Sergei Starikov

List of Publications by Year in Descending Order

66 papers	1,033 citations	20 h-index	30 g-index
70 ext. papers	1,263 ext. citations	3.2 avg, IF	4.71 L-index

#	Paper	IF	Citations
66	Formation of metastable aluminum silicide as intermediate stage of Al-Si alloy crystallization. *Scripta Materialia*, **2022**, 210, 114481	5.6	0
65	Laser-printed hemispherical silicon Mie resonators. *Optics Letters*, **2021**, 46, 2304-2307	3	1
64	Angular-dependent interatomic potential for large-scale atomistic simulation of iron: Development and comprehensive comparison with existing interatomic models. *Physical Review Materials*, **2021**, 5,	3.2	2
63	Optimized interatomic potential for atomistic simulation of Zr-Nb alloy. *Computational Materials Science*, **2021**, 197, 110581	3.2	2
62	Optimized interatomic potential for study of structure and phase transitions in Si-Au and Si-Al systems. *Computational Materials Science*, **2020**, 184, 109891	3.2	8
61	Study of grain boundary self-diffusion in iron with different atomistic models. *Acta Materialia*, **2020** , 188, 560-569	8.4	10
60	Two-scale simulation of plasticity in molybdenum: Combination of atomistic simulation and dislocation dynamics with non-linear mobility function. *Computational Materials Science*, **2020**, 179, 109585	3.2	3
59	Atomistic description of self-diffusion in molybdenum: A comparative theoretical study of non-Arrhenius behavior. *Physical Review Materials*, **2020**, 4,	3.2	9
58	Plasmonic nanosponges filled with silicon for enhanced white light emission. *Nanoscale*, **2020**, 12, 1013-1021	7.7	17
57	Atomistic Modeling of Grain Boundary Migration in Nickel. *Advanced Engineering Materials*, **2020**, 22, 2000115	3.5	1
56	Light-Emitting Nanophotonic Designs Enabled by Ultrafast Laser Processing of Halide Perovskites. *Small*, **2020**, 16, e2000410	11	27
55	Comparison of Different Methods of Atomistic Simulation To Calculate the Temperature of Phase Transition Using the Example of Zirconium. *Journal of Experimental and Theoretical Physics*, **2019**, 128, 747-753	1	4
54	Atomistic Simulation of the Fission-Fragment-Induced Formation of Defects in a Uranium–Molybdenum Alloy. *Journal of Experimental and Theoretical Physics*, **2019**, 129, 59-65	1	1
53	Understanding thermally-activated glide of 1/2<110>{110} screw dislocations in UO2 – A molecular dynamics analysis. *International Journal of Plasticity*, **2018**, 110, 294-305	7.6	7
52	Description of phase transitions through accumulation of point defects: UN, UO2 and UC. *Journal of Nuclear Materials*, **2018**, 510, 373-381	3.3	8
51	New interatomic potential for simulation of pure magnesium and magnesium hydrides. *Computational Materials Science*, **2018**, 154, 295-302	3.2	7
50	Atomistic simulation of cubic and tetragonal phases of U-Mo alloy: Structure and thermodynamic properties. *Journal of Nuclear Materials*, **2018**, 499, 451-463	3.3	31

49	Atomistic simulation of Si-Au melt crystallization with novel interatomic potential. *Computational Materials Science*, **2018**, 142, 303-311	3.2	15
48	Resonant silicon nanoparticles with controllable crystalline states and nonlinear optical responses. *Nanoscale*, **2018**, 10, 11403-11409	7.7	17
47	Evaluation of the structure and properties for the high-temperature phase of zirconium from the atomistic simulations. *Computational Materials Science*, **2018**, 152, 51-59	3.2	8
46	An interatomic potential for simulation of Zr-Nb system. *Computational Materials Science*, **2017**, 129, 259-272	3.2	24
45	Efficient Second-Harmonic Generation in Nanocrystalline Silicon Nanoparticles. *Nano Letters*, **2017**, 17, 3047-3053	11.5	113
44	Study of Niobium Diffusion and Clusterization in hcp Zr-Nb Dilute Alloys. *Defect and Diffusion Forum*, **2017**, 375, 167-174	0.7	1
43	Multi-scale model for point defects behaviour in uranium mononitride. *Journal of Physics: Conference Series*, **2017**, 781, 012044	0.3	
42	Multiscale Modeling of Uranium Mononitride: Point Defects Diffusion, Self-Diffusion, Phase Composition. *Defect and Diffusion Forum*, **2017**, 375, 101-113	0.7	4
41	Atomistic simulation of defect formation and structure transitions in U-Mo alloys in swift heavy ion irradiation. *Journal of Nuclear Materials*, **2017**, 495, 111-117	3.3	5
40	The Investigation of Dislocation Behaviour in Molybdenum Using Molecular Dynamics. *Defect and Diffusion Forum*, **2017**, 375, 175-181	0.7	1
39	Glide mobility of the 1/2[1 1 0](0 0 1) edge dislocation in UO2 from molecular dynamics simulation. *International Journal of Plasticity*, **2017**, 89, 85-95	7.6	22
38	Atomistic simulation of defects formation and structure transitions in U-Mo alloys at swift heavy ion irradiation. *Journal of Physics: Conference Series*, **2017**, 781, 012008	0.3	1
37	The atomistic simulation of pressure-induced phase transition in uranium mononitride. *Journal of Nuclear Materials*, **2016**, 480, 7-14	3.3	13
36	Atomistic simulation of a superionic transition in fluorite type structures UO2, UN2, TiH2. *Journal of Physics: Conference Series*, **2016**, 774, 012037	0.3	0
35	Anisotropy of the U–Mo alloy: Molecular-dynamics study. *Physics of Metals and Metallography*, **2016**, 117, 487-493	1.2	1
34	Atomistic simulation of a superionic transition in UO2. *Physics of the Solid State*, **2016**, 58, 177-182	0.8	7
33	Features of cubic and tetragonal structures of U–Mo alloys: Atomistic simulation. *Scripta Materialia*, **2016**, 113, 27-30	5.6	7
32	The diffusion of point defects in uranium mononitride: Combination of DFT and atomistic simulation with novel potential. *Journal of Alloys and Compounds*, **2016**, 658, 385-394	5.7	20

31	Fabrication of Hybrid Nanostructures via Nanoscale Laser-Induced Reshaping for Advanced Light Manipulation. *Advanced Materials*, **2016**, 28, 3087-93	24	81
30	Features of structure and phase transitions in pure uranium and U–Mo alloys: atomistic simulation. *Journal of Physics: Conference Series*, **2016**, 774, 012036	0.3	2
29	Modeling of formation mechanism and optical properties of Si/Au core-shell nanoparticles **2016**,		3
28	Atomistic simulation of the process of defect formation in uranium dioxide during fission fragments flying through. *High Temperature*, **2015**, 53, 55-61	0.8	7
27	Development of the advanced mechanistic fuel performance and safety code using the multi-scale approach. *Nuclear Engineering and Design*, **2015**, 295, 116-126	1.8	24
26	Atomistic simulation of laser-pulse surface modification: Predictions of models with various length and time scales. *Journal of Applied Physics*, **2015**, 117, 135901	2.5	45
25	Investigation of point defects diffusion in bcc uranium and U–Mo alloys. *Journal of Nuclear Materials*, **2015**, 458, 304-311	3.3	40
24	Atomistic modeling of the self-diffusion in α-U and γ-U-Mo. *Physics of Metals and Metallography*, **2015**, 116, 445-455	1.2	26
23	The atomistic simulation of pressure-induced phase transition in uranium mononitride. *Journal of Physics: Conference Series*, **2015**, 653, 012092	0.3	1
22	Soft picosecond X-ray laser nanomodification of gold and aluminum surfaces. *Applied Physics B: Lasers and Optics*, **2014**, 116, 1005-1016	1.9	15
21	Atomistic simulation of ion track formation in UO2. *Journal of Physics Condensed Matter*, **2014**, 26, 475401	1.8	26
20	Nano-meter Size Modification of Metal Surfaces Induced by Soft X-Ray Laser Single Pulse. *Springer Proceedings in Physics*, **2014**, 121-124	0.2	
19	Development of the Mechanistic Fuel Performance and Safety Code SFPR Using the Multi-Scale Approach **2013**, 655-664		1
18	Atomistic Modeling of Warm Dense Matter in the Two-Temperature State. *Contributions To Plasma Physics*, **2013**, 53, 129-139	1.4	34
17	A ternary EAM interatomic potential for U–Mo alloys with xenon. *Modelling and Simulation in Materials Science and Engineering*, **2013**, 21, 035011	2	57
16	Nano-meter scale modifications on material surfaces induced by soft x-ray laser pulse irradiations **2013**,		1
15	Derivation of kinetic coefficients by atomistic methods for studying defect behavior in Mo. *Journal of Nuclear Materials*, **2012**, 425, 41-47	3.3	11
14	New interatomic potential for computation of mechanical and thermodynamic properties of uranium in a wide range of pressures and temperatures. *Physics of Metals and Metallography*, **2012**, 113, 107-116	1.2	9

13	Atomistic simulation of laser ablation of gold: Effect of pressure relaxation. *Journal of Experimental and Theoretical Physics*, **2012**, 114, 792-800	1	53
12	Atomistic simulation of laser ablation of gold: The effect of electronic pressure **2012**,		3
11	Interatomic potential for uranium in a wide range of pressures and temperatures. *Journal of Physics Condensed Matter*, **2012**, 24, 015702	1.8	22
10	Interatomic potential for uranium in a wide range of pressures and temperatures. *Journal of Physics Condensed Matter*, **2012**, 24, 149501	1.8	18
9	Nanomodification of gold surface by picosecond soft x-ray laser pulse. *Journal of Applied Physics*, **2012**, 112, 013104	2.5	37
8	Laser ablation of gold: Experiment and atomistic simulation. *JETP Letters*, **2011**, 93, 642-647	1.2	21
7	Radiation-induced damage and evolution of defects in Mo. *Physical Review B*, **2011**, 84,	3.3	48
6	Simulation Of Ion Implantation Into Nuclear Materials And Comparison With Experiment **2011**,		1
5	Description of mechanical properties of carbon nanotubes. Tube wall thickness problem. Size effect. Part 1. *Letters on Materials*, **2011**, 1, 185-189	0.9	3
4	Molecular dynamics simulation of premelting of metals at high pressure. *Bulletin of the Russian Academy of Sciences: Physics*, **2010**, 74, 1160-1162	0.4	
3	Molecular-dynamics simulation of iron premelting at high pressures. *Doklady Physics*, **2009**, 54, 1-5	0.8	1
2	Atomistic simulation of the premelting of iron and aluminum: Implications for high-pressure melting-curve measurements. *Physical Review B*, **2009**, 80,	3.3	42
1	Premelting of iron at high pressures under conditions of contact with amorphous argon. *High Temperature*, **2008**, 46, 795-799	0.8	4