Diana Farkas

List of Publications by Year
in descending order

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77 papers	2,574 citations	172443 29 h-index	197805 49 g-index
77 all docs	77 docs citations	77 times ranked	1769 citing authors

#	Article	IF	Citations
1	Model interatomic potentials and lattice strain in a high-entropy alloy. Journal of Materials Research, 2018, 33, 3218-3225.	2.6	189
2	Grain boundary migration during room temperature deformation of nanocrystalline Ni. Scripta Materialia, 2006, 55, 695-698.	5.2	148
3	Mechanical response of nanoporous gold. Acta Materialia, 2013, 61, 3249-3256.	7.9	131
4	Molecular statics simulation of fracture in -iron. Modelling and Simulation in Materials Science and Engineering, 1996, 4, 473-492.	2.0	98
5	Mechanical stability of nanoporous metals with small ligament sizes. Scripta Materialia, 2009, 61, 497-499.	5.2	94
6	Atomistic simulations in the Feâ€“C system. Computational Materials Science, 2009, 45, 550-560.	3.0	94
7	Model interatomic potentials for Feâ€“Niâ€“Crâ€“Coâ€“Al high-entropy alloys. Journal of Materials Research, 2020, 35, 3031-3040.	2.6	90
8	Atomistic simulation of point defects and diffusion in B2 NiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 75, 169-185.	0.6	85
9	Size effects in indentation response of thin films at the nanoscale: A molecular dynamics study. International Journal of Plasticity, 2008, 24, 2016-2031.	8.8	85
10	Mechanical response of nanoporous metals: A story of size, surface stress, and severed struts. MRS Bulletin, 2018, 43, 35-42.	3.5	81
11	Strain-driven grain boundary motion in nanocrystalline materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 493, 33-40.	5.6	70
12	Linear Grain Growth Kinetics and Rotation in Nanocrystalline Ni. Physical Review Letters, 2007, 98, 165502.	7.8	69
13	An atomistic investigation of elastic and plastic properties of Au nanowires. Jom, 2005, 57, 62-66.	1.9	67
14	Plastic deformation mechanisms in nanocrystalline columnar grain structures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 412, 316-322.	5.6	64
15	Atomistic simulations of metallic microstructures. Current Opinion in Solid State and Materials Science, 2013, 17, 284-297.	11.5	60
16	Strain-induced grain growth and rotation in nickel nanowires. Physical Review B, 2007, 75, .	3.2	56
17	Hardening under compression in Au foams. Acta Materialia, 2016, 108, 1-7.	7.9	51
18	Fivefold twin formation during annealing of nanocrystalline Cu. Scripta Materialia, 2008, 59, 1267-1270.	5.2	49

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19	Atomistic simulation of point defects and diffusion in B2 NiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 75, 187-199.	0.6	48
20	Interatomic potentials for ternary Nb - Ti - Al alloys. Modelling and Simulation in Materials Science and Engineering, 1996, 4, 23-32.	2.0	45
21	Micromechanics of dislocation channeling in intergranular stress corrosion crack nucleation. Current Opinion in Solid State and Materials Science, 2012, 16, 134-142.	11.5	43
22	The role of partial grain boundary dislocations in grain boundary sliding and coupled grain boundary motion. Journal of Materials Science, 2006, 41, 7741-7746.	3.7	42
23	Crack-Tip Deformation Mechanisms in Î±-Fe and Binary Fe Alloys: An Atomistic Study on Single Crystals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2191-2202.	2.2	40
24	Atomistic simulation of [001] symmetrical tilt grain boundaries in NiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 29-56.	0.6	36
25	Annealing twins in nanocrystalline fcc metals: A molecular dynamics simulation. Physical Review B, 2007, 75, .	3.2	36
26	Atomistic studies of hydrogen effects on grain boundary structure and deformation response in FCC Ni. Computational Materials Science, 2016, 122, 92-101.	3.0	36
27	Atomistic theory and computer simulation of grain boundary structure and diffusion. Journal of Physics Condensed Matter, 2000, 12, R497-R516.	1.8	35
28	Atomistic modeling of dislocations in a random quinary high-entropy alloy. Computational Materials Science, 2020, 173, 109366.	3.0	35
29	Improving the Ductility of Nanocrystalline bcc Metals. Nano Letters, 2005, 5, 2403-2407.	9.1	33
30	Dislocations in Grain Boundary Regions: The Origin of Heterogeneous Microstrains in Nanocrystalline Materials. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 513-530.	2.2	29
31	Grain boundary structure in high-entropy alloys. Journal of Materials Science, 2020, 55, 9173-9183.	3.7	26
32	Tensile deformation of fcc Ni as described by an EAM potential. Philosophical Magazine, 2009, 89, 3435-3450.	1.6	25
33	Molecular dynamics study of deformation and fracture in a tantalum nano-crystalline thin film. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 045010.	2.0	25
34	Atomistic structure and lattice effects of vacancies in Ni-Al intermetallics. Journal of Materials Research, 1994, 9, 875-883.	2.6	24
35	Atomistic simulation of dislocation core configurations in TiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 389-404.	0.6	24
36	The role of confinement on stress-driven grain boundary motion in nanocrystalline aluminum thin films. Journal of Applied Physics, 2012, 112, .	2.5	24

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37	Deformation mechanisms and scaling relations in the mechanical response of nano-porous Au. Acta Materialia, 2019, 165, 626-637.	7.9	24
38	Fracture in nanoporous gold: An integrated computational and experimental study. Acta Materialia, 2020, 185, 257-270.	7.9	24
39	Dislocation emission and propagation under a nano-indenter in a model high entropy alloy. Computational Materials Science, 2022, 205, 111218.	3.0	24
40	Non-planar grain boundary structures in fcc metals and their role in nano-scale deformation mechanisms. Philosophical Magazine, 2014, 94, 152-173.	1.6	23
41	Bulk and intergranular fracture behaviour of NiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 1425-1444.	0.6	21
42	Connecting interatomic potential characteristics with deformation response in FCC materials. Computational Materials Science, 2018, 147, 18-27.	3.0	21
43	Stress Localization Resulting from Grain Boundary Dislocation Interactions in Relaxed and Defective Grain Boundaries. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 667-683.	2.2	21
44	Mechanical response of a bicontinuous copperâ€“molybdenum nano-composite: Experiments and simulations. Acta Materialia, 2019, 178, 79-89.	7.9	19
45	Nanoindentation of thin films: Simulations and experiments. Journal of Materials Research, 2009, 24, 1135-1141.	2.6	18
46	Molecular Statics Simulation Of Crack Propagation In A-Fe Using Eam Potentials. Materials Research Society Symposia Proceedings, 1995, 409, 75.	0.1	16
47	Mechanical Response of Au Foams of Varying Porosity from Atomistic Simulations. Jom, 2018, 70, 2185-2191.	1.9	16
48	Deformation behavior of a model high entropy alloy from atomistic simulations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 812, 141124.	5.6	15
49	Indentation response of nanoporous gold from atomistic simulations. Journal of Materials Research, 2018, 33, 1382-1390.	2.6	13
50	Deformation response of high entropy alloy nanowires. Journal of Materials Science, 2021, 56, 16447-16462.	3.7	13
51	Monte Carlo simulation of correlation effects in a random bcc alloy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 75, 201-219.	0.6	12
52	Atomistic simulation of fracture in TiAl. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 951-955.	2.2	12
53	Dislocation content in random high angle grain boundaries. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 045005.	2.0	12
54	Deformation response of grain boundary networks at high temperature. Journal of Materials Science, 2018, 53, 5696-5705.	3.7	10

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55	Stoichiometry effects on core structure and mobility in B2 NiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1995, 72, 1671-1696.	0.6	9
56	Simple Flexible Boundary Conditions for the Atomistic Simulation of Dislocation Core Structure and Motion. Materials Research Society Symposia Proceedings, 1992, 291, 85.	0.1	7
57	The Mechanical Response of Nanoporous Gold and Silver Foams with Varying Composition and Surface Segregation. Acta Materialia, 2021, 203, 116445.	7.9	7
58	Influence of compositional complexity on species diffusion behavior in high-entropy solid-solution alloys. Journal of Materials Research, 2022, 37, 1403-1415.	2.6	7
59	Atomistic Simulation of Dislocation Motion as Determined by Core Structure. Materials Research Society Symposia Proceedings, 1994, 350, 293.	0.1	5
60	Varying Diffusion Kinetics Along Random Grain Boundaries in a Model Austenitic Stainless Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1117-1126.	2.2	5
61	Effects of Angular Dependent Terms in the Interatomic Potential on Defect Properties in TiAl. Materials Research Society Symposia Proceedings, 1994, 364, 151.	0.1	4
62	Atomistic simulation of fracture in TiAl. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 951-955.	2.2	4
63	Atomistic simulation of grain boundary diffusion mechanisms in B2 NiAl. Intermetallics, 2004, 12, 937-943.	3.9	4
64	Atomistic Simulation of Dislocation Interactions with a Ï*f* = 5 (210) Grain Boundary during Nanoindentation of Ni. Materials Research Society Symposia Proceedings, 2004, 821, 258.	0.1	4
65	Effects of Microalloying on the Mobility and Mechanical Response of Interfaces in Nanocrystalline Cu. Materials Science Forum, 2009, 633-634, 21-30.	0.3	4
66	Representation Of Finite Cracks By Dislocation Pileups: An Application To Atomic Simulation Of Fracture. Materials Research Society Symposia Proceedings, 1995, 409, 133.	0.1	2
67	Atomistic Study of Crack Propagation and Dislocation Emission in Cu-Ni Multilayers. Materials Research Society Symposia Proceedings, 1996, 457, 315.	0.1	2
68	Atomistic Simulation of Grain Boundary Structure and Diffusion in B2 NiAl. Materials Research Society Symposia Proceedings, 1996, 458, 21.	0.1	2
69	Bulk and intergranular fracture behaviour of NiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 1425-1444.	0.6	2
70	Atomistic simulation of dislocation core configurations in TiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 389-404.	0.6	2
71	Possibilities of Slip Modification in B2 NiAl. Materials Research Society Symposia Proceedings, 1992, 288, 435.	0.1	1
72	Structure and Energetics of Vacancies, Antisites and Divacancy Complexes in the Ni-Al system. Materials Research Society Symposia Proceedings, 1992, 288, 305.	0.1	1

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73	Representation of Finite Cracks by Dislocation Pileups: An Application to Atomic Simulation of Fracture. Materials Research Society Symposia Proceedings, 1995, 408, 217.	0.1	1
74	Atomistic Structure of High Index Surfaces. Materials Research Society Symposia Proceedings, 1996, 440, 39.	0.1	0
75	Atomistic Aspects of Crack Propagation Along High Angle Grain Boundaries. Materials Research Society Symposia Proceedings, 1996, 460, 399.	0.1	0
76	Dr Eduardo Savino (1945â€“1998). Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 1297-1298.	0.6	0
77	Multiscale modeling of deformation and fracture in metallic materials. , 2007, , 369-390.		0