Herbert M Urbassek

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

349 papers	6,606 citations	43 h-index	62 g-index
363 ext. papers	7,196 ext. citations	2.8 avg, IF	6.43 L-index

#	Paper	IF	Citations
349	Peripheral Collisions of Ice-covered Silica Dust Grains. *Astrophysical Journal*, **2022**, 925, 173	4.7	0
348	Influence of vacancies on the temperature-dependent magnetism of bulk Fe: A spin-lattice dynamics approach. *Computational Condensed Matter*, **2022**, 31, e00662	1.7	1
347	Temperature-dependent magnetism in Fe foams via spin-lattice dynamics. *Computational Materials Science*, **2022**, 211, 111483	3.2	
346	Reproducibility of atomistic friction computer experiments: a molecular dynamics simulation study. *Molecular Simulation*, **2021**, 47, 1509-1521	2	1
345	Exceptionally high spallation strength for a high-entropy alloy demonstrated by experiments and simulations. *Journal of Alloys and Compounds*, **2021**, 162567	5.7	2
344	On the scaling of fragmentation and energy dissipation in collisions of dust aggregates. *Granular Matter*, **2021**, 23, 1	2.6	2
343	Bouncing and sticking collisions of organic nanoparticles: Atomistic study. *Astronomy and Astrophysics*, **2021**, 647, L13	5.1	0
342	Collisions between micro-sized aggregates: role of porosity, mass ratio, and impact velocity. *Monthly Notices of the Royal Astronomical Society*, **2021**, 503, 1717-1733	4.3	2
341	Interaction of dislocations and shear bands in cutting of an amorphous-crystalline bilayer: An atomistic study. *Computational Materials Science*, **2021**, 192, 110379	3.2	6
340	Response of an amorphous/crystalline interface to nanoindentation: an atomistic study. *Applied Surface Science*, **2021**, 551, 149285	6.7	5
339	Atomistic simulation of amorphization during AlN nanoindentation. *Ceramics International*, **2021**, 47, 15968-15978	5.1	2
338	Indentation and scratching of iron by a rotating tool – a molecular dynamics study. *Computational Materials Science*, **2021**, 194, 110445	3.2	5
337	Molecular dynamics of rolling and twisting motion of amorphous nanoparticles. *Scientific Reports*, **2021**, 11, 14591	4.9	0
336	Distortion of a polycrystalline Al bar in a vice fixture: molecular dynamics analysis of grain movement and rotation. *International Journal of Advanced Manufacturing Technology*, **2021**, 117, 147	3.2	
335	Spin-lattice dynamics of surface vs core magnetization in Fe nanoparticles. *Applied Physics Letters*, **2021**, 119, 012404	3.4	2
334	Changes in the phonon density of states of Fe induced by external strain. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	0
333	Dislocation structures below a nano-indent of the CoCrNi medium-entropy alloy. *Materials Letters*, **2021**, 283, 128821	3.3	4

332	Transition to chip serration in simulated cutting of metallic glasses. *European Physical Journal B*, **2021**, 94, 1	1.2	1
331	Influence of stoichiometry on indentation-induced plasticity in CuZr glasses. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	0
330	Interaction between parallel shear bands in a metallic glass. *Journal of Non-Crystalline Solids*, **2021**, 566, 120882	3.9	4
329	Granular mechanics simulations of collisions between chondritic aggregates. *Astronomy and Astrophysics*, **2021**, 652, A40	5.1	2
328	Morphology of graphene flakes in Ni-graphene nanocomposites and its influence on hardness: an atomistic study. *Carbon*, **2021**, 185, 660-660	10.4	0
327	Molecular dynamics simulations of the mechanical behavior of alumina coated aluminum nanowires under tension and compression.. *RSC Advances*, **2020**, 10, 14353-14359	3.7	7
326	Ejection of Glycine Molecules Adsorbed on a Water Ice Surface by Swift-heavy Ion Irradiation. *Astrophysical Journal*, **2020**, 891, 21	4.7	1
325	Influence of porosity on high-velocity mass-asymmetric collisions. *Monthly Notices of the Royal Astronomical Society*, **2020**, 492, 1937-1946	4.3	3
324	Vibrational and magnetic signatures of extended defects in Fe. *European Physical Journal B*, **2020**, 93, 1	1.2	3
323	Influence of the Rake Angle on Nanocutting of Fe Single Crystals: A Molecular-Dynamics Study. *Crystals*, **2020**, 10, 516	2.3	7
322	Boron nitride nanotubes as containers for targeted drug delivery of doxorubicin. *Journal of Molecular Modeling*, **2020**, 26, 54	2	6
321	Fragmentation and energy dissipation in collisions of polydisperse granular clusters. *Astronomy and Astrophysics*, **2020**, 633, A24	5.1	3
320	Effect of subsurface voids on the nanoindentation of Fe crystals. *Modelling and Simulation in Materials Science and Engineering*, **2020**, 28, 025010	2	3
319	Cluster Evolution from Ultrafast Laser Irradiation of Gold Nanoparticle: A Molecular Dynamics Study. *Journal of Physics: Conference Series*, **2020**, 1428, 012004	0.3	
318	Cutting of Al/Si bilayer systems: molecular dynamics study of twinning, phase transformation, and cracking. *International Journal of Advanced Manufacturing Technology*, **2020**, 107, 1297-1307	3.2	9
317	An atomistic study of shear-band formation during cutting of metallic glasses. *Journal of Applied Physics*, **2020**, 127, 115101	2.5	10
316	Bouncing of Hydroxylated Silica Nanoparticles: an Atomistic Study Based on REAX Potentials. *Nanoscale Research Letters*, **2020**, 15, 67	5	7
315	Collisions between amorphous carbon nanoparticles: phase transformations. *Astronomy and Astrophysics*, **2020**, 641, A159	5.1	3

314	Acoustic tube models of the human vocal tract for the university classroom. *European Journal of Physics*, **2020**, 41, 065804	0.8	3
313	-phase transformation in iron: comparative study of the influence of the interatomic interaction potential. *Modelling and Simulation in Materials Science and Engineering*, **2020**, 28, 055011	2	3
312	Geometrical aspects of nanofillers influence the tribological performance of Al-based nanocomposites. *Wear*, **2020**, 444-445, 203117	3.5	8
311	Functionalized silica surfaces as carriers for monoclonal antibodies in targeted drug delivery systems: Accelerated molecular dynamics study. *Chemical Physics Letters*, **2020**, 739, 136988	2.5	6
310	Collisions between ice-covered silica grains: An atomistic study. *Icarus*, **2020**, 352, 113996	3.8	2
309	Applicability of cutting theory to nanocutting of metallic glasses: Atomistic simulation. *Journal of Non-Crystalline Solids*, **2020**, 550, 120363	3.9	11
308	Effect of Tip Roundness on the Nanoindentation of Fe Crystals. *Tribology Letters*, **2020**, 68, 1	2.8	3
307	Strength of Graphene-Coated Ni Bi-Crystals: A Molecular Dynamics Nano-Indentation Study. *Materials*, **2020**, 13,	3.5	3
306	Stucture and size of the plastic zone formed during nanoindentation of a metallic glass. *Journal of Non-Crystalline Solids*, **2019**, 523, 119593	3.9	8
305	Nanoscratching of metallic glasses An atomistic study. *Tribology International*, **2019**, 139, 1-11	4.9	28
304	Stopping of porous projectiles in granular targets. *Monthly Notices of the Royal Astronomical Society: Letters*, **2019**, 487, L13-L17	4.3	3
303	Adsorption and Diffusion of Cisplatin Molecules in Nanoporous Materials: A Molecular Dynamics Study. *Biomolecules*, **2019**, 9,	5.9	7
302	High-energy ion impacts into the sulfur-bearing ice surface of Europa: an atomistic study of chemical transformations. *Astronomy and Astrophysics*, **2019**, 625, A140	5.1	5
301	Shear-Transformation Zone Activation during Loading and Unloading in Nanoindentation of Metallic Glasses. *Materials*, **2019**, 12,	3.5	19
300	Cyclic Indentation of Iron: A Comparison of Experimental and Atomistic Simulations. *Metals*, **2019**, 9, 541	2.3	4
299	Effect of Alloying Elements on the - Phase Transformation in Iron. *Materials*, **2019**, 12,	3.5	1
298	Bouncing window for colliding nanoparticles: Role of dislocation generation. *Physical Review E*, **2019**, 99, 032904	2.4	7
297	Dislocations Help Initiate the Phase Transformation in Iron An Atomistic Study. *Metals*, **2019**, 9, 90	2.3	10

296	Influence of pre-existing plasticity on nanoindentation – an atomistic analysis of the dislocation fields produced. *Journal of the Mechanics and Physics of Solids*, **2019**, 132, 103674	5	10
295	Dislocation interactions during nanoindentation of nickel-graphene nanocomposites. *Computational Materials Science*, **2019**, 170, 109158	3.2	20
294	Influence of tip adhesion on nanoindentation and scratching. *Modelling and Simulation in Materials Science and Engineering*, **2019**, 27, 065014	2	4
293	Nanoindentation into a high-entropy alloy – An atomistic study. *Journal of Alloys and Compounds*, **2019**, 803, 618-624	5.7	44
292	Interaction of Dislocations and Interfaces in Crystalline Heterostructures: A Review of Atomistic Studies. *Crystals*, **2019**, 9, 584	2.3	8
291	Nanoindentation into a metastable austenite triggers the martensitic phase transformation – An atomistic study. *AIP Advances*, **2019**, 9, 015228	1.5	1
290	Influence of grain boundaries on the austenitic and martensitic phase transitions in iron. *European Physical Journal B*, **2019**, 92, 1	1.2	1
289	The Influence of Lubrication and the Solid-Fluid Interaction on Thermodynamic Properties in a Nanoscopic Scratching Process. *Langmuir*, **2019**, 35, 16948-16960	4	14
288	Energetic sulfur ion impacts into cometary ice surfaces: a molecular dynamics study. *Monthly Notices of the Royal Astronomical Society*, **2019**, 482, 2374-2388	4.3	8
287	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	2.8	9
286	Ethanol-induced conformational fluctuations of NMDA receptors. *Molecular Physics*, **2019**, 117, 200-206	1.7	1
285	Sputtering of SiGe1– nanospheres. *Physical Review B*, **2018**, 97,	3.3	6
284	The Laser ablation of a metal foam: The role of electron–phonon coupling and electronic heat diffusivity. *Journal of Applied Physics*, **2018**, 123, 034305	2.5	3
283	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	3.2	16
282	Insulin adsorption on functionalized silica surfaces: an accelerated molecular dynamics study. *Journal of Molecular Modeling*, **2018**, 24, 89	2	6
281	Molecular dynamics simulations of single grain pure aluminum in a vice fixture for nanomanufacturing applications. *CIRP Journal of Manufacturing Science and Technology*, **2018**, 23, 91-97	3.4	2
280	Nanoindentation tests of heavy-ion-irradiated Au foams – molecular dynamics simulation. *Journal of Applied Physics*, **2018**, 123, 225903	2.5	17
279	Scratching an Al/Si Interface: Molecular Dynamics Study of a Composite Material. *Tribology Letters*, **2018**, 66, 1	2.8	12

278	Indentation into an Al/Si composite: enhanced dislocation mobility at interface. *Journal of Materials Science*, **2018**, 53, 799-813	4.3	18
277	Orientation dependence in nanocutting of Fe single crystals: A molecular-dynamics study. *Computational Materials Science*, **2018**, 143, 286-294	3.2	7
276	Size of the Plastic Zone Produced by Nanoscratching. *Tribology Letters*, **2018**, 66, 1	2.8	13
275	Influence of the Crystal Surface on the Austenitic and Martensitic Phase Transition in Pure Iron. *Crystals*, **2018**, 8, 469	2.3	7
274	Laser induced ablation of aluminum nanoparticle: a molecular dynamics study. *MATEC Web of Conferences*, **2018**, 197, 04004	0.3	4
273	Ferrite-to-Austenite and Austenite-to-Martensite Phase Transformations in the Vicinity of a Cementite Particle: A Molecular Dynamics Approach. *Metals*, **2018**, 8, 837	2.3	7
272	Alcohol reduces muscle fatigue through atomistic interactions with nicotinic receptors. *Communications Biology*, **2018**, 1, 159	6.7	1
271	Insulin adsorption on crystalline SiO2: Comparison between polar and nonpolar surfaces using accelerated molecular-dynamics simulations. *Chemical Physics Letters*, **2017**, 670, 77-83	2.5	9
270	Influence of Tip Geometry on Nanoscratching. *Tribology Letters*, **2017**, 65, 1	2.8	25
269	Glancing ion incidence on a graphite-supported graphene flake: Lift-off vs welding. *Nuclear Instruments & Methods in Physics Research B*, **2017**, 409, 111-115	1.2	
268	Low-velocity collisions of chondrules: How a thin dust cover helps enhance the sticking probability. *Astronomy and Astrophysics*, **2017**, 599, L4	5.1	9
267	Nanoscratching of iron: A novel approach to characterize dislocation microstructures. *Computational Materials Science*, **2017**, 135, 181-188	3.2	15
266	Static and Dynamic Wetting Behavior of Drops on Impregnated Structured Walls by Molecular Dynamics Simulation. *Journal of Physical Chemistry C*, **2017**, 121, 12669-12683	3.8	9
265	The bouncing threshold in silica nanograin collisions. *Physical Chemistry Chemical Physics*, **2017**, 19, 16555-16562	3.6	25
264	Influence of Elastic Stiffness and Surface Adhesion on Bouncing of Nanoparticles. *Nanoscale Research Letters*, **2017**, 12, 637	5	1
263	Magnetic structure of [0 0 1] tilt grain boundaries in bcc Fe studied via magnetic potentials. *Philosophical Magazine*, **2017**, 97, 3027-3041	1.6	3
262	Comparative Study of Interatomic Interaction Potentials for Describing Indentation into Si Using Molecular Dynamics Simulation. *Applied Mechanics and Materials*, **2017**, 869, 3-8	0.3	4
261	Collision-Induced Melting in Collisions of Water Ice Nanograins: Strong Deformations and Prevention of Bouncing. *Geophysical Research Letters*, **2017**, 44, 10,822	4.9	8

260	Solar wind ion impacts into ice surfaces: A molecular-dynamics study using the REAX force field. *Icarus*, **2017**, 282, 351-362	3.8	6
259	Impact of energetic cosmic-ray ions on astrophysical ice grains. *Nuclear Instruments & Methods in Physics Research B*, **2017**, 393, 34-38	1.2	3
258	Dislocations penetrating an Al/Si interface. *AIP Advances*, **2017**, 7, 125119	1.5	6
257	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	5.1	8
256	Atomistic Studies of Nanoindentation: A Review of Recent Advances. *Crystals*, **2017**, 7, 293	2.3	32
255	Accelerated Molecular Dynamics Study of the Effects of Surface Hydrophilicity on Protein Adsorption. *Langmuir*, **2016**, 32, 9156-62	4	21
254	Forced Desorption of Bovine Serum Albumin and Lysozyme from Graphite: Insights from Molecular Dynamics Simulation. *Journal of Physical Chemistry B*, **2016**, 120, 7889-95	3.4	15
253	Probing the limitations of Sigmund's model of spatially resolved sputtering using Monte Carlo simulations. *Physical Review B*, **2016**, 93,	3.3	19
252	Nucleation of plasticity in nanoparticle collisions. *Physical Review E*, **2016**, 93, 063004	2.4	13
251	Irradiation of astrophysical ice grains by cosmic-ray ions: a REAX simulation study. *Astronomy and Astrophysics*, **2016**, 592, A35	5.1	10
250	The α-γ transformation of an Fe1−xCrx alloy: A molecular-dynamics approach. *International Journal of Modern Physics C*, **2016**, 27, 1650124	1.1	7
249	Accelerating Steered Molecular Dynamics: Toward Smaller Velocities in Forced Unfolding Simulations. *Journal of Chemical Theory and Computation*, **2016**, 12, 1380-4	6.4	20
248	Scratching of hcp metals: A molecular-dynamics study. *Computational Materials Science*, **2016**, 113, 187-197	3.2	26
247	Nanoindentation of hcp metals: a comparative simulation study of the evolution of dislocation networks. *Nanotechnology*, **2016**, 27, 045706	3.4	46
246	The elastic-plastic transition in nanoparticle collisions. *Physical Chemistry Chemical Physics*, **2016**, 18, 3423-9	3.6	14
245	Nanocutting: A Comparative Molecular-Dynamics Study of Fcc, Bcc, and Hcp Metals. *Current Nanoscience*, **2016**, 13, 40-47	1.4	10
244	Effect of uni- and biaxial strain on phase transformations in Fe thin films. *International Journal of Computational Materials Science and Engineering*, **2016**, 05, 1650001	0.3	7
243	Sputtering of silicon membranes with nanoscale thickness. *Journal of Applied Physics*, **2016**, 119, 245105	2.5	5

242	A phase field model for martensitic transformations with a temperature-dependent separation potential. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 481-482	0.2	5
241	Influence of porosity on collisions between dust aggregates. *Astronomy and Astrophysics*, **2016**, 589, A30	5.1	15
240	Crater production by energetic nanoparticle impact on Au nanofoams. *Applied Physics Letters*, **2016**, 108, 113108	3.4	5
239	Martensitic transformation of pure iron at a grain boundary: Atomistic evidence for a two-step Kurdjumov-Sachs–Pitsch pathway. *AIP Advances*, **2016**, 6, 085017	1.5	11
238	Compaction and plasticity in nanofoams induced by shock waves: A molecular dynamics study. *Computational Materials Science*, **2016**, 119, 27-32	3.2	15
237	Influence of C concentration on elastic moduli of α-Fe1-x C x alloys. *Philosophical Magazine*, **2016**, 96, 1448-1462	1.6	8
236	Role of the Surface in Solid–Solid Phase Transitions: Molecular Dynamics Study of the α–γ Transition in Fe. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2016**, 47, 2471-2480	2.3	7
235	Instationary compaction wave propagation in highly porous cohesive granular media. *Computational Particle Mechanics*, **2016**, 3, 429-434	3	4
234	Interplay of dislocation-based plasticity and phase transformation during Si nanoindentation. *Computational Materials Science*, **2016**, 119, 82-89	3.2	24
233	Scratching of nanocrystalline metals: A molecular dynamics study of Fe. *Applied Surface Science*, **2016**, 389, 688-695	6.7	28
232	Subsurface channeling of keV ions between graphene layers: Molecular dynamics simulation. *Physical Review B*, **2015**, 91,	3.3	6
231	Molecule emission from condensed Ar and O 2 targets by 750 eV Ne impact. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 352, 195-201	1.2	
230	Compaction of highly porous granular matter by impacts on a hard wall. *Physical Review E*, **2015**, 91, 042205	2.4	2
229	Ultrafast laser irradiation of spherical nanoparticles: molecular-dynamics results on fragmentation and small-angle scattering. *European Physical Journal D*, **2015**, 69, 1	1.3	15
228	Nanoscratching of iron: A molecular dynamics study of the influence of surface orientation and scratching direction. *Computational Materials Science*, **2015**, 103, 77-89	3.2	52
227	Laser Ablation of Nanoparticles: A Molecular Dynamics Study. *Advanced Materials Research*, **2015**, 1112, 120-123	0.5	7
226	Morphological changes in polycrystalline Fe after compression and release. *Journal of Applied Physics*, **2015**, 117, 085901	2.5	20
225	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	1.2	11

224	Temperature-induced phase transformation of Fe1-xNix alloys: molecular-dynamics approach. *European Physical Journal B*, **2015**, 88, 1	1.2	13
223	Melting of Al Induced by Laser Excitation of 2p Holes. *Materials Research Letters*, **2015**, 3, 149-155	7.4	4
222	Electronic sputtering of solid O2 by keV Ne ions. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 354, 230-234	1.2	3
221	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	5	92
220	Sputtering of a metal nanofoam by Au ions. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 342, 234-239	1.2	21
219	Sputter yield of curved surfaces. *Physical Review B*, **2015**, 91,	3.3	26
218	Influence of phase transition on shock-induced spallation in nanocrystalline iron. *Journal of Applied Physics*, **2015**, 118, 185902	2.5	22
217	Collision-spike Sputtering of Au Nanoparticles. *Nanoscale Research Letters*, **2015**, 10, 1009	5	23
216	Consequences of Hydrocarbon Contamination for Wettability and Protein Adsorption on Graphite Surfaces. *Journal of Physical Chemistry C*, **2015**, 119, 12496-12501	3.8	41
215	Molecular-dynamics study of the α-ε phase transition in Fe□. *Computational Materials Science*, **2014**, 82, 399-404	3.2	30
214	Atomistic dynamics of the bcc<-fcc phase transition in iron: Competition of homo- and heterogeneous phase growth. *Computational Materials Science*, **2014**, 81, 170-177	3.2	21
213	Free energies of austenite and martensite Fe□ alloys: an atomistic study. *Philosophical Magazine*, **2014**, 94, 933-945	1.6	11
212	Contact angle of sessile drops in Lennard-Jones systems. *Langmuir*, **2014**, 30, 13606-14	4	52
211	Dynamics of l-Phenylalanine Sputtering by Argon Cluster Bombardment. *Journal of Physical Chemistry C*, **2014**, 118, 7962-7970	3.8	15
210	Shock waves in polycrystalline iron: Plasticity and phase transitions. *Physical Review B*, **2014**, 89,	3.3	47
209	Martensitic and austenitic phase transformations in Fe□ nanowires. *Modelling and Simulation in Materials Science and Engineering*, **2014**, 22, 045003	2	15
208	Evolution of plasticity in nanometric cutting of Fe single crystals. *Applied Surface Science*, **2014**, 317, 6-10	6.7	24
207	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	5.3	76

206	Nanoindentation and nanoscratching of iron: Atomistic simulation of dislocation generation and reactions. *Computational Materials Science*, **2014**, 90, 232-240	3.2	85
205	Acoustic tube model of the human vocal tract: formants and vowels. *European Journal of Physics*, **2014**, 35, 045017	0.8	2
204	Interplay of plasticity and phase transformation in shock wave propagation in nanocrystalline iron. *New Journal of Physics*, **2014**, 16, 093032	2.9	26
203	Sputtering of Si nanospheres. *Physical Review B*, **2014**, 90,	3.3	46
202	Subsurface and interface channeling of keV ions in graphene/SiC. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 340, 5-10	1.2	3
201	Microstructure and magnetic disorder induced by nanoindentation in single-crystalline Fe. *Physical Review B*, **2014**, 89,	3.3	10
200	Ablation of a nanostructured metal surface by ultrashort X-ray pulses. *Applied Surface Science*, **2014** , 307, 142-145	6.7	3
199	Enhancing protein adsorption simulations by using accelerated molecular dynamics. *PLoS ONE*, **2014**, 8, e64883	3.7	29
198	A structural feature of the non-peptide ligand interactions with mice mu-opioid receptors. *Current Computer-Aided Drug Design*, **2014**, 10, 354-60	1.4	3
197	Influence of the ion impact azimuth on glancing-incidence keV ion impact on the Si(100) surface. *Surface Science*, **2013**, 615, 41-46	1.8	4
196	A phase field approach for multivariant martensitic transformations of stable and metastable phases. *Archive of Applied Mechanics*, **2013**, 83, 849-859	2.2	33
195	Melting of Al by ultrafast laser pulses: dynamics at the melting threshold. *Applied Physics A: Materials Science and Processing*, **2013**, 110, 649-654	2.6	7
194	Molecular dynamics study of the β phase transition in Fe induced by shear deformation. *Acta Materialia*, **2013**, 61, 5979-5987	8.4	30
193	A simple algorithm for constructing fractal aggregates with pre-determined fractal dimension. *Computer Physics Communications*, **2013**, 184, 1683-1685	4.2	11
192	Influence of defects on extreme ultraviolet laser ablation of LiF. *Physical Review B*, **2013**, 88,	3.3	7
191	Sputtering and reflection under cluster bombardment of solids. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 315, 304-307	1.2	5
190	Influence of local curvature on sputtering. *Applied Physics Letters*, **2013**, 103, 113108	3.4	24
189	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	1.2	12

188	Anisotropy of the crater function of the Cu surface under Ar bombardment. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 295, 72-75	1.2	7
187	Sputtering from swift-ion trails in LiF: A hybrid PIC/MD simulation. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 315, 313-317	1.2	5
186	Atom and molecule emission caused by ion impact into a frozen oxygen target: Role of rovibrational excitation. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 315, 308-312	1.2	4
185	Sputtering of a silicon surface: Preferential sputtering of surface impurities. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 303, 205-208	1.2	4
184	Hybrid particle-in-cell/molecular dynamics simulation of swift-ion tracks in LiF. *Physical Review B*, **2013**, 87,	3.3	11
183	Polyatomic bismuth impacts into germanium: Molecular dynamics study. *Physical Review B*, **2013**, 87,	3.3	3
182	Phase transitions in an Fe system containing a bcc/fcc phase boundary: An atomistic study. *Physical Review B*, **2013**, 87,	3.3	40
181	Computer simulation of strain-induced phase transformations in thin Fe films. *Modelling and Simulation in Materials Science and Engineering*, **2013**, 21, 085007	2	16
180	Atomistic Simulation of Nanodroplet Collisions with a Wall: Fragmentation and Impact Desolvation of Macromolecules. *Lecture Notes in Nanoscale Science and Technology*, **2013**, 169-193	0.3	1
179	A LAMMPS implementation of granular mechanics: Inclusion of adhesive and microscopic friction forces. *Computer Physics Communications*, **2012**, 183, 986-992	4.2	23
178	COLLISIONS OF POROUS CLUSTERS: A GRANULAR-MECHANICS STUDY OF COMPACTION AND FRAGMENTATION. *Astrophysical Journal*, **2012**, 752, 151	4.7	32
177	Impact on porous targets: penetration, crater formation, target compaction, and ejection. *Physical Review E*, **2012**, 86, 061313	2.4	14
176	Crater formation by nanoparticle impact: contributions of gas, melt and plastic flow. *New Journal of Physics*, **2012**, 14, 083016	2.9	14
175	Response of polymer molecules embedded in a nanodroplet to collisions with a wall. *Soft Matter*, **2012**, 8, 4708	3.6	5
174	Experimental and atomistic study of the elastic properties of α-Fe martensite. *Acta Materialia*, **2012**, 60, 4901-4907	8.4	32
173	Desolvation of macromolecules by ultrafast heating: A molecular-dynamics study. *European Physical Journal E*, **2012**, 35, 99	1.5	1
172	Polycrystalline iron under compression: Plasticity and phase transitions. *Physical Review B*, **2012**, 86,	3.3	76
171	Why nanoprojectiles work differently than macroimpactors: the role of plastic flow. *Physical Review Letters*, **2012**, 108, 027601	7.4	15

170	Sputtering of dimers off a silicon surface. *Nuclear Instruments & Methods in Physics Research B*, **2012** , 289, 97-99	1.2	4
169	Crater formation caused by nanoparticle impact: A molecular dynamics study of crater volume and shape. *Physical Review B*, **2012**, 85,	3.3	18
168	Glancing ion incidence on Si(100): Influence of surface reconstruction on ion subsurface channeling. *Physical Review B*, **2012**, 85,	3.3	9
167	Stopping of hypervelocity clusters in solids. *New Journal of Physics*, **2011**, 13, 113019	2.9	7
166	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	1.7	13
165	Molecular dynamics simulation of free and forced BSA adsorption on a hydrophobic graphite surface. *Langmuir*, **2011**, 27, 12938-43	4	73
164	News on sputter theory: Molecular targets, nanoparticle desorption, rough surfaces. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 947-954	1.2	14
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