

William J Weber

List of Publications by Year in descending order

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665
papers

29,270
citations

6233

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141
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685
all docs

685
docs citations

685
times ranked

12336
citing authors

#	ARTICLE	IF	CITATIONS
1	Nuclear waste disposal—pyrochlore (A2B2O7): Nuclear waste form for the immobilization of plutonium and actinides. Journal of Applied Physics, 2004, 95, 5949-5971.	1.1	951
2	Radiation effects in crystalline ceramics for the immobilization of high-level nuclear waste and plutonium. Journal of Materials Research, 1998, 13, 1434-1484.	1.2	842
3	Radiation effects in nuclear waste forms for high-level radioactive waste. Progress in Nuclear Energy, 1995, 29, 63-127.	1.3	574
4	Electrochemical Properties of Mixed Conducting Perovskites $\text{La}_{1-x}\text{M}_x\text{Co}_{1-y}\text{Fe}_y\text{O}_{3-\delta}$. Journal of the Electrochemical Society, 1996, 143, 2722-2729.	1.3	559
5	Enhancing radiation tolerance by controlling defect mobility and migration pathways in multicomponent single-phase alloys. Nature Communications, 2016, 7, 13564.	5.8	533
6	Influence of chemical disorder on energy dissipation and defect evolution in concentrated solid solution alloys. Nature Communications, 2015, 6, 8736.	5.8	477
7	Models and mechanisms of irradiation-induced amorphization in ceramics. Nuclear Instruments & Methods in Physics Research B, 2000, 166-167, 98-106.	0.6	406
8	Radiation stability of gadolinium zirconate: A waste form for plutonium disposition. Journal of Materials Research, 1999, 14, 4470-4473.	1.2	386
9	Radiation Effects in Glasses Used for Immobilization of High-level Waste and Plutonium Disposition. Journal of Materials Research, 1997, 12, 1948-1978.	1.2	381
10	The radiation-induced crystalline-to-amorphous transition in zircon. Journal of Materials Research, 1994, 9, 688-698.	1.2	372
11	Mechanism of Radiation Damage Reduction in Equiatomic Multicomponent Single Phase Alloys. Physical Review Letters, 2016, 116, 135504.	2.9	359
12	Primary radiation damage: A review of current understanding and models. Journal of Nuclear Materials, 2018, 512, 450-479.	1.3	358
13	Radiation damage in zircon and monazite. Geochimica Et Cosmochimica Acta, 1998, 62, 2509-2520.	1.6	330
14	Radiation effects in SiC for nuclear structural applications. Current Opinion in Solid State and Materials Science, 2012, 16, 143-152.	5.6	318
15	Zircon: A host-phase for the disposal of weapons plutonium. Journal of Materials Research, 1995, 10, 243-246.	1.2	307
16	Materials Science of High-Level Nuclear Waste Immobilization. MRS Bulletin, 2009, 34, 46-53.	1.7	300
17	Local Structure and Short-Range Order in a NiCoCr Solid Solution Alloy. Physical Review Letters, 2017, 118, 205501.	2.9	283
18	Radiation detector materials: An overview. Journal of Materials Research, 2008, 23, 2561-2581.	1.2	269

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19	Effects of compositional complexity on the ion-irradiation induced swelling and hardening in Ni-containing equiatomic alloys. Scripta Materialia, 2016, 119, 65-70.	2.6	244
20	Improving atomic displacement and replacement calculations with physically realistic damage models. Nature Communications, 2018, 9, 1084.	5.8	241
21	Effects of self-radiation damage in Cm-doped Gd ₂ Ti ₂ O ₇ and CaZrTi ₂ O ₇ . Journal of Nuclear Materials, 1986, 138, 196-209.	1.3	223
22	Plutonium Immobilization and Radiation Effects. Science, 2000, 289, 2051-2052.	6.0	217
23	Radiation-induced segregation on defect clusters in single-phase concentrated solid-solution alloys. Acta Materialia, 2017, 127, 98-107.	3.8	212
24	Atomic scale simulation of defect production in irradiated 3C-SiC. Journal of Applied Physics, 2001, 90, 2303-2309.	1.1	211
25	Displacement energy surface in 3C and 6H SiC. Journal of Nuclear Materials, 2000, 278, 258-265.	1.3	207
26	Review of A ₂ B ₂ O ₇ pyrochlore response to irradiation and pressure. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 2951-2959.	0.6	202
27	Radiation-induced defects and amorphization in zircon. Journal of Materials Research, 1990, 5, 2687-2697.	1.2	199
28	Promise and challenges of SiCf/SiC composites for fusion energy applications. Journal of Nuclear Materials, 2002, 307-311, 1057-1072.	1.3	187
29	Structure and properties of ion-beam-modified (6H) silicon carbide. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 253, 62-70.	2.6	179
30	Spectroscopic Investigations of the Structural Phase Transition in Gd ₂ (Ti _{1-y} Zr _y) ₂ O ₇ Pyrochlores. Journal of Physical Chemistry B, 2002, 106, 4663-4677.	1.2	179
31	Nature of the band gap and origin of the electro-/photo-activity of Co ₃ O ₄ . Journal of Materials Chemistry C, 2013, 1, 4628.	2.7	176
32	Effects of Cation Substitution on Electrical and Thermal Transport Properties of YCrO ₃ and LaCrO ₃ . Journal of the American Ceramic Society, 1987, 70, 265-270.	1.9	171
33	Tailoring the physical properties of Ni-based single-phase equiatomic alloys by modifying the chemical complexity. Scientific Reports, 2016, 6, 20159.	1.6	166
34	Processing and Electrical Properties of Alkaline Earth-Doped Lanthanum Gallate. Journal of the Electrochemical Society, 1997, 144, 3613-3620.	1.3	159
35	Predicting damage production in monoatomic and multi-elemental targets using stopping and range of ions in matter code: Challenges and recommendations. Current Opinion in Solid State and Materials Science, 2019, 23, 100757.	5.6	159
36	Atomic-level heterogeneity and defect dynamics in concentrated solid-solution alloys. Current Opinion in Solid State and Materials Science, 2017, 21, 221-237.	5.6	155

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37	A Review of Radiation Effects in Solid Nuclear Waste Forms. Nuclear Technology, 1983, 60, 178-198.	0.7	152
38	Displacement threshold energies in \hat{I}^2 -SiC. Journal of Nuclear Materials, 1998, 253, 47-52.	1.3	151
39	Quantification of actinide \hat{I}^2 -radiation damage in minerals and ceramics. Nature, 2007, 445, 190-193.	13.7	150
40	Heavy-ion irradiation effects in $Gd_2(Ti_{2-x}Zr_x)O_7$ pyrochlores. Journal of Nuclear Materials, 2001, 289, 188-193.	1.3	149
41	The role of electronic energy loss in ion beam modification of materials. Current Opinion in Solid State and Materials Science, 2015, 19, 1-11.	5.6	149
42	Signal variance in gamma-ray detectors – A review. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 565, 637-649.	0.7	148
43	Ingrowth of lattice defects in alpha irradiated UO_2 single crystals. Journal of Nuclear Materials, 1981, 98, 206-215.	1.3	142
44	Synergy of nuclear and electronic energy losses in ion-irradiation processes: The case of vitreous silicon dioxide. Physical Review B, 2011, 83, .	1.1	142
45	Alpha-irradiation damage in CeO_2 , UO_2 and PuO_2 . Radiation Effects, 1984, 83, 145-156.	0.4	139
46	The kinetics of alpha-decay-induced amorphization in zircon and apatite containing weapons-grade plutonium or other actinides. Journal of Nuclear Materials, 1997, 250, 147-155.	1.3	136
47	Cascade overlap and amorphization in $3C\hat{I}^2SiC$: Defect accumulation, topological features, and disordering. Physical Review B, 2002, 66, .	1.1	135
48	Computer simulation of defects and oxygen transport in yttria-stabilized zirconia. Solid State Ionics, 2006, 177, 1251-1258.	1.3	135
49	Alpha-Decay-Induced Amorphization in Complex Silicate Structures. Journal of the American Ceramic Society, 1993, 76, 1729-1738.	1.9	130
50	Single-ion tracks in Gd . Physical Review B, 2009, 79, .	1.1	126
51	Point defect evolution in Ni, NiFe and NiCr alloys from atomistic simulations and irradiation experiments. Acta Materialia, 2015, 99, 69-76.	3.8	120
52	New ion beam materials laboratory for materials modification and irradiation effects research. Nuclear Instruments & Methods in Physics Research B, 2014, 338, 19-30.	0.6	118
53	Ionization-induced annealing of pre-existing defects in silicon carbide. Nature Communications, 2015, 6, 8049.	5.8	116
54	Atomistic study of intrinsic defect migration in $3C-SiC$. Physical Review B, 2004, 69, .	1.1	115

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55	Grain growth and phase stability of nanocrystalline cubic zirconia under ion irradiation. <i>Physical Review B</i> , 2010, 82, .	1.1	115
56	Damage accumulation in ion-irradiated Ni-based concentrated solid-solution alloys. <i>Acta Materialia</i> , 2016, 109, 17-22.	3.8	114
57	Atomic-scale simulation of 50 keV Si displacement cascades in $\hat{1}^2$ -SiC. <i>Physical Review B</i> , 2000, 63, .	1.1	113
58	Heavy-ion irradiation effects on structures and acid dissolution of pyrochlores. <i>Journal of Nuclear Materials</i> , 2001, 288, 208-216.	1.3	111
59	Amorphization and recrystallization of the ABO ₃ oxides. <i>Journal of Nuclear Materials</i> , 2002, 300, 242-254.	1.3	111
60	Influence of chemical disorder on energy dissipation and defect evolution in advanced alloys. <i>Journal of Materials Research</i> , 2016, 31, 2363-2375.	1.2	110
61	Defect production, multiple ionâ€“solid interactions and amorphization in SiC. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2002, 191, 487-496.	0.6	104
62	Ion-induced damage accumulation and electron-beam-enhanced recrystallization in SrTiO ₃ . <i>Physical Review B</i> , 2005, 72, .	1.1	103
63	Self-radiation damage in Gd ₂ Ti ₂ O ₇ . <i>Materials Letters</i> , 1985, 3, 173-180.	1.3	101
64	Combustion synthesis of YBa ₂ Cu ₃ O _{7-δ} : glycine/metal nitrate method. <i>Materials Letters</i> , 1991, 10, 437-443.	1.3	101
65	Nanoscale engineering of radiation tolerant silicon carbide. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 13429.	1.3	98
66	Synergy of elastic and inelastic energy loss on ion track formation in SrTiO ₃ . <i>Scientific Reports</i> , 2015, 5, 7726.	1.6	98
67	Computer simulation of a 10 keV Si displacement cascade in SiC. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1998, 141, 118-122.	0.6	95
68	Irradiation-induced amorphization in $\hat{1}^2$ -SiC. <i>Journal of Nuclear Materials</i> , 1998, 253, 53-59.	1.3	95
69	Ab initio and empirical-potential studies of defect properties in 3C- $\hat{1}^2$ -SiC. <i>Physical Review B</i> , 2001, 64, .	1.1	95
70	Recovery of close Frenkel pairs produced by low energy recoils in SiC. <i>Journal of Applied Physics</i> , 2003, 94, 4348-4356.	1.1	95
71	Damage evolution and recovery on both Si and C sublattices in Al-implanted 4H- $\hat{1}^2$ -SiC studied by Rutherford backscattering spectroscopy and nuclear reaction analysis. <i>Journal of Applied Physics</i> , 2002, 91, 6388.	1.1	91
72	Atomistic modeling of displacement cascades in La ₂ Zr ₂ O ₇ pyrochlore. <i>Physical Review B</i> , 2003, 67, .	1.1	90

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73	Effects of implantation temperature on damage accumulation in Al-implanted 4H-SiC. Journal of Applied Physics, 2004, 95, 4012-4018.	1.1	89
74	Temperature dependence of disorder accumulation and amorphization in Au-ion-irradiated 6H-SiC. Physical Review B, 2004, 70, .	1.1	88
75	Radiation-induced swelling and amorphization in Ca ₂ Nd ₈ (SiO ₄) ₆ O ₂ . Radiation Effects, 1983, 77, 295-308.	0.4	87
76	Nanoscale phase transitions under extreme conditions within an ion track. Journal of Materials Research, 2010, 25, 1344-1351.	1.2	87
77	The temperature dependence of ion-beam-induced amorphization in ̂ ² -SiC. Nuclear Instruments & Methods in Physics Research B, 1995, 106, 298-302.	0.6	86
78	Damage profile and ion distribution of slow heavy ions in compounds. Journal of Applied Physics, 2009, 105, .	1.1	85
79	Ion irradiation and modification: The role of coupled electronic and nuclear energy dissipation and subsequent nonequilibrium processes in materials. Applied Physics Reviews, 2020, 7, 041307.	5.5	85
80	Theoretical study of disorder in Ti-substituted La ₂ Zr ₂ O ₇ . Physical Review B, 2002, 65, .	1.1	84
81	Response of strontium titanate to ion and electron irradiation. Journal of Nuclear Materials, 2009, 389, 303-310.	1.3	82
82	Empirical potential approach for defect properties in 3C-SiC. Nuclear Instruments & Methods in Physics Research B, 2002, 191, 504-508.	0.6	81
83	The irradiation-induced crystalline-to-amorphous phase transition in ̂ [±] -SiC. Nuclear Instruments & Methods in Physics Research B, 1996, 116, 322-326.	0.6	80
84	Effects of Cation Disorder on Oxygen Vacancy Migration in Gd ₂ Ti ₂ O ₇ . , 1999, 3, 409-424.		80
85	Combined experimental and computational study of the recrystallization process induced by electronic interactions of swift heavy ions with silicon carbide crystals. Physical Review B, 2012, 86, .	1.1	80
86	Threshold displacement energy in GaN: <i>Ab initio</i> molecular dynamics study. Journal of Applied Physics, 2009, 105, .	1.1	79
87	Radiation effects in nuclear waste glasses. Nuclear Instruments & Methods in Physics Research B, 1988, 32, 471-479.	0.6	78
88	Molecular Dynamic Simulation of Disorder Induced Amorphization in Pyrochlore. Physical Review Letters, 2005, 94, 025505.	2.9	77
89	Molecular dynamics simulations of swift heavy ion induced defect recovery in SiC. Computational Materials Science, 2013, 67, 261-265.	1.4	77
90	Defect-Enhanced Charge Transfer by Ion-Solid Interactions in SiC using Large-Scale <i>Ab Initio</i> Molecular Dynamics Simulations. Physical Review Letters, 2009, 103, 027405.	2.9	74

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91	Self-radiation damage and recovery in Pu-doped zircon. Radiation Effects and Defects in Solids, 1991, 115, 341-349.	0.4	72
92	First-principles study of defects and phase transition in UO_2 . Journal of Physics Condensed Matter, 2009, 21, 435401.	0.7	71
93	Thermal recovery of lattice defects in alpha-irradiated UO_2 crystals. Journal of Nuclear Materials, 1983, 114, 213-221.	1.3	70
94	Displacement damage in silicon carbide irradiated in fission reactors. Journal of Nuclear Materials, 2004, 327, 175-181.	1.3	69
95	Effect of temperature and recoil-energy spectra on irradiation-induced amorphization in $\text{Ca}_2\text{La}_8(\text{SiO}_4)_6\text{O}_2$. Nuclear Instruments & Methods in Physics Research B, 1994, 91, 63-66.	0.6	68
96	Atomistic simulations of the mechanical properties of silicon carbide nanowires. Physical Review B, 2008, 77, .	1.1	67
97	Response of nanocrystalline C silicon carbide to heavy-ion irradiation. Physical Review B, 2009, 80, .	1.1	66
98	Crystalline Ceramics: Waste Forms for the Disposal of Weapons Plutonium. , 1996, , 65-83.		66
99	Computer simulation of disordering and amorphization by Si and Au recoils in $^3\text{C-SiC}$. Journal of Applied Physics, 2001, 89, 4275-4281.	1.1	65
100	The ion beam materials analysis laboratory at the environmental molecular sciences laboratory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 420, 81-89.	0.7	64
101	Irradiation-induced nanostructures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 286, 72-80.	2.6	64
102	Effects of Fe concentration on the ion-irradiation induced defect evolution and hardening in Ni-Fe solid solution alloys. Acta Materialia, 2016, 121, 365-373.	3.8	64
103	Temperature and dose dependence of ion-beam-induced amorphization in $\hat{1}\pm\text{-SiC}$. Journal of Nuclear Materials, 1997, 244, 258-265.	1.3	62
104	The effect of electronic energy loss on irradiation-induced grain growth in nanocrystalline oxides. Physical Chemistry Chemical Physics, 2014, 16, 8051-8059.	1.3	62
105	Pressure-induced fcc to hcp phase transition in Ni-based high entropy solid solution alloys. Applied Physics Letters, 2017, 110, .	1.5	62
106	Radiation Damage in a Rare-Earth Silicate With the Apatite Structure. Journal of the American Ceramic Society, 1982, 65, 544-548.	1.9	61
107	Local segregation versus irradiation effects in high-entropy alloys: Steady-state conditions in a driven system. Journal of Applied Physics, 2017, 122, .	1.1	61
108	molecular dynamics simulations of low-energy recoil events in ThO_2 , CeO_2 , and ZrO_2 .	1.1	60

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109	Evolution of spent nuclear fuel in dry storage conditions for millennia and beyond. <i>Journal of Nuclear Materials</i> , 2014, 451, 198-206.	1.3	60
110	Radiation tolerance of ceramics—insights from atomistic simulation of damage accumulation in pyrochlores. <i>Energy and Environmental Science</i> , 2010, 3, 1551.	15.6	59
111	In-situ luminescence monitoring of ion-induced damage evolution in SiO ₂ and Al ₂ O ₃ . <i>Journal of Luminescence</i> , 2016, 172, 208-218.	1.5	59
112	Chemical expansion affected oxygen vacancy stability in different oxide structures from first principles calculations. <i>Computational Materials Science</i> , 2015, 99, 298-305.	1.4	58
113	Coupled electronic and atomic effects on defect evolution in silicon carbide under ion irradiation. <i>Current Opinion in Solid State and Materials Science</i> , 2017, 21, 285-298.	5.6	57
114	Structural modification of nanocrystalline ceria by ion beams. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 11946.	1.3	56
115	Computer simulation of displacement energies for several ceramic materials. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1998, 141, 94-98.	0.6	55
116	Effects of implantation temperature and ion flux on damage accumulation in Al-implanted 4H-SiC. <i>Journal of Applied Physics</i> , 2003, 93, 1954-1960.	1.1	54
117	Chemical complexity induced local structural distortion in NiCoFeMnCr high-entropy alloy. <i>Materials Research Letters</i> , 2018, 6, 450-455.	4.1	54
118	Irradiation effects on microstructure change in nanocrystalline ceria — Phase, lattice stress, grain size and boundaries. <i>Acta Materialia</i> , 2012, 60, 5408-5416.	3.8	53
119	Why natural monazite never becomes amorphous: Experimental evidence for alpha self-healing. <i>American Mineralogist</i> , 2018, 103, 824-827.	0.9	53
120	Accumulation, dynamic annealing and thermal recovery of ion-beam-induced disorder in silicon carbide. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 175-177, 26-30.	0.6	52
121	Energetic recoils in UO ₂ simulated using five different potentials. <i>Journal of Chemical Physics</i> , 2009, 130, 174502.	1.2	52
122	Competing effects of electronic and nuclear energy loss on microstructural evolution in ionic-covalent materials. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 327, 33-43.	0.6	52
123	In situ channeling study of gallium disorder and gold profiles in Au-implanted GaN. <i>Journal of Applied Physics</i> , 2000, 87, 7671-7678.	1.1	51
124	Composition dependent intrinsic defect structures in SrTiO ₃ . <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 15590-15596.	1.3	51
125	Dissipation of radiation energy in concentrated solid-solution alloys: Unique defect properties and microstructural evolution. <i>MRS Bulletin</i> , 2019, 44, 798-811.	1.7	51
126	Threshold displacement energies and defect formation energies in Y ₂ Ti ₂ O ₇ . <i>Journal of Physics Condensed Matter</i> , 2010, 22, 415801.	0.7	50

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127	Investigation of phase stability of $\text{Ca}_{2+x}\text{Nd}_{8-x}(\text{SiO}_4)_6\text{O}_{2+0.5x}$ system. Journal of Solid State Chemistry, 1985, 60, 145-158.	1.1	50
128	Ion beam-induced amorphous-to-tetragonal phase transformation and grain growth of nanocrystalline zirconia. Nanotechnology, 2009, 20, 245303.	1.3	49
129	Temperature measurements during high flux ion beam irradiations. Review of Scientific Instruments, 2016, 87, 024902.	0.6	49
130	An X-ray and neutron powder diffraction study of the $\text{Ca}_{2+x}\text{Nd}_{8-x}(\text{SiO}_4)_6\text{O}_{2+0.5x}$ system. Journal of Solid State Chemistry, 1985, 60, 145-158.	1.4	48
131	Investigation of phase stability of Y_2O_3 . Physical Review B, 2009, 80, .	1.1	48
132	Swift heavy ion track formation in $\text{Gd}_2\text{Zr}_2\text{Ti}_7\text{O}_{17}$ pyrochlore: Effect of electronic energy loss. Nuclear Instruments & Methods in Physics Research B, 2014, 336, 102-115.	0.6	48
133	Radiation effects in actinide host phases. Radiation Effects, 1986, 98, 93-99.	0.4	47
134	Damage accumulation and annealing in $^6\text{HfSiC}$ irradiated with Si^+ . Nuclear Instruments & Methods in Physics Research B, 1998, 143, 333-341.	0.6	47
135	Electron-beam induced recrystallization in amorphous apatite. Applied Physics Letters, 2007, 90, 021912.	1.5	47
136	Tunable Chemical Disorder in Concentrated Alloys: Defect Physics and Radiation Performance. Chemical Reviews, 2022, 122, 789-829.	23.0	47
137	Accumulation and recovery of disorder on silicon and carbon sublattices in ion-irradiated $^6\text{HfSiC}$. Journal of Nuclear Materials, 2001, 289, 96-101.	1.3	46
138	Atomic-scale simulation of displacement cascades and amorphization in ^2SiC . Nuclear Instruments & Methods in Physics Research B, 2001, 180, 176-186.	0.6	46
139	Defect clustering in GaN irradiated with O^+ ions. Journal of Materials Research, 2002, 17, 2945-2952.	1.2	46
140	Oxygen Vacancy Formation and Migration in $\text{Ce}_x\text{Th}_{1-x}\text{O}_2$ Solid Solution. Journal of Physical Chemistry B, 2011, 115, 6524-6533.	1.2	46
141	Effects of two-temperature model on cascade evolution in Ni and NiFe. Scripta Materialia, 2016, 124, 6-10.	2.6	46
142	Irradiation-induced damage evolution in concentrated Ni-based alloys. Acta Materialia, 2017, 135, 54-60.	3.8	46
143	Enhanced void swelling in NiCoFeCrPd high-entropy alloy by indentation-induced dislocations. Materials Research Letters, 2018, 6, 584-591.	4.1	46
144	Elemental dissolution study of Pu-bearing borosilicate glasses. Journal of Nuclear Materials, 2005, 340, 149-162.	1.3	45

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145	Atomistic simulations of the size, orientation, and temperature dependence of tensile behavior in GaN nanowires. <i>Physical Review B</i> , 2007, 76, .	1.1	45
146	Suppression of vacancy cluster growth in concentrated solid solution alloys. <i>Acta Materialia</i> , 2017, 125, 231-237.	3.8	45
147	Effects of precipitates and dislocation loops on the yield stress of irradiated iron. <i>Scientific Reports</i> , 2018, 8, 6914.	1.6	45
148	Radiation effects in nuclear materials: Role of nuclear and electronic energy losses and their synergy. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 307, 43-48.	0.6	44
149	Forging Fast Ion Conducting Nanochannels with Swift Heavy Ions: The Correlated Role of Local Electronic and Atomic Structure. <i>Journal of Physical Chemistry C</i> , 2017, 121, 975-981.	1.5	44
150	XAS and XRD study of annealed ²³⁸ Pu- and ²³⁹ Pu-substituted zircons (Zr _{0.92} Pu _{0.08} SiO ₄). <i>Journal of Nuclear Materials</i> , 2000, 278, 212-224.	1.3	43
151	Native defect properties in $\hat{\text{I}}^2\text{-SiC}$: Ab initio and empirical potential calculations. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 180, 286-292.	0.6	43
152	Electron irradiation induced phase separation in a sodium borosilicate glass. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2004, 218, 368-374.	0.6	43
153	Atomistic simulation of the size and orientation dependences of thermal conductivity in GaN nanowires. <i>Applied Physics Letters</i> , 2007, 90, 161923.	1.5	43
154	Zirconate pyrochlores under high pressure. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 12472.	1.3	43
155	A coupled effect of nuclear and electronic energy loss on ion irradiation damage in lithium niobate. <i>Acta Materialia</i> , 2016, 105, 429-437.	3.8	43
156	Transmission electron microscopy study of ion-beam-induced amorphization of Ca ₂ La ₈ (SiO ₄) ₆ O ₂ . <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1999, 79, 237-253.	0.8	42
157	Multiaxial channeling study of disorder accumulation and recovery in gold-irradiated $\hat{\text{I}}^2\text{SiC}$. <i>Physical Review B</i> , 2001, 64, .	1.1	42
158	Atomistic simulation of amorphization thermokinetics in lanthanum pyrozoirconate. <i>Applied Physics Letters</i> , 2006, 88, 051912.	1.5	42
159	Energy dissipation and defect generation in nanocrystalline silicon carbide. <i>Physical Review B</i> , 2010, 81, .	1.1	42
160	Review of dynamic recovery effects on ion irradiation damage in ionic-covalent materials. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012, 277, 1-5.	0.6	42
161	The impact of crystal symmetry on the electronic structure and functional properties of complex lanthanum chromium oxides. <i>Journal of Materials Chemistry C</i> , 2013, 1, 4527.	2.7	42
162	Formation and growth of stacking fault tetrahedra in Ni via vacancy aggregation mechanism. <i>Scripta Materialia</i> , 2016, 114, 137-141.	2.6	42

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163	Mechanical properties and elastic constants due to damage accumulation and amorphization in SiC. Physical Review B, 2004, 69, .	1.1	41
164	Intrinsic defect properties in GaN calculated by ab initio and empirical potential methods. Physical Review B, 2004, 70, .	1.1	41
165	Radiation-induced effects in pyrochlores and nanoscale materials engineering. Nuclear Instruments & Methods in Physics Research B, 2006, 250, 128-136.	0.6	41
166	Monte Carlo simulations of defect recovery within a 10 keV collision cascade in 3C-SiC. Journal of Applied Physics, 2007, 102, .	1.1	41
167	Damage and microstructure evolution in GaN under Au ion irradiation. Journal Physics D: Applied Physics, 2010, 43, 085303.	1.3	41
168	Trapping and diffusion of fission products in ThO ₂ and CeO ₂ . Journal of Nuclear Materials, 2011, 414, 464-470.	1.3	41
169	U and Pu L _{III} XAFS of Pu-doped glass and ceramic waste forms. Journal of Alloys and Compounds, 1998, 271-273, 240-243.	2.8	40
170	Insights into the radiation response of pyrochlores from calculations of threshold displacement events. Journal of Applied Physics, 2005, 98, 086110.	1.1	40
171	Tensile and compressive mechanical behavior of twinned silicon carbide nanowires. Acta Materialia, 2010, 58, 1963-1971.	3.8	40
172	Amorphization of nanocrystalline 3C-SiC irradiated with Si ⁺ ions. Journal of Materials Research, 2010, 25, 2341-2348.	1.2	40
173	Study of cerium solubility in Gd ₂ Zr ₂ O ₇ by DFT+U calculations. Journal of Nuclear Materials, 2011, 419, 105-111.	1.3	40
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