Shuozhi Xu

List of Publications by Year in Descending Order

71 papers	1,297 citations	22 h-index	32 g-index
73 ext. papers	1,666 ext. citations	5 avg, IF	5.56 L-index

#	Paper	IF	Citations
71	Fabrication and Characterization of High-Quality Epitaxial Nanocolumnar Niobium Films with Abrupt Interfaces on YSZ(001). *Journal of Physical Chemistry C*, **2022**, 126, 2098-2107	3.8	1
70	Line-length-dependent dislocation glide in refractory multi-principal element alloys. *Applied Physics Letters*, **2022**, 120, 061901	3.4	1
69	Role of layer thickness and dislocation distribution in confined layer slip in nanolaminated Nb. *International Journal of Plasticity*, **2022**, 152, 103239	7.6	0
68	Transitions in the morphology and critical stresses of gliding dislocations in multiprincipal element alloys. *Physical Review Materials*, **2022**, 6,	3.2	1
67	Phase-field modeling of the interactions between an edge dislocation and an array of obstacles. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 389, 114426	5.7	3
66	Shock-induced amorphization in medium entropy alloy CoCrNi. *Scripta Materialia*, **2022**, 209, 114379	5.6	4
65	On calculations of basic structural parameters in multi-principal element alloys using small atomistic models. *Computational Materials Science*, **2022**, 202, 110942	3.2	5
64	Energetically favorable dislocation/nanobubble bypass mechanism in irradiation conditions. *Acta Materialia*, **2022**, 230, 117849	8.4	0
63	Recent progress in the phase-field dislocation dynamics method. *Computational Materials Science*, **2022**, 210, 111419	3.2	0
62	Atomistic simulations of the local slip resistances in four refractory multi-principal element alloys. *International Journal of Plasticity*, **2021**, 149, 103157	7.6	5
61	Role of local chemical fluctuations in the shock dynamics of medium entropy alloy CoCrNi. *Acta Materialia*, **2021**, 221, 117380	8.4	7
60	Lattice dislocation induced misfit dislocation evolution in semi-coherent {111} bimetal interfaces. *Journal of Materials Research*, **2021**, 36, 2763-2778	2.5	3
59	Generalized stacking fault energies and Peierls stresses in refractory body-centered cubic metals from machine learning-based interatomic potentials. *Computational Materials Science*, **2021**, 192, 110364	3.2	16
58	Effect of interface structure on dislocation glide behavior in nanolaminates. *Journal of Materials Research*, **2021**, 36, 2802-2815	2.5	2
57	Local slip resistances in equal-molar MoNbTi multi-principal element alloy. *Acta Materialia*, **2021**, 202, 68-79	8.4	25
56	On the significance of model design in atomistic calculations of the Peierls stress in Nb. *Computational Materials Science*, **2021**, 188, 110150	3.2	6
55	Role of local chemical fluctuations in the melting of medium entropy alloy CoCrNi. *Applied Physics Letters*, **2021**, 119, 121904	3.4	2

54	Frank-Read source operation in six body-centered cubic refractory metals. *Journal of the Mechanics and Physics of Solids*, **2020**, 141, 104017	5	18
53	Atomistic simulations of dynamics of an edge dislocation and its interaction with a void in copper: a comparative study. *Modelling and Simulation in Materials Science and Engineering*, **2020**, 28, 045004	2	14
52	Comparative modeling of the disregistry and Peierls stress for dissociated edge and screw dislocations in Al. *International Journal of Plasticity*, **2020**, 129, 102689	7.6	22
51	Atomistic mechanism for vacancy-enhanced grain boundary migration. *Physical Review Materials*, **2020**, 4,	3.2	12
50	Atomistic calculations of the generalized stacking fault energies in two refractory multi-principal element alloys. *Intermetallics*, **2020**, 124, 106844	3.5	23
49	Effects of lattice distortion and chemical short-range order on the mechanisms of deformation in medium entropy alloy CoCrNi. *Acta Materialia*, **2020**, 199, 352-369	8.4	74
48	Multiplicity of dislocation pathways in a refractory multiprincipal element alloy. *Science*, **2020**, 370, 95-101	33.3	65
47	Si/Ge (111) Semicoherent Interfaces: Responses to an In-Plane Shear and Interactions with Lattice Dislocations. *Physica Status Solidi (B): Basic Research*, **2020**, 257, 2000274	1.3	7
46	The effect of local chemical ordering on Frank-Read source activation in a refractory multi-principal element alloy. *International Journal of Plasticity*, **2020**, 134, 102850	7.6	17
45	Atomistic simulations of dipole tilt wall stability in thin films. *Thin Solid Films*, **2019**, 689, 137457	2.2	5
44	Atomistic simulations of tungsten nanotubes under uniform tensile loading. *Journal of Applied Physics*, **2019**, 126, 095105	2.5	3
43	Density functional theory calculations of generalized stacking fault energy surfaces for eight face-centered cubic transition metals. *Journal of Applied Physics*, **2019**, 126, 105112	2.5	19
42	A comparison of different continuum approaches in modeling mixed-type dislocations in Al. *Modelling and Simulation in Materials Science and Engineering*, **2019**, 27, 074004	2	24
41	Sequential obstacle interactions with dislocations in a planar array. *Acta Materialia*, **2019**, 174, 160-172	8.4	22
40	Alloy design for mechanical properties: Conquering the length scales. *MRS Bulletin*, **2019**, 44, 257-265	3.2	12
39	Modeling dislocations and heat conduction in crystalline materials: atomistic/continuum coupling approaches. *International Materials Reviews*, **2019**, 64, 407-438	16.1	11
38	Ab initio-informed phase-field modeling of dislocation core structures in equal-molar CoNiRu multi-principal element alloys. *Modelling and Simulation in Materials Science and Engineering*, **2019**, 27, 084001	2	15
37	Intrinsic and extrinsic size effects in materials. *Journal of Materials Research*, **2019**, 34, 2147	2.5	0

36	Modeling dislocations with arbitrary character angle in face-centered cubic transition metals using the phase-field dislocation dynamics method with full anisotropic elasticity. *Mechanics of Materials*, **2019**, 139, 103200	3.3	18
35	Phase-field-based calculations of the disregistry fields of static extended dislocations in FCC metals. *Philosophical Magazine*, **2019**, 99, 1400-1428	1.6	30
34	Nanoindentation/scratching at finite temperatures: Insights from atomistic-based modeling. *Progress in Materials Science*, **2019**, 100, 1-20	42.2	26
33	Temperature-dependent nanoindentation response of materials. *MRS Communications*, **2018**, 8, 15-28	2.7	14
32	Deformation Mechanisms in Nanotwinned Tungsten Nanopillars: Effects of Coherent Twin Boundary Spacing. *Physica Status Solidi - Rapid Research Letters*, **2018**, 12, 1700399	2.5	11
31	Deformation of periodic nanovoid structures in Mg single crystals. *Materials Research Express*, **2018**, 5, 016523	1.7	12
30	PyCAC: The concurrent atomistic-continuum simulation environment. *Journal of Materials Research*, **2018**, 33, 857-871	2.5	26
29	Dislocation nucleation from symmetric tilt grain boundaries in body-centered cubic vanadium. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2018**, 382, 1185-1189	2.3	19
28	Uniaxial deformation of nanotwinned nanotubes in body-centered cubic tungsten. *Current Applied Physics*, **2018**, 18, 114-121	2.6	14
27	A Review on Micro- and Nanoscratching/Tribology at High Temperatures: Instrumentation and Experimentation. *Journal of Materials Engineering and Performance*, **2018**, 27, 3844-3858	1.6	17
26	MODELING PLASTIC DEFORMATION OF NANO/SUBMICRON-SIZED TUNGSTEN PILLARS UNDER COMPRESSION: A COARSE-GRAINED ATOMISTIC APPROACH. *International Journal for Multiscale Computational Engineering*, **2018**, 16, 367-376	2.4	7
25	A spatial decomposition parallel algorithm for a concurrent atomistic-continuum simulator and its preliminary applications. *Computational Materials Science*, **2018**, 144, 1-10	3.2	15
24	Twinning effects in the single/nanocrystalline cubic silicon carbide subjected to nanoindentation loading. *Materialia*, **2018**, 3, 304-325	3.2	5
23	Tension-compression asymmetry in plasticity of nanotwinned 3C-SiC nanocrystals. *Journal of Applied Physics*, **2018**, 124, 095103	2.5	5
22	Concurrent atomistic-continuum simulations of uniaxial compression of gold nano/submicropillars. *Philosophical Magazine Letters*, **2018**, 98, 173-182	1	7
21	Generalized Continua Concepts in Coarse-Graining Atomistic Simulations. *Advanced Structured Materials*, **2018**, 237-260	0.6	4
20	Size-dependent plastic deformation of twinned nanopillars in body-centered cubic tungsten. *Journal of Applied Physics*, **2017**, 121, 175101	2.5	23
19	Addressing the discrepancy of finding the equilibrium melting point of silicon using molecular dynamics simulations. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170084	2.4	21

18	Plastic deformation of Cu single crystals containing an elliptic cylindrical void. *Materials Letters*, **2017**, 193, 283-287	3.3	31
17	Comparing EAM Potentials to Model Slip Transfer of Sequential Mixed Character Dislocations Across Two Symmetric Tilt Grain Boundaries in Ni. *Jom*, **2017**, 69, 814-821	2.1	37
16	An atomistic study of the deformation behavior of tungsten nanowires. *Applied Physics A: Materials Science and Processing*, **2017**, 123, 1	2.6	12
15	Shear stress- and line length-dependent screw dislocation cross-slip in FCC Ni. *Acta Materialia*, **2017**, 122, 412-419	8.4	36
14	Validation of the Concurrent Atomistic-Continuum Method on Screw Dislocation/Stacking Fault Interactions. *Crystals*, **2017**, 7, 120	2.3	20
13	An analysis of key characteristics of the Frank-Read source process in FCC metals. *Journal of the Mechanics and Physics of Solids*, **2016**, 96, 460-476	5	35
12	Sequential slip transfer of mixed-character dislocations across Σ3 coherent twin boundary in FCC metals: a concurrent atomistic-continuum study. *Npj Computational Materials*, **2016**, 2,	10.9	72
11	Nanovoid growth in BCC-Fe: influences of initial void geometry. *Modelling and Simulation in Materials Science and Engineering*, **2016**, 24, 085015	2	12
10	Edge dislocations bowing out from a row of collinear obstacles in Al. *Scripta Materialia*, **2016**, 123, 135-139	3.6	27
9	Coarse-grained elastodynamics of fast moving dislocations. *Acta Materialia*, **2016**, 104, 143-155	8.4	36
8	Dislocation-mediated plasticity in silicon during nanometric cutting: A molecular dynamics simulation study. *Materials Science in Semiconductor Processing*, **2016**, 51, 60-70	4.3	39
7	Mesh refinement schemes for the concurrent atomistic-continuum method. *International Journal of Solids and Structures*, **2016**, 90, 144-152	3.1	29
6	On the role of initial void geometry in plastic deformation of metallic thin films: A molecular dynamics study. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 678, 153-164	5.3	26
5	Concurrent atomistic-continuum simulations of dislocation-void interactions in fcc crystals. *International Journal of Plasticity*, **2015**, 65, 33-42	7.6	73
4	A quasistatic implementation of the concurrent atomistic-continuum method for FCC crystals. *International Journal of Plasticity*, **2015**, 72, 91-126	7.6	44
3	Atomic collision cascades on void evolution in vanadium. *Radiation Effects and Defects in Solids*, **2012**, 167, 12-25	0.9	13
2	An analysis on nanovoid growth in body-centered cubic single crystalline vanadium. *Computational Materials Science*, **2011**, 50, 2411-2421	3.2	31
1	A molecular dynamics study of void interaction in copper. *IOP Conference Series: Materials Science and Engineering*, **2010**, 10, 012175	0.4	6