

Liming Xiong

List of Publications by Year in descending order

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44
papers

1,618
citations

201385

27
h-index

288905

40
g-index

44
all docs

44
docs citations

44
times ranked

768
citing authors

#	ARTICLE	IF	CITATIONS
1	Coarse-grained atomistic simulation of dislocations. <i>Journal of the Mechanics and Physics of Solids</i> , 2011, 59, 160-177.	2.3	95
2	Concurrent atomistic-continuum simulations of dislocation-void interactions in fcc crystals. <i>International Journal of Plasticity</i> , 2015, 65, 33-42.	4.1	91
3	Sequential slip transfer of mixed-character dislocations across $\Sigma 3$ coherent twin boundary in FCC metals: a concurrent atomistic-continuum study. <i>Npj Computational Materials</i> , 2016, 2, .	3.5	83
4	A General Crosslinker Strategy to Realize Intrinsic Frozen Resistance of Hydrogels. <i>Advanced Materials</i> , 2021, 33, e2104006.	11.1	82
5	A concurrent scheme for passing dislocations from atomistic to continuum domains. <i>Acta Materialia</i> , 2012, 60, 899-913.	3.8	68
6	Coarse-grained atomistic simulations of dislocations in Al, Ni and Cu crystals. <i>International Journal of Plasticity</i> , 2012, 38, 86-101.	4.1	61
7	A quasistatic implementation of the concurrent atomistic-continuum method for FCC crystals. <i>International Journal of Plasticity</i> , 2015, 72, 91-126.	4.1	56
8	An analysis of key characteristics of the Frank-Read source process in FCC metals. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 96, 460-476.	2.3	55
9	Deformation mechanisms in silicon nanoparticles. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	51
10	Shear stress- and line length-dependent screw dislocation cross-slip in FCC Ni. <i>Acta Materialia</i> , 2017, 122, 412-419.	3.8	48
11	Coarse-graining atomistic dynamics of brittle fracture by finite element method. <i>International Journal of Plasticity</i> , 2010, 26, 1402-1414.	4.1	47
12	Coarse-grained elastodynamics of fast moving dislocations. <i>Acta Materialia</i> , 2016, 104, 143-155.	3.8	47
13	Nucleation and growth of dislocation loops in Cu, Al and Si by a concurrent atomistic-continuum method. <i>Scripta Materialia</i> , 2012, 67, 633-636.	2.6	45
14	Effects of phonons on mobility of dislocations and dislocation arrays. <i>Scripta Materialia</i> , 2017, 137, 22-26.	2.6	44
15	Comparing EAM Potentials to Model Slip Transfer of Sequential Mixed Character Dislocations Across Two Symmetric Tilt Grain Boundaries in Ni. <i>Jom</i> , 2017, 69, 814-821.	0.9	43
16	Concurrent atomistic and continuum simulation of strontium titanate. <i>Acta Materialia</i> , 2013, 61, 89-102.	3.8	42
17	Nanoscale toughening mechanism of nacre tablet. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 53, 200-209.	1.5	41
18	Triaxial-Stress-Induced Homogeneous Hysteresis-Free First-Order Phase Transformations with Stable Intermediate Phases. <i>Physical Review Letters</i> , 2017, 118, 025701.	2.9	39

#	ARTICLE	IF	CITATIONS
19	Sub-THz Phonon drag on dislocations by coarse-grained atomistic simulations. <i>International Journal of Plasticity</i> , 2014, 55, 268-278.	4.1	38
20	Lattice instability during phase transformations under multiaxial stress: Modified transformation work criterion. <i>Physical Review B</i> , 2017, 96, .	1.1	38
21	Coarse-grained simulations of single-crystal silicon. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2009, 17, 035002.	0.8	37
22	Ballistic-diffusive phonon heat transport across grain boundaries. <i>Acta Materialia</i> , 2017, 136, 355-365.	3.8	35
23	Amorphization induced by 60° shuffle dislocation pileup against different grain boundaries in silicon bicrystal under shear. <i>Acta Materialia</i> , 2019, 179, 287-295.	3.8	35
24	Mesh refinement schemes for the concurrent atomistic-continuum method. <i>International Journal of Solids and Structures</i> , 2016, 90, 144-152.	1.3	34
25	PyCAC: The concurrent atomistic-continuum simulation environment. <i>Journal of Materials Research</i> , 2018, 33, 857-871.	1.2	34
26	Passing waves from atomistic to continuum. <i>Journal of Computational Physics</i> , 2018, 354, 393-402.	1.9	33
27	Prediction of phonon properties of 1D polyatomic systems using concurrent atomistic-continuum simulation. <i>Archive of Applied Mechanics</i> , 2014, 84, 1665-1675.	1.2	31
28	Validation of the Concurrent Atomistic-Continuum Method on Screw Dislocation/Stacking Fault Interactions. <i>Crystals</i> , 2017, 7, 120.	1.0	25
29	Multiscale modeling and simulation of single-crystal MgO through an atomistic field theory. <i>International Journal of Solids and Structures</i> , 2009, 46, 1448-1455.	1.3	24
30	Metallic glass instability induced by the continuous dislocation absorption at an amorphous/crystalline interface. <i>Acta Materialia</i> , 2020, 189, 10-24.	3.8	24
31	Quantifying the dynamics of dislocation kinks in iron and tungsten through atomistic simulations. <i>International Journal of Plasticity</i> , 2020, 128, 102675.	4.1	24
32	A spatial decomposition parallel algorithm for a concurrent atomistic-continuum simulator and its preliminary applications. <i>Computational Materials Science</i> , 2018, 144, 1-10.	1.4	19
33	Stresses and strains at nano/micro scales. <i>Journal of Mechanics of Materials and Structures</i> , 2006, 1, 705-723.	0.4	18
34	A coherent phonon pulse model for transient phonon thermal transport. <i>Computer Physics Communications</i> , 2015, 195, 112-116.	3.0	18
35	Atomistic simulation of mechanical properties of diamond and silicon carbide by a field theory. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2007, 15, 535-551.	0.8	16
36	Nanoscale plastic deformation mechanisms of single crystalline silicon under compression, tension and indentation. <i>Journal of Micromechanics and Molecular Physics</i> , 2016, 01, 1640007.	0.7	15

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37	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.	1.0	15
38	A Generalized Continuum Theory and Its Relation to Micromorphic Theory. Journal of Engineering Mechanics - ASCE, 2009, 135, 149-155.	1.6	14
39	Slip of shuffle screw dislocations through tilt grain boundaries in silicon. Computational Materials Science, 2019, 157, 132-135.	1.4	13
40	Stationary dislocation motion at stresses significantly below the Peierls stress: Example of shuffle screw and $\langle 111 \rangle$ dislocations in silicon. Acta Materialia, 2021, 206, 116623.	3.8	13
41	Multiscale modeling of interface-mediated mechanical, thermal, and mass transport in heterogeneous materials: Perspectives and applications. Journal of Materials Research, 2021, 36, 2601-2614.	1.2	9
42	Coarse-grained atomistic modeling and simulation of inelastic material behavior. Acta Mechanica Solida Sinica, 2012, 25, 244-261.	1.0	8
43	Atomistic Computational Analysis of the Loading Orientation-Dependent Phase Transformation in Graphite under Compression. Jom, 2019, 71, 3892-3902.	0.9	7
44	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.	1.2	3