

# Jian Wang

## List of Publications by Citations

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319  
ext. papers

26,729  
ext. citations

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L-index

#	Paper	IF	Citations
311	Cobalt nanocrystals on graphene as a synergistic catalyst for oxygen reduction reaction. <i>Nature Materials</i> , <b>2011</b> , 10, 780-6	27	4565
310	Indium phosphide nanowires as building blocks for nanoscale electronic and optoelectronic devices. <i>Nature</i> , <b>2001</b> , 409, 66-9	50.4	2992
309	Highly polarized photoluminescence and photodetection from single indium phosphide nanowires. <i>Science</i> , <b>2001</b> , 293, 1455-7	33.3	1553
308	Covalent hybrid of spinel manganese-cobalt oxide and graphene as advanced oxygen reduction electrocatalysts. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 3517-23	16.4	1129
307	Detwinning mechanisms for growth twins in face-centered cubic metals. <i>Acta Materialia</i> , <b>2010</b> , 58, 2262-2270	8.4	393
306	An overview of interface-dominated deformation mechanisms in metallic multilayers. <i>Current Opinion in Solid State and Materials Science</i> , <b>2011</b> , 15, 20-28	12	323
305	A crystal plasticity model for hexagonal close packed (HCP) crystals including twinning and de-twinning mechanisms. <i>International Journal of Plasticity</i> , <b>2013</b> , 49, 36-52	7.6	302
304	(10012) Twinning nucleation mechanisms in hexagonal-close-packed crystals. <i>Acta Materialia</i> , <b>2009</b> , 57, 5521-5530	8.4	283
303	An atomic and probabilistic perspective on twin nucleation in Mg. <i>Scripta Materialia</i> , <b>2010</b> , 63, 741-746	5.6	244
302	High-strength and thermally stable bulk nanolayered composites due to twin-induced interfaces. <i>Nature Communications</i> , <b>2013</b> , 4, 1696	17.4	238
301	Atomistic modeling of the interaction of glide dislocations with weak interfaces. <i>Acta Materialia</i> , <b>2008</b> , 56, 5685-5693	8.4	216
300	Twin-twin interactions in magnesium. <i>Acta Materialia</i> , <b>2014</b> , 77, 28-42	8.4	190
299	Theory of Elasticity at the Nanoscale. <i>Advances in Applied Mechanics</i> , <b>2009</b> , 42, 1-68	10	187
298	Atomistic simulations of the shear strength and sliding mechanisms of copper-bismuth interfaces. <i>Acta Materialia</i> , <b>2008</b> , 56, 3109-3119	8.4	187
297	Radiation damage in nanostructured materials. <i>Progress in Materials Science</i> , <b>2018</b> , 96, 217-321	42.2	178
296	Outstanding tensile properties of a precipitation-strengthened FeCoNiCrTi0.2 high-entropy alloy at room and cryogenic temperatures. <i>Acta Materialia</i> , <b>2019</b> , 165, 228-240	8.4	178
295	Interface defects, reference spaces and the Frank-Bilby equation. <i>Progress in Materials Science</i> , <b>2013</b> , 58, 749-823	42.2	169

294	Strength and plasticity of nanolaminated materials. <i>Materials Research Letters</i> , <b>2017</b> , 5, 1-19	7.4	168
293	Twinning dislocation multiplication at a coherent twin boundary. <i>Acta Materialia</i> , <b>2011</b> , 59, 5989-5996	8.4	166
292	A constitutive model of twinning and detwinning for hexagonal close packed polycrystals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2012</b> , 555, 93-98	5.3	164
291	Nucleation of a (10012) twin in hexagonal close-packed crystals. <i>Scripta Materialia</i> , <b>2009</b> , 61, 903-906	5.6	162
290	Why are {1010} twins profuse in magnesium?. <i>Acta Materialia</i> , <b>2015</b> , 85, 354-361	8.4	148
289	Pure-Shuffle Nucleation of Deformation Twins in Hexagonal-Close-Packed Metals. <i>Materials Research Letters</i> , <b>2013</b> , 1, 126-132	7.4	146
288	Twinning and De-twinning via Glide and Climb of Twinning Dislocations along Serrated Coherent Twin Boundaries in Hexagonal-close-packed Metals. <i>Materials Research Letters</i> , <b>2013</b> , 1, 81-88	7.4	143
287	Twinning dislocations on {10011} and {10013} planes in hexagonal close-packed crystals. <i>Acta Materialia</i> , <b>2011</b> , 59, 3990-4001	8.4	140
286	Twinning-like lattice reorientation without a crystallographic twinning plane. <i>Nature Communications</i> , <b>2014</b> , 5, 3297	17.4	128
285	Growth of Y-shaped nanorods through physical vapor deposition. <i>Nano Letters</i> , <b>2005</b> , 5, 2505-8	11.5	126
284	Reactions of lattice dislocations with grain boundaries in Mg: Implications on the micro scale from atomic-scale calculations. <i>International Journal of Plasticity</i> , <b>2014</b> , 56, 156-172	7.6	125
283	Shockley partial dislocations to twin: Another formation mechanism and generic driving force. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 5983-5985	3.4	122
282	Dislocation structures of $\Sigma$ {112} twin boundaries in face centered cubic metals. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 021908	3.4	119
281	Modeling inelastic behavior of magnesium alloys during cyclic loading/unloading. <i>International Journal of Plasticity</i> , <b>2013</b> , 47, 49-64	7.6	118
280	Emergence of stable interfaces under extreme plastic deformation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 4386-90	11.5	111
279	Realizing strength-ductility combination of coarse-grained Al <sub>0.2</sub> Co <sub>1.5</sub> CrFeNi <sub>1.5</sub> Ti <sub>0.3</sub> alloy via nano-sized, coherent precipitates. <i>International Journal of Plasticity</i> , <b>2018</b> , 100, 177-191	7.6	110
278	Structure-Property-Functionality of Bimetal Interfaces. <i>Jom</i> , <b>2012</b> , 64, 1192-1207	2.1	110
277	Novel deformation mechanism of twinned nanowires. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 203112	3.4	109

276	Atomic structures of symmetric tilt grain boundaries in hexagonal close packed (hcp) crystals. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2012</b> , 20, 024002	2	107
275	Interface-driven microstructure development and ultra high strength of bulk nanostructured Cu-Nb multilayers fabricated by severe plastic deformation. <i>Journal of Materials Research</i> , <b>2013</b> , 28, 1799-1812	2.5	106
274	Atomic-scale study of nucleation of dislocations from fcc/bcc interfaces. <i>Acta Materialia</i> , <b>2012</b> , 60, 2855-2865	2.5	106
273	Disconnections and other defects associated with twin interfaces. <i>Progress in Materials Science</i> , <b>2016</b> , 83, 417-471	42.2	105
272	The influence of interface shear strength on the glide dislocation-interface interactions. <i>Acta Materialia</i> , <b>2011</b> , 59, 3164-3173	8.4	104
271	Precipitation strengthening of ductile Cr 15 Fe 20 Co 35 Ni 20 Mo 10 alloys. <i>Scripta Materialia</i> , <b>2017</b> , 137, 88-93	5.6	103
270	Growth, defect formation, and morphology control of germanium-silicon semiconductor nanowire heterostructures. <i>Nano Letters</i> , <b>2011</b> , 11, 4200-6	11.5	103
269	Dislocation nucleation mechanisms from fcc/bcc incoherent interfaces. <i>Scripta Materialia</i> , <b>2011</b> , 65, 1022-1025	5.1025	102
268	High resolution transmission electron microscope observation of zero-strain deformation twinning mechanisms in Ag. <i>Physical Review Letters</i> , <b>2011</b> , 106, 175504	7.4	102
267	One-step synthesis of Mn <sub>3</sub> O <sub>4</sub> /reduced graphene oxide nanocomposites for oxygen reduction in nonaqueous Li-O <sub>2</sub> batteries. <i>Chemical Communications</i> , <b>2013</b> , 49, 10838-40	5.8	100
266	Shear response of $\Sigma$ {112} twin boundaries in face-centered-cubic metals. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	98
265	Interface dislocation patterns and dislocation nucleation in face-centered-cubic and body-centered-cubic bicrystal interfaces. <i>International Journal of Plasticity</i> , <b>2014</b> , 53, 40-55	7.6	93
264	Slip transmission across fcc/bcc interfaces with varying interface shear strengths. <i>Acta Materialia</i> , <b>2012</b> , 60, 1503-1513	8.4	93
263	Influence of slip transmission on the migration of incoherent twin boundaries in epitaxial nanotwinned Cu. <i>Scripta Materialia</i> , <b>2011</b> , 64, 149-152	5.6	93
262	Molecular dynamics simulations of plastic deformation in Nb/NbC multilayers. <i>International Journal of Plasticity</i> , <b>2014</b> , 59, 119-132	7.6	89
261	Double twinning mechanisms in magnesium alloys via dissociation of lattice dislocations. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2012</b> , 468, 1496-1520	2.4	89
260	Plastic flow stability of nanotwinned Cu foils. <i>International Journal of Plasticity</i> , <b>2010</b> , 26, 875-886	7.6	89
259	Plastic instability mechanisms in bimetallic nanolayered composites. <i>Acta Materialia</i> , <b>2014</b> , 79, 282-291	8.4	86

258	Strain hardening in nanolayered thin films. <i>Current Opinion in Solid State and Materials Science</i> , <b>2014</b> , 18, 19-28	12	86
257	Spiral patterns of dislocations at nodes in (111) semi-coherent FCC interfaces. <i>Scientific Reports</i> , <b>2013</b> , 3, 2448	4.9	85
256	Study of lattice strains in magnesium alloy AZ31 based on a large strain elastic-viscoplastic self-consistent polycrystal model. <i>International Journal of Solids and Structures</i> , <b>2012</b> , 49, 2155-2167	3.1	84
255	Deformation twinning mechanisms from bimetal interfaces as revealed by in situ straining in the TEM. <i>Acta Materialia</i> , <b>2012</b> , 60, 5858-5866	8.4	83
254	Direct observations of confined layer slip in Cu/Nb multilayers. <i>Microscopy and Microanalysis</i> , <b>2012</b> , 18, 1155-62	0.5	83
253	In situ nanoindentation study on plasticity and work hardening in aluminium with incoherent twin boundaries. <i>Nature Communications</i> , <b>2014</b> , 5, 4864	17.4	81
252	Interface structure and the inception of plasticity in Nb/NbC nanolayered composites. <i>Acta Materialia</i> , <b>2015</b> , 86, 331-340	8.4	80
251	Rolling-induced Face Centered Cubic Titanium in Hexagonal Close Packed Titanium at Room Temperature. <i>Scientific Reports</i> , <b>2016</b> , 6, 24370	4.9	79
250	Mapping dislocation nucleation behavior from bimetal interfaces. <i>Acta Materialia</i> , <b>2013</b> , 61, 7488-7499	8.4	79
249	Damage-tolerant nanotwinned metals with nanovoids under radiation environments. <i>Nature Communications</i> , <b>2015</b> , 6, 7036	17.4	79
248	In situ TEM observations of room temperature dislocation climb at interfaces in nanolayered Al/Nb composites. <i>Scripta Materialia</i> , <b>2010</b> , 63, 363-366	5.6	76
247	3D printing of hybrid MoS <sub>2</sub> -graphene aerogels as highly porous electrode materials for sodium ion battery anodes. <i>Materials and Design</i> , <b>2019</b> , 170, 107689	8.1	75
246	First-principles study of energy and atomic solubility of twinning-associated boundaries in hexagonal metals. <i>Acta Materialia</i> , <b>2015</b> , 85, 144-154	8.4	75
245	Co-zone {10012} Twin Interaction in Magnesium Single Crystal. <i>Materials Research Letters</i> , <b>2014</b> , 2, 82-88	7.4	75
244	Strength and ductility of CrFeCoNiMo alloy with hierarchical microstructures. <i>International Journal of Plasticity</i> , <b>2019</b> , 113, 255-268	7.6	75
243	Interface-facilitated deformation twinning in copper within submicron AgCu multilayered composites. <i>Scripta Materialia</i> , <b>2011</b> , 64, 1083-1086	5.6	74
242	Stress and strain relaxation in magnesium AZ31 rolled plate: In-situ neutron measurement and elastic viscoplastic polycrystal modeling. <i>International Journal of Plasticity</i> , <b>2016</b> , 79, 275-292	7.6	73
241	Atomic-scale understanding of stress-induced phase transformation in cold-rolled Hf. <i>Acta Materialia</i> , <b>2017</b> , 131, 271-279	8.4	72

240	Atomic-level study of twin nucleation from face-centered-cubic/body-centered-cubic interfaces in nanolamellar composites. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 011911	3.4	71
239	Role of interface structure on the plastic response of Cu/Nb nanolaminates under shock compression: Non-equilibrium molecular dynamics simulations. <i>Scripta Materialia</i> , <b>2013</b> , 68, 114-117	5.6	70
238	Direct measurement of coherency limits for strain relaxation in heteroepitaxial core/shell nanowires. <i>Nano Letters</i> , <b>2013</b> , 13, 1869-76	11.5	69
237	Glide dislocation nucleation from dislocation nodes at semi-coherent $\{1\ 1\ 1\}$ Cu/Ni interfaces. <i>Acta Materialia</i> , <b>2015</b> , 98, 206-220	8.4	67
236	Mechanics of nanoscale metallic multilayers: From atomic-scale to micro-scale. <i>Scripta Materialia</i> , <b>2009</b> , 60, 1067-1072	5.6	67
235	Atomic Structures of $([0\bar{1}1]0)$ Symmetric Tilt Grain Boundaries in Hexagonal Close-Packed (hcp) Crystals. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2012</b> , 43, 3556-3569	2.3	65
234	In situ nanoindentation study of plastic co-deformation in Al-TiN nanocomposites. <i>Scientific Reports</i> , <b>2014</b> , 4, 6633	4.9	63
233	Single crystalline nanostructures of topological crystalline insulator SnTe with distinct facets and morphologies. <i>Nano Letters</i> , <b>2013</b> , 13, 5443-8	11.5	63
232	Nucleation of elementary $\{\bar{1},0,1,1\}$ and $\{\bar{1},0,1,3\}$ twinning dislocations at a twin boundary in hexagonal close-packed crystals. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2012</b> , 20, 024001	2	63
231	Atomic structure variations of mechanically stable fcc-bcc interfaces. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 053531	2.5	62
230	High-Strength Nanotwinned Al Alloys with 9R Phase. <i>Advanced Materials</i> , <b>2018</b> , 30, 1704629	24	60
229	Experimentally quantifying critical stresses associated with basal slip and twinning in magnesium using micropillars. <i>Acta Materialia</i> , <b>2017</b> , 135, 411-421	8.4	59
228	Characterizing interface dislocations by atomically informed Frank-Bilby theory. <i>Journal of Materials Research</i> , <b>2013</b> , 28, 1646-1657	2.5	59
227	Diffusion barriers on Cu surfaces and near steps. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2004</b> , 12, 1209-1225	2	59
226	Structural characterization of $\{101\bar{2}\}$ twin boundaries in cobalt. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 051903	3.4	58
225	Modeling Interface-Dominated Mechanical Behavior of Nanolayered Crystalline Composites. <i>Jom</i> , <b>2014</b> , 66, 102-113	2.1	57
224	Twinning effects on strength and plasticity of metallic materials. <i>MRS Bulletin</i> , <b>2016</b> , 41, 274-281	3.2	57
223	Interface structures and twinning mechanisms of twins in hexagonal metals. <i>Materials Research Letters</i> , <b>2017</b> , 5, 449-464	7.4	56

222	Dynamic process of phase transition from wurtzite to zinc blende structure in InAs nanowires. <i>Nano Letters</i> , <b>2013</b> , 13, 6023-7	11.5	56
221	Room-temperature dislocation climb in metallic interfaces. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 131910	3.4	56
220	Interfaces Between Dissimilar Crystalline Solids. <i>Dislocations in Solids</i> , <b>2008</b> , 141-205		56
219	Secondary twin variant selection in four types of double twins in titanium. <i>Acta Materialia</i> , <b>2018</b> , 152, 58-76	8.4	55
218	Deformation twinning in hexagonal materials. <i>MRS Bulletin</i> , <b>2016</b> , 41, 314-319	3.2	54
217	Twinability of bimetal interfaces in nanostructured composites. <i>Materials Research Letters</i> , <b>2013</b> , 1, 89-95	7.4	53
216	The multiscale modeling of plastic deformation in metallic nanolayered composites. <i>Jom</i> , <b>2008</b> , 60, 39-42.1	4.1	53
215	Structure and Property of Interfaces in ARB Cu/Nb Laminated Composites. <i>Jom</i> , <b>2012</b> , 64, 1208-1217	2.1	52
214	Plasticity evolution in nanoscale Cu/Nb single-crystal multilayers as revealed by synchrotron X-ray microdiffraction. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2015</b> , 635, 6-12	5.3	51
213	Incoherent twin boundary migration induced by ion irradiation in Cu. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 023508	2.5	51
212	Terrace-like morphology of the boundary created through basal-prismatic transformation in magnesium. <i>Scripta Materialia</i> , <b>2015</b> , 100, 86-89	5.6	50
211	Twinning in bcc metals under shock loading: a challenge to empirical potentials. <i>Philosophical Magazine Letters</i> , <b>2011</b> , 91, 731-740	1	50
210	Dislocation models of interfacial shearing induced by an approaching lattice glide dislocation. <i>International Journal of Plasticity</i> , <b>2013</b> , 41, 1-13	7.6	49
209	Structure and stability of $\Sigma$ grain boundaries in face centered cubic metals. <i>Philosophical Magazine</i> , <b>2013</b> , 93, 315-327	1.6	49
208	A multi-scale statistical study of twinning in magnesium. <i>Jom</i> , <b>2011</b> , 63, 19-23	2.1	48
207	Atomistic Simulations of Dislocations in Confined Volumes. <i>MRS Bulletin</i> , <b>2009</b> , 34, 184-189	3.2	48
206	Sequential $\{101\bar{2}\}$ twinning stimulated by other twins in titanium. <i>Acta Materialia</i> , <b>2017</b> , 132, 57-68	8.4	47
205	Characterizing the boundary lateral to the shear direction of deformation twins in magnesium. <i>Nature Communications</i> , <b>2016</b> , 7, 11577	17.4	47

204	3D Printing Hierarchical Silver Nanowire Aerogel with Highly Compressive Resilience and Tensile Elongation through Tunable Poisson's Ratio. <i>Small</i> , <b>2017</b> , 13, 1701756	11	47
203	Unusual size dependent strengthening mechanisms of Cu/amorphous CuNb multilayers. <i>Acta Materialia</i> , <b>2016</b> , 120, 327-336	8.4	46
202	Plastic Deformation of Metal/Ceramic Nanolayered Composites. <i>Jom</i> , <b>2014</b> , 66, 2078-2085	2.1	45
201	Radiation response of alloy T91 at damage levels up to 1000 peak dpa. <i>Journal of Nuclear Materials</i> , <b>2016</b> , 482, 257-265	3.3	45
200	Cyclic deformation and fatigue damage in single-crystal magnesium under fully reversed strain-controlled tension-compression in the [1 010] direction. <i>Scripta Materialia</i> , <b>2015</b> , 96, 41-44	5.6	44
199	Modelling the role of slips and twins in magnesium alloys under cyclic shear. <i>Computational Materials Science</i> , <b>2015</b> , 96, 214-218	3.2	44
198	Diameter dependent thermoelectric properties of individual SnTe nanowires. <i>Nanoscale</i> , <b>2015</b> , 7, 2869-767	7.7	44
197	Deformation induced FCC lamellae and their interaction in commercial pure Ti. <i>Scripta Materialia</i> , <b>2019</b> , 162, 326-330	5.6	44
196	Atomistic simulations of interaction between basal dislocations and three-dimensional twins in magnesium. <i>Acta Materialia</i> , <b>2018</b> , 155, 187-198	8.4	43
195	Layer size effect on the shock compression behavior of fccBcc nanolaminates. <i>Acta Materialia</i> , <b>2014</b> , 79, 74-83	8.4	43
194	Energy minimization mechanisms of semi-coherent interfaces. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 023508	5.08	43
193	The influence of dilute heats of mixing on the atomic structures, defect energetics and mechanical properties of fccBcc interfaces. <i>Acta Materialia</i> , <b>2010</b> , 58, 4549-4557	8.4	43
192	Dislocation slip stress prediction in shape memory alloys. <i>International Journal of Plasticity</i> , <b>2014</b> , 54, 247-266	7.6	42
191	Ex situ and in situ measurements of the shear strength of interfaces in metallic multilayers. <i>Scripta Materialia</i> , <b>2012</b> , 67, 479-482	5.6	42
190	Minimum energy structures of faceted, incoherent interfaces. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 073504	5.04	41
189	Insight from in situ microscopy into which precipitate morphology can enable high strength in magnesium alloys. <i>Journal of Materials Science and Technology</i> , <b>2018</b> , 34, 1061-1066	9.1	40
188	Interface-dependent nucleation in nanostructured layered composites. <i>APL Materials</i> , <b>2013</b> , 1, 032112	5.7	39
187	Surface kinetics: Step-facet barriers. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 4752-4754	3.4	38



186	Grain boundary decohesion by nanoclustering Ni and Cr separately in CrMnFeCoNi high-entropy alloys. <i>Science Advances</i> , <b>2019</b> , 5, eaay0639	14.3	38
185	Investigation into nanoscratching mechanical performance of metallic glass multilayers with improved nano-tribological properties. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 776, 447-459	5.7	38
184	Twinning and sequential kinking in lamellar Ti-6Al-4V alloy. <i>Acta Materialia</i> , <b>2019</b> , 181, 479-490	8.4	37
183	Atomistic Simulations of Dislocation Pileup: Grain Boundaries Interaction. <i>Jom</i> , <b>2015</b> , 67, 1515-1525	2.1	34
182	Twinning-Associated Boundaries in Hexagonal Close-Packed Metals. <i>Jom</i> , <b>2014</b> , 66, 95-101	2.1	34
181	Misfit dislocation patterns of Mg-Nb interfaces. <i>Acta Materialia</i> , <b>2017</b> , 126, 552-563	8.4	33
180	Elastic fields of dislocation loops in three-dimensional anisotropic bimetals. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2012</b> , 60, 418-431	5	33
179	Phase transition and dislocation nucleation in Cu/Nb layered composites during physical vapor deposition. <i>Journal of Materials Research</i> , <b>2008</b> , 23, 1009-1014	2.5	33
178	Highly deformable Mg-Al-Ca alloy with Al <sub>2</sub> Ca precipitates. <i>Acta Materialia</i> , <b>2020</b> , 200, 236-245	8.4	33
177	Twinning and detwinning behaviors of commercially pure titanium sheets. <i>International Journal of Plasticity</i> , <b>2019</b> , 121, 261-279	7.6	32
176	Structural characteristics of {100} non-cozone twin-twin interactions in magnesium. <i>Acta Materialia</i> , <b>2018</b> , 159, 65-76	8.4	31
175	Atomistic observation of a crack tip approaching coherent twin boundaries. <i>Scientific Reports</i> , <b>2014</b> , 4, 4397	4.9	30
174	Flexible memory devices with tunable electrical bistability via controlled energetics in donor-acceptor and donor-acceptor conjugated polymers. <i>Journal of Materials Chemistry C</i> , <b>2014</b> , 2, 4374-4378	7.1	30
173	Numerical study of the effects of shear deformation and superimposed hydrostatic pressure on the formability of AZ31B sheet at room temperature. <i>International Journal of Mechanical Sciences</i> , <b>2015</b> , 92, 70-79	5.5	30
172	Structure evolution and mechanical properties enhancement of Al/AlN multilayer. <i>Applied Surface Science</i> , <b>2007</b> , 253, 8835-8840	6.7	30
171	Self-energy of elliptical dislocation loops in anisotropic crystals and its application for defect-free core/shell nanowires. <i>Acta Materialia</i> , <b>2011</b> , 59, 7114-7124	8.4	29
170	Rotational partitioning at two-phase interfaces. <i>Acta Materialia</i> , <b>2011</b> , 59, 241-251	8.4	29
169	Plastic Deformation Modes of CuZr/Cu Multilayers. <i>Scientific Reports</i> , <b>2016</b> , 6, 23306	4.9	29

168	Peierls stress in face-centered-cubic metals predicted from an improved semi-discrete variation Peierls-Nabarro model. <i>Scripta Materialia</i> , <b>2016</b> , 120, 94-97	5.6	29
167	Atomistic study of fundamental character and motion of dislocations in intermetallic Al <sub>2</sub> Cu. <i>International Journal of Plasticity</i> , <b>2016</b> , 87, 100-113	7.6	29
166	Plasticity of laser-processed nanoscale Al Al <sub>2</sub> Cu eutectic alloy. <i>Acta Materialia</i> , <b>2018</b> , 156, 52-63	8.4	29
165	Impurities of shear avalanches dynamic evolution in a metallic glass. <i>Materials Research Letters</i> , <b>2020</b> , 8, 357-363	7.4	28
164	First-principles density functional theory study of generalized stacking faults in TiN and MgO. <i>Philosophical Magazine</i> , <b>2014</b> , 94, 464-475	1.6	28
163	High-velocity projectile impact induced 9R phase in ultrafine-grained aluminium. <i>Nature Communications</i> , <b>2017</b> , 8, 1653	17.4	28
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159	First-principles study of Cu/TiN and Al/TiN interfaces: weak versus strong interfaces. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2014</b> , 22, 035020	2	27
158	Shock-induced two types of {101̄} sequential twinning in Titanium. <i>Acta Materialia</i> , <b>2019</b> , 165, 547-560.8.4		27
157	Effect of grain boundary structure on plastic deformation during shock compression using molecular dynamics. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2013</b> , 21, 015011	2	26
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153	Interface-driven mechanisms in cubic/noncubic nanolaminates at different scales. <i>MRS Bulletin</i> , <b>2019</b> , 44, 31-39	3.2	24
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149	Structural modifications due to interface chemistry at metal-nitride interfaces. <i>Scientific Reports</i> , <b>2015</b> , 5, 17380	4.9	22
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140	Role of local stresses on co-zone twin-twin junction formation in HCP magnesium. <i>Acta Materialia</i> , <b>2019</b> , 168, 353-361	8.4	20
139	Radiation induced detwinning in nanotwinned Cu. <i>Scripta Materialia</i> , <b>2017</b> , 130, 37-41	5.6	19
138	Steps and {112̄1} secondary twinning associated with {112̄2} twin in titanium. <i>Acta Materialia</i> , <b>2019</b> , 164, 776-787	8.4	19
137	Ultra-strong nanotwinned Al-Ni solid solution alloys with significant plasticity. <i>Nanoscale</i> , <b>2018</b> , 10, 22025-22034	7.7	19
136	Interface-Driven Plasticity in Metal/Ceramic Nanolayered Composites: Direct Validation of Multiscale Deformation Modeling via In Situ Indentation in TEM. <i>Jom</i> , <b>2016</b> , 68, 143-150	2.1	18
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134	On the origins of hardness of Cu <sub>3</sub> TiN nanolayered composites. <i>Scripta Materialia</i> , <b>2015</b> , 109, 48-51	5.6	18
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121	Atomically informed nonlocal semi-discrete variational Peierls-Nabarro model for planar core dislocations. <i>Scientific Reports</i> , <b>2017</b> , 7, 43785	4.9	16
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105	Mechanically controlling the reversible phase transformation from zinc blende to wurtzite in AlN. <i>Materials Research Letters</i> , <b>2017</b> , 5, 426-432	7.4	11
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103	Strength and plasticity of amorphous silicon oxycarbide. <i>Journal of Nuclear Materials</i> , <b>2019</b> , 516, 289-296	3.3	10
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98	Modeling of Microstructure Evolution in Metallic Multilayers with Immiscible Constituents. <i>Jom</i> , <b>2013</b> , 65, 443-449	2.1	10
97	Twinning-dominated nucleation, propagation and deflection of crack in molybdenum characterized with in situ transmission electron microscopy. <i>Philosophical Magazine Letters</i> , <b>2014</b> , 94, 225-232	1	10

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40	Mechanical Behavior of Al <sub>2</sub> Al <sub>2</sub> Cu <sub>2</sub> Si and Al <sub>2</sub> Al <sub>2</sub> Cu Eutectic Alloys. <i>Crystals</i> , <b>2021</b> , 11, 194	2.3	3
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- 1 Microstructures and Deformation Mechanisms of FCC-Phase High-Entropy Alloys