

Chuang Deng

List of Publications by Year in descending order

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50
papers

1,207
citations

394286

19
h-index

395590

33
g-index

50
all docs

50
docs citations

50
times ranked

1120
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of alloying concentration on the aqueous corrosion and passivation of aluminum-manganese-molybdenum concentrated alloys. <i>Corrosion Science</i> , 2022, 198, 110137.	3.0	13
2	Atomic energy in grain boundaries studied by machine learning. <i>Physical Review Materials</i> , 2022, 6, .	0.9	7
3	Atomistic dynamics of disconnection-mediated grain boundary plasticity: A case study of gold nanocrystals. <i>Journal of Materials Science and Technology</i> , 2022, 125, 182-191.	5.6	9
4	Improving thermal stability and Hall-Petch breakdown relationship in nanocrystalline Cu: A molecular dynamics simulation study. <i>Materials Letters</i> , 2022, 324, 132821.	1.3	5
5	Survey of shear coupling behavior in FCC Ni and BCC Fe grain boundaries. <i>Materialia</i> , 2021, 15, 100945.	1.3	6
6	Mitigating the Hall-Petch breakdown in nanotwinned Cu by amorphous intergranular films. <i>Scripta Materialia</i> , 2021, 194, 113682.	2.6	9
7	Stacking fault and transformation-induced plasticity in nanocrystalline high-entropy alloys. <i>Journal of Materials Research</i> , 2021, 36, 2705-2714.	1.2	14
8	Atomistic simulation of grain boundary migration induced by non-equilibrium solute distribution. <i>Materialia</i> , 2021, 15, 101005.	1.3	0
9	The spectrum of atomic excess free volume in grain boundaries. <i>Journal of Materials Science</i> , 2021, 56, 11511-11528.	1.7	11
10	A continuum thermodynamic framework for grain boundary motion. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 137, 103827.	2.3	6
11	Martensite transformation induced superplasticity and strengthening in single crystalline CoNiCrFeMn high entropy alloy nanowires: A molecular dynamics study. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 793, 139853.	2.6	40
12	Electron localization governed plasticity in nanotwinned metals beyond the Hall-Petch type limit. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 797, 140251.	2.6	5
13	Dislocation nucleation in CoNiCrFeMn high entropy alloy. <i>Materialia</i> , 2020, 12, 100749.	1.3	11
14	Effect of solute segregation on diffusion induced grain boundary migration studied by molecular dynamics simulations. <i>Computational Materials Science</i> , 2020, 179, 109685.	1.4	12
15	The origin of passivity in aluminum-manganese solid solutions. <i>Corrosion Science</i> , 2020, 173, 108749.	3.0	22
16	Continuous strengthening in nanotwinned high-entropy alloys enabled by martensite transformation. <i>Physical Review Materials</i> , 2020, 4, .	0.9	8
17	Ultimate Strength of Nanotwinned Face-Centered Cubic Metals. <i>Physical Review Letters</i> , 2020, 125, 266101.	2.9	8
18	Survey of grain boundary migration and thermal behavior in Ni at low homologous temperatures. <i>Acta Materialia</i> , 2019, 177, 151-159.	3.8	19

#	ARTICLE	IF	CITATIONS
19	On the role of Cu-Zr amorphous intergranular films on crack growth retardation in nanocrystalline Cu during monotonic and cyclic loading conditions. <i>Computational Materials Science</i> , 2019, 169, 109122.	1.4	16
20	Atomistic investigation of the deformation mechanisms in nanocrystalline Cu with amorphous intergranular films. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	8
21	Intensification of shock damage through heterogeneous phase transition and dislocation loop formation due to presence of pre-existing line defects in single crystal Cu. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	4
22	In situ atomistic observation of disconnection-mediated grain boundary migration. <i>Nature Communications</i> , 2019, 10, 156.	5.8	98
23	Dynamic characterization of shock response in crystalline-metallic glass nanolaminates. <i>Acta Materialia</i> , 2019, 164, 347-361.	3.8	48
24	Atomic link between the structure and strength of grain boundaries subject to shear coupling. <i>Physical Review Materials</i> , 2019, 3, .	0.9	3
25	Stress-induced solid-state amorphization of nanocrystalline Ni and NiZr investigated by atomistic simulations. <i>Journal of Applied Physics</i> , 2018, 123, 044306.	1.1	15
26	Mechanically enhanced grain boundary structural phase transformation in Cu. <i>Acta Materialia</i> , 2018, 146, 304-313.	3.8	16
27	Orientation dependent plasticity of metallic amorphous-crystalline interface. <i>Computational Materials Science</i> , 2018, 141, 375-387.	1.4	27
28	Fast phase mapping of mechanically alloyed Cu-Zr by using nanoindentation. <i>Materialia</i> , 2018, 3, 182-185.	1.3	3
29	The ductility and toughness improvement in metallic glass through the dual effects of graphene interface. <i>Journal of Materials Research</i> , 2017, 32, 392-403.	1.2	12
30	Deformation mode transitions in amorphous-Cu ₄₅ Zr ₅₅ /crystalline-Cu multilayers. <i>Thin Solid Films</i> , 2017, 626, 184-189.	0.8	21
31	Pseudoelasticity and shape memory effects in cylindrical FCC metal nanowires. <i>Acta Materialia</i> , 2017, 132, 49-56.	3.8	23
32	Size and rate dependent grain boundary motion mediated by disconnection nucleation. <i>Acta Materialia</i> , 2017, 131, 400-409.	3.8	25
33	Egg Albumen as a Fast and Strong Medical Adhesive Glue. <i>Advanced Healthcare Materials</i> , 2017, 6, 1700132.	3.9	26
34	Mechanical characteristics of CNT-reinforced metallic glass nanocomposites by molecular dynamics simulations. <i>Computational Materials Science</i> , 2016, 119, 19-26.	1.4	45
35	Deformation twinning-mediated pseudoelasticity in metal-graphene nanolayered membrane. <i>Philosophical Magazine Letters</i> , 2016, 96, 322-329.	0.5	32
36	Adsorption of Protein on a Au Surface Studied by All-Atom Atomistic Simulations. <i>Journal of Physical Chemistry C</i> , 2016, 120, 13103-13112.	1.5	3

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37	A new form of pseudo-elasticity in small-scale nanotwinned gold. <i>Extreme Mechanics Letters</i> , 2016, 8, 201-207.	2.0	12
38	Hardening and crystallization in monatomic metallic glass during elastic cycling. <i>Journal of Materials Research</i> , 2015, 30, 1820-1826.	1.2	8
39	Disclination mediated dynamic recrystallization in metals at low temperature. <i>Scientific Reports</i> , 2015, 5, 14215.	1.6	11
40	Strong Hall-Petch Type Behavior in the Elastic Strain Limit of Nanotwinned Gold Nanowires. <i>Nano Letters</i> , 2015, 15, 3865-3870.	4.5	41
41	Adapted solute drag model for impurity-controlled grain boundary motion. <i>Journal of Materials Research</i> , 2014, 29, 1369-1375.	1.2	10
42	Direct quantification of solute effects on grain boundary motion by atomistic simulations. <i>Computational Materials Science</i> , 2014, 93, 137-143.	1.4	29
43	Near-ideal strength in metal nanotubes revealed by atomistic simulations. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	7
44	Atomistic mechanisms of cyclic hardening in metallic glass. <i>Applied Physics Letters</i> , 2012, 100, 251909.	1.5	54
45	Atomistic Simulation of Slow Grain Boundary Motion. <i>Physical Review Letters</i> , 2011, 106, 045503.	2.9	59
46	Diffusive-to-ballistic transition in grain boundary motion studied by atomistic simulations. <i>Physical Review B</i> , 2011, 84, .	1.1	42
47	Size-dependent yield stress in twinned gold nanowires mediated by site-specific surface dislocation emission. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	73
48	Enabling Ultrahigh Plastic Flow and Work Hardening in Twinned Gold Nanowires. <i>Nano Letters</i> , 2009, 9, 1517-1522.	4.5	112
49	Near-Ideal Strength in Gold Nanowires Achieved through Microstructural Design. <i>ACS Nano</i> , 2009, 3, 3001-3008.	7.3	116
50	Comment on "Deformation mechanisms of face-centered-cubic metal nanowires with twin boundaries" [Appl. Phys. Lett. 90, 151909 (2007)]. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	3