 2013, 69, 385-388.	5.2	72
92	Superior corrosion resistance properties of TiN-based coatings on Zircaloy tubes in supercritical water. Journal of Nuclear Materials, 2014, 451, 346-351.	2.7	71
93	Microstructure, magnetic, and low-field magnetotransport properties of self-assembled $(\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3)_{0.5}:(\text{CeO}_2)_{0.5}$ vertically aligned nanocomposite thin films. Nanotechnology, 2011, 22, 315712.	2.1	70
94	Multifunctional, self-assembled oxide nanocomposite thin films and devices. MRS Bulletin, 2015, 40, 736-745.	3.5	70
95	Mechanical behavior of structurally gradient nickel alloy. Acta Materialia, 2018, 149, 57-67.	7.9	70
96	Ion irradiation effects in nanocrystalline TiN coatings. Nuclear Instruments & Methods in Physics Research B, 2007, 261, 1162-1166.	1.4	69
97	Growth of $\mu^2/5 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$ mobility, p-type Copper(I) oxide (Cu_2O) films by fast atmospheric atomic layer deposition (AALD) at 225°C and below. AIP Advances, 2012, 2, .	1.3	69
98	Extremely High Tunability and Low Loss in Nanoscaffold Ferroelectric Films. Nano Letters, 2012, 12, 4311-4317.	9.1	69
99	Room-Temperature Electrocaloric Effect in Layered Ferroelectric CuInP_2S_6 for Solid-State Refrigeration. ACS Nano, 2019, 13, 8760-8765.	14.6	69
100	The influence of interfaces on the formation of bubbles in He-ion-irradiated Cu/Mo nanolayers. Philosophical Magazine Letters, 2011, 91, 18-28.	1.2	68
101	Comparisons of radiation damage in He ion and proton irradiated immiscible Ag/Ni nanolayers. Journal of Nuclear Materials, 2013, 440, 310-318.	2.7	68
102	Enhancement and angular dependence of transport critical current density in pulsed laser deposited $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ /BaSnO ₃ films in applied magnetic fields. Journal of Applied Physics, 2007, 102, .	2.5	67
103	How $(\text{Ba}_{0.5}\text{Sr}_{0.5})(\text{Fe}_{0.8}\text{Zn}_{0.2})\text{O}_3$ and $(\text{Ba}_{0.5}\text{Sr}_{0.5})(\text{Co}_{0.8}\text{Fe}_{0.2})\text{O}_3$ Perovskites Form via an EDTA/Citric Acid Complexing Method. Advanced Materials, 2007, 19, 2134-2140.	21.0	67
104	In situ study of defect migration kinetics in nanoporous Ag with enhanced radiation tolerance. Scientific Reports, 2014, 4, 3737.	3.3	67
105	Green luminescent zinc oxide films prepared by polymer-assisted deposition with rapid thermal process. Thin Solid Films, 2005, 492, 101-104.	1.8	66
106	Effects of deposition parameters on residual stresses, hardness and electrical resistivity of nanoscale twinned 330 stainless steel thin films. Journal of Applied Physics, 2005, 97, 094302.	2.5	66
107	Response of nanocrystalline C_3 silicon carbide to heavy-ion irradiation. Physical Review B, 2009, 80, .	3.2	66
108	Direct observation of Lomer-Cottrell Locks during strain hardening in nanocrystalline nickel by in situ TEM. Scientific Reports, 2013, 3, 1061.	3.3	66

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109	High-velocity projectile impact induced 9R phase in ultrafine-grained aluminium. Nature Communications, 2017, 8, 1653.	12.8	66
110	Intrinsic ferroelectricity in Y-doped HfO ₂ thin films. Nature Materials, 2022, 21, 903-909.	27.5	66
111	Rare earth ion size effects and enhanced critical current densities in Y ₂ Sm _{1-x} Ba ₂ Cu ₃ O _{7-x} coated conductors. Applied Physics Letters, 2005, 86, 032505.	3.3	65
112	The role of point defects and defect gradients in flash sintering of perovskite oxides. Acta Materialia, 2019, 165, 398-408.	7.9	65
113	Low field magnetotransport properties of (La _{0.7} Sr _{0.3} MnO ₃) _{0.5} :(ZnO) _{0.5} nanocomposite films. Applied Physics Letters, 2006, 88, 192514.	3.3	64
114	Leakage mechanisms of self-assembled (BiFeO ₃) _{0.5} :(Sm ₂ O ₃) _{0.5} nanocomposite films. Applied Physics Letters, 2008, 93, .	3.3	64
115	State-of-the-art flux pinning in YBa ₂ Cu ₃ O _{7-x} by the creation of highly linear, segmented nanorods of Ba ₂ (Y/Gd)(Nb/Ta)O ₆ together with nanoparticles of (Y/Gd) ₂ O ₃ and (Y) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 497 Td (#Gd)Ba₂/su 005012	3.3	64
116	Self-assembled Co ²⁺ BaZrO ₃ nanocomposite thin films with ultra-fine vertically aligned Co nanopillars. Nanoscale, 2017, 9, 7970-7976.	5.6	64
117	Structural and dielectric properties of epitaxial Ba _{1-x} Sr _x TiO ₃ films grown on LaAlO ₃ substrates by polymer-assisted deposition. Applied Physics Letters, 2004, 85, 5007-5009.	3.3	63
118	In situ studies on radiation tolerance of nanotwinned Cu. Acta Materialia, 2016, 111, 148-156.	7.9	63
119	The formation of protective nitride surfaces for PEM fuel cell metallic bipolar plates. Jom, 2006, 58, 50-57.	1.9	62
120	Multifunctional La _{0.67} Sr _{0.33} MnO ₃ (LSMO) Thin Films Integrated on Mica Substrates toward Flexible Spintronics and Electronics. ACS Applied Materials & Interfaces, 2018, 10, 42698-42705.	8.0	62
121	High critical current YBCO coated conductors based on IBAD MgO. Physica C: Superconductivity and Its Applications, 2004, 412-414, 795-800.	1.2	61
122	Application of weak ferromagnetic BiFeO ₃ films as the photoelectrode material under visible-light irradiation. Applied Physics Letters, 2007, 91, .	3.3	61
123	Unusual size dependent strengthening mechanisms of Cu/amorphous CuNb multilayers. Acta Materialia, 2016, 120, 327-336.	7.9	61
124	Inhomogeneous reduction and its relation to grain growth of titania during flash sintering. Scripta Materialia, 2018, 155, 37-40.	5.2	60
125	Induced Magnetization in $\text{La}_{0.7}\text{Mn}_{0.3}\text{O}_x$ Physical Review Letters, 2014, 113, 047204.	7.9	59
126	Ultra-smooth glassy graphene thin films for flexible transparent circuits. Science Advances, 2016, 2, e1601574.	10.3	59

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127	Integration of Self-Assembled Vertically Aligned Nanocomposite ($\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$) λ -(ZnO) Thin Films on Silicon Substrates. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 3995-3999.	8.0	58
128	Three-dimensional strain engineering in epitaxial vertically aligned nanocomposite thin films with tunable magnetotransport properties. <i>Materials Horizons</i> , 2018, 5, 536-544.	12.2	57
129	An Electronic Synapse Based on 2D Ferroelectric CuInP_2S_6 . <i>Advanced Electronic Materials</i> , 2020, 6, 2000760.	5.1	57
130	Comparison of size dependent strengthening mechanisms in Ag/Fe and Ag/Ni multilayers. <i>Acta Materialia</i> , 2016, 114, 154-163.	7.9	56
131	Nanoscale Artificial Plasmonic Lattice in Self-Assembled Vertically Aligned Nitride-Metal Hybrid Metamaterials. <i>Advanced Science</i> , 2018, 5, 1800416.	11.2	56
132	Size dependent strengthening in high strength nanotwinned Al/Ti multilayers. <i>Acta Materialia</i> , 2019, 175, 466-476.	7.9	56
133	Self-Assembled Ordered Three-Phase $\text{Au-BaTiO}_3\text{-ZnO}$ Vertically Aligned Nanocomposites Achieved by a Templating Method. <i>Advanced Materials</i> , 2019, 31, e1806529.	21.0	56
134	Significant enhancement of the strength-to-resistivity ratio by nanotwins in epitaxial Cu films. <i>Journal of Applied Physics</i> , 2009, 106, .	2.5	55
135	Influence of naturally grown nanoparticles at the buffer layer in the flux pinning in $\text{YBa}_2\text{Cu}_3\text{O}_7$ coated conductors. <i>Superconductor Science and Technology</i> , 2006, 19, 891-895.	3.5	54
136	P-type ZnO thin films achieved by N^+ ion implantation through dynamic annealing process. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	54
137	Strain Tuning and Strong Enhancement of Ionic Conductivity in $\text{SrZrO}_3\text{-RE}_2\text{O}_3$ (RE = Sm, Eu, Gd, Dy, and Er) Nanocomposite Films. <i>Advanced Functional Materials</i> , 2015, 25, 4328-4333.	14.9	54
138	Controlling Oxidation States in Uranium Oxides through Epitaxial Stabilization. <i>Advanced Materials</i> , 2007, 19, 3559-3563.	21.0	53
139	Electrochemical Properties of Nanocrystalline $\text{La}_{0.5}\text{Sr}_{0.5}\text{CoO}_3\lambda$ Thin Films. <i>Chemistry of Materials</i> , 2010, 22, 776-782.	6.7	52
140	High-speed atmospheric atomic layer deposition of ultra thin amorphous TiO_2 blocking layers at 100°C for inverted bulk heterojunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2013, 21, 393-400.	8.1	52
141	Vertically aligned nanocomposite electrolytes with superior out-of-plane ionic conductivity for solid oxide fuel cells. <i>Journal of Power Sources</i> , 2013, 242, 455-463.	7.8	52
142	Size-dependent radiation tolerance in ion irradiated TiN/AlN nanolayer films. <i>Journal of Nuclear Materials</i> , 2013, 441, 47-53.	2.7	52
143	Sharp semiconductor-to-metal transition of VO_2 thin films on glass substrates. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	52
144	Composite epitaxial thin films: A new platform for tuning, probing, and exploiting mesoscale oxides. <i>MRS Bulletin</i> , 2015, 40, 933-942.	3.5	52

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145	Epitaxial Growth of 1D Atomic Chain Based Se Nanoplates on Monolayer ReS ₂ for High-Performance Photodetectors. <i>Advanced Functional Materials</i> , 2018, 28, 1806254.	14.9	52
146	Perovskite Transparent Conducting Oxide for the Design of a Transparent, Flexible, and Self-Powered Perovskite Photodetector. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 16462-16468.	8.0	52
147	Design of Radiation Tolerant Nanostructured Metallic Multilayers. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2012, 134, .	1.4	51
148	Thermal stability of twins and strengthening mechanisms in differently oriented epitaxial nanotwinned Ag films. <i>Journal of Materials Research</i> , 2013, 28, 1729-1739.	2.6	51
149	Very High Surface Area Mesoporous Thin Films of SrTiO ₃ Grown by Pulsed Laser Deposition and Application to Efficient Photoelectrochemical Water Splitting. <i>Nano Letters</i> , 2016, 16, 7338-7345.	9.1	51
150	Preparation of bulk ultrafine-grained and nanostructured Zn, Al and their alloys by in situ consolidation of powders during mechanical attrition. <i>Scripta Materialia</i> , 2002, 46, 661-665.	5.2	50
151	Nanostructured cathode thin films with vertically-aligned nanopores for thin film SOFC and their characteristics. <i>Applied Surface Science</i> , 2007, 254, 266-269.	6.1	50
152	Structural and dielectric properties of epitaxial Sm ₂ O ₃ thin films. <i>Applied Physics Letters</i> , 2008, 92, 062905.	3.3	50
153	Couplings of Polarization with Interfacial Deep Trap and Schottky Interface Controlled Ferroelectric Memristive Switching. <i>Advanced Functional Materials</i> , 2020, 30, 2000664.	14.9	50
154	Precise Tuning of (YBa ₂ Cu ₃ O _{7-δ}) _{1-x} :(BaZrO ₃) _x Thin Film Nanocomposite Structures. <i>Advanced Functional Materials</i> , 2014, 24, 5240-5245.	14.9	49
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