Herbert M Urbassek

List of Publications by Year
in descending order

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355 papers	7,848 citations	50170 46 h-index	98622 67 g-index
363 all docs	363 docs citations	363 times ranked	3987 citing authors

#	Article	IF	Citations
1	Metal ablation by picosecond laser pulses: A hybrid simulation. Physical Review B, 2002, 66, .	1.1	236
2	Influence of crystal anisotropy on elastic deformation and onset of plasticity in nanoindentation: A simulational study. Journal of Applied Physics, 2010, 107, .	1.1	132
3	A gas-flow model for the sputtering of condensed gases. Nuclear Instruments & Methods in Physics Research B, 1987, 22, 480-490.	0.6	130
4	Sputtering of Au (111) induced by 16-keV Au cluster bombardment:â€ƒSpikes, craters, late emission, and fluctuations. Physical Review B, 2000, 62, 8487-8493.	1.1	127
5	Comparative simulation study of the structure of the plastic zone produced by nanoindentation. Journal of the Mechanics and Physics of Solids, 2015, 75, 58-75.	2.3	115
6	Molecular-dynamics simulation of sputtering. Nuclear Instruments & Methods in Physics Research B, 1997, 122, 427-441.	0.6	110
7	Nanoindentation and nanoscratching of iron: Atomistic simulation of dislocation generation and reactions. Computational Materials Science, 2014, 90, 232-240.	1.4	110
8	Pair vs many-body potentials: Influence on elastic and plastic behavior in nanoindentation of fcc metals. Journal of the Mechanics and Physics of Solids, 2009, 57, 1514-1526.	2.3	108
9	Hydrodynamical instability of melt flow in laser cutting. Journal Physics D: Applied Physics, 1987, 20, 140-145.	1.3	102
10	Kinetic study of pulsed desorption flows into vacuum. Physical Review A, 1991, 43, 6722-6734.	1.0	100
11	Atomistic simulation of tantalum nanoindentation: Effects of indenter diameter, penetration velocity, and interatomic potentials on defect mechanisms and evolution. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 613, 390-403.	2.6	98
12	On laser fusion cutting of metals. Journal Physics D: Applied Physics, 1987, 20, 481-488.	1.3	96
13	Polycrystalline iron under compression: Plasticity and phase transitions. Physical Review B, 2012, 86, .	1.1	96
14	Nanoindentation into a high-entropy alloy â€“ An atomistic study. Journal of Alloys and Compounds, 2019, 803, 618-624.	2.8	93
15	Pressure-transmitting boundary conditions for molecular-dynamics simulations. Computational Materials Science, 2002, 24, 421-429.	1.4	85
16	Ablation by ultrashort laser pulses: Atomistic and thermodynamic analysis of the processes at the ablation threshold. Physical Review B, 2008, 78, .	1.1	85
17	Effect of gasâ€phase collisions in pulsedâ€laser desorption: A threeâ€dimensional Monte Carlo simulation study. Journal of Applied Physics, 1993, 73, 8544-8551.	1.1	84
18	Molecular Dynamics Simulation of Free and Forced BSA Adsorption on a Hydrophobic Graphite Surface. Langmuir, 2011, 27, 12938-12943.	1.6	83

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19	The Bain versus Nishiyamaâ€“Wassermann path in the martensitic transformation of Fe. New Journal of Physics, 2009, 11, 103027.	1.2	81
20	Gas-phase segregation effects in pulsed laser desorption from binary targets. Physical Review Letters, 1993, 70, 1886-1889.	2.9	75
21	Spikes in condensed rare gases induced by keV-atom bombardment. Physical Review Letters, 1991, 67, 105-108.	2.9	73
22	Finite-Size Effects in Fe-Nanowire Solidâ˜Solid Phase Transitions: A Molecular Dynamics Approach. Nano Letters, 2009, 9, 2290-2294.	4.5	73
23	Contact Angle of Sessile Drops in Lennard-Jones Systems. Langmuir, 2014, 30, 13606-13614.	1.6	71
24	Molecularâ€dynamics simulations of bulk and surface damage production in lowâ€energy Cuâ†'Cu bombardment. Journal of Applied Physics, 1992, 71, 5410-5418.	1.1	69
25	Nanoscratching of iron: A molecular dynamics study of the influence of surface orientation and scratching direction. Computational Materials Science, 2015, 103, 77-89.	1.4	69
26	Sputtering from spherical Au clusters by energetic atom bombardment. Nuclear Instruments & Methods in Physics Research B, 2001, 180, 293-298.	0.6	68
27	Au sputtering by cluster bombardment: A molecular dynamics study. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 687-696.	0.6	67
28	Linearity and additivity in cluster-induced sputtering:â€ƒA molecular-dynamics study of van der Waals bonded systems. Physical Review B, 2004, 70, .	1.1	65
29	Characterization of Fe potentials with respect to the stability of the bcc and fcc phase. Modelling and Simulation in Materials Science and Engineering, 2008, 16, 035005.	0.8	65
30	Pair versus many-body potentials in atomic emission processes from a Cu surface. Nuclear Instruments & Methods in Physics Research B, 1992, 69, 232-241.	0.6	64
31	Molecular-dynamics simulation of adatom formation under keV-ion bombardment of Pt(111). Physical Review B, 1994, 50, 11167-11174.	1.1	64
32	Implantation and damage under low-energy Si self-bombardment. Physical Review B, 1998, 57, 4756-4763.	1.1	64
33	Sputtered cluster mass distributions, thermodynamic equilibrium and critical phenomena. Nuclear Instruments & Methods in Physics Research B, 1988, 31, 541-550.	0.6	63
34	Shock waves in polycrystalline iron: Plasticity and phase transitions. Physical Review B, 2014, 89, .	1.1	61
35	Nanoindentation of hcp metals: a comparative simulation study of the evolution of dislocation networks. Nanotechnology, 2016, 27, 045706.	1.3	61
36	Atom ejection from a fast-ion track: A molecular-dynamics study. Physical Review B, 1994, 49, 786-795.	1.1	56

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37	Reflection coefficient of low-energy light ions. Physical Review B, 1991, 44, 7234-7242.	1.1	53
38	Sputtering of nanoparticles: Molecular dynamics study of Au impact on 20nm sized Au nanoparticles. International Journal of Mass Spectrometry, 2008, 272, 91-97.	0.7	53
39	Molecular-dynamics study of craters formed by energetic Cu cluster impact on Cu. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 697-704.	0.6	52
40	Sputtering of Si nanospheres. Physical Review B, 2014, 90, .	1.1	51
41	Monte Carlo study of Knudsen layers in evaporation from elemental and binary media. Physics of Fluids A, Fluid Dynamics, 1993, 5, 243-256.	1.6	50
42	Model study of keV-ion mixing of metallic interfaces: Influence of materials properties and deposited energy. Physical Review B, 1995, 51, 14559-14569.	1.1	49
43	Molecular-dynamics investigation of the fccâ†'bcc phase transformation in Fe. Computational Materials Science, 2008, 41, 297-304.	1.4	49
44	Consequences of Hydrocarbon Contamination for Wettability and Protein Adsorption on Graphite Surfaces. Journal of Physical Chemistry C, 2015, 119, 12496-12501.	1.5	49
45	Atomistic Studies of Nanoindentationâ€"A Review of Recent Advances. Crystals, 2017, 7, 293.	1.0	48
46	Mechanisms of pattern formation in grazing-incidence ion bombardment of Pt(111). Physical Review B, 2006, 73, .	1.1	47
47	Phase transitions in an Fe system containing a bcc/fcc phase boundary: An atomistic study. Physical Review B, 2013, 87, .	1.1	47
48	Transformation pathways in the solid-solid phase transitions of iron nanowires. Applied Physics Letters, 2009, 95, .	1.5	43
49	Adsorption of BMP-2 on a hydrophobic graphite surface: A molecular dynamics study. Chemical Physics Letters, 2011, 510, 252-256.	1.2	43
50	Nanoscratching of metallic glasses â€" An atomistic study. Tribology International, 2019, 139, 1-11.	3.0	43
51	Visualization ofke V-ion-induced spikes in metals. Radiation Effects and Defects in Solids, 1997, 142, 439-447.	0.4	42
52	Atomic dynamics of explosive boiling of liquid-argon films. Applied Physics B: Lasers and Optics, 2005, 81, 675-679.	1.1	42
53	COLLISIONS OF POROUS CLUSTERS: A GRANULAR-MECHANICS STUDY OF COMPACTION AND FRAGMENTATION. Astrophysical Journal, 2012, 752, 151.	1.6	42
54	Scratching of nanocrystalline metals: A molecular dynamics study of Fe. Applied Surface Science, 2016, 389, 688-695.	3.1	42

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55	Energy and angular distributions of sputtered particles: A comparison between analytical theory and computer simulation results. Nuclear Instruments & Methods in Physics Research B, 1988, 30, 507-513.	0.6	40
56	Statistical properties of collision cascades. Nuclear Instruments & Methods in Physics Research B, 1990, 48, 399-403.	0.6	40
57	Cluster-size dependence of ranges of 100eV/atom Aun clusters. Nuclear Instruments & Methods in Physics Research B, 2005, 228, 57-63.	0.6	40
58	Experimental and atomistic study of the elastic properties of Î±â€² Feâ€“C martensite. Acta Materialia, 2012, 60, 4901-4907.	3.8	40
59	A phase field approach for multivariant martensitic transformations of stable and metastable phases. Archive of Applied Mechanics, 2013, 83, 849-859.	1.2	40
60	Scratching of hcp metals: A molecular-dynamics study. Computational Materials Science, 2016, 113, 187-197.	1.4	40
61	Monte Carlo simulation of growth and decay processes in a cluster aggregation source. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 256-265.	0.9	39
62	Molecular dynamics study of the Î±â€“Î³ phase transition in Fe induced by shear deformation. Acta Materialia, 2013, 61, 5979-5987.	3.8	39
63	Influence of Tip Geometry on Nanoscratching. Tribology Letters, 2017, 65, 1.	1.2	38
64	Step Edge Sputtering Yield at Grazing Incidence Ion Bombardment. Physical Review Letters, 2004, 92, 246106.	2.9	37
65	Solid-solid phase transitions and phonon softening in an embedded-atom method model for iron. Physical Review B, 2009, 80, .	1.1	37
66	Solidâ€“solid phase transitions in Fe nanowires induced by axial strain. Nanotechnology, 2009, 20, 325704.	1.3	36
67	Molecular-dynamics study of the Î±â†”Î³ phase transition in Feâ€“C. Computational Materials Science, 2014, 82, 399-404.	1.4	34
68	Evolution of plasticity in nanometric cutting of Fe single crystals. Applied Surface Science, 2014, 317, 6-10.	3.1	33
69	Surface binding energies of alloys: a many-body approach. Nuclear Instruments & Methods in Physics Research B, 1994, 88, 218-228.	0.6	32
70	A LAMMPS implementation of granular mechanics: Inclusion of adhesive and microscopic friction forces. Computer Physics Communications, 2012, 183, 986-992.	3.0	32
71	Interplay of plasticity and phase transformation in shock wave propagation in nanocrystalline iron. New Journal of Physics, 2014, 16, 093032.	1.2	32
72	Collision cascades as fractals. Physica Scripta, 1987, 36, 689-692.	1.2	31

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73	Superior Regularity in Erosion Patterns by Planar Subsurface Channeling. Physical Review Letters, 2006, 96, 106103.	2.9	31
74	Enhancing Protein Adsorption Simulations by Using Accelerated Molecular Dynamics. PLoS ONE, 2013, 8, e64883.	1.1	31
75	Accelerated Molecular Dynamics Study of the Effects of Surface Hydrophilicity on Protein Adsorption. Langmuir, 2016, 32, 9156-9162.	1.6	31
76	Simulation of the influence of energetic atoms on Si homoepitaxial growth. Physical Review B, 1998, 58, 2050-2054.	1.1	30
77	Adatom formation and atomic layer growth on Al(111) by ion bombardment: experiments and molecular dynamics simulations. Surface Science, 2001, 488, 346-366.	0.8	30
78	Sputtering of a Au surface covered with large spherical clusters. International Journal of Mass Spectrometry, 2001, 208, 29-35.	0.7	30
79	Melting and fragmentation of ultra-thin metal films due to ultrafast laser irradiation: a molecular-dynamics study. Journal Physics D: Applied Physics, 2005, 38, 2933-2941.	1.3	30
80	Dislocation interactions during nanoindentation of nickel-graphene nanocomposites. Computational Materials Science, 2019, 170, 109158.	1.4	30
81	Sputtered atom transport in highâ€current gas discharges: A selfâ€consistent computer simulation study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1993, 11, 676-681.	0.9	29
82	Sputter yield of curved surfaces. Physical Review B, 2015, 91, .	1.1	29
83	Influence of phase transition on shock-induced spallation in nanocrystalline iron. Journal of Applied Physics, 2015, 118, .	1.1	29
84	The Influence of Lubrication and the Solidâ€“Fluid Interaction on Thermodynamic Properties in a Nanoscopic Scratching Process. Langmuir, 2019, 35, 16948-16960.	1.6	29
85	keV-atom bombardment of condensed rare gases: molecular dynamics simulation. Nuclear Instruments & Methods in Physics Research B, 1993, 73, 14-28.	0.6	28
86	Ta cluster bombardment of graphite: molecular dynamics study of penetration and damage. Nuclear Instruments & Methods in Physics Research B, 1998, 145, 503-508.	0.6	28
87	Ranges and fragmentation behavior of fullerene molecules: A molecular-dynamics study of the dependence on impact energy and target material. Nuclear Instruments & Methods in Physics Research B, 2007, 255, 247-252.	0.6	28
88	Interplay of dislocation-based plasticity and phase transformation during Si nanoindentation. Computational Materials Science, 2016, 119, 82-89.	1.4	28
89	Ion-induced mixing and demixing in the immiscible Ni-Ag system. Physical Review B, 2001, 63, .	1.1	27
90	Step-edge sputtering through grazing incidence ions investigated by scanning tunneling microscopy and molecular dynamics simulations. Physical Review B, 2008, 77, .	1.1	26

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91	Collision-spike Sputtering of Au Nanoparticles. Nanoscale Research Letters, 2015, 10, 1009.	3.1	26
92	Shear-Transformation Zone Activation during Loading and Unloading in Nanoindentation of Metallic Glasses. Materials, 2019, 12, 1477.	1.3	26
93	Exceptionally high spallation strength for a high-entropy alloy demonstrated by experiments and simulations. Journal of Alloys and Compounds, 2022, 895, 162567.	2.8	26
94	Sputtering of Au by cluster impact. Nuclear Instruments & Methods in Physics Research B, 2007, 255, 208-213.	0.6	25
95	Influence of local curvature on sputtering. Applied Physics Letters, 2013, 103, .	1.5	25
96	Compaction and plasticity in nanofoams induced by shock waves: A molecular dynamics study. Computational Materials Science, 2016, 119, 27-32.	1.4	25
97	Accelerating Steered Molecular Dynamics: Toward Smaller Velocities in Forced Unfolding Simulations. Journal of Chemical Theory and Computation, 2016, 12, 1380-1384.	2.3	25
98	Effect of surface steps on sputtering and surface defect formation: molecular-dynamics study of 5 keV Xe+ bombardment of Pt(111) at glancing incidence angles. Surface Science, 2003, 547, 315-323.	0.8	24
99	Probing the limitations of Sigmund's model of spatially resolved sputtering using Monte Carlo simulations. Physical Review B, 2016, 93, .	1.1	24
100	Preferential sputtering of alloys: a molecular-dynamics study. Nuclear Instruments & Methods in Physics Research B, 1995, 102, 261-271.	0.6	23
101	Comparison of classical and tight-binding molecular dynamics for silicon growth. Physical Review B, 1996, 53, 16497-16503.	1.1	23
102	Influence of electronic stopping on sputtering induced by cluster impact on metallic targets. Physical Review B, 2009, 79, .	1.1	23
103	Effect of material stiffness on hardness: A computational study based on model potentials. Philosophical Magazine, 2009, 89, 2225-2238.	0.7	23
104	Atomistic dynamics of the bccâ†”fcc phase transition in iron: Competition of homo- and heterogeneous phase growth. Computational Materials Science, 2014, 81, 170-177.	1.4	23
105	Morphological changes in polycrystalline Fe after compression and release. Journal of Applied Physics, 2015, 117, .	1.1	23
106	Sputtering of a metal nanofoam by Au ions. Nuclear Instruments & Methods in Physics Research B, 2015, 342, 234-239.	0.6	23
107	Influence of porosity on collisions between dust aggregates. Astronomy and Astrophysics, 2016, 589, A30.	2.1	23
108	Energy deposition, reflection and sputtering in hyperthermal rare-gas?Cu bombardment. Applied Physics A: Materials Science and Processing, 1995, 61, 39-43.	1.1	22

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109	Tight-binding molecular-dynamics study ofaâ^'Si:H:â€ƒPreparation, structure, and dynamics. Physical Review B, 1999, 60, 5478-5484.	1.1	22
110	Monte Carlo description of gas flow from laser-evaporated silver. Applied Physics A: Materials Science and Processing, 1999, 69, S577-S581.	1.1	22
111	The bouncing threshold in silica nanograin collisions. Physical Chemistry Chemical Physics, 2017, 19, 16555-16562.	1.3	22
112	Size of the Plastic Zone Produced by Nanoscratching. Tribology Letters, 2018, 66, 1.	1.2	22
113	Influence of the spatial and temporal structure of the deposited-energy distribution in swift-ion-induced sputtering. Physical Review B, 2003, 68, .	1.1	21
114	Effect of laser pulse width on material phenomena in ultrathin metal films irradiated by an ultrafast laser: molecular-dynamics study. Journal Physics D: Applied Physics, 2007, 40, 3518-3526.	1.3	21
115	Short-pulse Laser Induced Transient Structure Formation and Ablation Studied with Time-resolved Coherent XUV-scattering. , 2010, , .		21
116	Crater formation caused by nanoparticle impact: A molecular dynamics study of crater volume and shape. Physical Review B, 2012, 85, .	1.1	21
117	Dislocation-based strengthening mechanisms in metal-matrix nanocomposites: a molecular dynamics study of the influence of reinforcement shape in the Al-Si system. Computational Materials Science, 2018, 145, 109-115.	1.4	21
118	Indentation into an Al/Si composite: enhanced dislocation mobility at interface. Journal of Materials Science, 2018, 53, 799-813.	1.7	21
119	Energy partitioning and particle spectra in multicomponent collision cascades. Physical Review B, 1993, 47, 617-629.	1.1	20
120	Nuclear sputtering of condensed diatomic gases. The Journal of Physical Chemistry, 1995, 99, 15565-15572.	2.9	20
121	Nanoindentation tests of heavy-ion-irradiated Au foamsâ€"molecular dynamics simulation. Journal of Applied Physics, 2018, 123, .	1.1	20
122	Interaction of Dislocations and Interfaces in Crystalline Heterostructures: A Review of Atomistic Studies. Crystals, 2019, 9, 584.	1.0	20
123	Dimer emission in alloy sputtering and the concept of the â€œclustering probabilityâ€• Nuclear Instruments & Methods in Physics Research B, 1995, 103, 131-138.	0.6	19
124	Stress relaxation inaâ^'Siinduced by ion bombardment. Physical Review B, 2000, 62, 11219-11224.	1.1	19
125	Dynamics of <scp>I</scp>-Phenylalanine Sputtering by Argon Cluster Bombardment. Journal of Physical Chemistry C, 2014, 118, 7962-7970.	1.5	19
126	Forced Desorption of Bovine Serum Albumin and Lysozyme from Graphite: Insights from Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2016, 120, 7889-7895.	1.2	19

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127	Nucleation of plasticity in nanoparticle collisions. Physical Review E, 2016, 93, 063004.	0.8	19
128	The elasticâ€“plastic transition in nanoparticle collisions. Physical Chemistry Chemical Physics, 2016, 18, 3423-3429.	1.3	19
129	Preferential effects in low-energy Si bombardment of SiC. Nuclear Instruments & Methods in Physics Research B, 1998, 142, 287-294.	0.6	18
130	Sputtering of Au (111) by 64keV/atom Au clusters. Nuclear Instruments & Methods in Physics Research B, 2005, 228, 75-83.	0.6	18
131	Computer simulation of strain-induced phase transformations in thin Fe films. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 085007.	0.8	18
132	Effect of binding energy and mass in cluster-induced sputtering of van-der-Waals bonded systems. Nuclear Instruments & Methods in Physics Research B, 2005, 228, 84-91.	0.6	17
133	Impact on porous targets: Penetration, crater formation, target compaction, and ejection. Physical Review E, 2012, 86, 061313.	0.8	17
134	Temperature-induced phase transformation of Fe1-xNix alloys: molecular-dynamics approach. European Physical Journal B, 2015, 88, 1.	0.6	17
135	Scratching an Al/Si Interface: Molecular Dynamics Study of a Composite Material. Tribology Letters, 2018, 66, 1.	1.2	17
136	Fractal structure of collision cascades. Nuclear Instruments & Methods in Physics Research B, 1990, 48, 404-407.	0.6	16
137	Collision cascades in binary media: Analytical results for power-law cross sections. Nuclear Instruments & Methods in Physics Research B, 1992, 69, 413-426.	0.6	16
138	Preferential sputtering of atoms and dimers from ordered and disordered Cu3Au. Nuclear Instruments & Methods in Physics Research B, 1999, 152, 459-471.	0.6	16
139	Particle-in-cell simulation of the pulsed planar expansion of a fully ionized plasma off a surface. Physics of Plasmas, 2002, 9, 3209-3216.	0.7	16
140	Cluster-induced crater formation. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 3122-3125.	0.6	16
141	Why Nanoprojectiles Work Differently than Macroimpactors: The Role of Plastic Flow. Physical Review Letters, 2012, 108, 027601.	2.9	16
142	Martensitic and austenitic phase transformations in Feâ€“C nanowires. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 045003.	0.8	16
143	Dislocations Help Initiate the Î±â€“Î³ Phase Transformation in Ironâ€”An Atomistic Study. Metals, 2019, 9, 90.	1.0	16
144	Applicability of cutting theory to nanocutting of metallic glasses: Atomistic simulation. Journal of Non-Crystalline Solids, 2020, 550, 120363.	1.5	16

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145	An atomistic study of shear-band formation during cutting of metallic glasses. Journal of Applied Physics, 2020, 127, .	1.1	16
146	Sputtering of large clusters: Information from mass spectra. Radiation Effects and Defects in Solids, 1989, 109, 293-300.	0.4	15
147	Ion peening and stress relaxation induced by low-energy atom bombardment of covalent solids. Physical Review B, 2001, 63, .	1.1	15
148	Trails of Kilovolt Ions Created by Subsurface Channeling. Physical Review Letters, 2010, 104, 075501.	2.9	15
149	Ultrafast laser irradiation of spherical nanoparticles: molecular-dynamics results on fragmentation and small-angle scattering. European Physical Journal D, 2015, 69, 1.	0.6	15
150	Irradiation of astrophysical ice grains by cosmic-ray ions: a REAX simulation study. Astronomy and Astrophysics, 2016, 592, A35.	2.1	15
151	Nanoscratching of iron: A novel approach to characterize dislocation microstructures. Computational Materials Science, 2017, 135, 181-188.	1.4	15
152	Geometrical aspects of nanofillers influence the tribological performance of Al-based nanocomposites. Wear, 2020, 444-445, 203117.	1.5	15
153	Effects of Lubrication on the Friction in Nanometric Machining Processes: A Molecular Dynamics Approach. Applied Mechanics and Materials, 0, 869, 85-93.	0.2	15
154	Influence of adatom coverage on sputter yield. Nuclear Instruments & Methods in Physics Research B, 1996, 117, 361-366.	0.6	14
155	Expansion flow and cluster distributions originating from ultrafast-laser-induced fragmentation of thin metal films: A molecular-dynamics study. Physical Review B, 2006, 73, .	1.1	14
156	Chemical Energy Release and Radical Formation in Cluster-Induced Sputtering of Diatomic Molecular Targets: A Molecular-Dynamics Model Study. Physical Review Letters, 2007, 99, 027602.	2.9	14
157	Computer Simulation of the Sputtering Process. , 2007, , 21-31.		14
158	Nonlinear stopping of heavy clusters in matter: A case study. Nuclear Instruments & Methods in Physics Research B, 2007, 258, 497-500.	0.6	14
159	Ultrashort-pulse laser irradiation of metal films: theÂeffectÂofÂaÂdouble-peak laser pulse. Applied Physics A: Materials Science and Processing, 2010, 101, 509-515.	1.1	14
160	News on sputter theory: Molecular targets, nanoparticle desorption, rough surfaces. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 947-954.	0.6	14
161	Crater formation by nanoparticle impact: contributions of gas, melt and plastic flow. New Journal of Physics, 2012, 14, 083016.	1.2	14
162	Impacts into cosmic ice surfaces: A molecular-dynamics study using the Reax force field. Nuclear Instruments & Methods in Physics Research B, 2013, 303, 200-204.	0.6	14

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163	Microstructure and magnetic disorder induced by nanoindentation in single-crystalline Fe. Physical Review B, 2014, 89, .	1.1	14
164	Insulin adsorption on crystalline SiO2: Comparison between polar and nonpolar surfaces using accelerated molecular-dynamics simulations. Chemical Physics Letters, 2017, 670, 77-83.	1.2	14
165	Influence of pre-existing plasticity on nanoindentation â€“ an atomistic analysis of the dislocation fields produced. Journal of the Mechanics and Physics of Solids, 2019, 132, 103674.	2.3	14
166	Response of an amorphous/crystalline interface to nanoindentation: an atomistic study. Applied Surface Science, 2021, 551, 149285.	3.1	14
167	Interaction between parallel shear bands in a metallic glass. Journal of Non-Crystalline Solids, 2021, 566, 120882.	1.5	14
168	Energy and angular distribution of pulsed-laser desorbed particles: the influence of a hot contribution on a cold desorbing species. Journal Physics D: Applied Physics, 1997, 30, 185-193.	1.3	13
169	Simulation of sheath dynamics and current nonuniformity in plasma-immersion ion implantation of a patterned surface. Journal of Applied Physics, 2003, 93, 4420-4431.	1.1	13
170	Atomistic modeling of ultrashort-pulse ultraviolet laser ablation of a thin LiF film. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1817.	0.9	13
171	A simple algorithm for constructing fractal aggregates with pre-determined fractal dimension. Computer Physics Communications, 2013, 184, 1683-1685.	3.0	13
172	Martensitic transformation of pure iron at a grain boundary: Atomistic evidence for a two-step Kurdjumov-Sachsâ€“Pitsch pathway. AIP Advances, 2016, 6, .	0.6	13
173	Diffusion of cisplatin molecules in silica nanopores: Molecular dynamics study of a targeted drug delivery system. Journal of Molecular Graphics and Modelling, 2019, 86, 228-234.	1.3	13
174	Boron nitride nanotubes as containers for targeted drug delivery of doxorubicin. Journal of Molecular Modeling, 2020, 26, 54.	0.8	13
175	Effect of energy density on cluster formation from energized metals. Computational Materials Science, 1996, 6, 7-14.	1.4	12
176	Free energies of austenite and martensite Feâ€“C alloys: an atomistic study. Philosophical Magazine, 2014, 94, 933-945.	0.7	12
177	Effect of swift-ion irradiation on DNA molecules: A molecular dynamics study using the REAX force field. Nuclear Instruments & Methods in Physics Research B, 2015, 365, 622-625.	0.6	12
178	Static and Dynamic Wetting Behavior of Drops on Impregnated Structured Walls by Molecular Dynamics Simulation. Journal of Physical Chemistry C, 2017, 121, 12669-12683.	1.5	12
179	Dust-aggregate impact into granular matter: A systematic study of the influence of projectile velocity and size on crater formation and grain ejection. Astronomy and Astrophysics, 2017, 607, A19.	2.1	12
180	Monte Carlo study of fluence dependent mixing and sputtering of isotopic targets under ion bombardment. Surface Science, 1992, 278, 414-426.	0.8	11

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181	Transmission of low-energy oxygen ions through ultrathin rare-gas films: Molecular-dynamics simulation. Physical Review B, 1995, 51, 4597-4605.	1.1	11
182	Modification of a-Si under 100 eV Si atom bombardment. Nuclear Instruments & Methods in Physics Research B, 2001, 180, 299-305.	0.6	11
183	Atomistic simulation of stress effects in a-Si due to low-energy Si impact. Surface Science, 2002, 496, 196-208.	0.8	11
184	Surface channelling in grazing-incidence ion bombardment of a stepped surface. Nuclear Instruments & Methods in Physics Research B, 2007, 256, 373-377.	0.6	11
185	Nanostructured surfaces yield earlier: Molecular dynamics study of nanoindentation into adatom islands. Physical Review B, 2010, 81, .	1.1	11
186	Effect of Molecular Dissociation Energy on the Sputtering of Molecular Targets. Journal of Physical Chemistry C, 2010, 114, 5499-5505.	1.5	11
187	Influence of defects on extreme ultraviolet laser ablation of LiF. Physical Review B, 2013, 88, .	1.1	11
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