Yuri N Osetskiy

List of Publications by Year in descending order

198 papers	8,550 citations	34105 52 h-index	60623 81 g-index
199 all docs	199 docs citations	199 times ranked	2750 citing authors

#	Article	IF	Citations
1	An atomic-level model for studying the dynamics of edge dislocations in metals. Modelling and Simulation in Materials Science and Engineering, 2003, 11, 427-446.	2.0	350
2	The primary damage state in fcc, bcc and hcp metals as seen in molecular dynamics simulations. Journal of Nuclear Materials, 2000, 276, 1-12.	2.7	326
3	Stability and mobility of defect clusters and dislocation loops in metals. Journal of Nuclear Materials, 2000, 276, 65-77.	2.7	266
4	One-dimensional atomic transport by clusters of self-interstitial atoms in iron and copper. Philosophical Magazine, 2003, 83, 61-91.	1.6	214
5	Magnetic Interactions Influence the Properties of Helium Defects in Iron. Physical Review Letters, 2005, 94, 046403.	7.8	163
6	Atomic modelling of strengthening mechanisms due to voids and copper precipitates in Î±-iron. Philosophical Magazine, 2003, 83, 3623-3641.	1.6	147
7	Aspects of microstructure evolution under cascade damage conditions. Journal of Nuclear Materials, 1997, 251, 107-122.	2.7	142
8	MD description of damage production in displacement cascades in copper and Î±-iron. Journal of Nuclear Materials, 2003, 323, 152-162.	2.7	142
9	Void and precipitate strengthening in Î±-iron: what can we learn from atomic-level modelling?. Journal of Nuclear Materials, 2003, 323, 268-280.	2.7	139
10	Solving the Puzzle of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo stretchy="false">âŸ¨</mml:mo><mml:mn>100</mml:mn><mml:mo stretchy="false">âŸ©</mml:mo></mml:math>Interstitial Loop Formation in bcc Iron. Physical Review Letters, 2013, 110, 265503.	7.8	132
11	First-principles theory of the energetics of He defects in bcc transition metals. Physical Review B, 2008, 78, .	3.2	130
12	On the origin of large interstitial clusters in displacement cascades. Philosophical Magazine, 2010, 90, 863-884.	1.6	128
13	Preferential diffusion in concentrated solid solution alloys: NiFe, NiCo and NiCoCr. Acta Materialia, 2017, 128, 391-399.	7.9	124
14	Chapter 88 Dislocationâ€“Obstacle Interactions at the Atomic Level. Dislocations in Solids, 2009, 15, 1-90.	1.6	123
15	Simulation of the interaction between an edge dislocation and a ã€ˆ1 0 0ã€‰ interstitial dislocation loop in Î±-iron. Acta Materialia, 2008, 56, 5034-5046.	7.9	122
16	Computer simulation of carbon diffusion and vacancyâ€“carbon interaction in Î±-iron. Acta Materialia, 2007, 55, 1-11.	7.9	118
17	Atomic-scale mechanisms of void hardening in bcc and fcc metals. Philosophical Magazine, 2010, 90, 945-961.	1.6	105
18	Atomic-scale study of dislocationâ€“stacking fault tetrahedron interactions. Part I: mechanisms. Philosophical Magazine, 2006, 86, 2295-2313.	1.6	99

#	Article	IF	Citations
19	On the existence and origin of sluggish diffusion in chemically disordered concentrated alloys. Current Opinion in Solid State and Materials Science, 2018, 22, 65-74.	11.5	97
20	Structure and properties of clusters of self-interstitial atoms in fcc copper and bcc iron. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 2131-2157.	0.6	95
21	Mapping strain rate dependence of dislocation-defect interactions by atomistic simulations. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17756-17761.	7.1	93
22	Computer simulation of reactions between an edge dislocation and glissile self-interstitial clusters in iron. Philosophical Magazine, 2006, 86, 3921-3936.	1.6	91
23	Computer simulation of interaction of an edge dislocation with a carbon interstitial in Î±-iron and effects on glide. Acta Materialia, 2007, 55, 93-104.	7.9	88
24	Calculation of helium defect clustering properties in iron using a multi-scale approach. Journal of Nuclear Materials, 2006, 351, 109-118.	2.7	83
25	Onset Mechanism of Strain-Rate-Induced Flow Stress Upturn. Physical Review Letters, 2012, 109, 135503.	7.8	82
26	Computer simulation of primary damage creation in displacement cascades in copper. I. Defect creation and cluster statistics. Journal of Nuclear Materials, 2008, 377, 385-395.	2.7	81
27	Interaction of an edge dislocation with voids in Î±-iron modelled with different interatomic potentials. Journal of Physics Condensed Matter, 2008, 20, 445007.	1.8	81
28	Local-environment dependence of stacking fault energies in concentrated solid-solution alloys. Npj Computational Materials, 2019, 5, .	8.7	80
29	Thermally activated glide of small dislocation loops in metals. Philosophical Magazine Letters, 1999, 79, 273-282.	1.2	77
30	Analysis of the anisotropy of point defect diffusion in hcp Zr. Acta Materialia, 2014, 78, 173-180.	7.9	76
31	Specific features of defect and mass transport in concentrated fcc alloys. Acta Materialia, 2016, 115, 364-371.	7.9	75
32	Atomistic studies of formation and diffusion of helium clusters and bubbles in BCC iron. Journal of Nuclear Materials, 2011, 417, 1110-1114.	2.7	74
33	Atomistic study of the generation, interaction, accumulation and annihilation of cascade-induced defect clusters. Journal of Nuclear Materials, 2002, 307-311, 852-861.	2.7	69
34	Comparison of void strengthening in fcc and bcc metals: Large-scale atomic-level modelling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 374-377.	5.6	68
35	Computer simulation of vacancy and interstitial clusters in bcc and fcc metals. Journal of Nuclear Materials, 1997, 251, 34-48.	2.7	66
36	Cr segregation on dislocation loops enhances hardening in ferritic Feâ€“Cr alloys. Acta Materialia, 2013, 61, 1444-1453.	7.9	66

#	Article	IF	Citations
37	Study of copper precipitates in Î±â€iron by computer simulation I. Interatomic potentials and properties of Fe and Cu. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1995, 72, 361-381.	0.6	65
38	Properties and evolution of sessile interstitial clusters produced by displacement cascades in Î±-iron. Journal of Nuclear Materials, 2000, 276, 213-220.	2.7	65
39	Atomic-scale details of dislocationâ€“stacking fault tetrahedra interaction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 370-373.	5.6	64
40	Simulating complex atomistic processes: On-the-fly kinetic Monte Carlo scheme with selective active volumes. Physical Review B, 2011, 84, .	3.2	64
41	Competing processes in reactions between an edge dislocation and dislocation loops in a body-centred cubic metal. Scripta Materialia, 2010, 62, 697-700.	5.2	63
42	Interactions between mobile dislocation loops in Cu and Î±-Fe. Journal of Nuclear Materials, 2000, 276, 202-212.	2.7	61
43	Defect cluster formation in displacement cascades in copper. Nuclear Instruments & Methods in Physics Research B, 2001, 180, 85-90.	1.4	61
44	Reactions between a 1/2âŸ¨111âŸ© screw dislocation and âŸ¨100âŸ© interstitial dislocation loops in alpha-iron modelled at atomic scale. Philosophical Magazine, 2010, 90, 1019-1033.	1.6	61
45	Computer simulation of displacement cascades and the defects they generate in metals. Nuclear Instruments & Methods in Physics Research B, 1999, 153, 87-98.	1.4	60
46	Features of primary damage by high energy displacement cascades in concentrated Ni-based alloys. Journal of Applied Physics, 2016, 119, .	2.5	59
47	Atomic-scale dynamics of edge dislocations in Ni and concentrated solid solution NiFe alloys. Journal of Alloys and Compounds, 2017, 701, 1003-1008.	5.5	59
48	A model for the dynamics of loop drag by a gliding dislocation. Philosophical Magazine, 2005, 85, 1473-1493.	1.6	58
49	The influence of transition metal solutes on the dislocation core structure and values of the Peierls stress and barrier in tungsten. Journal of Physics Condensed Matter, 2013, 25, 025403.	1.8	57
50	Modelling dislocationâ€“obstacle interactions in metals exposed to an irradiation environment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 353-361.	5.6	56
51	Mechanisms of stacking fault tetrahedra destruction by gliding dislocations in quenched gold. Philosophical Magazine, 2008, 88, 581-597.	1.6	54
52	Atomic-scale mechanisms of helium bubble hardening in iron. Journal of Nuclear Materials, 2015, 465, 448-454.	2.7	53
53	The effect of temperature and strain rate on the interaction between an edge dislocation and an interstitial dislocation loop in Î±-iron. Journal of Physics Condensed Matter, 2007, 19, 456211.	1.8	52
54	Atomistic study of multimechanism diffusion by self-interstitial defects in Î±-Fe. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 025008.	2.0	52

#	Article	IF	Citations
55	Hardening due to copper precipitates in Î±-iron studied by atomic-scale modelling. Journal of Nuclear Materials, 2004, 329-333, 1233-1237.	2.7	51
56	Dislocationâ€“stacking fault tetrahedron interaction: what can we learn from atomic-scale modelling. Journal of Nuclear Materials, 2004, 329-333, 1228-1232.	2.7	51
57	Atomistic Study of Diffusional Mass Transport in Metals. Defect and Diffusion Forum, 2001, 188-190, 71-92.	0.4	49
58	Impact of Short-Range Forces on Defect Production from High-Energy Collisions. Journal of Chemical Theory and Computation, 2016, 12, 2871-2879.	5.3	49
59	Destruction processes of large stacking fault tetrahedra induced by direct interaction with gliding dislocations. Journal of Nuclear Materials, 2006, 351, 285-294.	2.7	48
60	Effects of temperature on structure and mobility of the ã€ˆ1 0 0ã€‰ edge dislocation in body-centred cubic iron. Acta Materialia, 2010, 58, 2477-2482.	7.9	48
61	Tunable Chemical Disorder in Concentrated Alloys: Defect Physics and Radiation Performance. Chemical Reviews, 2022, 122, 789-829.	47.7	47
62	Study of copper precipitates in Î±-iron by computer simulation II. Interatomic potential for Fe[sbnd]Cu interactions and properties of coherent precipitates. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 73, 249-263.	0.6	46
63	Multiscale modelling of radiation damage in metals: from defect generation to material properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 365, 46-56.	5.6	46
64	Development of a Feâ€“He interatomic potential based on electronic structure calculations. Journal of Nuclear Materials, 2007, 367-370, 355-360.	2.7	46
65	Mechanisms of hardening due to copper precipitates in Î±-iron. Philosophical Magazine, 2009, 89, 3333-3349.	1.6	46
66	Dependence of radiation damage accumulation in iron on underlying models of displacement cascades and subsequent defect migration. Journal of Nuclear Materials, 2006, 355, 89-103.	2.7	44
67	Helium irradiated cavity formation and defect energetics in Ni-based binary single-phase concentrated solid solution alloys. Acta Materialia, 2019, 164, 283-292.	7.9	44
68	Mobility of interstitial clusters in alpha-zirconium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 783-789.	2.2	42
69	Two modes of screw dislocation glide in fcc single-phase concentrated alloys. Acta Materialia, 2019, 164, 741-748.	7.9	42
70	Atomistic studies of helium defect properties in bcc iron: Comparison of Heâ€“Fe potentials. Philosophical Magazine, 2010, 90, 935-944.	1.6	41
71	Mechanism of one-dimensional glide of self-interstitial atom clusters in Î±-iron. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 2709-2720.	0.6	40
72	Self-interstitial configurations in hcp Zr: a first principles analysis. Philosophical Magazine Letters, 2013, 93, 93-100.	1.2	40

#	Article	IF	Citations
73	Effects of 3d electron configurations on helium bubble formation and void swelling in concentrated solid-solution alloys. Acta Materialia, 2019, 181, 519-529.	7.9	40
74	Cascade annealing simulations of bcc iron using object kinetic Monte Carlo. Journal of Nuclear Materials, 2012, 423, 102-109.	2.7	39
75	An atomistic assessment of helium behavior in iron. Journal of Nuclear Materials, 2014, 455, 258-262.	2.7	39
76	Accurate classical short-range forces for the study of collision cascades in Feâ€“Niâ€“Cr. Computer Physics Communications, 2017, 219, 11-19.	7.5	39
77	Structure and properties of vacancy and interstitial clusters in Î±-zirconium. Journal of Nuclear Materials, 2008, 374, 87-94.	2.7	38
78	Mesoscale thermodynamic analysis of atomic-scale dislocationâ€“obstacle interactions simulated by molecular dynamics. Philosophical Magazine, 2010, 90, 1001-1018.	1.6	38
79	Study of copper precipitates in Î±-iron by computer simulation. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 75, 1097-1115.	0.6	37
80	Vacancy loops and stacking-fault tetrahedra in copper. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1999, 79, 2259-2283.	0.6	37
81	Effect of mass of the primary knock-on atom on displacement cascade debris in Î± -iron. Philosophical Magazine Letters, 2008, 88, 43-53.	1.2	37
82	Frenkel defect recombination in Ni and Niâ€'containing concentrated solidâ€'solution alloys. Acta Materialia, 2019, 173, 184-194.	7.9	37
83	Tunable chemical complexity to control atomic diffusion in alloys. Npj Computational Materials, 2020, 6, .	8.7	37
84	Mobility of Self-Interstitial Clusters in FE and CU. Materials Research Society Symposia Proceedings, 1998, 527, 59.	0.1	36
85	The collapse of stacking-fault tetrahedra by interaction with gliding dislocations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 366-369.	5.6	35
86	On the features of dislocationâ€“obstacle interaction in thin films: large-scale atomistic simulation. Philosophical Magazine Letters, 2006, 86, 511-519.	1.2	35
87	Computer simulation of the interaction of carbon atoms with self-interstitial clusters in Î±-iron. Journal of Nuclear Materials, 2007, 361, 52-61.	2.7	35
88	Effect of nickel on point defects diffusion in Fe â€“ Ni alloys. Acta Materialia, 2017, 132, 367-373.	7.9	35
89	Self-evolving atomistic kinetic Monte Carlo: fundamentals and applications. Journal of Physics Condensed Matter, 2012, 24, 375402.	1.8	34
90	The evolution of copper precipitates in binary Feî—¸Cu alloys during ageing and irradiation. Journal of Nuclear Materials, 1995, 226, 252-255.	2.7	33

#	Article	IF	Citations
91	Computer-simulation study of high-temperature phase stability in iron. Physical Review B, 1998, 57, 755-763.	3.2	33
92	Self-Evolving Atomistic Kinetic Monte Carlo simulations of defects in materials. Computational Materials Science, 2015, 100, 135-143.	3.0	33
93	Diffusion of point defects in ordered and disordered Niâ€“Fe alloys. Journal of Alloys and Compounds, 2019, 805, 1175-1183.	5.5	33
94	How do energetic ions damage metallic surfaces?. Current Opinion in Solid State and Materials Science, 2015, 19, 277-286.	11.5	32
95	The effect of alloying nickel with iron on the supersonic ballistic stage of high energy displacement cascades. Acta Materialia, 2016, 116, 136-142.	7.9	32
96	Modelling atomic scale radiation damage processes and effects in metals. International Materials Reviews, 2002, 47, 233-241.	19.3	31
97	Interstitial loop transformations in FeCr. Journal of Alloys and Compounds, 2015, 640, 219-225.	5.5	31
98	Vacancy interaction with glissile interstitial clusters in bcc metals. Philosophical Magazine Letters, 2001, 81, 803-811.	1.2	30
99	On the anisotropic migration of point defects in h.c.p. zirconium. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1994, 70, 25-33.	0.6	29
100	Dynamic properties of edge dislocations decorated by interstitial loops in Î±-iron and copper. Philosophical Magazine Letters, 2004, 84, 745-754.	1.2	29
101	Atomistic material behavior at extreme pressures. Npj Computational Materials, 2016, 2, .	8.7	29
102	Vacancy loops and stacking-fault tetrahedra in copper. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1999, 79, 2285-2311.	0.6	28
103	Self-interstitial atom clusters as obstacles to glide of edge dislocations in Î±-zirconium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 54-58.	5.6	28
104	Dislocationâ€”Obstacle Interactions at Atomic Level in Irradiated Metals. Mathematics and Mechanics of Solids, 2009, 14, 270-283.	2.4	28
105	Implementation of a new Feâ€“He three-body interatomic potential for molecular dynamics simulations. Philosophical Magazine, 2010, 90, 923-934.	1.6	28
106	Molecular dynamics study of influence of vacancy types defects on thermal conductivity of Î²-SiC. Journal of Nuclear Materials, 2011, 418, 174-181.	2.7	28
107	Atomic scale modeling of {110} twist grain boundaries in Î±-iron: Structure and energy properties. Philosophical Magazine, 2010, 90, 991-1000.	1.6	27
108	Molecular dynamics modeling of atomic displacement cascades in 3Câ€“SiC: Comparison of interatomic potentials. Journal of Nuclear Materials, 2015, 465, 83-88.	2.7	27

#	Article	IF	Citations
109	Chemically-biased diffusion and segregation impede void growth in irradiated Ni-Fe alloys. Current Opinion in Solid State and Materials Science, 2019, 23, 92-100.	11.5	27
110	On the validity of the cluster model to describe the evolution of Cu precipitates in Feâ€“Cu alloys. Journal of Nuclear Materials, 2000, 277, 113-115.	2.7	26
111	Statistical analysis of cluster production efficiency in MD simulations of cascades in copper. Journal of Nuclear Materials, 2002, 307-311, 866-870.	2.7	26
112	Computer simulation of cascade damage in Î±-iron with carbon in solution. Journal of Nuclear Materials, 2008, 382, 91-95.	2.7	26
113	Computer simulation of dislocationâ€“solute interaction in dilute Feâ€“Cu alloys. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 1153-1166.	2.0	25
114	The effect of twist angle on anisotropic mobility of {1 1 0} hexagonal dislocation networks in Î±-iron. Scripta Materialia, 2012, 66, 761-764.	5.2	25
115	Computer simulation of vacancy loops and stacking faults in zirconium. Journal of Nuclear Materials, 1992, 195, 83-101.	2.7	24
116	Simulation of copper atom diffusion via the vacancy mechanism in a dilute Fe-Cu alloy. Physical Review B, 2005, 71, .	3.2	24
117	The influence of interaction geometry on the obstacle strength of voids and copper precipitates in iron. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 015004.	2.0	24
118	Point-defect clusters and dislocation loops in bcc metals: Continuum and atomistic study. Philosophical Magazine, 2003, 83, 857-871.	1.6	23
119	Interaction of edge dislocation with point defect clusters created in displacement cascades in Î±-zirconium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 49-53.	5.6	23
120	Core structure, dislocation energy and Peierls stress for edge dislocations with (0001) and slip planes in Î±-Zr. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 45-48.	5.6	23
121	Cascade defect evolution processes: Comparison of atomistic methods. Journal of Nuclear Materials, 2013, 443, 66-70.	2.7	23
122	Kinetic Activationâ€“Relaxation Technique and Self-Evolving Atomistic Kinetic Monte Carlo: Comparison of on-the-fly Kinetic Monte Carlo algorithms. Computational Materials Science, 2015, 100, 124-134.	3.0	23
123	Sluggish, chemical bias and percolation phenomena in atomic transport by vacancy and interstitial diffusion in Ni Fe alloys. Current Opinion in Solid State and Materials Science, 2021, 25, 100961.	11.5	23
124	The atomic-scale modeling of dislocation-obstacle interactions in irradiated metals. Jom, 2007, 59, 40-45.	1.9	22
125	On the structure and mobility of point defect clusters in alpha-zirconium: a comparison for two interatomic potential models. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 035003.	2.0	22
126	Slow relaxation of cascade-induced defects in Fe. Physical Review B, 2015, 91, .	3.2	22

#	Article	IF	Citations
127	From suppressed void growth to significant void swelling in NiCoFeCr complex concentrated solid-solution alloy. Materialia, 2020, 9, 100603.	2.7	22
128	Dislocation loop evolution and radiation hardening in nickel-based concentrated solid solution alloys. Journal of Nuclear Materials, 2020, 538, 152247.	2.7	22
129	Dislocation dynamics modelling of dislocationâ€“loop interactions in irradiated metals. Philosophical Magazine, 2005, 85, 171-188.	1.6	21
130	Identification and morphology of point defect clusters created in displacement cascades in Î±-zirconium. Nuclear Instruments & Methods in Physics Research B, 2006, 242, 530-533.	1.4	21
131	Statistics of primary damage creation in high-energy displacement cascades in copper and zirconium. Nuclear Instruments & Methods in Physics Research B, 2006, 242, 68-70.	1.4	20
132	Atomic-scale computer simulation study of the interaction of Cu-rich precipitates with irradiation-produced defects in Î±-Fe. Philosophical Magazine, 2007, 87, 925-943.	1.6	20
133	The role of nickel in radiation damage of ferritic alloys. Acta Materialia, 2015, 84, 368-374.	7.9	20
134	Accelerated kinetic Monte Carlo: A case study; vacancy and dumbbell interstitial diffusion traps in concentrated solid solution alloys. Journal of Chemical Physics, 2020, 153, 074109.	3.0	20
135	Atomic-scale computer simulation of primary irradiation damage effects in metals. Journal of Computer-Aided Materials Design, 1999, 6, 225-237.	0.7	19
136	Absorbing boundary conditions for molecular dynamics and multiscale modeling. Physical Review B, 2007, 76, .	3.2	18
137	Atomic-scale modelling of primary damage and properties of radiation defects in metals. Nuclear Instruments & Methods in Physics Research B, 2003, 202, 31-43.	1.4	17
138	Properties of Vacancy Complexes with Hydrogen and Helium Atoms in Tungsten from First Principles. Fusion Science and Technology, 2017, 71, 52-59.	1.1	17
139	Simulation of dislocation glide in dilute Feâ€“Cu alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 109-113.	5.6	16
140	Interaction of dislocations with Frank loops in Feâ€“Ni alloys and pure Ni: An MD study. Journal of Nuclear Materials, 2013, 442, S628-S632.	2.7	16
141	Anisotropy of point defect diffusion in alpha-zirconium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 777-782.	2.2	16
142	Quantitative analysis of CTEM images of small dislocation loops in Al and stacking fault tetrahedra in Cu generated by molecular dynamics simulation. Journal of Nuclear Materials, 2000, 276, 251-257.	2.7	15
143	Strengthening and microstructure modification associated with moving twin boundaries in hcp metals. Philosophical Magazine Letters, 2007, 87, 451-459.	1.2	15
144	Diffusion-mediated chemical concentration variation and void evolution in ion-irradiated NiCoFeCr high-entropy alloy. Journal of Materials Research, 2021, 36, 298-310.	2.6	15

#	Article	IF	Citations
145	Vacancy and Interstitial Diffusion in bcc-Fe. Defect and Diffusion Forum, 1997, 143-147, 155-160.	0.4	13
146	Migration and directional change of interstitial clusters in Î±-Fe: searching for transition states by the dimer method. Philosophical Magazine, 2005, 85, 619-627.	1.6	13
147	On the interaction between a vacancy and self-interstitial atom clusters in metals. Philosophical Magazine, 2007, 87, 3501-3517.	1.6	13
148	Computer simulation study of copper precipitates in Î±-iron. Journal of Nuclear Materials, 1994, 212-215, 236-240.	2.7	12
149	Interactions between vacancy and glissile interstitial clusters in iron and copper. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 365, 101-106.	5.6	12
150	Dynamics of drag of self-interstitial clusters by an edge dislocation in iron. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 378-381.	5.6	12
151	Mobility of Self-Interstitials in FCC and BCC Metals. Materials Research Society Symposia Proceedings, 1998, 527, 49.	0.1	11
152	Features of the interactions between a vacancy and interstitial loops in metals. Philosophical Magazine Letters, 2004, 84, 257-266.	1.2	11
153	What is the Limit of Nanoparticle Strengthening?. MRS Bulletin, 2009, 34, 173-177.	3.5	11
154	Structural and chemical disorder enhance point defect diffusion and atomic transport in Ni3Al-based Î³â€² phase. Acta Materialia, 2021, 207, 116704.	7.9	11
155	Characteristics of the interaction of Cu-rich precipitates with irradiation-produced defects in Î±-Fe. Philosophical Magazine Letters, 2005, 85, 491-501.	1.2	10
156	Using a scalar parameter to trace dislocation evolution in atomistic modeling. Computational Materials Science, 2015, 96, 85-89.	3.0	10
157	Atomic-scale mechanisms of void strengthening in tungsten. Tungsten, 2021, 3, 65-71.	4.8	10
158	On normal and anomalous self-diffusion in body-centred cubic metals: a computer simulation study. Journal of Physics Condensed Matter, 1993, 5, 9121-9130.	1.8	9
159	On The Mechanism of Interstitial Cluster Migration in Î± -FE. Materials Research Society Symposia Proceedings, 1998, 540, 697.	0.1	9
160	Glissile and Sessile Vacancy and Self-Interstitial Clusters in BCC and FCC Metals. Materials Research Society Symposia Proceedings, 1998, 540, 691.	0.1	8
161	Effect of low-temperature phase transition on mechanical behavior of Feâ€“Cu alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 46-51.	5.6	8
162	On the mobility of defect clusters and their effect on microstructure evolution in fcc Ni under irradiation. Materialia, 2018, 4, 139-146.	2.7	8

#	Article	IF	Citations
163	Dislocation nucleation and defect formation in copper by stepped spherical indenter. Philosophical Magazine, 2012, 92, 3158-3171.	1.6	7
164	Decisive role of magnetism in the interaction of chromium and nickel solute atoms with 1/2ã€ˆ111ã€‰-screw dislocation core in body-centered cubic iron. Acta Materialia, 2016, 121, 137-143.	7.9	7
165	Simulation of the interaction between an edge dislocation and âŸ¨111âŸ© interstitial dislocation loops in Î±-iron. Radiation Effects and Defects in Solids, 2019, 174, 329-338.	1.2	7
166	Computer Simulation of the Diffusion in Binary Fe-Cu Alloys. Defect and Diffusion Forum, 1997, 143-147, 505-508.	0.4	6
167	Point-defect properties of and sputtering events in the {001} surfaces of Ni3Al I. Surface and point-defect properties. Philosophical Magazine, 2004, 84, 173-191.	1.6	6
168	Point-defect properties of, and sputtering events in, the {001} surfaces of Ni3Al. II. Sputtering events at and near surfaces. Philosophical Magazine, 2005, 85, 1687-1700.	1.6	6
169	Atomic-Level Dislocation Dynamics in Irradiated Metals. , 2020, , 663-688.		6
170	On the origin of internal obstacles to dislocation glide in single-phase NiFe random alloys. Acta Materialia, 2022, 222, 117457.	7.9	6
171	Mobility of Interstitial Clusters in HCP Zirconium. Materials Research Society Symposia Proceedings, 2000, 650, 3301.	0.1	5
172	Atomistic simulation of defect-dislocation interactions in concentrated solid-solution alloys. Physical Review Materials, 2019, 3, .	2.4	5
173	Interactions between Edge Dislocations and Interstitial Clusters in Iron and Copper. Materials Research Society Symposia Proceedings, 2000, 653, .	0.1	4
174	Atomistic Study of Self-Diffusion in Ni, Al and Ni₃Al. Defect and Diffusion Forum, 2001, 194-199, 423-428.	0.4	4
175	Microstructures Of Irradiated And Mechanically Deformed Metals And Alloys: Fundamental Aspects. Materials Research Society Symposia Proceedings, 2003, 792, 162.	0.1	4
176	Dissociation of migrating particle from trap with long-range interaction field. Philosophical Magazine, 2010, 90, 907-921.	1.6	4
177	Thermodynamic approach to the stability of multi-phase systems: application to the Y₂O₃â€“Fe system. Journal of Physics Condensed Matter, 2015, 27, 305001.	1.8	4
178	Defect Cluster Formation in High Energy Displacement Cascades in Copper. Materials Research Society Symposia Proceedings, 2000, 650, 421.	0.1	3
179	Structure and properties of clusters of self-interstitial atoms in fcc copper and bcc iron. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 2131-2157.	0.6	3
180	Geometrical Aspects of Dislocation-Obstacle Interaction in Iron. Advances in Science and Technology, 2010, 73, 109-117.	0.2	3

#	Article	IF	Citations
181	Diffusion-mediated chemical concentration variation and void evolution in ion-irradiated NiCoFeCr high-entropy alloy. Journal of Materials Research, 2021, 36, 1-13.	2.6	3
182	Vacancy loops and stacking-fault tetrahedra in copper I. Structure and properties studied by pair and many-body potentials. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1999, 79, 2259-2283.	0.6	2
183	Atomistic Study of Helium Bubbles in Fe: Equilibrium State. Materials Research Society Symposia Proceedings, 2011, 1298, 79.	0.1	2
184	Strengthening of tungsten by coherent rhenium precipitates formed during low fluence irradiation. Tungsten, 2022, 4, 20-27.	4.8	2
185	Atomistic Simulation of Mobile Defect Clusters in Metals. Materials Research Society Symposia Proceedings, 1998, 538, 223.	0.1	1
186	Features of Vacancy Interaction with Interstitial Clusters in BCC Metals. Materials Research Society Symposia Proceedings, 2000, 653, .	0.1	1
187	Cleavage force, tribology and bond breaking in some transition metals. Journal of Physics and Chemistry of Solids, 2000, 61, 2055-2060.	4.0	1
188	From Bytes to Ingots: Expedient Design of Structural Materials for Advanced Nuclear Energy Systems. Materials Research Society Symposia Proceedings, 2007, 1043, 1.	0.1	1
189	Reaction kinetics of non-localised particleâ€“trap complexes. Philosophical Magazine, 2010, 90, 897-906.	1.6	1
190	Equilibrium distribution of point defects in Fe-Y-O as a typical representative of nanocluster-strengthened alloys. Journal of Nuclear Materials, 2021, 549, 152875.	2.7	1
191	The role of the high-energy cascade thermal stage in local ordering of an amorphous metal. Journal of Nuclear Materials, 1993, 200, 108-119.	2.7	0
192	Computer Simulation Study of the Precipitate-Matrix Interface in an Fe-Cu System. Materials Science Forum, 1996, 207-209, 409-412.	0.3	0
193	Computer Simulation of Defect Production and Behaviour in Displacement Cascades in Metals. Materials Research Society Symposia Proceedings, 1998, 538, 127.	0.1	0
194	Elasticity to atomistics: Predictive modeling of defect behavior. Philosophical Magazine, 2010, 90, 803-804.	1.6	0
195	Features of Vacancy Interaction with Interstitial Clusters in BCC Metals. Materials Research Society Symposia Proceedings, 2000, 653, 1.	0.1	0
196	Impact of Vacancy-Type Defects on Thermal Conductivity of Î²-SiC: Molecular Dynamics Versus an Analytical Approach. , 2013, , 248-268.		0
197	Correlated Formation and Stability of SIA Loops and Stacking Fault Tetrahedra in High Energy Displacement Cascades in Copper. , 2006, , 285-298.		0
198	Atomic-Scale Simulation of Defect Cluster Formation in High-Energy Displacement Cascades in Zirconium. , 2006, , 299-313.		0