Kai Henrik Nordlund

List of Publications by Citations

551 papers	19,989 citations	68 h-index	118 g-index
579 ext. papers	21,860 ext. citations	3.1 avg, IF	7 L-index

#	Paper	IF	Citations
551	Ion and electron irradiation-induced effects in nanostructured materials. *Journal of Applied Physics*, **2010**, 107, 071301	2.5	759
550	Defect production in collision cascades in elemental semiconductors and fcc metals. *Physical Review B*, **1998**, 57, 7556-7570	3.3	671
549	Recent progress in research on tungsten materials for nuclear fusion applications in Europe. *Journal of Nuclear Materials*, **2013**, 432, 482-500	3.3	494
548	Evidence for native-defect donors in n-type ZnO. *Physical Review Letters*, **2005**, 95, 225502	7.4	420
547	Magnetic properties and diffusion of adatoms on a graphene sheet. *Physical Review Letters*, **2003**, 91, 017202	7.4	391
546	Molecular dynamics simulation of ion ranges in the 1100 keV energy range. *Computational Materials Science*, **1995**, 3, 448-456	3.2	337
545	Effects of ion bombardment on a two-dimensional target: Atomistic simulations of graphene irradiation. *Physical Review B*, **2010**, 81,	3.3	303
544	Mechanical properties of carbon nanotubes with vacancies and related defects. *Physical Review B*, **2004**, 70,	3.3	303
543	Formation of Ion Irradiation-Induced Small-Scale Defects on Graphite Surfaces. *Physical Review Letters*, **1996**, 77, 699-702	7.4	281
542	Formation of ion-irradiation-induced atomic-scale defects on walls of carbon nanotubes. *Physical Review B*, **2001**, 63,	3.3	267
541	Molecular dynamics investigations of surface damage produced by kiloelectronvolt self-bombardment of solids. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1999**, 79, 795-820		258
540	Mechanism of Radiation Damage Reduction in Equiatomic Multicomponent Single Phase Alloys. *Physical Review Letters*, **2016**, 116, 135504	7.4	250
539	Fine structure in swift heavy ion tracks in amorphous SiO2. *Physical Review Letters*, **2008**, 101, 175503	7.4	220
538	Analytical interatomic potential for modeling nonequilibrium processes in the W□H system. *Journal of Applied Physics*, **2005**, 98, 123520	2.5	213
537	Primary radiation damage: A review of current understanding and models. *Journal of Nuclear Materials*, **2018**, 512, 450-479	3.3	208
536	Production of defects in supported carbon nanotubes under ion irradiation. *Physical Review B*, **2002**, 65,	3.3	183
535	Hydrogen interaction with point defects in tungsten. *Physical Review B*, **2010**, 82,	3.3	182

534	Irradiation effects in carbon nanotubes. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 216, 355-366	1.2	181
533	Comparison of empirical interatomic potentials for iron applied to radiation damage studies. *Journal of Nuclear Materials*, **2010**, 406, 19-38	3.3	179
532	Energetics, structure, and long-range interaction of vacancy-type defects in carbon nanotubes: Atomistic simulations. *Physical Review B*, **2006**, 74,	3.3	178
531	Two-band modeling of □prime phase formation in Fe-Cr. *Physical Review B*, **2005**, 72,	3.3	175
530	Modelling of compound semiconductors: analytical bond-order potential for gallium, nitrogen and gallium nitride. *Journal of Physics Condensed Matter*, **2003**, 15, 5649-5662	1.8	174
529	Molecular dynamics of single-particle impacts predicts phase diagrams for large scale pattern formation. *Nature Communications*, **2011**, 2, 276	17.4	149
528	High-energy collision cascades in tungsten: Dislocation loops structure and clustering scaling laws. *Europhysics Letters*, **2013**, 103, 46003	1.6	147
527	Improving atomic displacement and replacement calculations with physically realistic damage models. *Nature Communications*, **2018**, 9, 1084	17.4	146
526	Determination of strain fields and composition of self-organized quantum dots using x-ray diffraction. *Physical Review B*, **2001**, 63,	3.3	143
525	Review on the EFDA programme on tungsten materials technology and science. *Journal of Nuclear Materials*, **2011**, 417, 463-467	3.3	139
524	Coherent displacement of atoms during ion irradiation. *Nature*, **1999**, 398, 49-51	50.4	138
523	Molecular dynamics simulations of threshold displacement energies in Fe. *Nuclear Instruments & Methods in Physics Research B*, **2006**, 246, 322-332	1.2	135
522	Difference in formation of hydrogen and helium clusters in tungsten. *Applied Physics Letters*, **2005**, 87, 163113	3.4	134
521	Point defect movement and annealing in collision cascades. *Physical Review B*, **1997**, 56, 2421-2431	3.3	131
520	Modeling the metal-semiconductor interaction: Analytical bond-order potential for platinum-carbon. *Physical Review B*, **2002**, 65,	3.3	130
519	Ion-irradiation-induced welding of carbon nanotubes. *Physical Review B*, **2002**, 66,	3.3	128
518	Improved mechanical load transfer between shells of multiwalled carbon nanotubes. *Physical Review B*, **2004**, 70,	3.3	126
517	Overview of the JET results in support to ITER. *Nuclear Fusion*, **2017**, 57, 102001	3.3	125

516	Repulsive interatomic potentials calculated using Hartree-Fock and density-functional theory methods. *Nuclear Instruments & Methods in Physics Research B*, **1997**, 132, 45-54	1.2	121
515	Threshold defect production in silicon determined by density functional theory molecular dynamics simulations. *Physical Review B*, **2008**, 78,	3.3	120
514	Comparison of TOF-ERDA and nuclear resonance reaction techniques for range profile measurements of keV energy implants. *Nuclear Instruments & Methods in Physics Research B*, **1996**, 119, 533-542	1.2	120
513	Modeling of compound semiconductors: Analytical bond-order potential for Ga, As, and GaAs. *Physical Review B*, **2002**, 66,	3.3	119
512	Molecular dynamics simulations of helium cluster formation in tungsten. *Nuclear Instruments & Methods in Physics Research B*, **2006**, 244, 377-391	1.2	112
511	Atomic-level heterogeneity and defect dynamics in concentrated solid-solution alloys. *Current Opinion in Solid State and Materials Science*, **2017**, 21, 221-237	12	110
510	Swift chemical sputtering of amorphous hydrogenated carbon. *Physical Review B*, **2001**, 63,	3.3	110
509	Adsorption and migration of carbon adatoms on carbon nanotubes: Density-functional ab initio and tight-binding studies. *Physical Review B*, **2004**, 69,	3.3	102
508	Burrowing of Co Nanoparticles on Clean Cu and Ag Surfaces. *Physical Review Letters*, **1999**, 83, 1163-1166	7.4	102
507	Displacement cascades in Fe□r: A molecular dynamics study. *Journal of Nuclear Materials*, **2006**, 349, 119-132	3.3	97
506	Strings and interstitials in liquids, glasses and crystals. *Europhysics Letters*, **2005**, 71, 625-631	1.6	87
505	Molecular dynamics study of damage accumulation in GaN during ion beam irradiation. *Physical Review B*, **2003**, 68,	3.3	87
504	Recent advances in modeling and simulation of the exposure and response of tungsten to fusion energy conditions. *Nuclear Fusion*, **2017**, 57, 092008	3.3	85
503	Comparative study of cascade damage in Fe simulated with recent potentials. *Nuclear Instruments & Methods in Physics Research B*, **2007**, 259, 853-860	1.2	85
502	B and N ion implantation into carbon nanotubes: Insight from atomistic simulations. *Physical Review B*, **2005**, 71,	3.3	84
501	Effect of the interatomic potential on the features of displacement cascades in □Fe: A molecular dynamics study. *Journal of Nuclear Materials*, **2006**, 351, 65-77	3.3	83
500	Ion-irradiation-induced defects in bundles of carbon nanotubes. *Nuclear Instruments & Methods in Physics Research B*, **2002**, 193, 603-608	1.2	83
499	Formation Mechanism of Fe Nanocubes by Magnetron Sputtering Inert Gas Condensation. *ACS Nano*, **2016**, 10, 4684-94	16.7	81

498	Pair potential for Fe–He. *Journal of Nuclear Materials*, **2008**, 382, 143-146	3.3	81
497	Direct observation of size scaling and elastic interaction between nano-scale defects in collision cascades. *Europhysics Letters*, **2015**, 110, 36001	1.6	80
496	Tracks and voids in amorphous Ge induced by swift heavy-ion irradiation. *Physical Review Letters*, **2013**, 110, 245502	7.4	76
495	Amorphization mechanism and defect structures in ion-beam-amorphized Si, Ge, and GaAs. *Physical Review B*, **2002**, 65,	3.3	74
494	Role of electron-phonon coupling on collision cascade development in Ni, Pd, and Pt. *Physical Review B*, **1998**, 57, R13965-R13968	3.3	74
493	Ion ranges and irradiation-induced defects in multiwalled carbon nanotubes. *Journal of Applied Physics*, **2004**, 96, 2864-2871	2.5	73
492	Structural investigation of keV Ar-ion-induced surface ripples in Si by cross-sectional transmission electron microscopy. *Physical Review B*, **2003**, 67,	3.3	73
491	Role of Self-Interstitial Atoms on the High Temperature Properties of Metals. *Physical Review Letters*, **1998**, 80, 4201-4204	7.4	73
490	Inverse Kirkendall mixing in collision cascades. *Physical Review B*, **1999**, 59, 20-23	3.3	73
489	Fast three dimensional migration of He clusters in bcc Fe and Fe–Cr alloys. *Journal of Applied Physics*, **2009**, 105, 103509	2.5	72
488	Loop punching and bubble rupture causing surface roughening—A model for W fuzz growth. *Europhysics Letters*, **2014**, 105, 25002	1.6	71
487	Molecular dynamics simulations of swift heavy ion induced defect recovery in SiC. *Computational Materials Science*, **2013**, 67, 261-265	3.2	71
486	Atomistic simulation of the interface structure of Si nanocrystals embedded in amorphous silica. *Physical Review B*, **2008**, 77,	3.3	70
485	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,	3.3	69
484	The nature of high-energy radiation damage in iron. *Journal of Physics Condensed Matter*, **2013**, 25, 125402	2.2	68
483	The EU programme for modelling radiation effects in fusion reactor materials: An overview of recent advances and future goals. *Journal of Nuclear Materials*, **2009**, 386-388, 1-7	3.3	66
482	Simulations of cementite: An analytical potential for the Fe-C system. *Physical Review B*, **2009**, 79,	3.3	66
481	Heterogeneous Gas-Phase Synthesis and Molecular Dynamics Modeling of Janus and Core–Satellite Si–Ag Nanoparticles. *Journal of Physical Chemistry C*, **2014**, 118, 13869-13875	3.8	65

480	Mechanisms of ion beam mixing in metals and semiconductors. *Journal of Applied Physics*, **1998**, 83, 1238-1246	2.5	65
479	Development of interatomic ReaxFF potentials for Au-S-C-H systems. *Journal of Physical Chemistry A*, **2011**, 115, 10315-22	2.8	64
478	Cratering-energy regimes: From linear collision cascades to heat spikes to macroscopic impacts. *Physical Review B*, **2001**, 64,	3.3	64
477	Formation of stacking-fault tetrahedra in collision cascades. *Applied Physics Letters*, **1999**, 74, 2720-2722	3.4	64
476	Historical review of computer simulation of radiation effects in materials. *Journal of Nuclear Materials*, **2019**, 520, 273-295	3.3	63
475	A brief summary of the progress on the EFDA tungsten materials program. *Journal of Nuclear Materials*, **2013**, 442, S173-S180	3.3	63
474	Modelling radiation effects using the ab-initio based tungsten and vanadium potentials. *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 3204-3208	1.2	63
473	Radiation damage production in massive cascades initiated by fusion neutrons in tungsten. *Journal of Nuclear Materials*, **2014**, 455, 207-211	3.3	62
472	Enhanced sputtering yields from single-ion impacts on gold nanorods. *Physical Review Letters*, **2013**, 111, 065504	7.4	61
471	Carbon nanotube mats and fibers with irradiation-improved mechanical characteristics: a theoretical model. *Physical Review Letters*, **2004**, 93, 215503	7.4	60
470	Plastic deformation of single nanometer-sized crystals. *Physical Review Letters*, **2008**, 101, 156101	7.4	59
469	Nondislocation origin of GaAs nanoindentation pop-in event. *Physical Review Letters*, **2007**, 98, 045502	7.4	58
468	Large fraction of crystal directions leads to ion channeling. *Physical Review B*, **2016**, 94,	3.3	58
467	Enhanced sputtering from nanoparticles and thin films: Size effects. *Europhysics Letters*, **2008**, 82, 26002	1.6	57
466	Analytic bond-order potential for atomistic simulations of zinc oxide. *Journal of Physics Condensed Matter*, **2006**, 18, 6585-6605	1.8	57
465	Chemical sputtering of Be due to D bombardment. *New Journal of Physics*, **2009**, 11, 123017	2.9	56
464	The effect of Cr concentration on radiation damage in Fe□r alloys. *Journal of Nuclear Materials*, **2008**, 382, 24-30	3.3	56
463	Overview of the JET preparation for deuterium□ritium operation with the ITER like-wall. *Nuclear Fusion*, **2019**, 59, 112021	3.3	55

462	MD simulations of onset of tungsten fuzz formation under helium irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 303, 156-161	1.2	54
461	Atomistic simulation of the transition from atomistic to macroscopic cratering. *Physical Review Letters*, **2008**, 101, 027601	7.4	54
460	Multiscale modeling of dislocation-precipitate interactions in Fe: From molecular dynamics to discrete dislocations. *Physical Review E*, **2016**, 93, 013309	2.4	53
459	Development of a ReaxFF description for gold. *European Physical Journal B*, **2008**, 66, 75-79	1.2	53
458	Molecular dynamics study of defect formation in GaN cascades. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 202, 93-99	1.2	53
457	Origin of complex impact craters on native oxide coated silicon surfaces. *Physical Review B*, **2008**, 77,	3.3	52
456	Simulations of dynamical stabilization of Ag□u nanocomposites by ion-beam processing. *Journal of Applied Physics*, **2003**, 93, 2917-2923	2.5	52
455	A quantitative and comparative study of sputtering yields in Au. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 239, 331-346	1.2	51
454	Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating. *Nature Physics*, **2017**, 13, 973-978	16.2	50
453	Simulation of displacement cascades in Fe90Cr10 using a two band model potential. *Journal of Nuclear Materials*, **2008**, 372, 312-317	3.3	50
452	Simulations of the Initial Stages of Blistering in Helium Implanted Tungsten. *Physica Scripta*, **2004**, 95	2.6	50
451	Plasma□wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. *Nuclear Fusion*, **2017**, 57, 116041	3.3	50
450	Radiation damage buildup and dislocation evolution in Ni and equiatomic multicomponent Ni-based alloys. *Journal of Nuclear Materials*, **2017**, 490, 323-332	3.3	49
449	Fusion materials modeling: Challenges and opportunities. *MRS Bulletin*, **2011**, 36, 216-222	3.2	49
448	The Depths of Hydrogen and Helium Bubbles in Tungsten: A Comparison. *Fusion Science and Technology*, **2006**, 50, 43-57	1.1	49
447	Stability of irradiation-induced point defects on walls of carbon nanotubes. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2002**, 20, 728		49
446	Defect production in tungsten: A comparison between field-ion microscopy and molecular-dynamics simulations. *Physical Review B*, **1998**, 58, 2361-2364	3.3	47
445	Suppression of carbon erosion by hydrogen shielding during high-flux hydrogen bombardment. *Physical Review B*, **1999**, 60, R14005-R14008	3.3	47

444	Non-equilibrium properties of interatomic potentials in cascade simulations in tungsten. *Journal of Nuclear Materials*, **2016**, 470, 119-127	3.3	46
443	Multiwalled carbon nanotubes as apertures and conduits for energetic ions. *Physical Review B*, **2005**, 71,	3.3	46
442	Adsorption and migration of carbon adatoms on zigzag carbon nanotubes. *Carbon*, **2004**, 42, 1021-1025	10.4	45
441	Gas-Phase Synthesis of Trimetallic Nanoparticles. *Chemistry of Materials*, **2019**, 31, 2151-2163	9.6	44
440	Cascade fragmentation: deviation from power law in primary radiation damage. *Materials Research Letters*, **2017**, 5, 357-363	7.4	44
439	Measurement of two solvation regimes in water-ethanol mixtures using x-ray compton scattering. *Physical Review Letters*, **2011**, 107, 197401	7.4	44
438	Grazing incidence diffuse x-ray scattering investigation of the properties of irradiation-induced point defects in silicon. *Physical Review B*, **2001**, 64,	3.3	44
437	Screening and engineering of colour centres in diamond. *Journal Physics D: Applied Physics*, **2018**, 51, 483002	3	44
436	Gas Phase Synthesis of Multifunctional Fe-Based Nanocubes. *Advanced Functional Materials*, **2017**, 27, 1605328	15.6	43
435	Creating nanoporous graphene with swift heavy ions. *Carbon*, **2017**, 114, 511-518	10.4	43
434	Multiscale modelling of plasma□wall interactions in fusion reactor conditions. *Journal Physics D: Applied Physics*, **2014**, 47, 224018	3	43
433	Production of defects in hexagonal boron nitride monolayer under ion irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1327-1331	1.2	43
432	Interatomic potentials for the Be-C-H system. *Journal of Physics Condensed Matter*, **2009**, 21, 445002	1.8	43
431	Influence of the picosecond defect distribution on damage accumulation in irradiated □Fe. *Physical Review B*, **2012**, 85,	3.3	43
430	Defect clustering during ion irradiation of GaAs: Insight from molecular dynamics simulations. *Journal of Applied Physics*, **2001**, 90, 1710-1717	2.5	43
429	Atomistic simulations of stainless steels: a many-body potential for the Fe-Cr-C system. *Journal of Physics Condensed Matter*, **2013**, 25, 445401	1.8	42
428	Ion-irradiation-induced amorphization of cobalt nanoparticles. *Physical Review B*, **2010**, 81,	3.3	42
427	Molecular dynamics simulation of pressure dependence of cluster growth in inert gas condensation. *Physical Review B*, **2007**, 75,	3.3	42

426	Atomistic modeling of metal surfaces under electric fields: direct coupling of electric fields to a molecular dynamics algorithm. *Physical Review E*, **2011**, 83, 026704	2.4	41
425	Anisotropic elasticity of IVB transition-metal mononitrides determined by ab initio calculations. *Physical Review B*, **2006**, 73,	3.3	41
424	Contact epitaxy by deposition of Cu, Ag, Au, Pt, and Ni nanoclusters on (100) surfaces: Size limits and mechanisms. *Physical Review B*, **2007**, 75,	3.3	41
423	Relative abundance of single and double vacancies in irradiated single-walled carbon nanotubes. *Applied Physics Letters*, **2007**, 91, 173109	3.4	41
422	Strain-induced Kirkendall mixing at semiconductor interfaces. *Computational Materials Science*, **2000**, 18, 283-294	3.2	41
421	Recoils, flows and explosions: surface damage mechanisms in metals and semiconductors during 50 eV–50 keV ion bombardment. *Nuclear Instruments & Methods in Physics Research B*, **1999**, 148, 74-82	1.2	41
420	A new parametrization of the Stillinger-Weber potential for an improved description of defects and plasticity of silicon. *Journal of Physics Condensed Matter*, **2013**, 25, 055801	1.8	40
419	Modelling irradiation effects in fusion materials. *Fusion Engineering and Design*, **2007**, 82, 2413-2421	1.7	40
418	Irradiation-induced stiffening of carbon nanotube bundles. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 142-145	1.2	40
417	Machine-learning interatomic potential for radiation damage and defects in tungsten. *Physical Review B*, **2019**, 100,	3.3	39
416	Radiation effects in nuclear materials: Role of nuclear and electronic energy losses and their synergy. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 307, 43-48	1.2	39
415	Electronic effects in high-energy radiation damage in iron. *Journal of Physics Condensed Matter*, **2014**, 26, 085401	1.8	39
414	Molecular dynamics simulations of the structure of latent tracks in quartz and amorphous SiO2. *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 1456-1459	1.2	39
413	Comparison of molecular dynamics and binary collision approximation simulations for atom displacement analysis. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 297, 23-28	1.2	38
412	A One-Dimensional Particle-in-Cell Model of Plasma Build-Up in Vacuum Arcs. *Contributions To Plasma Physics*, **2011**, 51, 5-21	1.4	38
411	The diffusion of carbon atoms inside carbon nanotubes. *New Journal of Physics*, **2008**, 10, 023022	2.9	38
410	Local segregation versus irradiation effects in high-entropy alloys: Steady-state conditions in a driven system. *Journal of Applied Physics*, **2017**, 122, 105106	2.5	36
409	Assessment of the relation between ion beam mixing, electron–phonon coupling and damage production in Fe. *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 1830-1836	1.2	36

408	Sticking of atomic hydrogen on the tungsten (0 0 1) surface. *Surface Science*, **2006**, 600, 3167-3174	1.8	36
407	Carbon nanotubes as masks against ion irradiation: An insight from atomistic simulations. *Applied Physics Letters*, **2002**, 81, 1101-1103	3.4	36
406	Surface effects and statistical laws of defects in primary radiation damage: Tungsten vs. iron. *Europhysics Letters*, **2016**, 115, 36001	1.6	36
405	Swift Heavy Ion Shape Transformation of Au Nanocrystals Mediated by Molten Material Flow and Recrystallization. *Materials Research Letters*, **2014**, 2, 37-42	7.4	35
404	Bond-breaking mechanism of sputtering. *Europhysics Letters*, **2000**, 52, 504-510	1.6	35
403	Defect structures and statistics in overlapping cascade damage in fusion-relevant bcc metals. *Journal of Nuclear Materials*, **2018**, 511, 64-74	3.3	35
402	Cooperative effect of electronic and nuclear stopping on ion irradiation damage in silica. *Journal Physics D: Applied Physics*, **2012**, 45, 505305	3	34
401	SAXS investigations of the morphology of swift heavy ion tracks in □quartz. *Journal of Physics Condensed Matter*, **2013**, 25, 045006	1.8	34
400	Mechanism of vacancy formation induced by hydrogen in tungsten. *AIP Advances*, **2013**, 3, 122111	1.5	34
399	Temperature dependence of underdense nanostructure formation in tungsten under helium irradiation. *Journal of Nuclear Materials*, **2017**, 490, 108-114	3.3	33
398	Effects of the short-range repulsive potential on cascade damage in iron. *Journal of Nuclear Materials*, **2018**, 508, 530-539	3.3	33
397	Inoculation of silicon nanoparticles with silver atoms. *Scientific Reports*, **2013**, 3, 3083	4.9	33
396	Cascade debris overlap mechanism of <100> dislocation loop formation in Fe and FeCr. *Europhysics Letters*, **2017**, 119, 56003	1.6	33
395	Simulation of threshold displacement energies in FeCr. *Nuclear Instruments & Methods in Physics Research B*, **2007**, 255, 75-77	1.2	33
394	From Field Emission to Vacuum Arc Ignition: A New Tool for Simulating Copper Vacuum Arcs. *Contributions To Plasma Physics*, **2015**, 55, 299-314	1.4	32
393	The effect of prolonged irradiation on defect production and ordering in Fe-Cr and Fe-Ni alloys. *Journal of Physics Condensed Matter*, **2011**, 23, 355007	1.8	32
392	Dislocation nucleation from near surface void under static tensile stress in Cu. *Journal of Applied Physics*, **2011**, 110, 023509	2.5	32
391	Crystallization of silicon nanoclusters with inert gas temperature control. *Physical Review B*, **2015**, 91,	3.3	31

390	Surface Segregation in Chromium-Doped NiCr Alloy Nanoparticles and Its Effect on Their Magnetic Behavior. *Chemistry of Materials*, **2015**, 27, 3216-3225	9.6	31
389	Multiple scattering of MeV ions: Comparison between the analytical theory and Monte-Carlo and molecular dynamics simulations. *Nuclear Instruments & Methods in Physics Research B*, **2006**, 249, 823-827	1.2	31
388	Effects of precipitates and dislocation loops on the yield stress of irradiated iron. *Scientific Reports*, **2018**, 8, 6914	4.9	30
387	Subcascade formation and defect cluster size scaling in high-energy collision events in metals. *Europhysics Letters*, **2016**, 115, 26001	1.6	30
386	Multiscale modelling of irradiation in nanostructures. *Journal of Computational Electronics*, **2014**, 13, 122-141	1.8	30
385	Microchemical effects in irradiated Fe□r alloys as revealed by atomistic simulation. *Journal of Nuclear Materials*, **2013**, 442, 486-498	3.3	30
384	Mechanism of surface modification in the plasma-surface interaction in electrical arcs. *Physical Review B*, **2010**, 81,	3.3	30
383	Stopping of energetic cobalt clusters and formation of radiation damage in graphite. *Physical Review B*, **2009**, 80,	3.3	30
382	Origin of nonlinear sputtering during nanocluster bombardment of metals. *Physical Review B*, **2007**, 76,	3.3	30
381	Mechanism of electron-irradiation-induced recrystallization in Si. *Physical Review B*, **2001**, 64,	3.3	30
380	Effect of surface on defect creation by self-ion bombardment of Si(001). *Physical Review B*, **1998**, 58, 9907-9915	3.3	30
379	Surface Defects and Bulk Defect Migration Produced by Ion Bombardment of Si(001). *Physical Review Letters*, **1999**, 83, 4788-4791	7.4	30
378	A low-level detection system for hydrogen analysis with the reaction 1H(15N,α12C. *Nuclear Instruments & Methods in Physics Research B*, **1994**, 84, 105-110	1.2	30
377	Electronic effects in high-energy radiation damage in tungsten. *Journal of Physics Condensed Matter* , **2015**, 27, 135401	1.8	29
376	Fragmentation of clusters sputtered from silver and gold: Molecular dynamics simulations. *Physical Review B*, **2005**, 71,	3.3	29
375	Site-Specific Wetting of Iron Nanocubes by Gold Atoms in Gas-Phase Synthesis. *Advanced Science*, **2019**, 6, 1900447	13.6	28
374	The as-deposited structure of co-sputtered Cu□a alloys, studied by X-ray diffraction and molecular dynamics simulations. *Acta Materialia*, **2015**, 82, 51-63	8.4	28
373	Sputtering of freestanding metal nanocrystals. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 272, 66-69	1.2	28

372	Latent ion tracks in amorphous silicon. *Physical Review B*, **2013**, 88,	3.3	28
371	Amorphization of Ge and Si nanocrystals embedded in amorphous SiO2 by ion irradiation. *Physical Review B*, **2009**, 80,	3.3	28
370	On the lower energy limit of electronic stopping in simulated collision cascades in Ni, Pd and Pt. *Journal of Nuclear Materials*, **2015**, 456, 99-105	3.3	27
369	Roughness of glancing angle deposited titanium thin films: an experimental and computational study. *Nanotechnology*, **2012**, 23, 385708	3.4	27
368	Cluster ion–solid interactions from meV to MeV energies. *Applied Physics A: Materials Science and Processing*, **2008**, 91, 561-566	2.6	27
367	Irradiation-assisted substitution of carbon atoms with nitrogen and boron in single-walled carbon nanotubes. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 31-36	1.2	27
366	Collision cascades in metals and semiconductors: defect creation and interface behavior. *Journal of Nuclear Materials*, **2000**, 276, 194-201	3.3	27
365	Electronic stopping of Si from a three-dimensional charge distribution. *Physical Review B*, **2000**, 62, 3109-3116	3.3	27
364	First-principles simulation of collision cascades in Si to test pair-potentials for Si-Si interaction at 10 eV–5 keV. *Nuclear Instruments & Methods in Physics Research B*, **1994**, 88, 382-386	1.2	27
363	Response of mechanically strained nanomaterials to irradiation: Insight from atomistic simulations. *Physical Review B*, **2010**, 82,	3.3	26
362	Threshold defect production in germanium determined by density functional theory molecular dynamics simulations. *Physica Scripta*, **2010**, 81, 035601	2.6	26
361	Simulation of cascades in tungsten–helium. *Philosophical Magazine*, **2010**, 90, 3581-3589	1.6	26
360	Interatomic potentials for simulating radiation damage effects in metals. *Comptes Rendus Physique*, **2008**, 9, 343-352	1.4	26
359	Defect model for the dependence of breakdown rate on external electric fields. *Physical Review Special Topics: Accelerators and Beams*, **2012**, 15,		25
358	Molecules can be sputtered also from pure metals: sputtering of beryllium hydride by fusion plasma–wall interactions. *Plasma Physics and Controlled Fusion*, **2013**, 55, 074004	2	25
357	Nanoscale density fluctuations in swift heavy ion irradiated amorphous SiO2. *Journal of Applied Physics*, **2011**, 110, 123520	2.5	25
356	Molecular dynamics simulations of hydrogen bombardment of tungsten carbide surfaces. *Physical Review B*, **2007**, 75,	3.3	25
355	Swift chemical sputtering of covalently bonded materials. *Pure and Applied Chemistry*, **2006**, 78, 1203-1211	1.1	25

354	Upper size limit of complete contact epitaxy. *Thin Solid Films*, **2003**, 425, 297-303	2.2	25
353	Channeling of heavy ions through multi-walled carbon nanotubes. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 21-25	1.2	25
352	Atomistic two-temperature modelling of ion track formation in silicon dioxide. *Europhysics Letters*, **2015**, 110, 16004	1.6	24
351	Simulation of Rutherford backscattering spectrometry from arbitrary atom structures. *Physical Review E*, **2016**, 94, 043319	2.4	24
350	Swift heavy ion induced recrystallization in cubic silicon carbide: New insights from designed experiments and MD simulations. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 326, 326-331	1.2	24
349	Modeling high-energy radiation damage in nuclear and fusion applications. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 277, 6-13	1.2	24
348	Growth of single-walled carbon nanotubes from sharp metal tips. *Small*, **2009**, 5, 2710-5	11	24
347	Stopping of energetic ions in carbon nanotubes. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 206, 18-21	1.2	24
346	Atomic fingers, bridges and slingshots: formation of exotic surface structures during ion irradiation of heavy metals. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 206, 189-193	1.2	24
345	Sputtering of amorphous hydrogenated carbon by hyperthermal ions as studied by tight-binding molecular dynamics. *Computational Materials Science*, **2002**, 25, 427-434	3.2	24
344	Atomistic simulation of diffuse x-ray scattering from defects in solids. *Journal of Applied Physics*, **2000**, 88, 2278-2288	2.5	24
343	Controlled softening of Cu64Zr36 metallic glass by ion irradiation. *Applied Physics Letters*, **2013**, 102, 181910	3.4	23
342	From multiply twinned to fcc nanoparticles via irradiation-induced transient amorphization. *Europhysics Letters*, **2009**, 85, 26001	1.6	23
341	Methane production from ATJ graphite by slow atomic and molecular D ions: Evidence for projectile molecule-size-dependent yields at low energies. *Journal of Nuclear Materials*, **2006**, 357, 9-18	3.3	23
340	Molecular dynamics simulation of ion-beam-amorphization of Si, Ge and GaAs. *Nuclear Instruments & Methods in Physics Research B*, **2002**, 193, 294-298	1.2	23
339	Melting temperature effects on the size of ion-induced craters. *Applied Physics Letters*, **2001**, 79, 3624-3626	3.4	23
338	Electronic stopping calculated using explicit phase shift factors. *Physical Review B*, **2001**, 63,	3.3	23
337	Effect of the interatomic Si-Si-potential on vacancy production during ion implantation of Si. *Physica Scripta*, **1994**, T54, 34-37	2.6	23

336	High-energy radiation damage in zirconia: Modeling results. *Journal of Applied Physics*, **2014**, 115, 083507	2.5	22
335	Primary radiation damage in bcc Fe and FeCr crystals containing dislocation loops. *Journal of Nuclear Materials*, **2011**, 417, 1063-1066	3.3	22
334	A Be-W interatomic potential. *Journal of Physics Condensed Matter*, **2010**, 22, 352206	1.8	22
333	Kinetics versus thermodynamics in materials modeling: The case of the di-vacancy in iron. *Philosophical Magazine*, **2010**, 90, 2585-2595	1.6	22
332	Density evolution in formation of swift heavy ion tracks in insulators. *Nuclear Instruments & Methods in Physics Research B*, **2010**, 268, 3163-3166	1.2	22
331	Dynamics of cluster induced sputtering in gold. *Nuclear Instruments & Methods in Physics Research B* , **2007**, 263, 375-388	1.2	22
330	Ion-induced mixing and demixing in the immiscible Ni-Ag system. *Physical Review B*, **2001**, 63,	3.3	22
329	Radiation damage buildup by athermal defect reactions in nickel and concentrated nickel alloys. *Materials Research Letters*, **2017**, 5, 433-439	7.4	21
328	Ion-solid interactions at the extremes of electronic energy loss: Examples for amorphous semiconductors and embedded nanostructures. *Current Opinion in Solid State and Materials Science*, **2015**, 19, 29-38	12	21
327	MD simulations of low energy deuterium irradiation on W, WC and surfaces. *Journal of Nuclear Materials*, **2012**, 429, 284-292	3.3	21
326	Evolution of Cu nanoclusters on Cu(100). *Journal of Physics Condensed Matter*, **2004**, 16, 2995-3003	1.8	21
325	Comparison of repulsive interatomic potentials calculated with an all-electron DFT approach with experimental data. *Nuclear Instruments & Methods in Physics Research B*, **2017**, 406, 511-517	1.2	20
324	Tensile testing of Fe and FeCr nanowires using molecular dynamics simulations. *Journal of Applied Physics*, **2015**, 117, 014313	2.5	20
323	Directional Sensitivity in Light-Mass Dark Matter Searches with Single-Electron-Resolution Ionization Detectors. *Physical Review Letters*, **2018**, 120, 111301	7.4	20
322	Electronic processes in molecular dynamics simulations of nanoscale metal tips under electric fields. *Computational Materials Science*, **2011**, 50, 2075-2079	3.2	20
321	Atomic displacement processes in irradiated amorphous and crystalline silicon. *Applied Physics Letters*, **1997**, 70, 3101-3103	3.4	20
320	Damage production in GaAs and GaAsN induced by light and heavy ions. *Journal of Applied Physics*, **2006**, 100, 053516	2.5	20
319	Size dependent epitaxial cluster deposition: The effect of deposition energy. *Nuclear Instruments & Methods in Physics Research B*, **2006**, 242, 161-163	1.2	20

318	H, He, Ne, Ar-bombardment of amorphous hydrocarbon structures. *Journal of Nuclear Materials*, **2006**, 357, 1-8	3.3	20
317	Multi□scale modeling of hydrogen isotope diffusion in graphite. *Contributions To Plasma Physics*, **2004**, 44, 307-310	1.4	20
316	Making junctions between carbon nanotubes using an ion beam. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 202, 224-229	1.2	20
315	Range profiles in self-ion-implanted crystalline Si. *Physical Review B*, **1995**, 52, 15170-15175	3.3	20
314	Modelling of Radiation Damage in Fe-Cr Alloys. *Journal of ASTM International*, **2007**, 4, 100692		20
313	Nanoscale density variations induced by high energy heavy ions in amorphous silicon nitride and silicon dioxide. *Nanotechnology*, **2018**, 29, 144004	3.4	19
312	Thermal Oxidation of Size-Selected Pd Nanoparticles Supported on CuO Nanowires: The Role of the CuO□Pd Interface. *Chemistry of Materials*, **2017**, 29, 6153-6160	9.6	19
311	Classical molecular dynamics simulations of hypervelocity nanoparticle impacts on amorphous silica. *Physical Review B*, **2010**, 81,	3.3	19
310	Molecular Dynamics Simulations of Deuterium Trapping and Re-emission in Tungsten Carbide□ *Journal of Physical Chemistry C*, **2010**, 114, 5382-5390	3.8	19
309	Argon cluster impacts on layered silicon, silica, and graphite surfaces. *European Physical Journal D*, **2007**, 43, 181-184	1.3	19
308	Molecular dynamics simulations of C2, C2H, C2H2, C2H3, C2H4, C2H5, and C2H6 bombardment of diamond (1 1 1) surfaces. *Journal of Nuclear Materials*, **2008**, 375, 270-274	3.3	19
307	Heat spike effect on the straggling of cluster implants. *Physical Review B*, **2003**, 68,	3.3	19
306	Burrowing of nanoparticles on clean metal substrates: Surface smoothing on a nanoscale. *Physical Review B*, **2001**, 64,	3.3	19
305	Diffuse x-ray streaks from stacking faults in Si analyzed by atomistic simulations. *Applied Physics Letters*, **2000**, 76, 846-848	3.4	19
304	Stopping of 5□100 keV helium in tantalum, niobium, tungsten, and AISI 316L steel. *Nuclear Instruments & Methods in Physics Research B*, **1996**, 111, 1-6	1.2	19
303	Tuning the onset of ferromagnetism in heterogeneous bimetallic nanoparticles by gas phase doping. *Physical Review Materials*, **2017**, 1,	3.2	19
302	Segregation of Ni at early stages of radiation damage in NiCoFeCr solid solution alloys. *Acta Materialia*, **2020**, 196, 44-51	8.4	18
301	Structural analysis of simulated swift heavy ion tracks in quartz. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 326, 289-292	1.2	18

300	Primary radiation defect production in polyethylene and cellulose. *Journal of Physical Chemistry B*, **2012**, 116, 13932-8	3.4	18
299	Defect-induced junctions between single- or double-wall carbon nanotubes and metal crystals. *Nanoscale*, **2010**, 2, 901-5	7.7	18
298	Hydrocarbon radicals interaction with amorphous carbon surfaces. *Journal of Nuclear Materials*, **2007**, 363-365, 1283-1288	3.3	18
297	Collision cascades overlapping with self-interstitial defect clusters in Fe and W. *Journal of Physics Condensed Matter*, **2019**, 31, 245402	1.8	18
296	Damage buildup and edge dislocation mobility in equiatomic multicomponent alloys. *Nuclear Instruments & Methods in Physics Research B*, **2017**, 393, 114-117	1.2	17
295	Temperature dependence of ion track formation in quartz and apatite. *Journal of Applied Crystallography*, **2013**, 46, 1558-1563	3.8	17
294	Stopping of energetic argon cluster ions in graphite: Role of cluster momentum and charge. *Physical Review B*, **2010**, 82,	3.3	17
293	Amorphization of Ge nanocrystals embedded in amorphous silica under ion irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 1235-1238	1.2	17
292	Molecular dynamics simulations of Si/Ge cluster condensation. *Computational Materials Science*, **2009**, 47, 456-459	3.2	17
291	Comparison of silicon potentials for cluster bombardment simulations. *Nuclear Instruments & Methods in Physics Research B*, **2007**, 255, 253-258	1.2	17
290	Structure and stability of non-molecular nitrogen at ambient pressure. *Europhysics Letters*, **2004**, 65, 400-406	1.6	17
289	Molecular dynamics simulations of CH3 sticking on carbon surfaces. *Journal of Applied Physics*, **2003**, 93, 1826-1831	2.5	17
288	Heat spike effects on ion beam mixing. *Nuclear Instruments & Methods in Physics Research B*, **2000**, 164-165, 441-452	1.2	17
287	Kinetic Monte Carlo Simulations of the Response of Carbon Nanotubes to Electron Irradiation. *Journal of Computational and Theoretical Nanoscience*, **2007**, 4, 1153-1159	0.3	17
286	Pattern formation on ion-irradiated Si surface at energies where sputtering is negligible. *Journal of Applied Physics*, **2018**, 123, 235108	2.5	17
285	Cluster analysis of Dairy Herd Improvement data to discover trends in performance characteristics in large Upper Midwest dairy herds. *Journal of Dairy Science*, **2015**, 98, 3059-70	4	16
284	Molecular dynamics simulations of ballistic He penetration into W fuzz. *Nuclear Fusion*, **2016**, 56, 126015	3.3	16
283	Crater functions for compound materials: A route to parameter estimation in coupled-PDE models of ion bombardment. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 318, 245-252	1.2	16

282	A study on the elongation of embedded Au nanoclusters in SiO2 by swift heavy ion irradiation using MD simulations. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 282, 76-80	1.2	16
281	Interaction of dislocations with carbides in BCC Fe studied by molecular dynamics. *Journal of Nuclear Materials*, **2015**, 460, 23-29	3.3	16
280	Irradiation-induced densification of cluster-assembled thin films. *Physical Review B*, **2009**, 79,	3.3	16
279	Combined ab initio and classical potential simulation study on silicon carbide precipitation in silicon. *Physical Review B*, **2011**, 84,	3.3	16
278	Defect cores investigated by x-ray scattering close to forbidden reflections in silicon. *Physical Review Letters*, **2007**, 99, 225504	7.4	16
277	Molecular dynamics studies of the sputtering of divertor materials. *Journal of Nuclear Materials*, **2003**, 313-316, 404-407	3.3	16
276	Mechanism of Co nanocluster burrowing on Cu(100). *Physical Review B*, **2003**, 67,	3.3	16
275	Enhancement of irradiation-induced defect production in Si nanowires. *Journal of Applied Physics*, **2011**, 110, 043540	2.5	15
274	Tracking defect type and strain relaxation in patterned Ge/Si(001) islands by x-ray forbidden reflection analysis. *Physical Review B*, **2011**, 84,	3.3	15
273	Effect of the porous structure of graphite on atomic hydrogen diffusion and inventory. *Nuclear Fusion*, **2007**, 47, 1656-1663	3.3	15
272	What is the real driving force of bilayer ion beam mixing?. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 226, 517-530	1.2	15
271	Modeling of the Diffusion of Hydrogen in Porous Graphite. *Physica Scripta*, **2004**, 85	2.6	15
270	Multi-scale modeling of hydrogen isotope transport in porous graphite. *Journal of Nuclear Materials* , **2005**, 337-339, 580-584	3.3	15
269	Sputtering of hydrocarbons by ion-induced breaking of chemical bonds. *Nuclear Instruments & Methods in Physics Research B*, **2001**, 180, 77-84	1.2	15
268	Unravelling the secrets of the resistance of GaN to strongly ionising radiation. *Communications Physics*, **2021**, 4,	5.4	15
267	Atomistic simulations of the effect of reactor-relevant parameters on be sputtering. *Journal of Nuclear Materials*, **2015**, 463, 805-809	3.3	14
266	Improved ERO modelling for spectroscopy of physically and chemically assisted eroded beryllium from the JET-ILW. *Nuclear Materials and Energy*, **2016**, 9, 604-609	2.1	14
265	Investigation of the thermal stability of Cu nanowires using atomistic simulations. *Journal of Applied Physics*, **2014**, 115, 213518	2.5	14

264	Sputtering yields exceeding 1000 by 80keV Xe irradiation of Au nanorods. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 341, 17-21	1.2	14
263	Atomistic simulations of irradiation effects in carbon nanotubes: an overview. *Radiation Effects and Defects in Solids*, **2007**, 162, 157-169	0.9	14
262	Structural modification of a multiply twinned nanoparticle by ion irradiation: A molecular dynamics study. *Journal of Applied Physics*, **2007**, 102, 124304	2.5	14
261	Effects of the surface structure and cluster bombardment on the self-sputtering of molybdenum. *Journal of Physics Condensed Matter*, **2003**, 15, 5845-5855	1.8	14
260	Does the thermal spike affect low energy ion-induced interfacial mixing?. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 211, 524-532	1.2	14
259	A molecular dynamics study of the clustering of implanted potassium in multiwalled carbon nanotubes. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 240, 810-818	1.2	14
258	Molecular dynamics simulation of ion ranges at keV energies. *Nuclear Instruments & Methods in Physics Research B*, **1996**, 115, 528-531	1.2	14
257	Dependence of short and intermediate-range order on preparation in experimental and modeled pure a-Si. *Journal of Non-Crystalline Solids*, **2016**, 438, 26-36	3.9	14
256	Ru/Al Multilayers Integrate Maximum Energy Density and Ductility for Reactive Materials. *Scientific Reports*, **2016**, 6, 19535	4.9	13
255	Crater formation by single ions, cluster ions and ion showers. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 272, 374-376	1.2	13
254	ERO modelling of tungsten erosion in the linear plasma device PSI-2. *Nuclear Materials and Energy*, **2017**, 12, 253-260	2.1	13
253	Radiation effects in nanoclusters embedded in solids. *European Physical Journal B*, **2014**, 87, 1	1.2	13
252	Molecular dynamics of irradiation-induced defect production in GaN nanowires. *Physical Review B*, **2012**, 86,	3.3	13
251	Multiscale modeling of BeD release and transport in PISCES-B. *Journal of Nuclear Materials*, **2013**, 438, S276-S279	3.3	13
250	Computational materials science of ion irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2002**, 188, 41-48	1.2	13
249	Effects of damage build-up in range profiles in crystalline Si; Molecular dynamics simulations. *Nuclear Instruments & Methods in Physics Research B*, **2002**, 195, 269-280	1.2	13
248	Inherent surface roughening as a limiting factor in epitaxial cluster deposition. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 69-74	1.2	13
247	Carbon erosion mechanisms in tokamak divertor materials: insight from molecular dynamics simulations. *Journal of Nuclear Materials*, **2001**, 290-293, 144-147	3.3	13

246	Lifetimes in 15N from gamma-ray line shapes produced in the 2H(14N,p gamma) and 14N(thermal n, gamma) reactions. *Physical Review C*, **1994**, 50, 682-697	2.7	13
245	Defect accumulation and evolution during prolonged irradiation of Fe and FeCr alloys. *Journal of Nuclear Materials*, **2020**, 528, 151843	3.3	13
244	Multi-scale modelling to relate beryllium surface temperature, deuterium concentration and erosion in fusion reactor environment. *Journal Physics D: Applied Physics*, **2017**, 50, 204003	3	12
243	Variables affecting simulated Be sputtering yields. *Journal of Nuclear Materials*, **2013**, 439, 174-179	3.3	12
242	Bond order potential for gold. *European Physical Journal B*, **2012**, 85, 1	1.2	12
241	Atomistic simulation of damage production by atomic and molecular ion irradiation in GaN. *Journal of Applied Physics*, **2012**, 112, 043517	2.5	12
240	Partial melting mechanisms of embedded nanocrystals. *Physical Review B*, **2009**, 79,	3.3	12
239	Modeling of film growth by cluster deposition: The effect of size and energy. *Physical Review B*, **2009**, 79,	3.3	12
238	Au irradiation by 25-keV Aun (n=1–5600) clusters. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 212, 286-290	1.2	12
237	Molecular dynamics simulations of CH3 sticking on carbon first wall structures. *Journal of Nuclear Materials*, **2003**, 313-316, 52-55	3.3	12
236	MD and BCA simulations of He and H bombardment of fuzz in bcc elements. *Journal of Nuclear Materials*, **2017**, 492, 113-121	3.3	11
235	Simple analytical model of nanocluster coalescence for porous thin film design. *Modelling and Simulation in Materials Science and Engineering*, **2015**, 23, 015008	2	11
234	Interatomic Fe-H potential for irradiation and embrittlement simulations. *Computational Materials Science*, **2016**, 111, 525-531	3.2	11
233	Interaction of Dislocations with Carbides in BCC Fe Studied by Molecular Dynamics. *Fusion Science and Technology*, **2014**, 66, 283-288	1.1	11
232	Atomistic simulations of MeV ion irradiation of silica. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 303, 129-132	1.2	11
231	Electrostatic-elastoplastic simulations of copper surface under high electric fields. *Physical Review Special Topics: Accelerators and Beams*, **2014**, 17,		11
230	Atomistic Simulation of the Explosion Welding Process. *Advanced Engineering Materials*, **2012**, 14, 265-268	3.5	11
229	Atomistic simulations of fracture in silica glass through hypervelocity impact. *Europhysics Letters*, **2011**, 96, 16005	1.6	11

228	Molecular dynamics simulations of collision cascades in FeCrHe. *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 3420-3423	1.2	11
227	Analytical model of dislocation nucleation on a near-surface void under tensile surface stress. *Philosophical Magazine*, **2012**, 92, 3994-4010	1.6	11
226	Electronic stopping power calculation method for molecular dynamics simulations using local Firsov and free electron-gas models. *Radiation Effects and Defects in Solids*, **2006**, 161, 511-521	0.9	11
225	Monte Carlo simulations of multiple scattering effects in ERD measurements. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 219-220, 1058-1061	1.2	11
224	Molecular dynamics simulations of CH3 sticking on carbon surfaces, angular and energy dependence. *Journal of Nuclear Materials*, **2004**, 334, 65-70	3.3	11
223	Signatures of irradiation-induced defects in scanning-tunneling microscopy images of carbon nanotubes. *Physics of the Solid State*, **2002**, 44, 470-472	0.8	11
222	Nonequilibrium self-organization in alloys under irradiation leading to the formation of nanocomposites. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 202, 206-216	1.2	11
221	Non-equilibrium properties of GaAs interatomic potentials. *Nuclear Instruments & Methods in Physics Research B*, **1999**, 159, 183-186	1.2	11
220	Improved ERO modelling of beryllium erosion at ITER upper first wall panel using JET-ILW and PISCES-B experience. *Nuclear Materials and Energy*, **2019**, 19, 510-515	2.1	10
219	Insights into the primary radiation damage of silicon by a machine learning interatomic potential. *Materials Research Letters*, **2020**, 8, 364-372	7.4	10
218	Graphitization of amorphous carbon by swift heavy ion impacts: Molecular dynamics simulation. *Diamond and Related Materials*, **2018**, 83, 134-140	3.5	10
217	Damage production in nanoparticles under light ion irradiation. *Physical Review B*, **2009**, 80,	3.3	10
216	Transition from atomistic to macroscopic cluster stopping in Au. *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 2980-2986	1.2	10
215	Pinning of size-selected Co clusters on highly ordered pyrolytic graphite. *European Physical Journal D*, **2009**, 52, 107-110	1.3	10
214	Molecular Dynamic simulations of a double-walled carbon nanotube motor subjected to a sinusoidally varying electric field. *Computational Materials Science*, **2009**, 44, 979-987	3.2	10
213	Energy dependence of processing and breakdown properties of Cu and Mo. *Physical Review Special Topics: Accelerators and Beams*, **2011**, 14,		10
212	Emergence of non-linear effects in nanocluster collision cascades in amorphous silicon. *New Journal of Physics*, **2008**, 10, 023013	2.9	10
211	Radiation damage in WC studied with MD simulations. *Nuclear Instruments & Methods in Physics Research B*, **2007**, 257, 614-617	1.2	10

210	Dynamic Monte-Carlo modeling of hydrogen isotope reactive-diffusive transport in porous graphite. *Journal of Nuclear Materials*, **2007**, 367-370, 1238-1242	3.3	10
209	Effects of heavy-ion and light-ion irradiation on the room temperature carrier dynamics of InGaAs/GaAs quantum wells. *Semiconductor Science and Technology*, **2006**, 21, 661-664	1.8	10
208	Contact epitaxy in multiple cluster deposition. *Applied Physics Letters*, **2006**, 89, 253109	3.4	10
207	Segregation in SiGe clusters. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 51-56	1.2	10
206	Defect creation by low-energy ion bombardment on GaAs (001) and Ge (001) surfaces. *Nuclear Instruments & Methods in Physics Research B*, **1999**, 153, 209-212	1.2	10
205	Gaussian approximation potentials for body-centered-cubic transition metals. *Physical Review Materials*, **2020**, 4,	3.2	10
204	Modelling of crater formation on anode surface by high-current vacuum arcs. *Journal of Applied Physics*, **2016**, 120, 183302	2.5	10
203	Sputtering and redeposition of ion irradiated Au nanoparticle arrays: direct comparison of simulations to experiments. *New Journal of Physics*, **2017**, 19, 013023	2.9	9
202	Analytical bond order potential for simulations of BeO 1D and 2D nanostructures and plasma-surface interactions. *Journal of Physics Condensed Matter*, **2018**, 30, 135001	1.8	9
201	A model of defect cluster creation in fragmented cascades in metals based on morphological analysis. *Journal of Physics Condensed Matter*, **2018**, 30, 405701	1.8	9
200	Cascade overlap with vacancy-type defects in Fe. *European Physical Journal B*, **2019**, 92, 1	1.2	9
199	Molecular dynamics simulation of helium ion implantation into silicon and its migration. *Nuclear Instruments & Methods in Physics Research B*, **2019**, 456, 53-59	1.2	9
198	Angular and velocity distributions of tungsten sputtered by low energy argon ions. *Journal of Nuclear Materials*, **2017**, 496, 18-23	3.3	9
197	Thermal response of nanoscale cylindrical inclusions of amorphous silica embedded in quartz. *Physical Review B*, **2014**, 90,	3.3	9
196	Atomistic simulation of Er irradiation induced defects in GaN nanowires. *Journal of Applied Physics*, **2014**, 116, 124313	2.5	9
195	Amorphous defect clusters of pure Si and type inversion in Si detectors. *Physical Review B*, **2010**, 82,	3.3	9
194	Crater annihilation on silver by cluster ion impacts. *Nuclear Instruments & Methods in Physics Research B*, **2007**, 255, 259-264	1.2	9
193	Atomistic simulation of radiation effects in carbon-based materials and nitrides. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 218, 9-18	1.2	9

192	Cooperative mixing induced surface roughening in bilayer metals: a possible novel surface damage mechanism. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 222, 525-532	1.2	9
191	Obtaining Distributions of Plasma Impurities Using Atomistic Simulations. *Contributions To Plasma Physics*, **2002**, 42, 458-463	1.4	9
190	Implantation angle dependence of ion irradiation damage in GaN. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2003**, 105, 111-113	3.1	9
189	Heat spike and ballistic contributions to mixing in Si. *Nuclear Instruments & Methods in Physics Research B*, **1999**, 153, 378-382	1.2	9
188	Atomistic simulations of field assisted evaporation in atom probe tomography. *Journal Physics D: Applied Physics*, **2016**, 49, 045302	3	9
187	Radiation damage in tungsten from cascade overlap with voids and vacancy clusters. *Journal of Physics Condensed Matter*, **2019**, 31, 405402	1.8	9
186	Simulation of redistributive and erosive effects in a-Si under Ar+ irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2018**, 414, 133-140	1.2	9
185	Effect of random surface orientation on W sputtering yields. *Nuclear Materials and Energy*, **2018**, 17, 113-122	2.1	9
184	Mechanistic details of the formation and growth of nanoscale voids in Ge under extreme conditions within an ion track. *Journal Physics D: Applied Physics*, **2017**, 50, 225302	3	8
183	Capacity of graphite's layered structure to suppress the sputtering yield: A molecular dynamics study. *Applied Surface Science*, **2015**, 337, 6-11	6.7	8
182	Effect of ion irradiation on structural properties of Cu64Zr36 metallic glass. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 341, 22-26	1.2	8
181	Impact of keV-energy argon clusters on diamond and graphite. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 282, 112-115	1.2	8
180	Modification of Pt/Co/Pt film properties by ion irradiation. *Physical Review B*, **2015**, 92,	3.3	8
179	Molecular dynamics investigation of the interaction of dislocations with carbides in BCC Fe. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 352, 77-80	1.2	8
178	Kinetic Monte Carlo simulations of proton conductivity. *Physical Review E*, **2014**, 90, 012135	2.4	8
177	Molecular dynamics simulations of nanoscale metal tips under electric fields. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1748-1751	1.2	8
176	Mechanism of swift chemical sputtering: Comparison of Be/C/W dimer bond breaking. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1257-1261	1.2	8
175	The effect of plasma impurities on the sputtering of tungsten carbide. *Journal of Physics Condensed Matter*, **2011**, 23, 085002	1.8	8

174	Light and heavy ion effects on damage clustering in GaAs quantum wells. *Nuclear Instruments & Methods in Physics Research B*, **2007**, 257, 324-327	1.2	8
173	Chemical sputtering of amorphous silicon carbide under hydrogen bombardment. *Applied Surface Science*, **2001**, 184, 387-390	6.7	8
172	Ions mimic the impact of meteorites. *Physics World*, **2001**, 14, 22-24	0.5	8
171	Reduced chemical sputtering of carbon by silicon doping. *Journal of Applied Physics*, **2002**, 92, 2216-2218	2.5	8
170	Diffuse x-ray scattering from 311 defects in Si. *Journal of Applied Physics*, **2002**, 91, 2978-2983	2.5	8
169	Molecular dynamics simulations of thermally activated edge dislocation unpinning from voids in □Fe. *Physical Review Materials*, **2017**, 1,	3.2	8
168	Formation and emission mechanisms of Ag nanoclusters in the Ar matrix assembly cluster source. *Physical Review Materials*, **2017**, 1,	3.2	8
167	Nanocutting mechanism of 6H-SiC investigated by scanning electron microscope online observation and stress-assisted and ion implant-assisted approaches. *International Journal of Advanced Manufacturing Technology*, **2020**, 106, 3869-3880	3.2	8
166	MD simulation of stress-assisted nanometric cutting mechanism of 3C silicon carbide. *Industrial Lubrication and Tribology*, **2019**, 71, 686-691	1.3	8
165	Probing electron beam effects with chemoresistive nanosensors during in situ environmental transmission electron microscopy. *Applied Physics Letters*, **2017**, 110, 094103	3.4	7
164	Defect clustering in irradiation of GaN by single and molecular ions. *Vacuum*, **2014**, 105, 88-90	3.7	7
163	Irradiation effects in high-density polyethylene. *Nuclear Instruments & Methods in Physics Research B* , **2013**, 312, 54-59	1.2	7
162	Roughness scaling in titanium thin films: A three-dimensional molecular dynamics study of rotational and static glancing angle deposition. *Applied Surface Science*, **2013**, 268, 270-273	6.7	7
161	Atomistic simulations of Be irradiation on W: mixed layer formation and erosion. *Nuclear Fusion*, **2014**, 54, 083001	3.3	7
160	Low-energy irradiation effects in cellulose. *Journal of Applied Physics*, **2014**, 115, 023521	2.5	7
159	Effects of defect clustering on optical properties of GaN by single and molecular ion irradiation. *Journal of Applied Physics*, **2013**, 114, 183511	2.5	7
158	Atomic flows, coronas and cratering in Au, Si and . *Nuclear Instruments & Methods in Physics Research B*, **2009**, 267, 1420-1423	1.2	7
157	Optimization of large amorphous silicon and silica structures for molecular dynamics simulations of energetic impacts. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1568-1571	1.2	7

156	Modelling the erosion of beryllium carbide surfaces. *Journal of Nuclear Materials*, **2011**, 414, 1-7	3.3	7
155	Reactive force field potential for carbon deposition on silicon surfaces. *Journal of Physics Condensed Matter*, **2012**, 24, 395004	1.8	7
154	Atomic-scale effects behind structural instabilities in Si lamellae during ion beam thinning. *AIP Advances*, **2012**, 2, 012186	1.5	7
153	Dynamic charge-transfer bond-order potential for gallium nitride. *Philosophical Magazine*, **2009**, 89, 3477-3497	1.8	7
152	Low energy cluster deposition of nanoalloys. *Journal of Applied Physics*, **2009**, 106, 063516	2.5	7
151	Explicit phase shift factor stopping model for multi-component targets. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 212, 118-122	1.2	7
150	Vaporlike phase of amorphous SiO2 is not a prerequisite for the core/shell ion tracks or ion shaping. *Physical Review Materials*, **2018**, 2,	3.2	7
149	Data on erosion and hydrogen fuel retention in Beryllium plasma-facing materials. *Nuclear Materials and Energy*, **2021**, 27, 100994	2.1	7
148	MD simulation study on defect evolution and doping efficiency of p-type doping of 3C-SiC by Al ion implantation with subsequent annealing. *Journal of Materials Chemistry C*, **2021**, 9, 2258-2275	7.1	7
147	Atomistic simulation of ion irradiation of semiconductor heterostructures. *Nuclear Instruments & Methods in Physics Research B*, **2017**, 409, 14-18	1.2	6
146	Elongation mechanism of the ion shaping of embedded gold nanoparticles under swift heavy ion irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2019**, 451, 42-48	1.2	6
145	Molecular dynamics simulation of the effects of swift heavy ion irradiation on multilayer graphene and diamond-like carbon. *Applied Surface Science*, **2020**, 527, 146495	6.7	6
144	Direct observation of ion-induced self-organization and ripple propagation processes in atomistic simulations. *Materials Research Letters*, **2020**, 8, 110-116	7.4	6
143	Molecular Dynamics Simulations of Heavy Ion Induced Defects in SiC Schottky Diodes. *IEEE Transactions on Device and Materials Reliability*, **2018**, 18, 481-483	1.6	6
142	Velocity-dependent dark matter interactions in single-electron resolution semiconductor detectors with directional sensitivity. *Physical Review D*, **2019**, 99,	4.9	6
141	Molecular dynamics simulation of radiation damage in CaCd6 quasicrystal cubic approximant up to 10 keV. *Journal of Chemical Physics*, **2013**, 138, 234505	3.9	6
140	Conditions for forming composite carbon nanotube-diamond like carbon material that retain the good properties of both materials. *Journal of Applied Physics*, **2015**, 118, 194306	2.5	6
139	Modelling of WBe mixed material sputtering under D irradiation. *Physica Scripta*, **2014**, T159, 014059	2.6	6

138	Defects in carbon implanted silicon calculated by classical potentials and first-principles methods. *Physical Review B*, **2010**, 82,	3.3	6
137	Fully Atomistic Analysis of Diffuse X-Ray Scattering Spectra of Silicon Defects. *Materials Research Society Symposia Proceedings*, **1997**, 469, 199		6
136	MD simulations of the cluster beam deposition of porous Ge. *European Physical Journal D*, **2007**, 43, 165-168	1.3	6
135	Molecular dynamics for ion beam analysis. *Nuclear Instruments & Methods in Physics Research B*, **2008**, 266, 1886-1891	1.2	6
134	Ultrafast dynamics of Ni+-irradiated and annealed GaInAs/InP multiple quantum wells. *Journal Physics D: Applied Physics*, **2006**, 39, 2659-2663	3	6
133	Major elemental asymmetry and recombination effects in irradiated WC. *Physical Review B*, **2006**, 74,	3.3	6
132	Enhanced erosion of tungsten by atom clusters. *Journal of Nuclear Materials*, **2002**, 305, 60-65	3.3	6
131	The effect of interatomic potential in molecular dynamics simulation of low energy ion implantation. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 240-244	1.2	6
130	Glancing incidence diffuse X-ray scattering studies of implantation damage in Si. *Nuclear Instruments & Methods in Physics Research B*, **1999**, 147, 399-409	1.2	6
129	Molecular dynamics investigations of surface damage produced by kiloelectronvolt self-bombardment of solids		6
128	Origin of increased helium density inside bubbles in Ni(1□)Fe alloys. *Scripta Materialia*, **2021**, 191, 1-6	5.6	6
127	Dependence of ion channeling on relative atomic number in compounds. *Nuclear Instruments & Methods in Physics Research B*, **2018**, 435, 61-69	1.2	6
126	Parameter-free quantitative simulation of high-dose microstructure and hydrogen retention in ion-irradiated tungsten. *Physical Review Materials*, **2021**, 5,	3.2	6
125	Atomic force microscope adhesion measurements and atomistic molecular dynamics simulations at different humidities. *Measurement Science and Technology*, **2017**, 28, 034004	2	5
124	Optimization of single crystal mirrors for ITER diagnostics. *Fusion Engineering and Design*, **2019**, 146, 1450-1453	1.7	5
123	Reflection of hydrogen and deuterium atoms from the beryllium, carbon, tungsten surfaces. *Nuclear Instruments & Methods in Physics Research B*, **2019**, 460, 4-9	1.2	5
122	Radiation stability of nanocrystalline single-phase multicomponent alloys. *Journal of Materials Research*, **2019**, 34, 854-866	2.5	5
121	Influence of alkane chain length on adsorption on an □lumina surface by MD simulations. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 352, 206-209	1.2	5

120	Cu self-sputtering MD simulations for 0.1–5 keV ions at elevated temperatures. *Nuclear Instruments & Methods in Physics Research B*, **2018**, 415, 31-40	1.2	5
119	Effects of crystallographic and geometric orientation on ion beam sputtering of gold nanorods. *Scientific Reports*, **2018**, 8, 512	4.9	5
118	Modified embedded-atom method used to derive interatomic potentials for defects and phase formation in the W-C system. *Physical Review B*, **2013**, 88,	3.3	5
117	Atomistic simulation of the measurement of mechanical properties of gold nanorods by AFM. *Scientific Reports*, **2017**, 7, 16257	4.9	5
116	Nuclear stopping power of antiprotons. *Physical Review A*, **2017**, 96,	2.6	5
115	Orientation dependent annealing kinetics of ion tracks in c-SiO2. *Journal of Applied Physics*, **2015**, 118, 224305	2.5	5
114	Nanoindentation of gold nanorods with an atomic force microscope. *Materials Research Express*, **2014**, 1, 045042	1.7	5
113	The effect of beryllium on deuterium implantation in tungsten by atomistic simulations. *Nuclear Fusion*, **2014**, 54, 123021	3.3	5
112	Hillock formation on ion-irradiated graphite surfaces. *Radiation Effects and Defects in Solids*, **1997**, 142, 459-469	0.9	5
111	Binding a carbon nanotube to the Si(100) surface using ion irradiation—an atomistic simulation study. *New Journal of Physics*, **2006**, 8, 115-115	2.9	5
110	Atomistic simulations of plasma–wall interactions in fusion reactors. *Physica Scripta*, **2006**, T124, 53-57	2.6	5
109	Molecular dynamics study on Si20 cluster deposition on Si(001). *Nuclear Instruments & Methods in Physics Research B*, **2003**, 212, 281-285	1.2	5
108	Low-energy deposition of Co onto Co islands on Ag(100): Effect on submonolayer growth. *Physical Review B*, **2005**, 71,	3.3	5
107	On the classification and quantification of crystal defects after energetic bombardment by machine learned molecular dynamics simulations. *Nuclear Materials and Energy*, **2020**, 22, 100724	2.1	5
106	Computational study of crystal defect formation in Mo by a machine learning molecular dynamics potential. *Modelling and Simulation in Materials Science and Engineering*, **2021**, 29, 055001	2	5
105	Machine-learning interatomic potential for W-Mo alloys. *Journal of Physics Condensed Matter*, **2021**, 33,	1.8	5
104	Experimental study and MD simulation of damage formation in GaN under atomic and molecular ion irradiation. *Vacuum*, **2016**, 129, 166-169	3.7	5
103	Absence of single critical dose for the amorphization of quartz under ion irradiation. *Journal of Physics Condensed Matter*, **2018**, 30, 015403	1.8	5

102	Spatial distribution of particles sputtered from single crystals by gas cluster ions. *Nuclear Instruments & Methods in Physics Research B*, **2017**, 406, 518-522	1.2	4
101	Molecular dynamics simulation of beryllium oxide irradiated by deuterium ions: sputtering and reflection. *Journal of Physics Condensed Matter*, **2019**, 31, 185001	1.8	4
100	Low energy sputtering of Mo surfaces. *Journal of Nuclear Materials*, **2020**, 539, 152274	3.3	4
99	Sputtering of beryllium oxide by deuterium at various temperatures simulated with molecular dynamics. *Physica Scripta*, **2020**, T171, 014024	2.6	4
98	Irradiation cascades in cementite: 0.1□10 keV Fe recoils. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 277, 136-139	1.2	4
97	Swift heavy ion effects on DLC-nanotube-diamond thin films. *Journal Physics D: Applied Physics*, **2017**, 50, 355301	3	4
96	Single and molecular ion irradiation-induced effects in GaN: experiment and cumulative MD simulations. *Journal Physics D: Applied Physics*, **2017**, 50, 505110	3	4
95	Experimental and numerical study of submonolayer sputter deposition of polystyrene fragments on silver for the storing matter technique. *Analytical Chemistry*, **2014**, 86, 11217-25	7.8	4
94	Quantum and Classical Molecular Dynamics Studies of the Threshold Displacement Energy in Si Bulk and Nanowire. *Materials Research Society Symposia Proceedings*, **2009**, 1181, 72		4
93	Implantation of keV-energy argon clusters and radiation damage in diamond. *Physical Review B*, **2012**, 85,	3.3	4
92	Annihilation of craters: Molecular dynamic simulations on a silver surface. *Physical Review B*, **2007**, 76,	3.3	4
91	Fusion tritons and plasma-facing components in a fusion reactor. *Europhysics Letters*, **2007**, 78, 65002	1.6	4
90	Measurement of Si 311 defect properties using x-ray scattering. *Journal of Applied Physics*, **2005**, 98, 073529	2.5	4
89	Molecular dynamics with phase-shift-based electronic stopping for calibration of ion implantation profiles in crystalline silicon. *Thin Solid Films*, **2006**, 504, 121-125	2.2	4
88	Tight-Binding Atomistic Simulations of Hydrocarbon Sputtering by Hyperthermal Ions in Tokamak Divertors. *Contributions To Plasma Physics*, **2002**, 42, 451-457	1.4	4
87	He, Ne, Ar-bombardment of carbon first wall structures. *Nuclear Instruments & Methods in Physics Research B*, **2005**, 228, 319-324	1.2	4
86	Chemical effects in collision cascades. *Nuclear Instruments & Methods in Physics Research B*, **2001**, 175-177, 31-35	1.2	4
85	On the mechanism of the shape elongation of embedded nanoparticles. *Nuclear Instruments & Methods in Physics Research B*, **2020**, 475, 44-48	1.2	4

84	Nano-vault architecture mitigates stress in silicon-based anodes for lithium-ion batteries. *Communications Materials*, **2021**, 2,	6	4
83	Modeling refractory high-entropy alloys with efficient machine-learned interatomic potentials: Defects and segregation. *Physical Review B*, **2021**, 104,	3.3	4
82	Modeling of high-fluence irradiation of amorphous Si and crystalline Al by linearly focused Ar ions. *Journal of Physics Condensed Matter*, **2019**, 31, 075302	1.8	3
81	Channeling maps for Si ions in Si: Assessing the binary collision approximation. *Nuclear Instruments & Methods in Physics Research B*, **2019**, 449, 17-21	1.2	3
80	Analytical interatomic bond-order potential for simulations of oxygen defects in iron. *Journal of Physics Condensed Matter*, **2019**, 31, 215401	1.8	3
79	The relationship between gross and net erosion of beryllium at elevated temperature. *Journal of Nuclear Materials*, **2015**, 463, 777-780	3.3	3
78	Structural properties of protective diamond-like-carbon thin films grown on multilayer graphene. *Journal of Physics Condensed Matter*, **2019**, 31, 505703	1.8	3
77	Mechanical and elastic changes in cementite Fe3C subjected to cumulative 1 keV Fe recoils. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 338, 119-125	1.2	3
76	Sputtering of Be/C/W compounds in molecular dynamics and ERO simulations. *Journal of Nuclear Materials*, **2013**, 438, S589-S593	3.3	3
75	Molecular dynamics simulations of cascades in strained carbide inclusions embedded in □ron. *AIP Advances*, **2015**, 5, 117152	1.5	3
74	Comparison of low-energy □radiation effects in polyethylene and cellulose by molecular dynamics simulations. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 326, 174-177	1.2	3
73	Structure of Si/Ge nanoclusters: Kinetics and thermodynamics. *Computational Materials Science*, **2011**, 50, 1504-1508	3.2	3
72	Molecular dynamics simulation of defect formation and precipitation in heavily carbon doped silicon. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2009**, 159-160, 149-152	3.1	3
71	Molecular dynamics study on stopping powers of channeled He and Li ions in Si. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 217, 25-32	1.2	3
70	Ion beam induced coherent displacement in Al on Au system. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 216, 308-312	1.2	3
69	Heat spike effect on the straggling of cluster implants. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 206, 61-65	1.2	3
68	Self-Interstitial Atoms at High Temperatures in Dense Metals. *Defect and Diffusion Forum*, **2001**, 188-190, 59-70	0.7	3
67	Strain effects in Ge surface cascades. *Nuclear Instruments & Methods in Physics Research B*, **2000**, 164-165, 482-486	1.2	3

66	Channeling in Manufacturing Sharp Junctions: a Molecular Dynamics Study. *Physica Scripta*, **1999**, T79, 272	2.6	3
65	Diffuse X-Ray Scattering Study of Defects Created by KeV Ion Implants in Si. *Materials Research Society Symposia Proceedings*, **1996**, 439, 89		3
64	Absence of a Crystal Direction Regime in which Sputtering Corresponds to Amorphous Material. *Physical Review Letters*, **2020**, 125, 225502	7.4	3
63	Adsorption of maleic anhydride on Pt(111). *Surface Science*, **2014**, 620, 9-16	1.8	2
62	Atomistic simulation of irradiation effects in GaN nanowires. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 326, 15-18	1.2	2
61	The effect of hydrocarbon chemistry on sputtering in mixed Be□□H materials. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 303, 188-191	1.2	2
60	Simulations of electromechanical shape transformations of Au nanoparticles. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 144-148	1.3	2
59	Molecular dynamics simulation of Cr-precipitate demixing in FeCr alloys. *Radiation Effects and Defects in Solids*, **2014**, 169, 646-654	0.9	2
58	On the molecular effect in hydrogen molecular ions penetration through thin films. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 287, 46-50	1.2	2
57	The effect of C concentration on radiation damage in Fe□r□ alloys. *Journal of Nuclear Materials*, **2013**, 442, S782-S785	3.3	2
56	Improvement of surface processes modelling in the ERO code. *Journal of Nuclear Materials*, **2009**, 390-391, 175-178	3.3	2
55	Effect of Atomic Bonding on Defect Production in Collision Cascades. *Materials Research Society Symposia Proceedings*, **1997**, 469, 113		2
54	Application of molecular dynamics for low-energy ion implantation in crystalline silicon. *Journal of Vacuum Science & Technology B*, **2006**, 24, 462		2
53	Multi-scale modeling of hydrogen isotope transport in porous graphite. *Journal of Plasma Physics*, **2006**, 72, 799	2.7	2
52	Molecular dynamics simulation of Ge surface segregation. *Thin Solid Films*, **2004**, 464-465, 95-98	2.2	2
51	Molecular dynamics simulation method for calculating fluence-dependent range profiles. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 202, 132-137	1.2	2
50	What is the real driving force of bilayer ion beam mixing?. *Nuclear Instruments & Methods in Physics Research B*, **2004**, 226, 517-530	1.2	2
49	Point Defects in Metals **2005**, 1855-1876		2

48	Nanopatterning of the (001) surface of crystalline Ge by ion irradiation at off-normal incidence: Experiment and simulation. *Physical Review B*, **2020**, 102,	3.3	2
47	An interatomic potential for W□ interactions. *Modelling and Simulation in Materials Science and Engineering*, **2016**, 24, 065007	2	2
46	Atomistic simulations of deuterium irradiation on iron-based alloys in future fusion reactors. *Nuclear Materials and Energy*, **2016**, 9, 571-575	2.1	2
45	Simulation Study of Al Channeling in 4H-SiC **2018**,		2
44	Solar neutrinos and dark matter detection with diurnal modulation. *Physical Review D*, **2021**, 104,	4.9	2
43	Interface effects on heat dynamics in embedded metal nanoparticles during swift heavy ion irradiation. *Journal Physics D: Applied Physics*,	3	2
42	New developments in the simulation of Rutherford backscattering spectrometry in channeling mode using arbitrary atom structures. *Modelling and Simulation in Materials Science and Engineering* , **2020**, 28, 075005	2	1
41	Effect of iron nanoparticle geometry on the energetics of carbon interstititals. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2010**, 7, NA-NA		1
40	Comment on □Nanoindentation hardness anisotropy of alumina crystal: A molecular dynamics study□[Appl. Phys. Lett. 92, 161904 (2008)]. *Applied Physics Letters*, **2009**, 94, 146101	3.4	1
39	Amorphization of □quartz and comparative study of defects in amorphized quartz and Si nanocrystals embedded in amorphous silica. *Nuclear Instruments & Methods in Physics Research B*, **2010**, 268, 3095-3098	1.2	1
38	Atomistic modelling of the interface structure of Si nanocrystals in silica. *Journal of Physics: Conference Series*, **2008**, 100, 052023	0.3	1
37	Recent Developments in Monte Carlo Codes for Edge Plasma Studies. *Contributions To Plasma Physics*, **2002**, 42, 145-156	1.4	1
36	Burrowing of cobalt nanoclusters in copper. *Nuclear Instruments & Methods in Physics Research B*, **2003**, 206, 66-70	1.2	1
35	Deposition energy dependence in cluster-assembled thin film densities. *Materials Research Society Symposia Proceedings*, **2005**, 908, 1		1
34	Diffuse X-Ray Scattering Study of Defects Created by keV Ion Implants in Si. *Materials Research Society Symposia Proceedings*, **1996**, 438, 77		1
33	Defect and density evolution under high-fluence ion irradiation of Si/SiO2 heterostructures. *Physical Review Materials*, **2020**, 4,	3.2	1
32	Primary radiation damage in silicon from the viewpoint of a machine learning interatomic potential. *Physical Review Materials*, **2021**, 5,	3.2	1
31	Computational study of tungsten sputtering by nitrogen. *Journal of Nuclear Materials*, **2020**, 542, 152465	3.3	1

30	Gradient-based training and pruning of radial basis function networks with an application in materials physics. *Neural Networks*, **2021**, 133, 123-131	9.1	1
29	Molecular Dynamics Simulations of Non-equilibrium Systems **2018**, 1-33		1
28	Temperature effect on irradiation damage in equiatomic multi-component alloys. *Computational Materials Science*, **2021**, 197, 110571	3.2	1
27	MD simulation of two-temperature model in ion irradiation of 3C-SiC: Effects of electronic and nuclear stopping coupling, ion energy and crystal orientation. *Journal of Nuclear Materials*, **2021**, 557, 153313	3.3	1
26	Molecular dynamics simulations of high-dose damage production and defect evolution in tungsten. *Journal of Nuclear Materials*, **2021**, 556, 153158	3.3	1
25	Recent Developments in Monte Carlo Codes for Edge Plasma Studies **2002**, 42, 145		1
24	Obtaining Distributions of Plasma Impurities Using Atomistic Simulations **2002**, 42, 458		1
23	Nanorod orientation control by swift heavy ion irradiation. *Applied Physics Letters*, **2022**, 120, 171602	3.4	1
22	Slowing down of 100 keV antiprotons in Al foils. *Results in Physics*, **2018**, 8, 683-685	3.7	0
21	Nuclear stopping powers for DFT potentials. *Nuclear Instruments & Methods in Physics Research B*, **2021**, 508, 10-18	1.2	0
20	The cluster species effect on the noble gas cluster interaction with solid surfaces. *Surfaces and Interfaces*, **2021**, 26, 101397	4.1	0
19	Modeling of Radiation Damage in Materials: Best Practices and Future Directions **2019**, 1-13		
18	Optimizing the sputter deposition process of polymers for the Storing Matter technique using PMMA. *Journal of Mass Spectrometry*, **2016**, 51, 889-899	2.2	
17	Self-assembly of oxide-supported metal clusters into ring-like structures. *Nanotechnology*, **2013**, 24, 035602	3.4	
16	First-principles and empirical potential simulation study of intrinsic and carbon-related defects in silicon. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2012**, 9, 1968-1973		
15	Adaptive molecular decomposition: large-scale quantum chemistry for liquids. *Journal of Chemical Physics*, **2013**, 138, 104108	3.9	
14	Contribution of Electronic Energy Deposition to the Atomic Cascade Damage in Nanocrystals. *Materials Research Society Symposia Proceedings*, **2010**, 1264, 1		
13	Ion irradiation effects in silicon nanowires. *Materials Research Society Symposia Proceedings*, **2011**, 1354, 59		

12	Growing multiple layers of porous semiconductors: A molecular-dynamics study. *Europhysics Letters*, **2010**, 91, 26002	1.6
11	Atomic-scale simulations of radiation effects in GaN and carbon nanotubes. *Materials Research Society Symposia Proceedings*, **2003**, 792, 440	
10	Ion irradiation-induced welding of a carbon nanotube to a Si (100) surface. *Materials Research Society Symposia Proceedings*, **2005**, 908, 1	
9	Effects of Ion Irradiation on Supported Carbon Nanotubes and Nanotube-Substrate Interfaces. *Materials Research Society Symposia Proceedings*, **2001**, 706, 1	
8	Surface Smoothing upon Deposition of Nanoparticles on Single Crystalline Substrates. *Materials Research Society Symposia Proceedings*, **1999**, 585, 21	
7	Effect of cascade overlap and C15 clusters on the damage evolution in Fe: An OKMC study. *Materialia*, **2022**, 21, 101344	3.2
6	Point Defects in Metals **2005**, 1855-1876	
5	Deuterium Retention in si Doped Carbon Films **2000**, 281-287	
4	Molecular Dynamics Simulations of Non-equilibrium Systems **2020**, 2161-2192	
3	Modeling of Radiation Damage in Materials: Best Practices and Future Directions **2020**, 2367-2379	
2	Nanocluster and Nanovoid Formation by Ion Implantation. *Particle Acceleration and Detection*, **2009** , 239-249	0.5
1	Defect Creation in Crystals: A Portal to Directional Dark Matter Searches. *Journal of Low Temperature Physics*, **2018**, 193, 1146-1150	1.3