

# Kaiyuan Yu

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

52  
papers

1,723  
citations

23  
h-index

41  
g-index

55  
ext. papers

2,057  
ext. citations

8  
avg, IF

4.45  
L-index

#	Paper	IF	Citations
52	Comparison of cracking behavior of nanocrystalline Cu film on substrates of different plastic deformation mechanisms. <i>Materials Today Communications</i> , <b>2022</b> , 31, 103289	2.5	1
51	Uniting tensile ductility with ultrahigh strength via composition undulation.. <i>Nature</i> , <b>2022</b> , 604, 273-279	50.4	2
50	Molecular dynamics simulations of ultralow hysteretic behavior in super-elastic shape memory alloys. <i>Acta Materialia</i> , <b>2022</b> , 232, 117973	8.4	0
49	Nanotubular ZrTiO <sub>4</sub> Prepared on Sputter Deposited ZrTi Films by Anodization. <i>ChemElectroChem</i> , <b>2021</b> , 8, 4136	4.3	
48	Transferring elastic strain in Mo/Nb/TiNi multilayer nanocomposites by the principle of lattice strain matching. <i>Composites Part B: Engineering</i> , <b>2021</b> , 215, 108784	10	3
47	Enhanced superelasticity of nanocrystalline NiTi/NiTiNbFe laminar composite. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 853, 157309	5.7	4
46	Step-wise R phase transformation rendering high-stability two-way shape memory effect of a NiTiFe-Nb nanowire composite. <i>Acta Materialia</i> , <b>2021</b> , 219, 117258	8.4	2
45	Recent Studies on the Microstructural Response of Nanotwinned Metals to In Situ Heavy Ion Irradiation. <i>Jom</i> , <b>2020</b> , 72, 160-169	2.1	1
44	"Lattice Strain Matching"-Enabled Nanocomposite Design to Harness the Exceptional Mechanical Properties of Nanomaterials in Bulk Forms. <i>Advanced Materials</i> , <b>2020</b> , 32, e1904387	24	5
43	Microstructures and optical properties of TiO <sub>2</sub> /ZrO <sub>2</sub> nanotube/nanoporous heterofilm prepared by anodizing of Ti/Zr/Ti multilayer films. <i>Applied Surface Science</i> , <b>2020</b> , 503, 144316	6.7	10
42	High performance Nb/TiNi nanocomposites produced by packaged accumulative roll bonding. <i>Composites Part B: Engineering</i> , <b>2020</b> , 202, 108403	10	8
41	Superior strength-ductility synergy by hetero-structuring high manganese steel. <i>Materials Research Letters</i> , <b>2020</b> , 8, 417-423	7.4	10
40	Layers-like martensitic transformation in a Cu/carbon-steel nanocomposite: An in situ synchrotron study. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 741, 693-699	5.7	2
39	Detwinning through migration of twin boundaries in nanotwinned Cu films under ion irradiation. <i>Science and Technology of Advanced Materials</i> , <b>2018</b> , 19, 212-220	7.1	9
38	Radiation damage in nanostructured materials. <i>Progress in Materials Science</i> , <b>2018</b> , 96, 217-321	42.2	178
37	Temperature-dependent plastic deformation mechanisms of a Cu/steel transforming nanolamellar composite. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2018</b> , 734, 77-84	5.3	3
36	Conductive nanolamellar Cu/martensite wire with high strength. <i>Materials Letters</i> , <b>2018</b> , 229, 344-347	3.3	1

35	Strengthening mechanisms in NiTi(NbFe)/amorphous-CuZrAl multilayered thin films. <i>Surface and Coatings Technology</i> , <b>2018</b> , 353, 247-253	4.4	3
34	High-velocity projectile impact induced 9R phase in ultrafine-grained aluminium. <i>Nature Communications</i> , <b>2017</b> , 8, 1653	17.4	28
33	Comparison of interface structure of BCC metallic (Fe, V and Nb) films on MgO (100) substrate. <i>Applied Surface Science</i> , <b>2017</b> , 410, 585-592	6.7	7
32	Unusual size dependent strengthening mechanisms of Cu/amorphous CuNb multilayers. <i>Acta Materialia</i> , <b>2016</b> , 120, 327-336	8.4	46
31	What determines the interfacial configuration of Nb/AlO and Nb/MgO interface. <i>Scientific Reports</i> , <b>2016</b> , 6, 33931	4.9	17
30	High strength W/TiNi micro-laminated composite with transformation-mediated ductility. <i>Materials and Design</i> , <b>2016</b> , 106, 415-419	8.1	15
29	In situ studies on radiation tolerance of nanotwinned Cu. <i>Acta Materialia</i> , <b>2016</b> , 111, 148-156	8.4	56
28	A roadmap for tailoring the strength and ductility of ferritic/martensitic T91 steel via thermo-mechanical treatment. <i>Acta Materialia</i> , <b>2016</b> , 112, 361-377	8.4	50
27	Plastic deformation in nanocrystalline TiN at ultra-low stress: An in situ nanoindentation study. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 650, 445-453	5.3	12
26	Measurement of Heavy Ion Irradiation Induced In-Plane Strain in Patterned Face-Centered-Cubic Metal Films: An in Situ Study. <i>Nano Letters</i> , <b>2016</b> , 16, 7481-7489	11.5	13
25	Crystal size induced reduction in thermal hysteresis of Ni-Ti-Nb shape memory thin films. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 171907	3.4	5
24	In situ Observation of Defect Annihilation in Kr Ion-Irradiated Bulk Fe/Amorphous-Fe <sub>2</sub> Zr Nanocomposite Alloy. <i>Materials Research Letters</i> , <b>2015</b> , 3, 35-42	7.4	18
23	In situ study of defect migration kinetics and self-healing of twin boundaries in heavy ion irradiated nanotwinned metals. <i>Nano Letters</i> , <b>2015</b> , 15, 2922-7	11.5	78
22	Enhanced Flux Pinning Properties in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}/\text{CoFe}_2\text{O}_4/0.3\text{CeO}_2/0.7$ Multilayer Thin Films. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2015</b> , 25, 1-4	1.8	2
21	Enhanced radiation tolerance in immiscible Cu/Fe multilayers with coherent and incoherent layer interfaces. <i>Journal of Materials Research</i> , <b>2015</b> , 30, 1300-1309	2.5	25
20	Radiation tolerant nanocrystalline ZrN films under high dose heavy-ion irradiations. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 145901	2.5	17
19	Unusual size-dependent strengthening mechanisms in helium ion-irradiated immiscible coherent Cu/Co nanolayers. <i>Acta Materialia</i> , <b>2015</b> , 84, 393-404	8.4	61
18	Damage-tolerant nanotwinned metals with nanovoids under radiation environments. <i>Nature Communications</i> , <b>2015</b> , 6, 7036	17.4	79

17	In situ neutron diffraction study on temperature dependent deformation mechanisms of ultrafine grained austenitic Fe <sub>84</sub> Cr <sub>16</sub> Ni alloy. <i>International Journal of Plasticity</i> , <b>2014</b> , 53, 125-134	7.6	8
16	Response of equal channel angular extrusion processed ultrafine-grained T91 steel subjected to high temperature heavy ion irradiation. <i>Acta Materialia</i> , <b>2014</b> , 74, 285-295	8.4	62
15	In situ studies of radiation induced crystallization in Fe/a-Y <sub>2</sub> O <sub>3</sub> nanolayers. <i>Journal of Nuclear Materials</i> , <b>2014</b> , 452, 321-327	3.3	25
14	Magnetic properties of (CoFe <sub>2</sub> O <sub>4</sub> ) <sub>x</sub> :(CeO <sub>2</sub> ) <sub>1-x</sub> vertically aligned nanocomposites and their pinning properties in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> thin films. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 123902	2.5	25
13	In situ Evidence of Defect Cluster Absorption by Grain Boundaries in Kr Ion Irradiated Nanocrystalline Ni. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2013</b> , 44, 1966-1974	2.3	81
12	In situ studies of irradiation-induced twin boundary migration in nanotwinned Ag. <i>Scripta Materialia</i> , <b>2013</b> , 69, 385-388	5.6	63
11	Stacking fault and partial dislocation dominated strengthening mechanisms in highly textured Cu/Co multilayers. <i>International Journal of Plasticity</i> , <b>2013</b> , 49, 152-163	7.6	91
10	Comparisons of radiation damage in He ion and proton irradiated immiscible Ag/Ni nanolayers. <i>Journal of Nuclear Materials</i> , <b>2013</b> , 440, 310-318	3.3	58
9	Strengthening mechanisms of Ag/Ni immiscible multilayers with fcc/fcc interface. <i>Surface and Coatings Technology</i> , <b>2013</b> , 237, 269-275	4.4	27
8	Removal of stacking-fault tetrahedra by twin boundaries in nanotwinned metals. <i>Nature Communications</i> , <b>2013</b> , 4, 1377	17.4	136
7	Basic criteria for formation of growth twins in high stacking fault energy metals. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 181903	3.4	20
6	Superior tolerance of Ag/Ni multilayers against Kr ion irradiation: an in situ study. <i>Philosophical Magazine</i> , <b>2013</b> , 93, 3547-3562	1.6	41
5	Enhanced radiation tolerance of ultrafine grained Fe <sub>80</sub> Cr <sub>20</sub> Ni alloy. <i>Journal of Nuclear Materials</i> , <b>2012</b> , 420, 235-240	3.3	68
4	Radiation damage in helium ion irradiated nanocrystalline Fe. <i>Journal of Nuclear Materials</i> , <b>2012</b> , 425, 140-146	3.3	129
3	Microstructure and strengthening mechanisms in Cu/Fe multilayers. <i>Acta Materialia</i> , <b>2012</b> , 60, 6312-6328	8.4	89
2	Effect of Zr addition on microstructures and mechanical properties of Ni-46Ti-4Al alloy. <i>Rare Metals</i> , <b>2011</b> , 30, 522-526	5.5	5
1	Size dependent strengthening mechanisms in sputtered Fe/W multilayers. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 093503	2.5	24