

# E-Wen Huang

## List of Publications by Year in descending order

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docs citations

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times ranked

1850  
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanical Behavior of High-Entropy Alloys Focusing on Tensors: An in situ Neutron Diffraction Investigation From Room to Elevated Temperature. , 2022, , 454-462.		0
2	Revealing the Precipitation Sequence with Aging Temperature in a Non-equiatomic AlCoCrFeNi High Entropy Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 314-321.	2.2	15
3	Unearthing principal strengthening factors tuning the additive manufactured 15-5 PH stainless steel. Materials Characterization, 2022, 184, 111645.	4.4	13
4	Thermal effects on stability of hierarchical microstructure in medium- and high-entropy alloys. Materials Chemistry and Physics, 2022, 278, 125677.	4.0	5
5	Grain-size-dependent microstructure effects on cyclic deformation mechanisms in CoCrFeMnNi high-entropy-alloys. Scripta Materialia, 2022, 210, 114459.	5.2	16
6	Machine-learning and high-throughput studies for high-entropy materials. Materials Science and Engineering Reports, 2022, 147, 100645.	31.8	44
7	Tensile Response of As-Cast CoCrFeNi and CoCrFeMnNi High-Entropy Alloys. Crystals, 2022, 12, 157.	2.2	6
8	Visualizing the valence states of europium ions in Eu-doped BaAl <sub>2</sub> O <sub>4</sub> using X-ray nanoprobe mapping. Journal of Synchrotron Radiation, 2022, 29, 456-461.	2.4	5
9	Tailoring Ferrimagnetic Transition Temperatures, Coercivity Fields, and Saturation Magnetization by Modulating Mn Concentration in (CoCrFeNi) <sub>1-x</sub> Mnx High-Entropy Alloys. Frontiers in Materials, 2022, 9, .	2.4	4
10	Transient Phase-Driven Cyclic Deformation in Additively Manufactured 15-5 PH Steel. Materials, 2022, 15, 777.	2.9	3
11	Microstructural Evolution and Mechanical Properties of Non-Equiatomic (CoNi) <sub>74.66</sub> Cr <sub>17</sub> Fe <sub>8</sub> C <sub>0.34</sub> High-Entropy Alloy. Materials, 2022, 15, 1312.	2.9	0
12	Diffraction-based Residual Stress Mapping of a Stress Frame of Gray Iron via Vibratory Stress Relief Method. Frontiers in Materials, 2022, 9, .	2.4	0
13	Microstructure evolution in high-pressure phase transformations of CrFeNi and CoCrFeMnNi alloys. Journal of Alloys and Compounds, 2022, 918, 165383.	5.5	3
14	Influence of pre-deformation on the precipitation characteristics of aged non-equiatomic Co <sub>1.5</sub> CrFeNi <sub>1.5</sub> high entropy alloys with Ti and Al additions. Journal of Alloys and Compounds, 2021, 855, 157521.	5.5	29
15	Unravelling thermal history during additive manufacturing of martensitic stainless steel. Journal of Alloys and Compounds, 2021, 857, 157555.	5.5	25
16	Pentafluoropyridine functionalized novel heteroatom-doped with hierarchical porous 3D cross-linked graphene for supercapacitor applications. RSC Advances, 2021, 11, 26892-26907.	3.6	8
17	Reversal of favorable microstructure under plastic ploughing vs. interfacial shear induced wear in aged Co <sub>1.5</sub> CrFeNi <sub>1.5</sub> Ti <sub>0.5</sub> high-entropy alloy. Wear, 2021, 468-469, 203595.	3.1	11
18	Tunable Mechanical and Electrical Properties of Coaxial Electrospun Composite Nanofibers of P(VDF-TrFE) and P(VDF-TrFE-CTFE). International Journal of Molecular Sciences, 2021, 22, 4639.	4.1	9

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19	Tailoring grain sizes of the biodegradable iron-based alloys by pre-additive manufacturing microalloying. <i>Scientific Reports</i> , 2021, 11, 9610.	3.3	7
20	Preface to Innovations in High-Entropy Alloys and Bulk Metallic Glasses in Honor of Peter K. Liaw. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021, 52, 3671-3673.	2.2	0
21	Regulation of cell differentiation via synergistic self-powered stimulation and degradation behavior of a biodegradable composite piezoelectric scaffold for cartilage tissue. <i>Nano Energy</i> , 2021, 90, 106545.	16.0	42
22	Aging temperature role on precipitation hardening in a non-equiatomic AlCoCrFeNiTi high-entropy alloy. <i>Materials Science and Technology</i> , 2021, 37, 1270-1279.	1.6	6
23	In-Situ Synchrotron SAXS and WAXS Investigation on the Deformation of Single and Coaxial Electrospun P(VDF-TrFE)-Based Nanofibers. <i>International Journal of Molecular Sciences</i> , 2021, 22, 12669.	4.1	2
24	On plastic anisotropy and deformation history-driven anelasticity of an extruded magnesium alloy. <i>Scripta Materialia</i> , 2020, 176, 36-41.	5.2	14
25	Tuning Stress in Cu Thin Films by Developing Highly (111)-Oriented Nanotwinned Structure. <i>Journal of Electronic Materials</i> , 2020, 49, 109-115.	2.2	2
26	Lattice distortion effect on elastic anisotropy of high entropy alloys. <i>Journal of Alloys and Compounds</i> , 2020, 818, 152876.	5.5	27
27	Crystal plasticity modeling and neutron diffraction measurements of a magnesium AZ31B plate: Effects of plastic anisotropy and surrounding grains. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 135, 103795.	4.8	24
28	Enhancement of fatigue resistance by overload-induced deformation twinning in a CoCrFeMnNi high-entropy alloy. <i>Acta Materialia</i> , 2020, 201, 412-424.	7.9	41
29	Element Effects of Mn and Ge on the Tuning of Mechanical Properties of High-Entropy Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 5023-5028.	2.2	11
30	Phase Stress Partition in Gray Cast Iron Using In Situ Neutron Diffraction Measurements. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 5029-5035.	2.2	2
31	Effects of Texture on the High Temperature Scratch Wear Behavior in Zinc. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 894, 012016.	0.6	0
32	Investigation of Bone Growth in Additive-Manufactured Pedicle Screw Implant by Using Ti-6Al-4V and Bioactive Glass Powder Composite. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7438.	4.1	9
33	Dual heterogeneous structures lead to ultrahigh strength and uniform ductility in a Co-Cr-Ni medium-entropy alloy. <i>Nature Communications</i> , 2020, 11, 2390.	12.8	244
34	Deformations of Ti-6Al-4V additive-manufacturing-induced isotropic and anisotropic columnar structures: Insitu measurements and underlying mechanisms. <i>Additive Manufacturing</i> , 2020, 35, 101322.	3.0	13
35	Mechanical and Magnetic Properties of the High-Entropy Alloys for Combinatorial Approaches. <i>Crystals</i> , 2020, 10, 200.	2.2	26
36	Nanowear Mechanisms of Mg Alloyed with Al and Y at Elevated Temperatures. <i>Tribology Letters</i> , 2020, 68, 1.	2.6	7

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37	Ultramicrostructural reductions in teeth: implications for dietary transition from non-avian dinosaurs to birds. <i>BMC Evolutionary Biology</i> , 2020, 20, 46.	3.2	15
38	Enhanced age hardening effects in FCC based Co <sub>1.5</sub> CrFeNi <sub>1.5</sub> high entropy alloys with varying Ti and Al contents. <i>Materialia</i> , 2020, 13, 100823.	2.7	14
39	Characterization of Deformation and Wear Mechanisms During Indentation Scratching on Pure Zinc. <i>Journal of Tribology</i> , 2020, 142, .	1.9	1
40	Plastic anisotropy and deformation-induced phase transformation of additive manufactured stainless steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 762, 138065.	5.6	43
41	Element Effects on High-Entropy Alloy Vacancy and Heterogeneous Lattice Distortion Subjected to Quasi-equilibrium Heating. <i>Scientific Reports</i> , 2019, 9, 14788.	3.3	27
42	High-temperature materials for structural applications: New perspectives on high-entropy alloys, bulk metallic glasses, and nanomaterials. <i>MRS Bulletin</i> , 2019, 44, 847-853.	3.5	27
43	Comparing Cyclic Tension-Compression Effects on CoCrFeMnNi High-Entropy Alloy and Ni-Based Superalloy. <i>Crystals</i> , 2019, 9, 420.	2.2	10
44	Tuning mechanical properties of electrospun piezoelectric nanofibers by heat treatment. <i>Materialia</i> , 2019, 8, 100461.	2.7	13
45	Control of Dopant Distribution in Yttrium-Doped Bioactive Glass for Selective Internal Radiotherapy Applications Using Spray Pyrolysis. <i>Materials</i> , 2019, 12, 986.	2.9	9
46	Hardening steels by the generation of transient phase using additive manufacturing. <i>Intermetallics</i> , 2019, 109, 60-67.	3.9	23
47	Multi-scale mapping for collagen-regulated mineralization in bone remodeling of additive manufacturing porous implants. <i>Materials Chemistry and Physics</i> , 2019, 230, 83-92.	4.0	17
48	Quantitative evaluation of grain boundary sliding and its dependence on orientation and temperature in pure Zn. <i>Materials Letters</i> , 2019, 246, 24-27.	2.6	9
49	Deviatoric deformation kinetics in high entropy alloy under hydrostatic compression. <i>Journal of Alloys and Compounds</i> , 2019, 792, 116-121.	5.5	13
50	Multi-Scale Microstructure Investigation for a PM2.5 Air-Filter Efficiency Study of Non-Woven Polypropylene. <i>Quantum Beam Science</i> , 2019, 3, 20.	1.2	17
51	Calcitriol exerts a mineralization-inductive effect comparable to that of vitamin C in cultured human periodontium cells. <i>American Journal of Translational Research (discontinued)</i> , 2019, 11, 2304-2316.	0.0	4
52	Micro-layer and Lattice Structure Effects on Impedance of Titanium Oxide Phthalocyanine. <i>Advanced Engineering Materials</i> , 2018, 20, 1701140.	3.5	3
53	Plasticity Enhancement by Fe-Addition on NiAl Alloy: A Synchrotron X-ray Diffraction Mapping and Molecular Dynamics Simulation Study. <i>Quantum Beam Science</i> , 2018, 2, 18.	1.2	0
54	Size-strain separation in diffraction line profile analysis. <i>Journal of Applied Crystallography</i> , 2018, 51, 831-843.	4.5	32

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55	Irreversible phase transformation in a CoCrFeMnNi high entropy alloy under hydrostatic compression. <i>Materials Today Communications</i> , 2018, 14, 10-14.	1.9	37
56	Internal Stress/Strain Analysis during Fatigue Crack Growth Retardation Using Neutron Diffraction. <i>Korean Journal of Materials Research</i> , 2018, 28, 398-404.	0.2	0
57	Using <i>in-situ</i> synchrotron x-ray diffraction to investigate phase transformation and lattice relaxation of a three-way piezo-phototronic soft material. <i>Semiconductor Science and Technology</i> , 2017, 32, 074005.	2.0	3
58	Neutron diffraction residual stress analysis during fatigue crack growth retardation of stainless steel. <i>International Journal of Fatigue</i> , 2017, 104, 408-415.	5.7	27
59	Influence of Zn Addition on Micro-scale Wear of Mg $\alpha$ -xZn (x=1-6wt%) Alloys. <i>Tribology Letters</i> , 2017, 65, 1.	2.6	11
60	Confined martensitic phase transformation kinetics and lattice dynamics in Ni-Co-Fe-Ga shape memory alloys. <i>Acta Materialia</i> , 2016, 110, 200-206.	7.9	8
61	Fatigue Crack Growth Behavior of Two Pipeline Steels. <i>Advanced Engineering Materials</i> , 2016, 18, 2028-2039.	3.5	1
62	The combination of rolling-and-T6-treatments with Al <sub>2</sub> O <sub>3</sub> -reinforcing-particles effect on A6061 metal-matrix composites. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2016, 230, 233-239.	1.1	2
63	Fatigue induced deformation and thermodynamics evolution in a nano particle strengthened nickel base superalloy. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2016, 39, 675-685.	3.4	12
64	Visible Light Modulation on Lattice Dielectric Responses of a Piezo-Phototronic Soft Material. <i>Advanced Materials</i> , 2015, 27, 7728-7733.	21.0	9
65	Dynamic Strain Evolution around a Crack Tip under Steady- and Overloaded-Fatigue Conditions. <i>Metals</i> , 2015, 5, 2109-2118.	2.3	25
66	Microyielding of Core-Shell Crystal Dendrites in a Bulk-metallic-glass Matrix Composite. <i>Scientific Reports</i> , 2015, 4, 4394.	3.3	16
67	A study of lattice elasticity from low entropy metals to medium and high entropy alloys. <i>Scripta Materialia</i> , 2015, 101, 32-35.	5.2	51
68	In-situ neutron diffraction studies on high-temperature deformation behavior in a CoCrFeMnNi high entropy alloy. <i>Intermetallics</i> , 2015, 62, 1-6.	3.9	63
69	Fatigue Crack-Tip Stress Mapping Using Neutron Diffraction. <i>Korean Journal of Materials Research</i> , 2015, 25, 690-693.	0.2	1
70	Resolution of structural transformation of intermediates in Al-Cu alloys during non-isothermal precipitation. <i>Journal of Materials Research</i> , 2014, 29, 874-879.	2.6	10
71	Sensor Selection and Integration to Improve Video Segmentation in Complex Environments. <i>Mathematical Problems in Engineering</i> , 2014, 2014, 1-14.	1.1	1
72	PEGylation Site-Dependent Structural Heterogeneity Study of MonoPEGylated Human Parathyroid Hormone Fragment hPTH(1-34). <i>Langmuir</i> , 2014, 30, 11421-11427.	3.5	2

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73	Phase transformation and precipitation of an Al–Cu alloy during non-isothermal heating studied by in situ small-angle and wide-angle scattering. <i>Journal of Alloys and Compounds</i> , 2013, 579, 138-146.	5.5	36
74	Development of crystallographic-orientation-dependent internal strains around a fatigue-crack tip during overloading and unloading. <i>Materials Characterization</i> , 2013, 79, 7-14.	4.4	4
75	Microstructural evolution of nuclear grade graphite induced by ion irradiation at high temperature environment. <i>Journal of Nuclear Materials</i> , 2013, 434, 17-23.	2.7	14
76	Characteristic of improved fatigue performance for Zr-based bulk metallic glass matrix composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 563, 101-105.	5.6	12
77	Kosmotrope-like Hydration Behavior of Polyethylene Glycol from Microcalorimetry and Binding Isotherm Measurements. <i>Langmuir</i> , 2013, 29, 4259-4265.	3.5	18
78	An Investigation of the Orientation-dependent Study of a Nickel-based Alloy Subjected to Deformation. <i>Procedia Engineering</i> , 2012, 36, 195-199.	1.2	0
79	Plastic Deformation of a Nano-Precipitate Strengthened Ni-Base Alloy Investigated by Complementary In Situ Neutron Diffraction Measurements and Molecular Dynamics Simulations. <i>Advanced Engineering Materials</i> , 2012, 14, 902-908.	3.5	14
80	A Synchrotron X-ray Study on the Wigner Effect of the Irradiated Nuclear-grade Graphite. <i>Procedia Engineering</i> , 2012, 36, 7-12.	1.2	2
81	Three-Orthogonal-Direction Stress Mapping around a Fatigue-Crack Tip Using Neutron Diffraction. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 2785-2791.	2.2	10
82	Cyclic-Loading Induced Lattice-Strain Asymmetry in Loading and Transverse Directions. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 1454-1461.	2.2	17
83	Tensile deformation micromechanisms for bulk metallic glass matrix composites: From work-hardening to softening. <i>Acta Materialia</i> , 2011, 59, 4126-4137.	7.9	257
84	Evolution of microstructure in a nickel-based superalloy as a function of ageing time. <i>Philosophical Magazine Letters</i> , 2011, 91, 483-490.	1.2	4
85	PL02 The Real Nature of Fatigue Behavior in Bulk-Metallic Glasses. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _PL02-1_.	0.0	0
86	Texture crossover: Trace from multiple grains to a subgrain. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 528, 3-10.	5.6	8
87	Evidence of two-length-scale kinetics of R-phase transformation by high-energy X-ray diffraction. <i>Scripta Materialia</i> , 2010, 62, 617-620.	5.2	2
88	Low-temperature shear banding for a Cu-based bulk-metallic glass. <i>Scripta Materialia</i> , 2010, 63, 871-874.	5.2	45
89	Fatigue-induced reversible/irreversible structural-transformations in a Ni-based superalloy. <i>International Journal of Plasticity</i> , 2010, 26, 1124-1137.	8.8	35
90	Resolving ensembled microstructural information of bulk-metallic-glass-matrix composites using synchrotron x-ray diffraction. <i>Applied Physics Letters</i> , 2010, 97, 171910.	3.3	10

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91	Fatigue initiation and propagation behavior in bulk-metallic glasses under a bending load. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	27
92	Cyclic-loading-induced accumulation of geometrically necessary dislocations near grain boundaries in an Ni-based superalloy. <i>Jom</i> , 2009, 61, 53-58.	1.9	14
93	Counterion Association and Structural Conformation Change of Charged PAMAM Dendrimer in Aqueous Solutions Revealed by Small Angle Neutron Scattering. <i>Macromolecular Symposia</i> , 2009, 279, 65-71.	0.7	2
94	Slip-System-Related Dislocation Study from In-Situ Neutron Measurements. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008, 39, 3079-3088.	2.2	27
95	In situ high-energy X-ray studies of magnetic-field-induced phase transition in a ferromagnetic shape memory Ni-Co-Mn-In alloy. <i>Acta Materialia</i> , 2008, 56, 913-923.	7.9	42
96	Plastic behavior of a nickel-based alloy under monotonic-tension and low-cycle-fatigue loading. <i>International Journal of Plasticity</i> , 2008, 24, 1440-1456.	8.8	58
97	Study of nanoprecipitates in a nickel-based superalloy using small-angle neutron scattering and transmission electron microscopy. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	30
98	A Nondestructive Study Using Lattice Plane Specific Analysis on a Nano-Precipitate Strengthened Alloy. <i>Key Engineering Materials</i> , 2007, 345-346, 1311-1314.	0.4	0
99	Direct evidence on magnetic-field-induced phase transition in a NiCoMnIn ferromagnetic shape memory alloy under a stress field. <i>Applied Physics Letters</i> , 2007, 90, 101917.	3.3	34
100	A neutron-diffraction study of the low-cycle fatigue behavior of HASTELLOY® C-22HSTM alloy. <i>International Journal of Fatigue</i> , 2007, 29, 1812-1819.	5.7	19
101	Deformation-induced phase development in a cobalt-based superalloy during monotonic and cyclic deformation. <i>Physica B: Condensed Matter</i> , 2006, 385-386, 523-525.	2.7	8
102	Magnetization reversal process of patterned Ni <sub>80</sub> Fe <sub>20</sub> zigzag wires. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, E1309-E1310.	2.3	0
103	Magnetic studies in octagon-patterned permalloy submicro-wires. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, 1686-1687.	2.3	0
104	Fabrication and physical properties of permalloy nano-size wires. <i>Physica B: Condensed Matter</i> , 2003, 327, 247-252.	2.7	5
105	Angular and field dependent magnetoresistance in Ni <sub>80</sub> Fe <sub>20</sub> zigzag wires. <i>Physica B: Condensed Matter</i> , 2003, 327, 287-291.	2.7	0
106	Magnetoresistance study in NiFe semicircle-ring patterned wires. <i>Journal of Applied Physics</i> , 2003, 93, 7619-7621.	2.5	5
107	Magnetoresistance and magnetic force microscopy studies in Ni <sub>80</sub> Fe <sub>20</sub> disk- and ring-patterned wires. <i>Journal of Applied Physics</i> , 2003, 93, 8424-8426.	2.5	2
108	Study of domain wall magnetoresistance by submicron patterned magnetic structure. <i>Journal of Applied Physics</i> , 2003, 93, 8761-8763.	2.5	11

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109	Microstructural Characteristics and Mechanical Behaviors of AlCoCrFeNi High-Entropy Alloys at Ambient and Cryogenic Temperatures. Materials Science Forum, 0, 688, 419-425.	0.3	111
110	Residual Strain Distribution around a Fatigue-Crack Tip Determined by Neutron Diffraction. Materials Science Forum, 0, 706-709, 1685-1689.	0.3	1
111	Thermal-Effect Study on a Carbon-Carbon Composite Using Synchrotron X-Ray Measurements & Molecular Dynamics Simulation. Materials Science Forum, 0, 777, 35-39.	0.3	0
112	The Effect of Shielded Metal Arc and Gas Tungsten Arc Welding Methods on 308L Stainless Steel Weldments. Materials Science Forum, 0, 783-786, 2753-2757.	0.3	0
113	Introduction of Neutron Diffractometers for Mechanical Behavior Studies of Structural Materials. , 0, , .		1
114	Cooling " As a "Heat Treatment" for the Mechanical Behavior of the Bulk Metallic Glass Alloys. , 0, , .		0
115	Community Structure Extraction for Social Networks. , 0, , 266-282.		0
116	Evaluation of Supercritical Carbon Dioxide Corrosion by High Temperature Oxidation Experiments and Machine Learning Models. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 0, , 1.	2.2	0