Y Liu; Liu, Y

List of Publications by Year in Descending Order

74 papers	3,363 citations	30 h-index	57 g-index
75 ext. papers	3,795 ext. citations	7.8 avg, IF	5.22 L-index

#	Paper	IF	Citations
74	Synergistically enhanced interface stability by graphene assisted copper surface reconstruction. *Acta Materialia*, **2022**, 226, 117638	8.4	1
73	Ferroelectric and Ferroelastic Domain Related Formation and Influential Mechanisms of Vapor Deposited Piezoelectric Thin Films. *Coatings*, **2021**, 11, 1437	2.9	0
72	Characterization of the terrace-defect interfaces using in situ straining techniques. *Journal of Materials Research*, **2021**, 36, 2674-2686	2.5	1
71	Migration kinetics of twinning disconnections in nanotwinned Cu: An in situ HRTEM deformation study. *Scripta Materialia*, **2021**, 194, 113621	5.6	6
70	High Strength and Low Coercivity of Cobalt with Three-Dimensional Nanoscale Stacking Faults. *Nano Letters*, **2021**, 21, 6480-6486	11.5	2
69	Synthesis, Microstructure and Properties of Magnetron Sputtered Lead Zirconate Titanate (PZT) Thin Film Coatings. *Coatings*, **2021**, 11, 944	2.9	4
68	A crystal plasticity model for metal matrix composites considering thermal mismatch stress induced dislocations and twins. *Scientific Reports*, **2021**, 11, 16053	4.9	4
67	Revealing extreme twin-boundary shear deformability in metallic nanocrystals. *Science Advances*, **2021**, 7, eabe4758	14.3	14
66	Enhanced defect annihilation capability of the graphene/copper interface: An in situ study. *Scripta Materialia*, **2021**, 203, 114001	5.6	5
65	Metal-graphene interfaces in epitaxial and bulk systems: A review. *Progress in Materials Science*, **2020**, 110, 100652	42.2	62
64	Twin Transmission Across Grain Boundaries in Mg. *Minerals, Metals and Materials Series*, **2020**, 3-5	0.3	
63	Quantifying elastic strain near coherent twin interface in magnesium with nanometric resolution. *Materials Characterization*, **2020**, 160, 110082	3.9	7
62	Anisotropic thermal conductivity and associated heat transport mechanism in roll-to-roll graphene reinforced copper matrix composites. *Acta Materialia*, **2020**, 197, 342-354	8.4	15
61	Insights into the interfacial bonding strength of TiB/Ti: A first principles study. *Journal of Applied Physics*, **2019**, 126, 035304	2.5	2
60	Three-dimensional character of the deformation twin in magnesium. *Nature Communications*, **2019**, 10, 3308	17.4	27
59	A new method to reliably determine elastic strain of various crystal structures from atomic-resolution images. *Scientific Reports*, **2019**, 9, 16399	4.9	1
58	The effect of coherent interface on strain-rate sensitivity of highly textured Cu/Ni and Cu/V multilayers. *Scripta Materialia*, **2019**, 162, 33-37	5.6	18

57	Beyond Indentation Hardness and Modulus: Recent Advances in Nanoindentation Techniques: Part II. *Jom*, **2018**, 70, 485-486	2.1	2
56	High-Strength Nanotwinned Al Alloys with 9R Phase. *Advanced Materials*, **2018**, 30, 1704629	24	60
55	Hot Deformation Behavior and Processing Maps of Diamond/Cu Composites. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 2202-2212	2.3	2
54	Structural characteristics of {1012} non-cozone twin-twin interactions in magnesium. *Acta Materialia*, **2018**, 159, 65-76	8.4	31
53	Deformation mechanisms in FCC Co dominated by high-density stacking faults. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 736, 12-21	5.3	17
52	Alternative misfit dislocations pattern in semi-coherent FCC {100} interfaces. *Acta Materialia*, **2018**, 144, 177-186	8.4	25
51	Influences of Interfaces on Dynamic Recrystallization and Texture Evolution During Hot Rolling of Graphene Nanoribbon/Cu Composite. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 6401-6415	2.3	1
50	Thickness-Dependent Strain Rate Sensitivity of Nanolayers via the Nanoindentation Technique. *Crystals*, **2018**, 8, 128	2.3	2
49	Tensile Failure Modes in Nanograined Metals with Nanotwinned Regions. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 5001-5014	2.3	5
48	Layer thickness dependent strain rate sensitivity of Cu/amorphous CuNb multilayer. *Applied Physics Letters*, **2017**, 110, 161905	3.4	20
47	Experimentally quantifying critical stresses associated with basal slip and twinning in magnesium using micropillars. *Acta Materialia*, **2017**, 135, 411-421	8.4	59
46	Interface structures and twinning mechanisms of twins in hexagonal metals. *Materials Research Letters*, **2017**, 5, 449-464	7.4	56
45	Thickness-dependent a1/a2 domain evolution in ferroelectric PbTiO3 films. *Acta Materialia*, **2017**, 131, 123-130	8.4	23
44	Size dependent alloying and plastic deformation behaviors of Ti/Ni nano-multilayers. *Journal of Alloys and Compounds*, **2017**, 727, 691-695	5.7	8
43	High-velocity projectile impact induced 9R phase in ultrafine-grained aluminium. *Nature Communications*, **2017**, 8, 1653	17.4	28
42	Giant linear strain gradient with extremely low elastic energy in a perovskite nanostructure array. *Nature Communications*, **2017**, 8, 15994	17.4	61
41	Beyond Indentation Hardness and Modulus: Recent Advances in Nanoindentation Techniques: Part I. *Jom*, **2017**, 69, 2227-2228	2.1	2
40	A phase field study focuses on the transverse propagation of deformation twinning for hexagonal-closed packed crystals. *International Journal of Plasticity*, **2016**, 76, 130-146	7.6	23

39	Characterizing the boundary lateral to the shear direction of deformation twins in magnesium. *Nature Communications*, **2016**, 7, 11577	17.4	47
38	Plastic deformation in nanocrystalline TiN at ultra-low stress: An in situ nanoindentation study. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2016**, 650, 445-453	5.3	12
37	In Situ Nanoindentation Studies on Detwinning and Work Hardening in Nanotwinned Monolithic Metals. *Jom*, **2016**, 68, 127-135	2.1	10
36	Effect of martensitic phase transformation on the behavior of 304 austenitic stainless steel under tension. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 649, 174-183	5.3	52
35	Measurement of Heavy Ion Irradiation Induced In-Plane Strain in Patterned Face-Centered-Cubic Metal Films: An in Situ Study. *Nano Letters*, **2016**, 16, 7481-7489	11.5	13
34	Synthesis and microstructure of electrodeposited and sputtered nanotwinned face-centered-cubic metals. *MRS Bulletin*, **2016**, 41, 286-291	3.2	44
33	In Situ TEM Nanoindentation Studies on Stress-Induced Phase Transformations in Metallic Materials. *Jom*, **2016**, 68, 226-234	2.1	5
32	In situ Observation of Defect Annihilation in Kr Ion-Irradiated Bulk Fe/Amorphous-Fe2Zr Nanocomposite Alloy. *Materials Research Letters*, **2015**, 3, 35-42	7.4	18
31	Enhanced radiation tolerance in immiscible Cu/Fe multilayers with coherent and incoherent layer interfaces. *Journal of Materials Research*, **2015**, 30, 1300-1309	2.5	25
30	In situ studies on superior thermal stability of bulk FeZr nanocomposites. *Acta Materialia*, **2015**, 101, 125-135	8.4	11
29	Unusual size-dependent strengthening mechanisms in helium ion-irradiated immiscible coherent Cu/Co nanolayers. *Acta Materialia*, **2015**, 84, 393-404	8.4	61
28	Damage-tolerant nanotwinned metals with nanovoids under radiation environments. *Nature Communications*, **2015**, 6, 7036	17.4	79
27	In situ nanoindentation study on plasticity and work hardening in aluminium with incoherent twin boundaries. *Nature Communications*, **2014**, 5, 4864	17.4	81
26	Quantitative damage and detwinning analysis of nanotwinned copper foil under cyclic loading. *Acta Materialia*, **2014**, 81, 184-193	8.4	26
25	A new method for reliable determination of strain-rate sensitivity of low-dimensional metallic materials by using nanoindentation. *Scripta Materialia*, **2014**, 77, 5-8	5.6	36
24	Two types of martensitic phase transformations in magnetic shape memory alloys by in-situ nanoindentation studies. *Advanced Materials*, **2014**, 26, 3893-8	24	27
23	In situ studies of radiation induced crystallization in Fe/a-Y2O3 nanolayers. *Journal of Nuclear Materials*, **2014**, 452, 321-327	3.3	25
22	Plasticity and ultra-low stress induced twin boundary migration in nanotwinned Cu by in situ nanoindentation studies. *Applied Physics Letters*, **2014**, 104, 231910	3.4	42

21	Repetitive Ultra-low Stress Induced Nanocrystallization in Amorphous Cu-Zr-Al Alloy Evidenced by in situ Nanoindentation. *Materials Research Letters*, **2014**, 2, 209-216	7.4	10
20	Stacking fault and partial dislocation dominated strengthening mechanisms in highly textured Cu/Co multilayers. *International Journal of Plasticity*, **2013**, 49, 152-163	7.6	91
19	The role of surface oxygen in the growth of large single-crystal graphene on copper. *Science*, **2013**, 342, 720-3	33.3	868
18	Comparisons of radiation damage in He ion and proton irradiated immiscible Ag/Ni nanolayers. *Journal of Nuclear Materials*, **2013**, 440, 310-318	3.3	58
17	Strengthening mechanisms of Ag/Ni immiscible multilayers with fcc/fcc interface. *Surface and Coatings Technology*, **2013**, 237, 269-275	4.4	27
16	Removal of stacking-fault tetrahedra by twin boundaries in nanotwinned metals. *Nature Communications*, **2013**, 4, 1377	17.4	136
15	Basic criteria for formation of growth twins in high stacking fault energy metals. *Applied Physics Letters*, **2013**, 103, 181903	3.4	20
14	Superior tolerance of Ag/Ni multilayers against Kr ion irradiation: an in situ study. *Philosophical Magazine*, **2013**, 93, 3547-3562	1.6	41
13	Formation Mechanisms of High-density Growth Twins in Aluminum with High Stacking-Fault Energy. *Materials Research Letters*, **2013**, 1, 51-60	7.4	67
12	Significant enhancement in the thermal stability of nanocrystalline metals via immiscible tri-phases. *Scripta Materialia*, **2012**, 67, 177-180	5.6	10
11	Enhanced radiation tolerance of ultrafine grained Fe□CrNi alloy. *Journal of Nuclear Materials*, **2012**, 420, 235-240	3.3	68
10	Radiation damage in helium ion irradiated nanocrystalline Fe. *Journal of Nuclear Materials*, **2012**, 425, 140-146	3.3	129
9	Thermal stability of ultrafine grained Fe□CrNi alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 542, 64-70	5.3	28
8	A formation mechanism for ultra-thin nanotwins in highly textured Cu/Ni multilayers. *Journal of Applied Physics*, **2012**, 111, 073526	2.5	32
7	Indentation of nanotwinned fcc metals: Implications for nanotwin stability. *Acta Materialia*, **2012**, 60, 4623-4635	8.4	44
6	Mechanical properties of crystalline Cu/Zr and crystal□morphous Cu/Cu□r multilayers. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 552, 392-398	5.3	77
5	Microstructure and strengthening mechanisms in Cu/Fe multilayers. *Acta Materialia*, **2012**, 60, 6312-6322	8.4	89
4	Length scale-dependent deformation behavior of nanolayered Cu/Zr micropillars. *Acta Materialia*, **2012**, 60, 1610-1622	8.4	99

3	Intrinsic and extrinsic size effects on deformation in nanolayered Cu/Zr micropillars: From bulk-like to small-volume materials behavior. *Acta Materialia*, **2012**, 60, 4054-4064	8.4	54
2	Mechanical properties of highly textured Cu/Ni multilayers. *Acta Materialia*, **2011**, 59, 1924-1933	8.4	172
1	Understanding nanoscale damage at a crack tip of multilayered metallic composites. *Applied Physics Letters*, **2008**, 92, 161905	3.4	35