

Liming Xiong

List of Publications by Year in descending order

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44
papers

1,618
citations

201674
27
h-index

289244
40
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44
all docs

44
docs citations

44
times ranked

768
citing authors

#	ARTICLE	IF	CITATIONS
1	Stationary dislocation motion at stresses significantly below the Peierls stress: Example of shuffle screw and  dislocations in silicon. Acta Materialia, 2021, 206, 116623.	7.9	13
2	A combined experimental and computational analysis on how material interface mediates plastic flow in amorphous/crystalline composites. Journal of Materials Research, 2021, 36, 2816-2829.	2.6	3
3	Multiscale modeling of interface-mediated mechanical, thermal, and mass transport in heterogeneous materials: Perspectives and applications. Journal of Materials Research, 2021, 36, 2601-2614.	2.6	9
4	A General Crosslinker Strategy to Realize Intrinsic Frozen Resistance of Hydrogels. Advanced Materials, 2021, 33, e2104006.	21.0	82
5	Metallic glass instability induced by the continuous dislocation absorption at an amorphous/crystalline interface. Acta Materialia, 2020, 189, 10-24.	7.9	24
6	Quantifying the dynamics of dislocation kinks in iron and tungsten through atomistic simulations. International Journal of Plasticity, 2020, 128, 102675.	8.8	24
7	Atomistic Computational Analysis of the Loading Orientation-Dependent Phase Transformation in Graphite under Compression. Jom, 2019, 71, 3892-3902.	1.9	7
8	Amorphization induced by 60° shuffle dislocation pileup against different grain boundaries in silicon bicrystal under shear. Acta Materialia, 2019, 179, 287-295.	7.9	35
9	Slip of shuffle screw dislocations through tilt grain boundaries in silicon. Computational Materials Science, 2019, 157, 132-135.	3.0	13
10	PyCAC: The concurrent atomistic-continuum simulation environment. Journal of Materials Research, 2018, 33, 857-871.	2.6	34
11	A spatial decomposition parallel algorithm for a concurrent atomistic-continuum simulator and its preliminary applications. Computational Materials Science, 2018, 144, 1-10.	3.0	19
12	Passing waves from atomistic to continuum. Journal of Computational Physics, 2018, 354, 393-402.	3.8	33
13	Asymmetry of the atomic-level stress tensor in homogeneous and inhomogeneous materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180155.	2.1	15
14	Triaxial-Stress-Induced Homogeneous Hysteresis-Free First-Order Phase Transformations with Stable Intermediate Phases. Physical Review Letters, 2017, 118, 025701.	7.8	39
15	Effects of phonons on mobility of dislocations and dislocation arrays. Scripta Materialia, 2017, 137, 22-26.	5.2	44
16	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.	1.9	43
17	Lattice instability during phase transformations under multiaxial stress: Modified transformation work criterion. Physical Review B, 2017, 96, .	3.2	38
18	Ballistic-diffusive phonon heat transport across grain boundaries. Acta Materialia, 2017, 136, 355-365.	7.9	35

#	ARTICLE	IF	CITATIONS
19	Shear stress- and line length-dependent screw dislocation cross-slip in FCC Ni. Acta Materialia, 2017, 122, 412-419.	7.9	48
20	Validation of the Concurrent Atomistic-Continuum Method on Screw Dislocation/Stacking Fault Interactions. Crystals, 2017, 7, 120.	2.2	25
21	Nanoscale plastic deformation mechanisms of single crystalline silicon under compression, tension and indentation. Journal of Micromechanics and Molecular Physics, 2016, 01, 1640007.	1.2	15
22	Mesh refinement schemes for the concurrent atomistic-continuum method. International Journal of Solids and Structures, 2016, 90, 144-152.	2.7	34
23	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.	4.8	55
24	Sequential slip transfer of mixed-character dislocations across $\Sigma 3$ coherent twin boundary in FCC metals: a concurrent atomistic-continuum study. Npj Computational Materials, 2016, 2, .	8.7	83
25	Coarse-grained elastodynamics of fast moving dislocations. Acta Materialia, 2016, 104, 143-155.	7.9	47
26	Nanoscale toughening mechanism of nacre tablet. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 53, 200-209.	3.1	41
27	A coherent phonon pulse model for transient phonon thermal transport. Computer Physics Communications, 2015, 195, 112-116.	7.5	18
28	A quasistatic implementation of the concurrent atomistic-continuum method for FCC crystals. International Journal of Plasticity, 2015, 72, 91-126.	8.8	56
29	Concurrent atomistic-continuum simulations of dislocation-void interactions in fcc crystals. International Journal of Plasticity, 2015, 65, 33-42.	8.8	91
30	Prediction of phonon properties of 1D polyatomic systems using concurrent atomistic-continuum simulation. Archive of Applied Mechanics, 2014, 84, 1665-1675.	2.2	31
31	Sub-THz Phonon drag on dislocations by coarse-grained atomistic simulations. International Journal of Plasticity, 2014, 55, 268-278.	8.8	38
32	Concurrent atomistic and continuum simulation of strontium titanate. Acta Materialia, 2013, 61, 89-102.	7.9	42
33	Coarse-grained atomistic simulations of dislocations in Al, Ni and Cu crystals. International Journal of Plasticity, 2012, 38, 86-101.	8.8	61
34	Coarse-grained atomistic modeling and simulation of inelastic material behavior. Acta Mechanica Solida Sinica, 2012, 25, 244-261.	1.9	8
35	Nucleation and growth of dislocation loops in Cu, Al and Si by a concurrent atomistic-continuum method. Scripta Materialia, 2012, 67, 633-636.	5.2	45
36	A concurrent scheme for passing dislocations from atomistic to continuum domains. Acta Materialia, 2012, 60, 899-913.	7.9	68

#	ARTICLE	IF	CITATIONS
37	Coarse-grained atomistic simulation of dislocations. Journal of the Mechanics and Physics of Solids, 2011, 59, 160-177.	4.8	95
38	Deformation mechanisms in silicon nanoparticles. Journal of Applied Physics, 2011, 109, .	2.5	51
39	Coarse-graining atomistic dynamics of brittle fracture by finite element method. International Journal of Plasticity, 2010, 26, 1402-1414.	8.8	47
40	Coarse-grained simulations of single-crystal silicon. Modelling and Simulation in Materials Science and Engineering, 2009, 17, 035002.	2.0	37
41	Multiscale modeling and simulation of single-crystal MgO through an atomistic field theory. International Journal of Solids and Structures, 2009, 46, 1448-1455.	2.7	24
42	A Generalized Continuum Theory and Its Relation to Micromorphic Theory. Journal of Engineering Mechanics - ASCE, 2009, 135, 149-155.	2.9	14
43	Atomistic simulation of mechanical properties of diamond and silicon carbide by a field theory. Modelling and Simulation in Materials Science and Engineering, 2007, 15, 535-551.	2.0	16
44	Stresses and strains at nano/micro scales. Journal of Mechanics of Materials and Structures, 2006, 1, 705-723.	0.6	18