Tao Fu

List of Publications by Year
in descending order

82 papers	1,979 citations	218592 26 h-index	289141 40 g-index
82 all docs	82 docs citations	82 times ranked	1064 citing authors

#	Article	IF	Citations
1	Molecular dynamics simulation of nanoindentation on Cu/Ni nanotwinned multilayer films using a spherical indenter. Scientific Reports, 2016, 6, 35665.	1.6	121
2	Molecular dynamics study of strengthening mechanism of nanolaminated graphene/Cu composites under compression. Scientific Reports, 2018, 8, 3089.	1.6	99
3	Formation of prismatic loops in AlN and GaN under nanoindentation. Acta Materialia, 2017, 138, 131-139.	3.8	82
4	Strengthening effects of twin interface in Cu/Ni multilayer thin films â€“ A molecular dynamics study. Materials and Design, 2016, 111, 1-8.	3.3	79
5	Molecular dynamics simulation of plasticity in VN(001) crystals under nanoindentation with a spherical indenter. Applied Surface Science, 2017, 392, 942-949.	3.1	67
6	Molecular dynamics simulation of VN thin films under indentation. Applied Surface Science, 2015, 357, 643-650.	3.1	62
7	Molecular dynamics simulation of BCC Ta with coherent twin boundaries under nanoindentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 700, 609-616.	2.6	62
8	Molecular dynamics simulation of effects of twin interfaces on Cu/Ni multilayers. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 658, 1-7.	2.6	58
9	Molecular dynamics simulations of aggregation of copper nanoparticles with different heating rates. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 90, 137-142.	1.3	54
10	Anisotropy effects in diamond under nanoindentation. Carbon, 2018, 132, 606-615.	5.4	48
11	Molecular dynamics simulation of TiN (001) thin films under indentation. Ceramics International, 2015, 41, 14078-14086.	2.3	47
12	Molecular dynamic simulation on nano-indentation of NiTi SMA. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 592-602.	2.6	46
13	MD simulation of nanoindentation on (001) and (111) surfaces of Agâ€“Ni multilayers. Physica E: Low-Dimensional Systems and Nanostructures, 2015, 74, 481-488.	1.3	43
14	Molecular dynamics simulation of deformation twin in rocksalt vanadium nitride. Journal of Alloys and Compounds, 2016, 675, 128-133.	2.8	43
15	Molecular dynamics simulation of AlN thin films under nanoindentation. Ceramics International, 2017, 43, 4068-4075.	2.3	43
16	Molecular dynamics simulation in single crystal 3C-SiC under nanoindentation: Formation of prismatic loops. Ceramics International, 2017, 43, 16313-16318.	2.3	43
17	Molecular dynamics simulation of effects of interface imperfections and modulation periods on Cu/Ta multilayers. Computational Materials Science, 2018, 143, 63-70.	1.4	42
18	Molecular dynamics simulations for responses of nanotwinned diamond films under nanoindentation. Ceramics International, 2017, 43, 16888-16894.	2.3	41

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19	Effects of strain rate and annealing temperature on tensile properties of nanocrystalline diamond. Carbon, 2018, 136, 320-328.	5.4	36
20	Molecular dynamics simulation of nano-indentation of (111) cubic boron nitride with optimized Tersoff potential. Applied Surface Science, 2016, 382, 309-315.	3.1	35
21	Strain rate dependence of tension and compression behavior in nano-polycrystalline vanadium nitride. Ceramics International, 2017, 43, 11635-11641.	2.3	34
22	Strengthening mechanisms of graphene coated copper under nanoindentation. Computational Materials Science, 2018, 144, 42-49.	1.4	34
23	Tension-Compression asymmetry of single-crystalline and nanocrystalline NiTi shape memory alloy: An atomic scale study. Mechanics of Materials, 2020, 145, 103402.	1.7	33
24	Molecular dynamics simulation of the slip systems in VN. RSC Advances, 2015, 5, 77831-77838.	1.7	30
25	A micro-macro description for pseudoelasticity of NiTi SMAs subjected to nonproportional deformations. International Journal of Plasticity, 2017, 90, 44-65.	4.1	30
26	Nanoindentation of ultra-hard cBN films: A molecular dynamics study. Applied Surface Science, 2017, 392, 215-224.	3.1	30
27	Strengthening and toughening by partial slip in nanotwinned diamond. Carbon, 2019, 150, 1-7.	5.4	29
28	Investigation of mechanical behaviour of amorphous aluminium nitride. Materialia, 2018, 2, 148-156.	1.3	27
29	Shock-induced stacking fault pyramids in Ni/Al multilayers. Applied Surface Science, 2018, 427, 219-225.	3.1	26
30	First-principles calculation and molecular dynamics simulation of fracture behavior of VN layers under uniaxial tension. Physica E: Low-Dimensional Systems and Nanostructures, 2015, 69, 224-231.	1.3	23
31	MD simulation of effect of crystal orientations and substrate temperature on growth of Cu/Ni bilayer films. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	22
32	MD simulation of growth of Pd on Cu (1 1 1) and Cu on Pd (1 1 1) substrates. Applied Surface Science, 2015, 356, 651-658.	3.1	21
33	Coalescence of Cu contacted nanoparticles with different heating rates: A molecular dynamics study. International Journal of Modern Physics B, 2016, 30, 1650212.	1.0	21
34	Grain size dependence of tensile properties in nanocrystalline diamond. Computational Materials Science, 2019, 157, 67-74.	1.4	20
35	Effects of twin boundaries in vanadium nitride films subjected to tensile/compressive deformations. Applied Surface Science, 2017, 426, 262-270.	3.1	19
36	Higher Strength and Ductility than Diamond: Nanotwinned Diamond/Cubic Boron Nitride Multilayer. ACS Applied Materials & Interfaces, 2018, 10, 42804-42811.	4.0	19

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37	In-plane anisotropy and twin boundary effects in vanadium nitride under nanoindentation. Scientific Reports, 2017, 7, 4768.	1.6	18
38	Anisotropic Phase Transformation in B2 Crystalline CuZr Alloy. Nanoscale Research Letters, 2019, 14, 283.	3.1	18
39	Anisotropic and asymmetric deformation mechanisms of nanolaminated graphene/Cu composites. Nano Materials Science, 2019, 1, 121-130.	3.9	18
40	Atomic structures and electronic properties of interfaces between aluminum and carbides/nitrides: A first-principles study. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 89, 15-20.	1.3	17
41	Molecular dynamics simulation of nano-indentation on Ti-V multilayered thin films. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 87, 213-219.	1.3	17
42	Dislocation reaction-based formation mechanism of stacking fault tetrahedra in FCC high-entropy alloy. Materials Chemistry and Physics, 2022, 282, 125997.	2.0	15
43	First-principles investigation on slip systems and twinnability of TiC. Computational Materials Science, 2017, 126, 103-107.	1.4	14
44	Generalized stacking fault energies and ideal strengths of MC systems (MÂ=ÂTi, Zr, Hf) doped with Si/Al using first principles calculations. Journal of Alloys and Compounds, 2018, 739, 431-438.	2.8	14
45	A homogenization scheme for elastoplastic composites using concept of Mori-Tanaka method and average deformation power rate density. International Journal of Plasticity, 2020, 128, 102652.	4.1	14
46	Nano-indentation and nano-scratching of pure nickel and NiTi shape memory alloy thin films: an atomic-scale simulation. Thin Solid Films, 2021, 736, 138906.	0.8	14
47	Molecular Dynamics Studies on Size Effects in Laminated Polycrystalline Graphene/Copper Composites: Implications for Mechanical Behavior. ACS Applied Nano Materials, 2021, 4, 12289-12299.	2.4	14
48	A novel high-entropy alloy with multi-scale precipitates and excellent mechanical properties fabricated by spark plasma sintering. Advanced Powder Technology, 2022, 33, 103520.	2.0	14
49	Flow strength limit of nanocrystalline tantalum predicted with molecular dynamics simulations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 738, 1-9.	2.6	13
50	Twin boundary migration and reactions with stacking fault tetrahedron in Cu and CoCrCuFeNi high-entropy alloy. Journal of Materials Research and Technology, 2022, 17, 282-292.	2.6	13
51	Effects of modulation periods on mechanical properties of V/VN nano-multilayers. Ceramics International, 2019, 45, 10295-10303.	2.3	12
52	Formation and Anisotropic Mechanical Behavior of Stacking Fault Tetrahedron in Ni and CoCrFeNiMn High-Entropy Alloy. Frontiers in Materials, 2022, 8, .	1.2	12
53	L21-strengthened body-centered-cubic high-entropy alloy with excellent mechanical properties. Intermetallics, 2022, 145, 107539.	1.8	12
54	Structure and shear response of <001> tilt grain boundary in titanium nitride. Ceramics International, 2019, 45, 5531-5546.	2.3	10

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55	Molecular Dynamics Investigation of the Influence of Voids on the Impact Mechanical Behavior of NiTi Shape-Memory Alloy. Materials, 2021, 14, 4020.	1.3	10
56	Incipient plasticity and dislocation loop evolution in rock-salt vanadium nitride. Ceramics International, 2020, 46, 11169-11178.	2.3	9
57	A novel high performance eutectic medium-entropy alloy with nanoprecipitates. Vacuum, 2022, 200, 111017.	1.6	9
58	Molecular Dynamics Simulation of Nanoindentation of Cu/Au Thin Films at Different Temperatures. Journal of Nanomaterials, 2016, 2016, 1-8.	1.5	8
59	Effect of tensile stress on thermal fatigue life of ZrB2-SiC-graphite composite. Materials and Design, 2017, 126, 91-97.	3.3	8
60	Inapparent Strengthening Effect of Twin Interface in Cu/Pd Multilayered Films with a Large Lattice Mismatch. Nanomaterials, 2019, 9, 1778.	1.9	8
61	Superior mechanical and thermal properties than diamond: Diamond/lonsdaleite biphasic structure. Journal of Materials Science and Technology, 2020, 48, 114-122.	5.6	8
62	Effects of Anisotropy and In-Plane Grain Boundary in Cu/Pd Multilayered Films with Cube-on-Cube and Twinned Interface. Nanoscale Research Letters, 2021, 16, 69.	3.1	8
63	Effect of heating rate on the strength of ZrB2â€“SiC composite subjected to cyclic thermal shock. Ceramics International, 2019, 45, 15400-15405.	2.3	7
64	Repeated Thermal Shock Behavior of ZrB2â€“SiCâ€“Graphite Composite under Pre-Stress in Air and Ar Atmospheres. Materials, 2020, 13, 370.	1.3	7
65	Repeated thermal shock behavior of ZrB2-SiC-graphite composite under prestress. Ceramics International, 2016, 42, 18012-18018.	2.3	6
66	Atomic structure, electronic properties and generalized stacking fault energy of diamond/c-BN multilayer. RSC Advances, 2017, 7, 29599-29605.	1.7	6
67	Investigation of Interaction between Dislocation Loop and Coherent Twin Boundary in BCC Ta Film during Nanoindentation. Nanomaterials, 2017, 7, 375.	1.9	6
68	Notch effects on deformation of crystalline and amorphous AlN â€“ A nanoscale study. Ceramics International, 2019, 45, 907-917.	2.3	6
69	Delay of inverse Hall-Petch relationship of nanocrystalline Cu by modifying grain boundaries with coherent twins. Physical Review B, 2022, 105, .	1.1	6
70	Heterogeneous structure induced excellent mechanical and wear properties in Co-free FeCrAlNi medium-entropy alloys. Journal of Materials Research and Technology, 2022, 18, 4169-4180.	2.6	6
71	Feature size coupling effect of nanolaminated graphene/copper composites. International Journal of Mechanical Sciences, 2022, 227, 107469.	3.6	6
72	Detwinning Mechanism for Nanotwinned Cubic Boron Nitride with Unprecedented Strength: A First-Principles Study. Nanomaterials, 2019, 9, 1117.	1.9	5

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73	Toughening and maintaining strength of diamond with substitutional doping boron and nitrogen. Journal of Alloys and Compounds, 2019, 805, 1090-1095.	2.8	5
74	Deformation mechanisms and twin boundary effects in cadmium telluride under nanoindentation. Ceramics International, 2017, 43, 14405-14412.	2.3	4
75	Extension of micromechanics model and micro-macro description to shape memory effect of NiTi SMAs. International Journal of Solids and Structures, 2020, 188-189, 169-180.	1.3	4
76	Investigation of impurity induced twinning in MgO from first principles calculations. Computational Materials Science, 2018, 150, 390-396.	1.4	3
77	Mechanical properties and their sensitivity to point defects: <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:mi>HfNbTaTiZr</mml:mi><mml:mo mathvariant="normal">)</mml:mo><mml:msub><mml:mi mathvariant="normal">C</mml:mi></mml:mrow></mml:math> high-entropy carbide. Physical Review B, 2022, 105, .	1.1	3
78	Modulation period dependent mechanical properties of Cu/Fe metallic multilayered films. AIP Advances, 2018, 8, 045208.	0.6	2
79	Comment on â€œEnhanced Strength Through Nanotwinning in the Thermoelectric Semiconductor InSbâ€. Physical Review Letters, 2019, 123, 119601.	2.9	1
80	A quick measuring method for yield temperatures of materials under constant prestress at ultra-high temperatures. Review of Scientific Instruments, 2020, 91, 075110.	0.6	0
81	Atomic Scale Study on the Tension-Compression Asymmetry of Single Crystalline and Nanocrystalline NiTi Shape Memory Alloy. SSRN Electronic Journal, 0, , .	0.4	0
82	Deformation characteristics of nanolayered dual-phase CrCoNi medium-entropy alloy nanowires. Materials Today Communications, 2022, 31, 103273.	0.9	0