

Snehanshu Pal

List of Publications by Year in descending order

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115
papers

1,113
citations

471509

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610901

24
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117
all docs

117
docs citations

117
times ranked

660
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Atomistic Insight into the Texture Weakening and Shear-Shuffle Twinning Mechanism During Cold-Rolling of Magnesium. Jom, 2022, 74, 1387-1394.	1.9	1
3	Amorphous Intergranular Film Effect on the Texture and Structural Evolution During Cold-Rolling of Nanocrystalline Ni-Zr Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 1025-1034.	2.2	2
4	Generative Adversarial Networks for Noise Removal in Plain Carbon Steel Microstructure Images. , 2022, 6, 1-4.		0
5	Small-scale deformation behaviour of the AlCoCrFeNi _{2.1} eutectic high entropy alloy. Philosophical Magazine, 2022, 102, 1708-1724.	1.6	3
6	Improving thermal stability and Hall-Petch breakdown relationship in nanocrystalline Cu: A molecular dynamics simulation study. Materials Letters, 2022, 324, 132821.	2.6	5
7	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
8	Molecular dynamics simulation-based study of creep ratcheting behavior of nanocrystalline aluminum. Applied Nanoscience (Switzerland), 2021, 11, 565-581.	3.1	15
9	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
10	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
11	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
12	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
13	Constant twist rate response of symmetric and asymmetric $\Sigma 5$ aluminium tilt grain boundaries: molecular dynamics study of deformation processes. Journal of Materials Science, 2021, 56, 8544-8562.	3.7	6
14	The spectrum of atomic excess free volume in grain boundaries. Journal of Materials Science, 2021, 56, 11511-11528.	3.7	11
15	Effect of variation in inclination angle of $\Sigma 5$ tilt grain boundary on the shock response of Ni bicrystals. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	4
16	Investigation of lanthanide complexation with acetohydroxamic acid in nitrate medium: experimental and DFT studies. Journal of Chemical Sciences, 2021, 133, 1.	1.5	2
17	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
18	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

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19	Atomistic simulation of crack propagation in CNT reinforced nanocrystalline aluminum under uniaxial tensile loading. Philosophical Magazine, 2021, 101, 1942-1964.	1.6	4
20	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
21	Impact of crystalline-amorphous interface on shock response of metallic glass Al ₉₀ Sm ₁₀ /crystalline Al nanolaminates. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	3
22	Investigation of structural evolution in the Cu-Zr metallic glass at cryogenic temperatures by using molecular dynamics simulations. Journal of Molecular Modeling, 2021, 27, 286.	1.8	8
23	Cold-rolling induced residual stress effect on the shock response of crystalline-metallic glass (Cu-Zr) nanolaminates by molecular dynamics simulation. Materials Chemistry and Physics, 2021, 272, 125010.	4.0	10
24	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
25	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
26	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
27	Dynamic probing of structural evolution for Co ₅₀ Ni ₅₀ metallic glass during pressurized cooling using atomistic simulation. Journal of Molecular Modeling, 2020, 26, 208.	1.8	3
28	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
29	Atomistic Simulation of Nano-Rolling Process for Nanocrystalline Tungsten. Jom, 2020, 72, 3977-3986.	1.9	4
30	A potential insight into the serration behaviour of Σ 3 boundaries in Alloy 617. Materials Chemistry and Physics, 2020, 248, 122919.	4.0	14
31	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
32	Evaluation of Ni ₆₂ Nb ₃₈ Bimetallic Glass Formation under Hydrostatically Pressurised Quenching. Materials Science Forum, 2020, 978, 436-445.	0.3	1
33	Atomistic investigation of mechanical behavior for CNT reinforced nanocrystalline aluminum under biaxial tensile loading. Materials Today: Proceedings, 2020, 33, 4942-4950.	1.8	7
34	Zr segregation in Ni-Zr alloy: implication on deformation mechanism during shear loading and bending creep. Journal of Materials Science, 2020, 55, 6172-6186.	3.7	5
35	Accumulative roll bonding of Cu-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
36	Effect of Ni-Nb Metallic Glass on Moderating the Shock Damage in Crystalline Ni-Amorphous Ni ₆₂ Nb ₃₈ Nanocomposite Structure: A Molecular Dynamics Study. Minerals, Metals and Materials Series, 2020, , 909-921.	0.4	0

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37	Molecular Dynamics Simulation Study of Uniaxial Ratcheting Behaviors for Ultrafine-Grained Nanocrystalline Nickel. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 4918-4930.	2.5	12
38	Nano-rolling: Roller Speed-Dependent Morphological Evolution and Mechanical Properties Enhancement in Nanoscale Mg. <i>Jom</i> , 2019, 71, 3407-3416.	1.9	6
39	Molecular dynamics simulation based investigation of strain induced crystallization of nickel metallic glass. <i>Materials Chemistry and Physics</i> , 2019, 237, 121831.	4.0	8
40	On the role of Cu-Zr amorphous intergranular films on crack growth retardation in nanocrystalline Cu during monotonic and cyclic loading conditions. <i>Computational Materials Science</i> , 2019, 169, 109122.	3.0	16
41	Atomistic investigation of the deformation mechanisms in nanocrystalline Cu with amorphous intergranular films. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	8
42	Intensification of shock damage through heterogeneous phase transition and dislocation loop formation due to presence of pre-existing line defects in single crystal Cu. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	4
43	An Image Texture Descriptor based Machine Learning Framework for Prediction of Thermo-Mechanic Heat Treatment Process in Plain Carbon Steel. , 2019, , .		0
44	Quantum chemical calculation based investigation of synergistic chelating between multiple hydroxyamide ligands and La ³⁺ ion. <i>Computational and Theoretical Chemistry</i> , 2019, 1170, 112643.	2.5	3
45	Restriction of grain growth of nano-crystalline Ni-Zr alloy by Zr atoms segregated at grain boundary under high temperature intermittent stressing. <i>Molecular Simulation</i> , 2019, 45, 1465-1479.	2.0	1
46	Computer vision approach for phase identification from steel microstructure. <i>Engineering Computations</i> , 2019, 36, 1913-1933.	1.4	10
47	Investigation of reorganization of a nanocrystalline grain boundary network during biaxial creep deformation of nanocrystalline Ni using molecular dynamics simulation. <i>Journal of Molecular Modeling</i> , 2019, 25, 282.	1.8	7
48	Deep learning approach for segmentation of plain carbon steel microstructure images. <i>IET Image Processing</i> , 2019, 13, 1516-1524.	2.5	11
49	Molecular dynamics based study of high temperature deformation process of nanocrystalline Ni-Nb alloy under tensile loading condition. <i>Materials Today: Proceedings</i> , 2019, 11, 740-746.	1.8	1
50	Influence of specimen size and strain rate on tensile deformation and fracture behavior of single-layer Silicene. <i>Materials Today: Proceedings</i> , 2019, 18, 1401-1410.	1.8	0
51	Dynamic formation and destruction process of stacking fault tetrahedra in single-crystal Ni during nanoscale cryo-rolling. <i>Philosophical Magazine Letters</i> , 2019, 99, 253-260.	1.2	10
52	Influence of Stress on Creep Behavior of Ni60Zr40 Glass-Reinforced Ni Nanocomposite Investigated by Atomistic Simulations. <i>Transactions of the Indian Institute of Metals</i> , 2019, 72, 2783-2791.	1.5	2
53	Dynamic Probing of Structural Evolution of Single Crystal Fe during Rolling Process Using Atomistic Simulation. <i>Steel Research International</i> , 2019, 90, 1800636.	1.8	12
54	Structural evolution and dislocation behaviour during nano-rolling process of FCC metals: A molecular dynamics simulation based investigation. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	11

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55	Optimization between Tundish Temperature and Slab Exit Temperature to Eliminate “Strand Stuck” Phenomenon in Continuous Casting Process of Steel by Implementation of Multi-Objective Evolutionary and Genetic Algorithm. <i>Steel Research International</i> , 2019, 90, 1800506.	1.8	2
56	Structure prediction of multi-principal element alloys using ensemble learning. <i>Engineering Computations</i> , 2019, 37, 1003-1022.	1.4	21
57	Influence of dislocation density and grain size on precipitation kinetics on P92 grade steel. <i>Materials Today: Proceedings</i> , 2019, 18, 1364-1374.	1.8	8
58	A 3D Wide Residual Network with Perceptual Loss for Brain MRI Image Denoising. , 2019, , .		8
59	Dislocation Interaction and V-Shaped Growth of the Distorted Structure During Nanoindentation of Cu ₂₀ Ni ₂₀ Al ₂₀ Co ₂₀ Fe ₂₀ (high-entropy alloy)-Coated Copper: A Molecular Dynamics Simulation-Based Study. <i>Transactions of the Indian Institute of Metals</i> , 2019, 72, 167-180.	1.5	14
60	Evaluation of glass forming ability of Zr–Nb alloy systems through liquid fragility and Voronoi cluster analysis. <i>Computational Materials Science</i> , 2019, 158, 324-332.	3.0	17
61	Structural evolution and dislocation behaviour study during nanoindentation of Mo ₂₀ W ₂₀ Co ₂₀ Ta ₂₀ Zr ₂₀ high entropy alloy coated Ni single crystal using molecular dynamic simulation. <i>Molecular Simulation</i> , 2019, 45, 572-584.	2.0	18
62	Dynamic characterization of shock response in crystalline-metallic glass nanolaminates. <i>Acta Materialia</i> , 2019, 164, 347-361.	7.9	48
63	Atomistic study of fracture behavior of metallic glass fiber reinforced metal-matrix nanocomposite during bending creep deformation process. <i>International Journal of Materials Research</i> , 2019, 110, 1142-1149.	0.3	1
64	Effect of grain boundary complexions on the deformation behavior of Ni bicrystal during bending creep. <i>Journal of Molecular Modeling</i> , 2018, 24, 87.	1.8	9
65	Effect of Thermal cycles and Dimensions of the Geometry on Residual stress of the Alumina-Kovar Joint. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 338, 012001.	0.6	3
66	Stress-induced solid-state amorphization of nanocrystalline Ni and NiZr investigated by atomistic simulations. <i>Journal of Applied Physics</i> , 2018, 123, 044306.	2.5	15
67	Influence of Grain Boundary Complexion on Deformation Mechanism of High Temperature Bending Creep Process of Cu Bicrystal. <i>Transactions of the Indian Institute of Metals</i> , 2018, 71, 1721-1734.	1.5	12
68	Optimisation of Ferrochrome Addition Using Multi-Objective Evolutionary and Genetic Algorithms for Stainless Steel Making via AOD Converter. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 338, 012002.	0.6	0
69	DFT Studies on Interaction between Lanthanum and Hydroxyamide. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 338, 012025.	0.6	5
70	The influence of void and porosity on deformation behaviour of nanocrystalline Ni under tensile followed by compressive loading. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 338, 012028.	0.6	0
71	Influence of dislocations, twins, and stacking faults on the fracture behavior of nanocrystalline Ni nanowire under constant bending load: a molecular dynamics study. <i>Journal of Molecular Modeling</i> , 2018, 24, 277.	1.8	17
72	Analysis of deformation behaviour of Al–Ni–Co thin film coated aluminium during nano-indentation: a molecular dynamics study. <i>Molecular Simulation</i> , 2018, 44, 1393-1401.	2.0	21

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73	On the comparison of interrupted and continuous creep behaviour of nanocrystalline copper: A molecular dynamics approach. <i>Materials Letters</i> , 2018, 229, 256-260.	2.6	12
74	Variation of glass transition temperature of Al90Sm10 metallic glass under pressurized cooling. <i>Journal of Non-Crystalline Solids</i> , 2018, 500, 249-259.	3.1	18
75	Data-Driven Bi-Objective Genetic Algorithms EvoNN Applied to Optimize Dephosphorization Process during Secondary Steel Making Operation for Producing LPG (Liquid Petroleum Gas Cylinder) Grade of Steel. <i>Steel Research International</i> , 2018, 89, 1800095.	1.8	4
76	Atomistic simulation study of influence of Al ₂ O ₃ -Al interface on dislocation interaction and prismatic loop formation during nano-indentation on Al ₂ O ₃ -coated aluminum. <i>Journal of Molecular Modeling</i> , 2018, 24, 167.	1.8	8
77	Exponential linear unit dilated residual network for digital image denoising. <i>Journal of Electronic Imaging</i> , 2018, 27, 1.	0.9	4
78	Influence of Carbon Equivalent Content on Phase Transformation During Inter-critical Heating of Dual Phase Steels Using Discrete Micro-scale Cellular Automata Model. <i>Transactions of the Indian Institute of Metals</i> , 2017, 70, 909-915.	1.5	6
79	Healing mechanism of nanocrack in nanocrystalline metals during creep process. <i>Applied Physics A: Materials Science and Processing</i> , 2017, 123, 1.	2.3	11
80	Mechanistic study of bending creep behaviour of bicrystal nanobeam. <i>Computational Materials Science</i> , 2017, 136, 36-43.	3.0	18
81	Experimental and Theoretical Studies on the Viscosity-Structure Correlation for High Alumina-Silicate Melts. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 1450-1462.	2.1	37
82	Effect of temperature and stress on creep behavior of ultrafine grained nanocrystalline Ni-3 at% Zr alloy. <i>Metals and Materials International</i> , 2017, 23, 272-282.	3.4	6
83	Prediction of Nitrogen Content of Steel Melt during Stainless Steel Making Using AOD Converter. <i>Steel Research International</i> , 2017, 88, 1600271.	1.8	6
84	Nano-scale simulation based study of creep behavior of bimodal nanocrystalline face centered cubic metal. <i>Journal of Molecular Modeling</i> , 2017, 23, 309.	1.8	14
85	Influence of Asymmetric Cyclic Loading on Structural Evolution and Deformation Behavior of Cu-5 at.% Zr Alloy: An Atomistic Simulation-Based Study. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 5197-5205.	2.5	3
86	AA6082 to DX56-Steel Laser Brazing: Process Parameter-Intermetallic Formation Correlation. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 4274-4281.	2.5	4
87	Presence of retained crystalline seed necessary for bicrystal-liquid-bicrystal phase transformation. <i>Journal of Crystal Growth</i> , 2017, 475, 307-315.	1.5	4
88	Contribution of Nb towards enhancement of glass forming ability and plasticity of Ni-Nb binary metallic glass. <i>Journal of Non-Crystalline Solids</i> , 2017, 471, 243-250.	3.1	35
89	Effect of Zr addition on creep properties of ultra-fine grained nanocrystalline Ni studied by molecular dynamics simulations. <i>Computational Materials Science</i> , 2017, 126, 382-392.	3.0	32
90	Optimization of Phosphorous in Steel Produced by Basic Oxygen Steel Making Process Using Multi-Objective Evolutionary and Genetic Algorithms. <i>Steel Research International</i> , 2017, 88, 1600193.	1.8	18

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91	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
92	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
93	Deformation of Ni ₂₀ W ₂₀ Cu ₂₀ Fe ₂₀ Mo ₂₀ high 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
94	Molecular dynamics based cohesive zone modeling of Al (metal)â€“Cu ₅₀ Zr ₅₀ (metallic glass) interfacial mechanical behavior and investigation of dissipative mechanisms. Materials and Design, 2016, 105, 41-50.	7.0	55
95	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
96	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
97	Effect of Basicity, Al ₂ O ₃ and MgO content on the softening and melting properties of the CaO-MgO-SiO ₂ -Al ₂ O ₃ high alumina quaternary slag system. Metallurgical Research and Technology, 2016, 113, 501.	0.7	8
98	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
99	Electrophoretic Deposition of Cu-SiO ₂ Coatings by DC and Pulsed DC for Enhanced Surface-Mechanical Properties. Journal of Materials Engineering and Performance, 2016, 25, 327-337.	2.5	11
100	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
101	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
102	Surface-Mechanical Properties of Electrodeposited Cu-Al ₂ O ₃ Composite Coating and Effects of Processing Parameters. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 388-399.	2.2	21
103	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
104	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
105	Synthesis and Characterization of W ₈₀ Ni ₁₀ Mo ₁₀ alloy produced by mechanical alloying. IOP Conference Series: Materials Science and Engineering, 2015, 75, 012032.	0.6	4
106	Racheting Behaviour of Copper Nano-Wire by Classical Molecular Dynamics Simulations. Journal of Computational and Theoretical Nanoscience, 2015, 12, 2264-2267.	0.4	4
107	Mechanical Behaviour of Cuâ€“Zrâ€“Al Glassy Nano-Wires. Journal of Computational and Theoretical Nanoscience, 2015, 12, 2332-2338.	0.4	4
108	Design of Methane Hydrate Inhibitor Molecule Using Density Functional Theory. Journal of Cluster Science, 2015, 26, 551-563.	3.3	4

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109	Asymmetry in steel welds with dissimilar amounts of sulfur. Scripta Materialia, 2015, 108, 88-91.	5.2	19
110	Pentagonal dodecahedron methane hydrate cage and methanol system " An ab initio study. Journal of Chemical Sciences, 2013, 125, 379-385.	1.5	14
111	DFT-based inhibitor and promoter selection criteria for pentagonal dodecahedron methane hydrate cage. Journal of Chemical Sciences, 2013, 125, 1259-1266.	1.5	13
112	Stability Analysis and Frontier Orbital Study of Different Glycol and Water Complex. , 2013, 2013, 1-16.		17
113	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
114	Theoretical Study of Hydrogen Bond Formation in Trimethylene Glycol-Water Complex. , 2012, 2012, 1-12.		13
115	Molecular Dynamics Simulation Based Study of Creep-Ratcheting Behavior of CNT Reinforced Nanocrystalline Aluminum Composite. , 0, , 1.		1