

Vasiliy S Krasnikov

List of Publications by Year in descending order

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25
papers

728
citations

567144

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610775

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g-index

26
all docs

26
docs citations

26
times ranked

352
citing authors

#	ARTICLE	IF	CITATIONS
1	Dislocation based high-rate plasticity model and its application to plate-impact and ultra short electron irradiation simulations. International Journal of Plasticity, 2011, 27, 1294-1308.	4.1	111
2	Dynamics and kinetics of dislocations in Al and Al-Cu alloy under dynamic loading. International Journal of Plasticity, 2014, 55, 94-107.	4.1	86
3	Plasticity driven growth of nanovoids and strength of aluminum at high rate tension: Molecular dynamics simulations and continuum modeling. International Journal of Plasticity, 2015, 74, 75-91.	4.1	63
4	Plastic deformation under high-rate loading: The multiscale approach. Physics of the Solid State, 2010, 52, 1386-1396.	0.2	57
5	Influence of local stresses on motion of edge dislocation in aluminum. International Journal of Plasticity, 2018, 101, 170-187.	4.1	53
6	Dislocation dynamics in aluminum containing θ' phase: Atomistic simulation and continuum modeling. International Journal of Plasticity, 2019, 119, 21-42.	4.1	50
7	Prediction of the shear strength of aluminum with θ' phase inclusions based on precipitate statistics, dislocation and molecular dynamics. International Journal of Plasticity, 2020, 128, 102672.	4.1	37
8	Interaction of dislocation with GP zones or θ'' phase precipitates in aluminum: Atomistic simulations and dislocation dynamics. International Journal of Plasticity, 2020, 125, 169-190.	4.1	36
9	Prediction of shear strength of cluster-strengthened aluminum with multi-scale approach describing transition from cutting to bypass of precipitates by dislocations. International Journal of Plasticity, 2021, 146, 103095.	4.1	32
10	Dislocation nucleation in Al single crystal at shear parallel to (111) plane: Molecular dynamics simulations and nucleation theory with artificial neural networks. International Journal of Plasticity, 2021, 139, 102953.	4.1	30
11	The unique hybrid precipitate in a peak-aged Al-Cu-Mg-Ag alloy. Scripta Materialia, 2021, 194, 113669.	2.6	29
12	Dynamic compaction of aluminum with nanopores of varied shape: MD simulations and machine-learning-based approximation of deformation behavior. International Journal of Plasticity, 2022, 156, 103363.	4.1	23
13	High-speed collision of copper nanoparticle with aluminum surface: Molecular dynamics simulation. Applied Surface Science, 2016, 390, 289-302.	3.1	21
14	Copper spall fracture under sub-nanosecond electron irradiation. Engineering Fracture Mechanics, 2011, 78, 1306-1316.	2.0	20
15	Numerical investigation of the change of dislocation density and microhardness in surface layer of iron targets under the high power ion- and electron-beam treatment. Surface and Coatings Technology, 2012, 212, 79-87.	2.2	15
16	Modeling of plastic localization in aluminum and Al-Cu alloys under shock loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 619, 354-363.	2.6	10
17	High-speed collision of copper nanoparticles with aluminum surface: Inclined impact, interaction with roughness and multiple impact. Computational Materials Science, 2018, 142, 108-121.	1.4	9
18	Dynamics of growth and collapse of nanopores in copper. International Journal of Solids and Structures, 2020, 202, 418-433.	1.3	9

#	ARTICLE	IF	CITATIONS
19	Homogeneous nucleation of dislocations in copper: Theory and approximate description based on molecular dynamics and artificial neural networks. Computational Materials Science, 2022, 206, 111266.	1.4	9
20	Influence of γ -Phase Cutting on Precipitate Hardening of Al-Cu Alloy during Prolonged Plastic Deformation: Molecular Dynamics and Continuum Modeling. Applied Sciences (Switzerland), 2021, 11, 4906.	1.3	8
21	Prediction of the strength of aged Al-Cu alloys with non-hybrid and hybrid {1 0 0}Al plates. Computational Materials Science, 2022, 207, 111331.	1.4	6
22	Dynamic Fracture of Metals in Solid and Liquid States under Ultra- short Intensive Electron or Laser Irradiation. , 2014, 3, 1890-1895.		4
23	Molecular Dynamics Investigation of Dislocation Slip in Pure Metals and Alloys. Structural Integrity, 2019, , 59-64.	0.8	4
24	Wave attenuation in microcrystal copper at irradiation by a powerful electron beam. Current Applied Physics, 2011, 11, 1315-1318.	1.1	3
25	Physical processes leading to changes of the material properties under irradiation. , 2014, , .		0