Snehanshu Pal

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4660833/publications.pdf

Version: 2024-02-01

115 papers	1,113 citations	471509 17 h-index	610901 24 g-index
117 all docs	117 docs citations	117 times ranked	660 citing authors

#	Article	IF	Citations
1	Molecular dynamics based cohesive zone modeling of Al (metal)â€“Cu50Zr50 (metallic glass) interfacial mechanical behavior and investigation of dissipative mechanisms. Materials and Design, 2016, 105, 41-50.	7.0	55
2	Dynamic characterization of shock response in crystalline-metallic glass nanolaminates. Acta Materialia, 2019, 164, 347-361.	7.9	48
3	Structural evaluation and deformation features of interface of joint between nano-crystalline Feâ€“Niâ€“Cr alloy and nano-crystalline Ni during creep process. Materials and Design, 2016, 108, 168-182.	7.0	37
4	Experimental and Theoretical Studies on the Viscosityâ€“Structure Correlation for High Alumina-Silicate Melts. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1450-1462.	2.1	37
5	Contribution of Nb towards enhancement of glass forming ability and plasticity of Ni-Nb binary metallic glass. Journal of Non-Crystalline Solids, 2017, 471, 243-250.	3.1	35
6	Effect of Zr addition on creep properties of ultra-fine grained nanocrystalline Ni studied by molecular dynamics simulations. Computational Materials Science, 2017, 126, 382-392.	3.0	32
7	Experimental and atomistic simulation based study of W based alloys synthesized by mechanical alloying. International Journal of Refractory Metals and Hard Materials, 2016, 58, 57-67.	3.8	26
8	The effect of porosity and void on creep behavior of ultra-fine grained nano crystalline nickel. Materials Letters, 2016, 169, 265-268.	2.6	26
9	Molecular Dynamics simulation based investigation of possible enhancement in strength and ductility of nanocrystalline aluminum by CNT reinforcement. Materials Chemistry and Physics, 2020, 243, 122593.	4.0	25
10	Surface-Mechanical Properties of Electrodeposited Cu-Al2O3 Composite Coating and Effects of Processing Parameters. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 388-399.	2.2	21
11	Analysis of deformation behaviour of Alâ€“Niâ€“Co thin film coated aluminium during nano-indentation: a molecular dynamics study. Molecular Simulation, 2018, 44, 1393-1401.	2.0	21
12	Structure prediction of multi-principal element alloys using ensemble learning. Engineering Computations, 2019, 37, 1003-1022.	1.4	21
13	Asymmetry in steel welds with dissimilar amounts of sulfur. Scripta Materialia, 2015, 108, 88-91.	5.2	19
14	Mechanistic study of bending creep behaviour of bicrystal nanobeam. Computational Materials Science, 2017, 136, 36-43.	3.0	18
15	Optimization of Phosphorous in Steel Produced by Basic Oxygen Steel Making Process Using Multi-Objective Evolutionary and Genetic Algorithms. Steel Research International, 2017, 88, 1600193.	1.8	18
16	Variation of glass transition temperature of Al90Sm10 metallic glass under pressurized cooling. Journal of Non-Crystalline Solids, 2018, 500, 249-259.	3.1	18
17	Structural evolution and dislocation behaviour study during nanoindentation of Mo₂₀W₂₀Co₂₀Ta₂₀Zr₂₀ high entropy alloy coated Ni single crystal using molecular dynamic simulation. Molecular Simulation, 2019, 45, 572-584.	2.0	18
18	Stability Analysis and Frontier Orbital Study of Different Glycol and Water Complex. , 2013, 2013, 1-16.		17

#	Article	IF	Citations
19	Influence of dislocations, twins, and stacking faults on the fracture behavior of nanocrystalline Ni nanowire under constant bending load: a molecular dynamics study. Journal of Molecular Modeling, 2018, 24, 277.	1.8	17
20	Evaluation of glass forming ability of Zrâ€“Nb alloy systems through liquid fragility and Voronoi cluster analysis. Computational Materials Science, 2019, 158, 324-332.	3.0	17
21	The Effect of Temperature on Creep Behaviour of Porous (1 at.%) Nano Crystalline Nickel. Transactions of the Indian Institute of Metals, 2016, 69, 277-282.	1.5	16
22	On the role of Cu-Zr amorphous intergranular films on crack growth retardation in nanocrystalline Cu during monotonic and cyclic loading conditions. Computational Materials Science, 2019, 169, 109122.	3.0	16
23	Stress-induced solid-state amorphization of nanocrystalline Ni and NiZr investigated by atomistic simulations. Journal of Applied Physics, 2018, 123, 044306.	2.5	15
24	Molecular dynamics simulation-based study of creepâ€“ratcheting behavior of nanocrystalline aluminum. Applied Nanoscience (Switzerland), 2021, 11, 565-581.	3.1	15
25	Pentagonal dodecahedron methane hydrate cage and methanol system â€” An ab initio study. Journal of Chemical Sciences, 2013, 125, 379-385.	1.5	14
26	Nano-scale simulation based study of creep behavior of bimodal nanocrystalline face centered cubic metal. Journal of Molecular Modeling, 2017, 23, 309.	1.8	14
27	Dislocation Interaction and V-Shaped Growth of the Distorted Structure During Nanoindentation of Cu20Ni20Al20Co20Fe20 (high-entropy alloy)-Coated Copper: A Molecular Dynamics Simulation-Based Study. Transactions of the Indian Institute of Metals, 2019, 72, 167-180.	1.5	14
28	A potential insight into the serration behaviour of Î£3n (nâ‰3) boundaries in Alloy 617. Materials Chemistry and Physics, 2020, 248, 122919.	4.0	14
29	DFT-based inhibitor and promoter selection criteria for pentagonal dodecahedron methane hydrate cage. Journal of Chemical Sciences, 2013, 125, 1259-1266.	1.5	13
30	Theoretical Study of Hydrogen Bond Formation in Trimethylene Glycol-Water Complex. , 2012, 2012, 1-12.		13
31	Influence of Grain Boundary Complexion on Deformation Mechanism of High Temperature Bending Creep Process of Cu Bicrystal. Transactions of the Indian Institute of Metals, 2018, 71, 1721-1734.	1.5	12
32	On the comparison of interrupted and continuous creep behaviour of nanocrystalline copper: A molecular dynamics approach. Materials Letters, 2018, 229, 256-260.	2.6	12
33	Molecular Dynamics Simulation Study of Uniaxial Ratcheting Behaviors for Ultrafine-Grained Nanocrystalline Nickel. Journal of Materials Engineering and Performance, 2019, 28, 4918-4930.	2.5	12
34	Dynamic Probing of Structural Evolution of Single Crystal Fe during Rolling Process Using Atomistic Simulation. Steel Research International, 2019, 90, 1800636.	1.8	12
35	Shock velocity-dependent elastic-plastic collapse of pre-existing stacking fault tetrahedron in single crystal Cu. Computational Materials Science, 2020, 172, 109390.	3.0	12
36	Electrophoretic Deposition of Cu-SiO2 Coatings by DC and Pulsed DC for Enhanced Surface-Mechanical Properties. Journal of Materials Engineering and Performance, 2016, 25, 327-337.	2.5	11

#	Article	IF	Citations
37	Healing mechanism of nanocrack in nanocrystalline metals during creep process. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	11
38	Deep learning approach for segmentation of plain carbon steel microstructure images. IET Image Processing, 2019, 13, 1516-1524.	2.5	11
39	Structural evolution and dislocation behaviour during nano-rolling process of FCC metals: A molecular dynamics simulation based investigation. Journal of Applied Physics, 2019, 125, .	2.5	11
40	The spectrum of atomic excess free volume in grain boundaries. Journal of Materials Science, 2021, 56, 11511-11528.	3.7	11
41	First-principles calculations to investigate electronic structure and magnetic, mechanical and thermodynamic properties of d0 half-Heusler LiXN (X= Na, K, Rb) alloys. Solid State Sciences, 2021, 118, 106633.	3.2	11
42	Role of W on the dislocation evolution in Ni-W alloy during tension followed by compression loading. Metals and Materials International, 2016, 22, 373-382.	3.4	10
43	Computer vision approach for phase identification from steel microstructure. Engineering Computations, 2019, 36, 1913-1933.	1.4	10
44	Dynamic formation and destruction process of stacking fault tetrahedra in single-crystal Ni during nanoscale cryo-rolling. Philosophical Magazine Letters, 2019, 99, 253-260.	1.2	10
45	Cold-rolling induced residual stress effect on the shock response of crystalline-metallic glass (Cuâ€“CuZr) nanolaminates by molecular dynamics simulation. Materials Chemistry and Physics, 2021, 272, 125010.	4.0	10
46	Comparative creep behaviour study between single crystal Nickel and ultra-fine grained nano crystalline Nickel in presence of porosity at 1120 K temperature. Metallurgical Research and Technology, 2017, 114, 107.	0.7	9
47	Effect of grain boundary complexions on the deformation behavior of Ni bicrystal during bending creep. Journal of Molecular Modeling, 2018, 24, 87.	1.8	9
48	Effect of Basicity, Al₂O₃and MgO content on the softening and melting properties of the CaO-MgO-SiO₂-Al₂O₃high alumina quaternary slag system. Metallurgical Research and Technology, 2016, 113, 501.	0.7	8
49	Atomistic simulation study of influence of Al2O3â€“Al interface on dislocation interaction and prismatic loop formation during nano-indentation on Al2O3-coated aluminum. Journal of Molecular Modeling, 2018, 24, 167.	1.8	8
50	Molecular dynamics simulation based investigation of strain induced crystallization of nickel metallic glass. Materials Chemistry and Physics, 2019, 237, 121831.	4.0	8
51	Atomistic investigation of the deformation mechanisms in nanocrystalline Cu with amorphous intergranular films. Journal of Applied Physics, 2019, 126, .	2.5	8
52	Influence of dislocation density and grain size on precipitation kinetics on P92 grade steel. Materials Today: Proceedings, 2019, 18, 1364-1374.	1.8	8
53	A 3D Wide Residual Network with Perceptual Loss for Brain MRI Image Denoising. , 2019, , .		8
54	Accumulative roll bonding of Cuâ€“Zr nanolaminate: Atomistic-scale investigation of structural evolution and grain orientation scatter dependence on rolling parameters. Journal of Applied Physics, 2020, 127, .	2.5	8

#	Article	IF	Citations
55	Investigation of structural evolution in the Cuâ€“Zr metallic glass at cryogenic temperatures by using molecular dynamics simulations. Journal of Molecular Modeling, 2021, 27, 286.	1.8	8
56	Investigation of reorganization of a nanocrystalline grain boundary network during biaxial creep deformation of nanocrystalline Ni using molecular dynamics simulation. Journal of Molecular Modeling, 2019, 25, 282.	1.8	7
57	Influence of rolling temperature on the structural evolution and residual stress generation of nanocrystalline Nickel during nano-rolling process. Computational Materials Science, 2020, 184, 109935.	3.0	7
58	Atomistic investigation of mechanical behavior for CNT reinforced nanocrystalline aluminum under biaxial tensile loading. Materials Today: Proceedings, 2020, 33, 4942-4950.	1.8	7
59	The effect of nano-void on deformation behaviour of Al-Cu intermetallic thin film compounds. Metallurgical Research and Technology, 2015, 112, 505.	0.7	6
60	Influence of Carbon Equivalent Content on Phase Transformation During Inter-critical Heating of Dual Phase Steels Using Discrete Micro-scale Cellular Automata Model. Transactions of the Indian Institute of Metals, 2017, 70, 909-915.	1.5	6
61	Effect of temperature and stress on creep behavior of ultrafine grained nanocrystalline Ni-3 at% Zr alloy. Metals and Materials International, 2017, 23, 272-282.	3.4	6
62	Prediction of Nitrogen Content of Steel Melt during Stainless Steel Making Using AOD Converter. Steel Research International, 2017, 88, 1600271.	1.8	6
63	Nano-rolling: Roller Speed-Dependent Morphological Evolution and Mechanical Properties Enhancement in Nanoscale Mg. Jom, 2019, 71, 3407-3416.	1.9	6
64	Constant twist rate response of symmetric and asymmetric Î£5 aluminium tilt grain boundaries: molecular dynamics study of deformation processes. Journal of Materials Science, 2021, 56, 8544-8562.	3.7	6
65	Ab-initio investigation of structural, mechanical, thermodynamic, electronic, magnetic and thermoelectric properties of half-metallic d0 half-Heusler alloys LiXSi (X=Ca, Sr). Journal of Solid State Chemistry, 2021, 304, 122610.	2.9	6
66	Deformation of Ni20W20Cu20Fe20Mo20high entropy alloy for tensile followed by compressive and compressive followed by tensile loading: A molecular dynamics simulation based study. IOP Conference Series: Materials Science and Engineering, 2016, 115, 012019.	0.6	5
67	DFT Studies on Interaction between Lanthanum and Hydroxyamide. IOP Conference Series: Materials Science and Engineering, 2018, 338, 012025.	0.6	5
68	Zr segregation in Niâ€“Zr alloy: implication on deformation mechanism during shear loading and bending creep. Journal of Materials Science, 2020, 55, 6172-6186.	3.7	5
69	Strength degradation and fractographic analysis of carbon fiber reinforced polymer composite laminates with square / circular hole using scanning electron microscope micrographs. Journal of Applied Polymer Science, 2021, 138, 49878.	2.6	5
70	Recreating the shear band evolution in nanoscale metallic glass by mimicking the atomistic rolling deformation: a molecular dynamics study. Journal of Molecular Modeling, 2021, 27, 220.	1.8	5
71	Stable nanocrystalline structure attainment and strength enhancement of Cu base alloy using bi-modal distributed tungsten dispersoids. Philosophical Magazine, 2022, 102, 189-209.	1.6	5
72	Improving thermal stability and Hall-Petch breakdown relationship in nanocrystalline Cu: A molecular dynamics simulation study. Materials Letters, 2022, 324, 132821.	2.6	5

#	Article	IF	Citations
73	Synthesis and Characterization of W80Ni10Mo10 alloy produced by mechanical alloying. IOP Conference Series: Materials Science and Engineering, 2015, 75, 012032.	0.6	4
74	Racheting Behaviour of Copper Nano-Wire by Classical Molecular Dynamics Simulations. Journal of Computational and Theoretical Nanoscience, 2015, 12, 2264-2267.	0.4	4
75	Mechanical Behaviour of Cuâ€“Zrâ€“Al Glassy Nano-Wires. Journal of Computational and Theoretical Nanoscience, 2015, 12, 2332-2338.	0.4	4
76	Design of Methane Hydrate Inhibitor Molecule Using Density Functional Theory. Journal of Cluster Science, 2015, 26, 551-563.	3.3	4
77	AA6082 to DX56-Steel Laser Brazing: Process Parameterâ€“Intermetallic Formation Correlation. Journal of Materials Engineering and Performance, 2017, 26, 4274-4281.	2.5	4
78	Presence of retained crystalline seed necessary for bicrystal-liquid-bicrystal phase transformation. Journal of Crystal Growth, 2017, 475, 307-315.	1.5	4
79	Dataâ€Driven Biâ€Objective Genetic Algorithms EvoNN Applied to Optimize Dephosphorization Process during Secondary Steel Making Operation for Producing LPG (Liquid Petroleum Gas Cylinder) Grade of Steel. Steel Research International, 2018, 89, 1800095.	1.8	4
80	Intensification of shock damage through heterogeneous phase transition and dislocation loop formation due to presence of pre-existing line defects in single crystal Cu. Journal of Applied Physics, 2019, 126, .	2.5	4
81	Atomistic Simulation of Nano-Rolling Process for Nanocrystalline Tungsten. Jom, 2020, 72, 3977-3986.	1.9	4
82	Assessment of open hole flexural strength and progressive damage mechanism of CFRP composite as a function of stacking sequence. International Journal of Materials and Product Technology, 2021, 62, 80.	0.2	4
83	Effect of variation in inclination angle of Æ©5 tilt grain boundary on the shock response of Ni bicrystals. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	4
84	Atomistic simulation of crack propagation in CNT reinforced nanocrystalline aluminum under uniaxial tensile loading. Philosophical Magazine, 2021, 101, 1942-1964.	1.6	4
85	Exponential linear unit dilated residual network for digital image denoising. Journal of Electronic Imaging, 2018, 27, 1.	0.9	4
86	Theoretical Study of Hydrogen Bond Formation in Chitosan and Pentagonal Dodecahedron Methane Hydrate Cage Structure. Chemical Science Transactions, 2013, 2, 447-454.	0.1	4
87	Influence of Asymmetric Cyclic Loading on Structural Evolution and Deformation Behavior of Cu-5 at.% Zr Alloy: An Atomistic Simulation-Based Study. Journal of Materials Engineering and Performance, 2017, 26, 5197-5205.	2.5	3
88	Effect of Thermal cycles and Dimensions of the Geometry on Residual stress of the Alumina-Kovar Joint. IOP Conference Series: Materials Science and Engineering, 2018, 338, 012001.	0.6	3
89	Quantum chemical calculation based investigation of synergistic chelating between multiple hydroxyamide ligands and La3+ ion. Computational and Theoretical Chemistry, 2019, 1170, 112643.	2.5	3
90	Dynamic probing of structural evolution for Co50Ni50 metallic glass during pressurized cooling using atomistic simulation. Journal of Molecular Modeling, 2020, 26, 208.	1.8	3

#	Article	IF	Citations
91	Impact of crystallineâ€“amorphous interface on shock response of metallic glass Al90Sm10/crystalline Al nanolaminates. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	3
92	Small-scale deformation behaviour of the AlCoCrFeNi_{2.1} eutectic high entropy alloy. Philosophical Magazine, 2022, 102, 1708-1724.	1.6	3
93	Theoretical study of methanol as inhibitor and cyclopentane as stabilizer of dodecahedron methane hydrate cage. IOP Conference Series: Materials Science and Engineering, 2015, 73, 012081.	0.6	2
94	Influence of Stress on Creep Behavior of Ni60Zr40 Glass-Reinforced Ni Nanocomposite Investigated by Atomistic Simulations. Transactions of the Indian Institute of Metals, 2019, 72, 2783-2791.	1.5	2
95	Optimization between Tundish Temperature and Slab Exit Temperature to Eliminate â€œStrand Stuckâ€Upâ€• Phenomenon in Continuous Casting Process of Steel by Implementation of Multiâ€Objective Evolutionary and Genetic Algorithm. Steel Research International, 2019, 90, 1800506.	1.8	2
96	Study of debonding phenomena at interface and its implication on mechanical behaviour of epoxy-CNT nano-composite using molecular dynamics simulation. Materials Today: Proceedings, 2020, 21, 1111-1115.	1.8	2
97	Investigation of lanthanide complexation with acetohydroxamic acid in nitrate medium: experimental and DFT studies. Journal of Chemical Sciences, 2021, 133, 1.	1.5	2
98	Processing and refinement of steel microstructure images for assisting in computerized heat treatment of plain carbon steel. Journal of Electronic Imaging, 2017, 26, 1.	0.9	2
99	Amorphous Intergranular Film Effect on the Texture and Structural Evolution During Cold-Rolling of Nanocrystalline Niâ€“Zr Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 1025-1034.	2.2	2
100	Restriction of grain growth of nano-crystalline Ni-Zr alloy by Zr atoms segregated at grain boundary under high temperature intermittent stressing. Molecular Simulation, 2019, 45, 1465-1479.	2.0	1
101	Molecular dynamics based study of high temperature deformation process of nanocrystalline Ni-Nb alloy under tensile loading condition. Materials Today: Proceedings, 2019, 11, 740-746.	1.8	1
102	Evaluation of Ni₆₂Nb₃₈ Bimetallic Glass Formation under Hydrostatically Pressurised Quenching. Materials Science Forum, 2020, 978, 436-445.	0.3	1
103	Molecular Dynamics Simulation-Based Investigation of Mechanical Behavior of CNT Embedded Nanocrystalline Al at Cryogenic Temperature. Springer Proceedings in Materials, 2021, , 211-221.	0.3	1
104	Atomistic study of fracture behavior of metallic glass fiber reinforced metal-matrix nanocomposite during bending creep deformation process. International Journal of Materials Research, 2019, 110, 1142-1149.	0.3	1
105	Molecular Dynamics Simulation Based Study of Creep-Ratcheting Behavior of CNT Reinforced Nanocrystalline Aluminum Composite. , 0, , 1.		1
106	Atomistic Insight into the Texture Weakening and Shear-Shuffle Twinning Mechanism During Cold-Rolling of Magnesium. Jom, 2022, 74, 1387-1394.	1.9	1
107	Optimisation of Ferrochrome Addition Using Multi-Objective Evolutionary and Genetic Algorithms for Stainless Steel Making via AOD Converter. IOP Conference Series: Materials Science and Engineering, 2018, 338, 012002.	0.6	0
108	The influence of void and porosity on deformation behaviour of nanocrystalline Ni under tensile followed by compressive loading. IOP Conference Series: Materials Science and Engineering, 2018, 338, 012028.	0.6	0

#	Article	IF	Citations
109	An Image Texture Descriptor based Machine Learning Framework for Prediction of Thermo-Mechanic Heat Treatment Process in Plain Carbon Steel. , 2019, , .		0
110	Influence of specimen size and strain rate on tensile deformation and fracture behavior of single-layer Silicene. Materials Today: Proceedings, 2019, 18, 1401-1410.	1.8	0
111	A Comparative Nanoindentation Study on HEA Coated FCC Metals and Stacking Fault Tetrahedra Evolution in HEA Coated Single Crystal Al: A MD Simulation Study. Springer Proceedings in Materials, 2021, , 325-347.	0.3	0
112	Bi-objective Optimization of Maraging Steel Produced by Vacuum Induction Melting Using Evolutionary Algorithms. Transactions of the Indian Institute of Metals, 2021, 74, 1193-1201.	1.5	0
113	Correlation and Optimization of Phosphorous Content in Liquid Steel with Turndown Temperature and FeO Content in Slag for Steel Making by LD Converter by Implementing Multi-Objective Evolutionary and Genetic Algorithms. Transactions of the Indian Institute of Metals, 2021, 74, 2787-2799.	1.5	0
114	Effect of Niâ€“Nb Metallic Glass on Moderating the Shock Damage in Crystalline Ni-Amorphous Ni62Nb38 Nanocomposite Structure: A Molecular Dynamics Study. Minerals, Metals and Materials Series, 2020, , 909-921.	0.4	0
115	Generative Adversarial Networks for Noise Removal in Plain Carbon Steel Microstructure Images. , 2022, 6, 1-4.		0