Chuang Deng

List of Publications by Year
in descending order

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50	1,207	394286	395590
papers	citations	19 h-index	33 g-index

50	50	50	1120
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Near-Ideal Strength in Gold Nanowires Achieved through Microstructural Design. ACS Nano, 2009, 3, 3001-3008.	7.3	116
2	Enabling Ultrahigh Plastic Flow and Work Hardening in Twinned Gold Nanowires. Nano Letters, 2009, 9, 1517-1522.	4.5	112
3	In situ atomistic observation of disconnection-mediated grain boundary migration. Nature Communications, 2019, 10, 156.	5.8	98
4	Size-dependent yield stress in twinned gold nanowires mediated by site-specific surface dislocation emission. Applied Physics Letters, 2009, 95, .	1.5	73
5	Atomistic Simulation of Slow Grain Boundary Motion. Physical Review Letters, 2011, 106, 045503.	2.9	59
6	Atomistic mechanisms of cyclic hardening in metallic glass. Applied Physics Letters, 2012, 100, 251909.	1.5	54
7	Dynamic characterization of shock response in crystalline-metallic glass nanolaminates. Acta Materialia, 2019, 164, 347-361.	3.8	48
8	Mechanical characteristics of CNT-reinforced metallic glass nanocomposites by molecular dynamics simulations. Computational Materials Science, 2016, 119, 19-26.	1.4	45
9	Diffusive-to-ballistic transition in grain boundary motion studied by atomistic simulations. Physical Review B, 2011, 84, .	1.1	42
10	Strong Hallâ€“Petch Type Behavior in the Elastic Strain Limit of Nanotwinned Gold Nanowires. Nano Letters, 2015, 15, 3865-3870.	4.5	41
11	Martensite transformation induced superplasticity and strengthening in single crystalline CoNiCrFeMn high entropy alloy nanowires: A molecular dynamics study. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 793, 139853.	2.6	40
12	Deformation twinning-mediated pseudoelasticity in metalâ€“graphene nanolayered membrane. Philosophical Magazine Letters, 2016, 96, 322-329.	0.5	32
13	Direct quantification of solute effects on grain boundary motion by atomistic simulations. Computational Materials Science, 2014, 93, 137-143.	1.4	29
14	Orientation dependent plasticity of metallic amorphous-crystalline interface. Computational Materials Science, 2018, 141, 375-387.	1.4	27
15	Egg Albumen as a Fast and Strong Medical Adhesive Glue. Advanced Healthcare Materials, 2017, 6, 1700132.	3.9	26
16	Size and rate dependent grain boundary motion mediated by disconnection nucleation. Acta Materialia, 2017, 131, 400-409.	3.8	25
17	Pseudoelasticity and shape memory effects in cylindrical FCC metal nanowires. Acta Materialia, 2017, 132, 49-56.	3.8	23
18	The origin of passivity in aluminum-manganese solid solutions. Corrosion Science, 2020, 173, 108749.	3.0	22

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19	Deformation mode transitions in amorphous-Cu45Zr55/crystalline-Cu multilayers. Thin Solid Films, 2017, 626, 184-189.	0.8	21
20	Survey of grain boundary migration and thermal behavior in Ni at low homologous temperatures. Acta Materialia, 2019, 177, 151-159.	3.8	19
21	Mechanically enhanced grain boundary structural phase transformation in Cu. Acta Materialia, 2018, 146, 304-313.	3.8	16
22	On the role of Cu-Zr amorphous intergranular films on crack growth retardation in nanocrystalline Cu during monotonic and cyclic loading conditions. Computational Materials Science, 2019, 169, 109122.	1.4	16
23	Stress-induced solid-state amorphization of nanocrystalline Ni and NiZr investigated by atomistic simulations. Journal of Applied Physics, 2018, 123, 044306.	1.1	15
24	Stacking fault and transformation-induced plasticity in nanocrystalline high-entropy alloys. Journal of Materials Research, 2021, 36, 2705-2714.	1.2	14
25	Effects of alloying concentration on the aqueous corrosion and passivation of aluminum-manganese-molybdenum concentrated alloys. Corrosion Science, 2022, 198, 110137.	3.0	13
26	A new form of pseudo-elasticity in small-scale nanotwinned gold. Extreme Mechanics Letters, 2016, 8, 201-207.	2.0	12
27	The ductility and toughness improvement in metallic glass through the dual effects of graphene interface. Journal of Materials Research, 2017, 32, 392-403.	1.2	12
28	Effect of solute segregation on diffusion induced grain boundary migration studied by molecular dynamics simulations. Computational Materials Science, 2020, 179, 109685.	1.4	12
29	Disclination mediated dynamic recrystallization in metals at low temperature. Scientific Reports, 2015, 5, 14215.	1.6	11
30	Dislocation nucleation in CoNiCrFeMn high entropy alloy. Materialia, 2020, 12, 100749.	1.3	11
31	The spectrum of atomic excess free volume in grain boundaries. Journal of Materials Science, 2021, 56, 11511-11528.	1.7	11
32	Adapted solute drag model for impurity-controlled grain boundary motion. Journal of Materials Research, 2014, 29, 1369-1375.	1.2	10
33	Mitigating the Hall-Petch breakdown in nanotwinned Cu by amorphous intergranular films. Scripta Materialia, 2021, 194, 113682.	2.6	9
34	Atomistic dynamics of disconnection-mediated grain boundary plasticity: A case study of gold nanocrystals. Journal of Materials Science and Technology, 2022, 125, 182-191.	5.6	9
35	Hardening and crystallization in monatomic metallic glass during elastic cycling. Journal of Materials Research, 2015, 30, 1820-1826.	1.2	8
36	Atomistic investigation of the deformation mechanisms in nanocrystalline Cu with amorphous intergranular films. Journal of Applied Physics, 2019, 126, .	1.1	8

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37	Continuous strengthening in nanotwinned high-entropy alloys enabled by martensite transformation. Physical Review Materials, 2020, 4, .	0.9	8
38	Ultimate Strength of Nanotwinned Face-Centered Cubic Metals. Physical Review Letters, 2020, 125, 266101.	2.9	8
39	Near-ideal strength in metal nanotubes revealed by atomistic simulations. Applied Physics Letters, 2013, 103, .	1.5	7
40	Atomic energy in grain boundaries studied by machine learning. Physical Review Materials, 2022, 6, .	0.9	7
41	A continuum thermodynamic framework for grain boundary motion. Journal of the Mechanics and Physics of Solids, 2020, 137, 103827.	2.3	6
42	Survey of shear coupling behavior in FCC Ni and BCC Fe grain boundaries. Materialia, 2021, 15, 100945.	1.3	6
43	Electron localization governed plasticity in nanotwinned metals beyond the Hall-Petch type limit. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 797, 140251.	2.6	5
44	Improving thermal stability and Hall-Petch breakdown relationship in nanocrystalline Cu: A molecular dynamics simulation study. Materials Letters, 2022, 324, 132821.	1.3	5
45	Intensification of shock damage through heterogeneous phase transition and dislocation loop formation due to presence of pre-existing line defects in single crystal Cu. Journal of Applied Physics, 2019, 126, .	1.1	4
46	Comment on â€œDeformation mechanisms of face-centered-cubic metal nanowires with twin boundariesâ€•[Appl. Phys. Lett. 90, 151909 (2007)]. Applied Physics Letters, 2008, 93, .	1.5	3
47	Adsorption of Protein on a Au Surface Studied by All-Atom Atomistic Simulations. Journal of Physical Chemistry C, 2016, 120, 13103-13112.	1.5	3
48	Fast phase mapping of mechanically alloyed Cuâ€“Zr by using nanoindentation. Materialia, 2018, 3, 182-185.	1.3	3
49	Atomic link between the structure and strength of grain boundaries subject to shear coupling. Physical Review Materials, 2019, 3, .	0.9	3
50	Atomistic simulation of grain boundary migration induced by non-equilibrium solute distribution. Materialia, 2021, 15, 101005.	1.3	0