E-Wen Huang

List of Publications by Citations

107 papers	1,402 citations	18 h-index	33 g-index
116 ext. papers	1,749 ext. citations	4.2 avg, IF	4.54 L-index

#	Paper	IF	Citations
107	Tensile deformation micromechanisms for bulk metallic glass matrix composites: From work-hardening to softening. *Acta Materialia*, **2011**, 59, 4126-4137	8.4	239
106	Dual heterogeneous structures lead to ultrahigh strength and uniform ductility in a Co-Cr-Ni medium-entropy alloy. *Nature Communications*, **2020**, 11, 2390	17.4	83
105	Microstructural Characteristics and Mechanical Behaviors of AlCoCrFeNi High-Entropy Alloys at Ambient and Cryogenic Temperatures. *Materials Science Forum*, **2011**, 688, 419-425	0.4	75
104	Plastic behavior of a nickel-based alloy under monotonic-tension and low-cycle-fatigue loading. *International Journal of Plasticity*, **2008**, 24, 1440-1456	7.6	55
103	In-situ neutron diffraction studies on high-temperature deformation behavior in a CoCrFeMnNi high entropy alloy. *Intermetallics*, **2015**, 62, 1-6	3.5	54
102	A study of lattice elasticity from low entropy metals to medium and high entropy alloys. *Scripta Materialia*, **2015**, 101, 32-35	5.6	46
101	Low-temperature shear banding for a Cu-based bulk-metallic glass. *Scripta Materialia*, **2010**, 63, 871-874	5.6	41
100	In situ high-energy X-ray studies of magnetic-field-induced phase transition in a ferromagnetic shape memory Ni□Co□Mn□In□ alloy. *Acta Materialia*, **2008**, 56, 913-923	8.4	37
99	Fatigue-induced reversible/irreversible structural-transformations in a Ni-based superalloy. *International Journal of Plasticity*, **2010**, 26, 1124-1137	7.6	34
98	Irreversible phase transformation in a CoCrFeMnNi high entropy alloy under hydrostatic compression. *Materials Today Communications*, **2018**, 14, 10-14	2.5	34
97	Phase transformation and precipitation of an Al□Cu alloy during non-isothermal heating studied by in situ small-angle and wide-angle scattering. *Journal of Alloys and Compounds*, **2013**, 579, 138-146	5.7	31
96	Plastic anisotropy and deformation-induced phase transformation of additive manufactured stainless steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 762, 138065	5.3	30
95	Direct evidence on magnetic-field-induced phase transition in a NiCoMnIn ferromagnetic shape memory alloy under a stress field. *Applied Physics Letters*, **2007**, 90, 101917	3.4	30
94	Study of nanoprecipitates in a nickel-based superalloy using small-angle neutron scattering and transmission electron microscopy. *Applied Physics Letters*, **2008**, 93, 161904	3.4	27
93	Fatigue initiation and propagation behavior in bulk-metallic glasses under a bending load. *Journal of Applied Physics*, **2010**, 108, 113512	2.5	24
92	Slip-System-Related Dislocation Study from In-Situ Neutron Measurements. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 3079-3088	2.3	24
91	Enhancement of fatigue resistance by overload-induced deformation twinning in a CoCrFeMnNi high-entropy alloy. *Acta Materialia*, **2020**, 201, 412-424	8.4	24

90	Size-strain separation in diffraction line profile analysis. *Journal of Applied Crystallography*, **2018**, 51, 831-843	3.8	22
89	Neutron diffraction residual stress analysis during fatigue crack growth retardation of stainless steel. *International Journal of Fatigue*, **2017**, 104, 408-415	5	18
88	High-temperature materials for structural applications: New perspectives on high-entropy alloys, bulk metallic glasses, and nanomaterials. *MRS Bulletin*, **2019**, 44, 847-853	3.2	17
87	A neutron-diffraction study of the low-cycle fatigue behavior of HASTELLOY C-22HSTM alloy. *International Journal of Fatigue*, **2007**, 29, 1812-1819	5	17
86	Crystal plasticity modeling and neutron diffraction measurements of a magnesium AZ31B plate: Effects of plastic anisotropy and surrounding grains. *Journal of the Mechanics and Physics of Solids*, **2020**, 135, 103795	5	17
85	Hardening steels by the generation of transient phase using additive manufacturing. *Intermetallics*, **2019**, 109, 60-67	3.5	16
84	Element Effects on High-Entropy Alloy Vacancy and Heterogeneous Lattice Distortion Subjected to Quasi-equilibrium Heating. *Scientific Reports*, **2019**, 9, 14788	4.9	16
83	Microyielding of core-shell crystal dendrites in a bulk-metallic-glass matrix composite. *Scientific Reports*, **2014**, 4, 4394	4.9	16
82	Cyclic-Loading Induced Lattice-Strain Asymmetry in Loading and Transverse Directions. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 1454-1461	2.3	16
81	Lattice distortion effect on elastic anisotropy of high entropy alloys. *Journal of Alloys and Compounds*, **2020**, 818, 152876	5.7	16
80	Mechanical and Magnetic Properties of the High-Entropy Alloys for Combinatorial Approaches. *Crystals*, **2020**, 10, 200	2.3	14
79	Kosmotrope-like hydration behavior of polyethylene glycol from microcalorimetry and binding isotherm measurements. *Langmuir*, **2013**, 29, 4259-65	4	14
78	Deviatoric deformation kinetics in high entropy alloy under hydrostatic compression. *Journal of Alloys and Compounds*, **2019**, 792, 116-121	5.7	13
77	Microstructural evolution of nuclear grade graphite induced by ion irradiation at high temperature environment. *Journal of Nuclear Materials*, **2013**, 434, 17-23	3.3	13
76	Plastic Deformation of a Nano-Precipitate Strengthened Ni-Base Alloy Investigated by Complementary In Situ Neutron Diffraction Measurements and Molecular-Dynamics Simulations. *Advanced Engineering Materials*, **2012**, 14, 902-908	3.5	13
75	Multi-Scale Microstructure Investigation for a PM2.5 Air-Filter Efficiency Study of Non-Woven Polypropylene. *Quantum Beam Science*, **2019**, 3, 20	1.6	13
74	Multi-scale mapping for collagen-regulated mineralization in bone remodeling of additive manufacturing porous implants. *Materials Chemistry and Physics*, **2019**, 230, 83-92	4.4	12
73	Characteristic of improved fatigue performance for Zr-based bulk metallic glass matrix composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2013**, 563, 101-105	5.3	11

72	Cyclic-loading-induced accumulation of geometrically necessary dislocations near grain boundaries in an Ni-based superalloy. *Jom*, **2009**, 61, 53-58	2.1	11
71	Study of domain wall magnetoresistance by submicron patterned magnetic structure. *Journal of Applied Physics*, **2003**, 93, 8761-8763	2.5	11
70	Fatigue induced deformation and thermodynamics evolution in a nano particle strengthened nickel base superalloy. *Fatigue and Fracture of Engineering Materials and Structures*, **2016**, 39, 675-685	3	10
69	Dynamic Strain Evolution around a Crack Tip under Steady- and Overloaded-Fatigue Conditions. *Metals*, **2015**, 5, 2109-2118	2.3	9
68	Comparing Cyclic Tension-Compression Effects on CoCrFeMnNi High-Entropy Alloy and Ni-Based Superalloy. *Crystals*, **2019**, 9, 420	2.3	8
67	Influence of Zn Addition on Micro-scale Wear of Mg□Zn (x = 1□ wt%) Alloys. *Tribology Letters*, **2017**, 65, 1	2.8	8
66	Three-Orthogonal-Direction Stress Mapping around a Fatigue-Crack Tip Using Neutron Diffraction. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 2785-2791	2.3	8
65	Resolving ensembled microstructural information of bulk-metallic-glass-matrix composites using synchrotron x-ray diffraction. *Applied Physics Letters*, **2010**, 97, 171910	3.4	8
64	On plastic anisotropy and deformation history-driven anelasticity of an extruded magnesium alloy. *Scripta Materialia*, **2020**, 176, 36-41	5.6	8
63	Quantitative evaluation of grain boundary sliding and its dependence on orientation and temperature in pure Zn. *Materials Letters*, **2019**, 246, 24-27	3.3	7
62	Resolution of structural transformation of intermediates in Al□Cu alloys during non-isothermal precipitation. *Journal of Materials Research*, **2014**, 29, 874-879	2.5	7
61	Texture crossover: Trace from multiple grains to a subgrain. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 528, 3-10	5.3	7
60	Enhanced age hardening effects in FCC based Co1.5CrFeNi1.5 high entropy alloys with varying Ti and Al contents. *Materialia*, **2020**, 13, 100823	3.2	7
59	Element Effects of Mn and Ge on the Tuning of Mechanical Properties of High-Entropy Alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2020**, 51, 5023-5028	2.3	7
58	Influence of pre-deformation on the precipitation characteristics of aged non-equiatomic Co1.5CrFeNi1.5 high entropy alloys with Ti and Al additions. *Journal of Alloys and Compounds*, **2021**, 855, 157521	5.7	7
57	Unravelling thermal history during additive manufacturing of martensitic stainless steel. *Journal of Alloys and Compounds*, **2021**, 857, 157555	5.7	7
56	Control of Dopant Distribution in Yttrium-Doped Bioactive Glass for Selective Internal Radiotherapy Applications Using Spray Pyrolysis. *Materials*, **2019**, 12,	3.5	6
55	Deformation-induced phase development in a cobalt-based superalloy during monotonic and cyclic deformation. *Physica B: Condensed Matter*, **2006**, 385-386, 523-525	2.8	6

54	Confined martensitic phase transformation kinetics and lattice dynamics in NiCoFeGa shape memory alloys. *Acta Materialia*, **2016**, 110, 200-206	8.4	6
53	Ultramicrostructural reductions in teeth: implications for dietary transition from non-avian dinosaurs to birds. *BMC Evolutionary Biology*, **2020**, 20, 46	3	6
52	Tuning mechanical properties of electrospun piezoelectric nanofibers by heat treatment. *Materialia* , **2019**, 8, 100461	3.2	5
51	Deformations of Ti-6Al-4V additive-manufacturing-induced isotropic and anisotropic columnar structures: measurements and underlying mechanisms. *Additive Manufacturing*, **2020**, 35, 101322	6.1	5
50	Visible-Light Modulation on Lattice Dielectric Responses of a Piezo-Phototronic Soft Material. *Advanced Materials*, **2015**, 27, 7728-33	24	5
49	Fabrication and physical properties of permalloy nano-size wires. *Physica B: Condensed Matter*, **2003** , 327, 247-252	2.8	5
48	Magnetoresistance study in NiFe semicircle-ring patterned wires. *Journal of Applied Physics*, **2003**, 93, 7619-7621	2.5	5
47	Regulation of cell differentiation via synergistic self-powered stimulation and degradation behavior of a biodegradable composite piezoelectric scaffold for cartilage tissue. *Nano Energy*, **2021**, 90, 106545	17.1	5
46	Investigation of Bone Growth in Additive-Manufactured Pedicle Screw Implant by Using Ti-6Al-4V and Bioactive Glass Powder Composite. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	4
45	Evolution of microstructure in a nickel-based superalloy as a function of ageing time. *Philosophical Magazine Letters*, **2011**, 91, 483-490	1	4
44	Reversal of favorable microstructure under plastic ploughing vs. interfacial shear induced wear in aged Co1.5CrFeNi1.5Ti0.5 high-entropy alloy. *Wear*, **2021**, 468-469, 203595	3.5	4
43	Micro-Layer and Lattice Structure Effects on Impedance of Titanium Oxide Phthalocyanine. *Advanced Engineering Materials*, **2018**, 20, 1701140	3.5	3
42	Development of crystallographic-orientation-dependent internal strains around a fatigue-crack tip during overloading and underloading. *Materials Characterization*, **2013**, 79, 7-14	3.9	3
41	Machine-learning and high-throughput studies for high-entropy materials. *Materials Science and Engineering Reports*, **2022**, 147, 100645	30.9	3
40	Calcitriol exerts a mineralization-inductive effect comparable to that of vitamin C in cultured human periodontium cells. *American Journal of Translational Research (discontinued)*, **2019**, 11, 2304-2316	3	3
39	Nanowear Mechanisms of Mg Alloyed with Al and Y at Elevated Temperatures. *Tribology Letters*, **2020**, 68, 1	2.8	2
38	The combination of rolling-and-T6-treatments with Al2O3-reinforcing-particles effect on A6061 metal-matrix composites. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, **2016**, 230, 233-239	1.3	2
37	PEGylation site-dependent structural heterogeneity study of monoPEGylated human parathyroid hormone fragment hPTH(1-34). *Langmuir*, **2014**, 30, 11421-7	4	2

36	Counterion Association and Structural Conformation Change of Charged PAMAM Dendrimer in Aqueous Solutions Revealed by Small Angle Neutron Scattering. *Macromolecular Symposia*, **2009**, 279, 65-71	0.8	2
35	Evidence of two-length-scale kinetics of R-phase transformation by high-energy X-ray diffraction. *Scripta Materialia*, **2010**, 62, 617-620	5.6	2
34	Magnetoresistance and magnetic force microscopy studies in Ni80Fe20 disk- and ring-patterned wires. *Journal of Applied Physics*, **2003**, 93, 8424-8426	2.5	2
33	Grain-size-dependent microstructure effects on cyclic deformation mechanisms in CoCrFeMnNi high-entropy-alloys. *Scripta Materialia*, **2022**, 210, 114459	5.6	2
32	Tailoring grain sizes of the biodegradable iron-based alloys by pre-additive manufacturing microalloying. *Scientific Reports*, **2021**, 11, 9610	4.9	2
31	Fatigue-Crack-Growth Behavior of Two Pipeline Steels . *Advanced Engineering Materials*, **2016**, 18, 2028-2039	3.5	1
30	Using in-situ synchrotron x-ray diffraction to investigate phase transformation and lattice relaxation of a three-way piezo-phototronic soft material. *Semiconductor Science and Technology*, **2017**, 32, 074005	1.8	1
29	Sensor Selection and Integration to Improve Video Segmentation in Complex Environments. *Mathematical Problems in Engineering*, **2014**, 2014, 1-14	1.1	1
28	A Synchrotron X-ray Study on the Wigner Effect of the Irradiated Nuclear-grade Graphite. *Procedia Engineering*, **2012**, 36, 7-12		1
27	Residual Strain Distribution around a Fatigue-Crack Tip Determined by Neutron Diffraction. *Materials Science Forum*, **2012**, 706-709, 1685-1689	0.4	1
26	Tensile Response of As-Cast CoCrFeNi and CoCrFeMnNi High-Entropy Alloys. *Crystals*, **2022**, 12, 157	2.3	1
25	Visualizing the valence states of europium ions in Eu-doped BaAlO using X-ray nanoprobe mapping.. *Journal of Synchrotron Radiation*, **2022**, 29, 456-461	2.4	1
24	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	2.3	1
23	Unearthing principal strengthening factors tuning the additive manufactured 15-5 PH stainless steel. *Materials Characterization*, **2021**, 184, 111645	3.9	1
22	Tuning Stress in Cu Thin Films by Developing Highly (111)-Oriented Nanotwinned Structure. *Journal of Electronic Materials*, **2020**, 49, 109-115	1.9	1
21	Phase Stress Partition in Gray Cast Iron Using In Situ Neutron Diffraction Measurements. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2020**, 51, 5029-5035	2.3	1
20	Pentafluoropyridine functionalized novel heteroatom-doped with hierarchical porous 3D cross-linked graphene for supercapacitor applications.. *RSC Advances*, **2021**, 11, 26892-26907	3.7	1
19	Thermal effects on stability of hierarchical microstructure in medium- and high-entropy alloys. *Materials Chemistry and Physics*, **2022**, 278, 125677	4.4	0

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18	Aging temperature role on precipitation hardening in a non-equiatomic AlCoCrFeNiTi high-entropy alloy. *Materials Science and Technology*,1-10	1.5	0
17	Microstructure Evolution in High-Pressure Phase Transformations of CrFeNi and CoCrFeMnNi Alloys. *Journal of Alloys and Compounds*, **2022**, 165383	5.7	0
16	Thermal-Effect Study on a Carbon-Carbon Composite Using Synchrotron X-Ray Measurements & Molecular Dynamics Simulation. *Materials Science Forum*, **2014**, 777, 35-39	0.4	
15	The Effect of Shielded Metal Arc and Gas Tungsten Arc Welding Methods on 308L Stainless Steel Weldments. *Materials Science Forum*, **2014**, 783-786, 2753-2757	0.4	
14	An Investigation of the Orientation-dependent Study of a Nickel-based Alloy Subjected to Deformation. *Procedia Engineering*, **2012**, 36, 195-199		
13	A Nondestructive Study Using Lattice Plane Specific Analysis on a Nano-Precipitate Strengthened Alloy. *Key Engineering Materials*, **2007**, 345-346, 1311-1314	0.4	
12	Magnetization reversal process of patterned Ni80Fe20 zigzag wires. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, E1309-E1310	2.8	
11	Magnetic studies in octagon-patterned permalloy submicro-wires. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, 1686-1687	2.8	
10	Angular and field dependent magnetoresistance in Ni80Fe20 zigzag wires. *Physica B: Condensed Matter*, **2003**, 327, 287-291	2.8	
9	Community Structure Extraction for Social Networks266-282		
8	Internal Stress/Strain Analysis during Fatigue Crack Growth Retardation Using Neutron Diffraction. *Korean Journal of Materials Research*, **2018**, 28, 398-404	0.2	
7	Fatigue Crack-Tip Stress Mapping Using Neutron Diffraction. *Korean Journal of Materials Research*, **2015**, 25, 690-693	0.2	
6	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	
5	Effects of Texture on the High Temperature Scratch Wear Behavior in Zinc. *IOP Conference Series: Materials Science and Engineering*, **2020**, 894, 012016	0.4	
4	Preface to Innovations in High-Entropy Alloys and Bulk Metallic Glasses in Honor of Peter K. Liaw. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2021**, 52, 3671-3673	2.3	
3	Plasticity Enhancement by Fe-Addition on NiAl Alloy: A Synchrotron X-ray Diffraction Mapping and Molecular Dynamics Simulation Study. *Quantum Beam Science*, **2018**, 2, 18	1.6	
2	Mechanical Behavior of High-Entropy Alloys Focusing on Tensors: An in situ Neutron Diffraction Investigation From Room to Elevated Temperature **2022**, 454-462		
1	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*,1	2.3	