Kaiyuan Yu

List of Publications by Year
in descending order

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55 papers	2,364 citations	236612 25 h-index	205818 48 g-index
55 all docs	55 docs citations	55 times ranked	1569 citing authors

#	Article	IF	Citations
1	Radiation damage in nanostructured materials. Progress in Materials Science, 2018, 96, 217-321.	16.0	307
2	Removal of stacking-fault tetrahedra by twin boundaries in nanotwinned metals. Nature Communications, 2013, 4, 1377.	5.8	155
3	Radiation damage in helium ion irradiated nanocrystalline Fe. Journal of Nuclear Materials, 2012, 425, 140-146.	1.3	154
4	Stacking fault and partial dislocation dominated strengthening mechanisms in highly textured Cu/Co multilayers. International Journal of Plasticity, 2013, 49, 152-163.	4.1	109
5	Microstructure and strengthening mechanisms in Cu/Fe multilayers. Acta Materialia, 2012, 60, 6312-6321.	3.8	104
6	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.	1.1	103
7	Damage-tolerant nanotwinned metals with nanovoids under radiation environments. Nature Communications, 2015, 6, 7036.	5.8	97
8	In Situ Study of Defect Migration Kinetics and Self-Healing of Twin Boundaries in Heavy Ion Irradiated Nanotwinned Metals. Nano Letters, 2015, 15, 2922-2927.	4.5	90
9	Uniting tensile ductility with ultrahigh strength via composition undulation. Nature, 2022, 604, 273-279.	13.7	80
10	Enhanced radiation tolerance of ultrafine grained Feâ€“Crâ€“Ni alloy. Journal of Nuclear Materials, 2012, 420, 235-240.	1.3	78
11	Response of equal channel angular extrusion processed ultrafine-grained T91 steel subjected to high temperature heavy ion irradiation. Acta Materialia, 2014, 74, 285-295.	3.8	78
12	A roadmap for tailoring the strength and ductility of ferritic/martensitic T91 steel via thermo-mechanical treatment. Acta Materialia, 2016, 112, 361-377.	3.8	76
13	Unusual size-dependent strengthening mechanisms in helium ion-irradiated immiscible coherent Cu/Co nanolayers. Acta Materialia, 2015, 84, 393-404.	3.8	75
14	In situ studies of irradiation-induced twin boundary migration in nanotwinned Ag. Scripta Materialia, 2013, 69, 385-388.	2.6	72
15	Comparisons of radiation damage in He ion and proton irradiated immiscible Ag/Ni nanolayers. Journal of Nuclear Materials, 2013, 440, 310-318.	1.3	68
16	High-velocity projectile impact induced 9R phase in ultrafine-grained aluminium. Nature Communications, 2017, 8, 1653.	5.8	66
17	In situ studies on radiation tolerance of nanotwinned Cu. Acta Materialia, 2016, 111, 148-156.	3.8	63
18	Unusual size dependent strengthening mechanisms of Cu/amorphous CuNb multilayers. Acta Materialia, 2016, 120, 327-336.	3.8	61

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19	Superior tolerance of Ag/Ni multilayers against Kr ion irradiation: an in situ study. Philosophical Magazine, 2013, 93, 3547-3562.	0.7	47
20	Enhanced radiation tolerance in immiscible Cu/Fe multilayers with coherent and incoherent layer interfaces. Journal of Materials Research, 2015, 30, 1300-1309.	1.2	34
21	Strengthening mechanisms of Ag/Ni immiscible multilayers with fcc/fcc interface. Surface and Coatings Technology, 2013, 237, 269-275.	2.2	33
22	Basic criteria for formation of growth twins in high stacking fault energy metals. Applied Physics Letters, 2013, 103, .	1.5	26
23	In situ studies of radiation induced crystallization in Fe/a-Y2O3 nanolayers. Journal of Nuclear Materials, 2014, 452, 321-327.	1.3	26
24	Magnetic properties of (CoFe2O4)x:(CeO2)1âˆ'x vertically aligned nanocomposites and their pinning properties in YBa2Cu3O7âˆ'Î´ thin films. Journal of Applied Physics, 2014, 115, 123902.	1.1	25
25	What determines the interfacial configuration of Nb/Al2O3 and Nb/MgO interface. Scientific Reports, 2016, 6, 33931.	1.6	25
26	Superior strength-ductility synergy by hetero-structuring high manganese steel. Materials Research Letters, 2020, 8, 417-423.	4.1	25
27	Size dependent strengthening mechanisms in sputtered Fe/W multilayers. Journal of Applied Physics, 2010, 107, 093503.	1.1	24
28	High performance Nb/TiNi nanocomposites produced by packaged accumulative roll bonding. Composites Part B: Engineering, 2020, 202, 108403.	5.9	22
29	Radiation tolerant nanocrystalline ZrN films under high dose heavy-ion irradiations. Journal of Applied Physics, 2015, 117, .	1.1	21
30	In situObservation of Defect Annihilation in Kr Ion-Irradiated Bulk Fe/Amorphous-Fe₂Zr Nanocomposite Alloy. Materials Research Letters, 2015, 3, 35-42.	4.1	20
31	High strength W/TiNi micro-laminated composite with transformation-mediated ductility. Materials and Design, 2016, 106, 415-419.	3.3	19
32	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.	2.6	16
33	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.	4.5	14
34	â€œLattice Strain Matchingâ€â€Enabled Nanocomposite Design to Harness the Exceptional Mechanical Properties of Nanomaterials in Bulk Forms. Advanced Materials, 2020, 32, e1904387.	11.1	13
35	Microstructures and optical properties of TiO2/ZrO2 nanotube/nanoporous heterofilm prepared by anodizing of Ti/Zr/Ti multilayer films. Applied Surface Science, 2020, 503, 144316.	3.1	13
36	Nanocrystalline strain glass TiNiPt and its superelastic behavior. Physical Review B, 2021, 104, .	1.1	13

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37	Comparison of interface structure of BCC metallic (Fe, V and Nb) films on MgO (100) substrate. Applied Surface Science, 2017, 410, 585-592.	3.1	12
38	Detwinning through migration of twin boundaries in nanotwinned Cu films under in situ ion irradiation. Science and Technology of Advanced Materials, 2018, 19, 212-220.	2.8	12
39	Transferring elastic strain in Mo/Nb/TiNi multilayer nanocomposites by the principle of lattice strain matching. Composites Part B: Engineering, 2021, 215, 108784.	5.9	11
40	In situ neutron diffraction study on temperature dependent deformation mechanisms of ultrafine grained austenitic Feâ€“14Crâ€“16Ni alloy. International Journal of Plasticity, 2014, 53, 125-134.	4.1	10
41	Step-wise R phase transformation rendering high-stability two-way shape memory effect of a NiTiFe-Nb nanowire composite. Acta Materialia, 2021, 219, 117258.	3.8	10
42	Revealing the mode and strain of reversible twinning in B19â€² martensite by in situ synchrotron X-ray diffraction. Acta Materialia, 2022, 236, 118131.	3.8	10
43	Enhanced superelasticity of nanocrystalline NiTi/NiTiNbFe laminar composite. Journal of Alloys and Compounds, 2021, 853, 157309.	2.8	9
44	Effect of Zr addition on microstructures and mechanical properties of Ni-46Ti-4Al alloy. Rare Metals, 2011, 30, 522-526.	3.6	6
45	Crystal size induced reduction in thermal hysteresis of Ni-Ti-Nb shape memory thin films. Applied Physics Letters, 2016, 108, .	1.5	5
46	Recent Studies on the Microstructural Response of Nanotwinned Metals to In Situ Heavy Ion Irradiation. Jom, 2020, 72, 160-169.	0.9	5
47	Strengthening mechanisms in NiTi(NbFe)/amorphous-CuZrAl multilayered thin films. Surface and Coatings Technology, 2018, 353, 247-253.	2.2	4
48	Temperature-dependent plastic deformation mechanisms of a Cu/steel transforming nanolamellar composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 734, 77-84.	2.6	4
49	Molecular dynamics simulations of ultralow hysteretic behavior in super-elastic shape memory alloys. Acta Materialia, 2022, 232, 117973.	3.8	4
50	LÃ¼ders-like martensitic transformation in a Cu/carbon-steel nanocomposite: An in situ synchrotron study. Journal of Alloys and Compounds, 2018, 741, 693-699.	2.8	3
51	Enhanced Flux Pinning Properties in $hbox{YBa}_{2}hbox{Cu}_{3}hbox{O}_{7-delta}$/ $(hbox{CoFe}_{2}hbox{O}_{4})_{0.3}(hbox{CeO}_{2})_{0.7} $ Multilayer Thin Films. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.1	2
52	Nanotubular ZrTiO₄ Prepared on Sputter Deposited Zrâ€“Ti Films by Anodization. ChemElectroChem, 2021, 8, 4136-4140.	1.7	2
53	Nanostructured metallic materials in extreme environments. , 2014, , .		1
54	Conductive nanolamellar Cu/martensite wire with high strength. Materials Letters, 2018, 229, 344-347.	1.3	1

#	Article	IF	Citations
55	Comparison of cracking behavior of nanocrystalline Cu film on substrates of different plastic deformation mechanisms. Materials Today Communications, 2022, 31, 103289.	0.9	1