

## List of Publications by Citations

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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.

59 papers	1,419 citations	18 h-index	37 g-index
66 ext. papers	1,989 ext. citations	8.4 avg, IF	5.1 L-index

#	Paper	IF	Citations
59	Extra strengthening and work hardening in gradient nanotwinned metals. <i>Science</i> , <b>2018</b> , 362,	33.3	237
58	History-independent cyclic response of nanotwinned metals. <i>Nature</i> , <b>2017</b> , 551, 214-217	50.4	136
57	Self-powered soft robot in the Mariana Trench. <i>Nature</i> , <b>2021</b> , 591, 66-71	50.4	131
56	Mechanical properties and optimal grain size distribution profile of gradient grained nickel. <i>Acta Materialia</i> , <b>2018</b> , 153, 279-289	8.4	88
55	An atomistic investigation of structural evolution in metallic glass matrix composites. <i>International Journal of Plasticity</i> , <b>2013</b> , 44, 147-160	7.6	81
54	A jogged dislocation governed strengthening mechanism in nanotwinned metals. <i>Nano Letters</i> , <b>2014</b> , 14, 5075-80	11.5	74
53	Origin of anomalous inverse notch effect in bulk metallic glasses. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2015</b> , 84, 85-94	5	56
52	Non-localized deformation in metallic alloys with amorphous structure. <i>Acta Materialia</i> , <b>2014</b> , 68, 32-41	8.4	54
51	Toughening by nano-scaled twin boundaries in nanocrystals. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2010</b> , 18, 065002	2	53
50	The effect of nanoscale twin boundaries on fracture toughness in nanocrystalline Ni. <i>Nanotechnology</i> , <b>2010</b> , 21, 035706	3.4	53
49	Size effects on tensile and compressive strengths in metallic glass nanowires. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2015</b> , 84, 130-144	5	48
48	A physically based visco-hyperelastic constitutive model for soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2019</b> , 128, 208-218	5	37
47	Processing effects on fracture toughness of metallic glasses. <i>Scripta Materialia</i> , <b>2017</b> , 130, 152-156	5.6	33
46	Test sample geometry for fracture toughness measurements of bulk metallic glasses. <i>Acta Materialia</i> , <b>2018</b> , 145, 477-487	8.4	33
45	Strain localization and fatigue cracking behaviors of Cu bicrystal with an inclined twin boundary. <i>Acta Materialia</i> , <b>2014</b> , 73, 167-176	8.4	31
44	Hardening by twin boundary during nanoindentation in nanocrystals. <i>Nanotechnology</i> , <b>2010</b> , 21, 335704	3.4	26
43	Metallic nanocrystals with low angle grain boundary for controllable plastic reversibility. <i>Nature Communications</i> , <b>2020</b> , 11, 3100	17.4	22

42	Machine learning-assisted discovery of strong and conductive Cu alloys: Data mining from discarded experiments and physical features. <i>Materials and Design</i> , <b>2021</b> , 197, 109248	8.1	18
41	A Review of Physically Based and Thermodynamically Based Constitutive Models for Soft Materials. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2020</b> , 87,	2.7	16
40	Torsional Detwinning Domino in Nanotwinned One-Dimensional Nanostructures. <i>Nano Letters</i> , <b>2015</b> , 15, 6082-7	11.5	15
39	Revealing extreme twin-boundary shear deformability in metallic nanocrystals. <i>Science Advances</i> , <b>2021</b> , 7, eabe4758	14.3	14
38	A Plastic Deformation Mechanism by Necklace Dislocations Near Crack-like Defects in Nanotwinned Metals. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2015</b> , 82,	2.7	13
37	Can nanoscale twin boundaries serve as dislocation sources in single crystals?. <i>Computational Materials Science</i> , <b>2011</b> , 50, 1567-1570	3.2	12
36	A constitutive model for multi network elastomers pre-stretched by swelling. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 40, 100926	3.9	11
35	Transition from source- to stress-controlled plasticity in nanotwinned materials below a softening temperature. <i>Npj Computational Materials</i> , <b>2019</b> , 5,	10.9	11
34	Effective design space exploration of gradient nanostructured materials using active learning based surrogate models. <i>Materials and Design</i> , <b>2019</b> , 183, 108085	8.1	10
33	Asymmetric cyclic response of tensile pre-deformed Cu with highly oriented nanoscale twins. <i>Acta Materialia</i> , <b>2019</b> , 175, 477-486	8.4	8
32	Atomistic mechanisms of microstructure evolution in nanotwinned polycrystals. <i>Scripta Materialia</i> , <b>2011</b> , 65, 265-268	5.6	8
31	Shear band initiation induced by slip-twin boundary interactions. <i>Scripta Materialia</i> , <b>2011</b> , 65, 715-718	5.6	8
30	Pressure-induced maximum shear strength and transition from shear banding to uniform plasticity in metallic glass. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 41, 101058	3.9	7
29	Temperature effect on critical shear stress for twin boundary migration. <i>Computational Materials Science</i> , <b>2012</b> , 60, 231-233	3.2	6
28	Bistable rotating mechanism based on dielectric elastomer actuator. <i>Smart Materials and Structures</i> , <b>2020</b> , 29, 015008	3.4	6
27	Size-dependent inertial cavitation of soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 137, 103859	5	6
26	Role of intersecting grain boundary on the deformation of twin-twin intersection. <i>Scripta Materialia</i> , <b>2020</b> , 188, 184-189	5.6	6
25	Blocking effect of twin boundaries on partial dislocation emission from void surfaces. <i>Nanoscale Research Letters</i> , <b>2012</b> , 7, 164	5	5

24	Anisotropy governs strain stiffening in nanotwinned-materials. <i>Nature Communications</i> , <b>2018</b> , 9, 1586	17.4	4
23	Shear band mediated $\beta$ -phase transformation in Nb single crystals deformed at 77 K. <i>Materials Research Letters</i> , <b>2021</b> , 9, 523-530	7.4	4
22	Penta-Twin Destruction by Coordinated Twin Boundary Deformation. <i>Nano Letters</i> , <b>2021</b> , 21, 8378-8384	11.5	4
21	Correlated necklace dislocations in highly oriented nanotwinned metals. <i>Journal of Zhejiang University: Science A</i> , <b>2020</b> , 21, 294-303	2.1	3
20	Molecular Dynamics Simulation of the Interaction Between Nanoscale Twin Boundaries and Partial Dislocations. <i>Journal of Computational and Theoretical Nanoscience</i> , <b>2010</b> , 7, 1931-1934	0.3	3
19	Coordinated grain boundary deformation governed nanograin annihilation in shear cycling. <i>Journal of Materials Science and Technology</i> , <b>2021</b> , 86, 180-191	9.1	3
18	Predicting the property contour-map and optimum composition of Cu-Co-Si alloys via machine learning. <i>Materials Today Communications</i> , <b>2022</b> , 30, 103138	2.5	2
17	Twinning-assisted dynamic adjustment of grain boundary mobility. <i>Nature Communications</i> , <b>2021</b> , 12, 6695	17.4	2
16	Unraveling the origin of stress-dependent glass transition temperature in metallic glasses. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 137, 103853	5	2
15	Physically Based Modeling of Cyclic Plasticity for Highly Oriented Nanotwinned Metals. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2021</b> , 88,	2.7	2
14	Extra plasticity governed by shear band deflection in gradient metallic glasses.. <i>Nature Communications</i> , <b>2022</b> , 13, 2120	17.4	2
13	BioARS: Designing Adaptive and Reconfigurable Bionic Assembly Robotic System with Inchworm Modules <b>2020</b> ,		1
12	A gradient Eshelby force on twinning partial dislocations and associated detwinning mechanism in gradient nanotwinned metals. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2022</b> , 159, 104746	5	1
11	A geometrical model for grain boundary migration mediated formation of multifold twins. <i>International Journal of Plasticity</i> , <b>2022</b> , 148, 103128	7.6	1
10	Mechanical Properties of Nanostructured Metals: Molecular Dynamics Studies <b>2019</b> , 591-613		1
9	Origin of different thermal cycling effects in Fe <sub>80</sub> P <sub>20</sub> and Ni <sub>60</sub> Nb <sub>40</sub> metallic glasses. <i>Materials Today Physics</i> , <b>2021</b> , 17, 100349	8	1
8	Mechanical Properties of Nanostructured Metals: Molecular Dynamics Studies <b>2018</b> , 1-23		1
7	Tailoring microstructure of metallic glass for delocalized plasticity by pressure annealing: Forward and inverse studies. <i>Acta Materialia</i> , <b>2021</b> , 220, 117282	8.4	1

6	Annihilation Mechanism of Low-Angle Grain Boundary in Nanocrystalline Metals. <i>Metals</i> , <b>2022</b> , 12, 451	2.3	1
5	Physically-based interpretation of abnormal stress relaxation response in glassy polymers. <i>Extreme Mechanics Letters</i> , <b>2022</b> , 52, 101667	3.9	1
4	Interactions between Dislocations and Penta-Twins in Metallic Nanocrystals. <i>Metals</i> , <b>2021</b> , 11, 1775	2.3	0
3	Impact-induced bubble interactions and coalescence in soft materials. <i>International Journal of Solids and Structures</i> , <b>2022</b> , 238, 111387	3.1	0
2	Inclination-governed deformation of dislocation-type grain boundaries. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 1306-1315	2.5	0
1	Modeling for Cyclic Plasticity of Gradient Nanostructured Metals and Fatigue Life Prediction. <i>International Journal of Applied Mechanics</i> , <b>2021</b> , 13, 2150021	2.4	