

Christopher A Schuh

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/9576372/christopher-a-schuh-publications-by-year.pdf>

Version: 2024-04-17

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

278
papers

17,401
citations

64
h-index

125
g-index

296
ext. papers

19,369
ext. citations

6.6
avg, IF

7.44
L-index

#	Paper	IF	Citations
278	Additional hindrances to metallurgical bonding from impurities during microparticle impact. <i>Surface and Coatings Technology</i> , 2022 , 433, 128114	4.4	0
277	Tin and zinc microparticle impacts above the critical adhesion velocity. <i>Surface and Coatings Technology</i> , 2022 , 432, 128053	4.4	1
276	Grain size dependencies of intergranular solute segregation in nanocrystalline materials. <i>Acta Materialia</i> , 2022 , 226, 117614	8.4	0
275	Oxide layer delamination: An energy dissipation mechanism during high-velocity microparticle impacts. <i>Applied Surface Science</i> , 2022 , 574, 151673	6.7	0
274	Optimization of the Mo-Cr binary system for Nanophase Separation Sintering. <i>Materialia</i> , 2022 , 22, 101430	3.0	0
273	Crystal orientation and detector distance effects on resolving pseudosymmetry by electron backscatter diffraction. <i>Journal of Applied Crystallography</i> , 2021 , 54, 513-522	3.8	2
272	Stability of nanocrystalline metals: The role of grain-boundary chemistry and structure. <i>MRS Bulletin</i> , 2021 , 46, 225-235	3.2	10
271	Grain-size effect on cracking accumulation in yttria-doped zirconia ceramics during cyclic martensitic transformations. <i>Acta Materialia</i> , 2021 , 209, 116789	8.4	2
270	The mechanism of thermal transformation hysteresis in ZrO ₂ -CeO ₂ shape-memory ceramics. <i>Acta Materialia</i> , 2021 , 213, 116972	8.4	2
269	Breakdown of the Hall-Petch relationship in extremely fine nanograined body-centered cubic Mo alloys. <i>Acta Materialia</i> , 2021 , 213, 116950	8.4	7
268	Site-specific study of jetting, bonding, and local deformation during high-velocity metallic microparticle impact. <i>Acta Materialia</i> , 2021 , 202, 159-169	8.4	12
267	Role of grain constraint on the martensitic transformation in ceria-doped zirconia. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 1156-1168	3.8	3
266	Direct Electric-Field Induced Phase Transformation in Paraelectric Zirconia via Electrical Susceptibility Mismatch. <i>Physical Review Letters</i> , 2021 , 126, 015701	7.4	3
265	The effect of substrate temperature on the critical velocity in microparticle impact bonding. <i>Applied Physics Letters</i> , 2021 , 119, 011903	3.4	6
264	Kissinger-Style Kinetic Analysis for Sintering Dilatometry Data. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021 , 52, 4479-4487	2.3	3
263	The Structural Evolution and Densification Mechanisms of Nanophase Separation Sintering. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021 , 52, 4946	2.3	1
262	Atomistic Assessment of Solute-Solute Interactions during Grain Boundary Segregation. <i>Nanomaterials</i> , 2021 , 11,	5.4	1

261	Thermodynamics and design of nanocrystalline alloys using grain boundary segregation spectra. <i>Acta Materialia</i> , 2021 , 217, 117177	8.4	5
260	Learning grain boundary segregation energy spectra in polycrystals. <i>Nature Communications</i> , 2020 , 11, 6376	17.4	20
259	Spreading Frost Under the Microscope. <i>Physics Magazine</i> , 2020 , 13,	1.1	2
258	Particle size effects in metallic microparticle impact-bonding. <i>Acta Materialia</i> , 2020 , 194, 40-48	8.4	17
257	Surface oxide and hydroxide effects on aluminum microparticle impact bonding. <i>Acta Materialia</i> , 2020 , 197, 28-39	8.4	19
256	Combinatorial study of thermal stability in ternary nanocrystalline alloys. <i>Acta Materialia</i> , 2020 , 188, 40-48	8.4	21
255	Mechanical alloying produces grain boundary segregation in FeMg powders. <i>Scripta Materialia</i> , 2020 , 180, 57-61	5.6	14
254	Cyclic martensitic transformations and damage evolution in shape memory zirconia: Single crystals vs polycrystals. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 4678-4690	3.8	7
253	The Transition From Rebound to Bonding in High-Velocity Metallic Microparticle Impacts: Jetting-Associated Power-Law Divergence. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020 , 87,	2.7	13
252	Incorporating the Element of Stochasticity in Coarse-Grained Modeling of Materials Mechanics 2020 , 1223-1236		
251	Microparticle impact-bonding modes for mismatched metals: From co-deformation to splatting and penetration. <i>Acta Materialia</i> , 2020 , 199, 480-494	8.4	14
250	Global optimization for accurate determination of EBSD pattern centers. <i>Ultramicroscopy</i> , 2020 , 209, 112876	3.1	13
249	Material hardness at strain rates beyond 10^6 s ⁻¹ via high velocity microparticle impact indentation. <i>Scripta Materialia</i> , 2020 , 177, 198-202	5.6	24
248	Particle flattening during cold spray: Mechanistic regimes revealed by single particle impact tests. <i>Surface and Coatings Technology</i> , 2020 , 403, 126386	4.4	18
247	FeNiCoAlTaB superelastic and shape-memory wires with oligocrystalline grain structure. <i>Scripta Materialia</i> , 2020 , 188, 1-5	5.6	6
246	Grain boundary segregation beyond the dilute limit: Separating the two contributions of site spectrality and solute interactions. <i>Acta Materialia</i> , 2020 , 199, 63-72	8.4	20
245	In situ observations of jetting in the divergent rebound regime for high-velocity metallic microparticle impact. <i>Applied Physics Letters</i> , 2020 , 117, 134105	3.4	6
244	Resolving pseudosymmetry in tetragonal ZrO ₂ using electron backscatter diffraction with a modified dictionary indexing approach. <i>Journal of Applied Crystallography</i> , 2020 , 53, 1060-1072	3.8	6

243	Spectrum of grain boundary segregation energies in a polycrystal. <i>Acta Materialia</i> , 2019 , 181, 228-237	8.4	38
242	Adhesion strength of titanium particles to alumina substrates: A combined cold spray and LIPIT study. <i>Surface and Coatings Technology</i> , 2019 , 361, 403-412	4.4	24
241	Stability of ternary nanocrystalline alloys in the PtPdAu system. <i>Materialia</i> , 2019 , 8, 100449	3.2	8
240	An off-lattice kinetic Monte Carlo investigation of the kinetic properties of the $\Sigma(210)$ grain boundary in copper. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2019 , 27, 075005	2	1
239	Reduced cracking in polycrystalline ZrO ₂ -CeO ₂ shape-memory ceramics by meeting the cofactor conditions. <i>Acta Materialia</i> , 2019 , 177, 230-239	8.4	16
238	Response to Comment on "Adiabatic shear instability is not necessary for adhesion in cold spray" <i>Scripta Materialia</i> , 2019 , 162, 515-519	5.6	37
237	Impact-bonding with aluminum, silver, and gold microparticles: Toward understanding the role of native oxide layer. <i>Applied Surface Science</i> , 2019 , 476, 528-532	6.7	39
236	Ultrahigh superelastic damping at the nano-scale: A robust phenomenon to improve smart MEMS devices. <i>Acta Materialia</i> , 2019 , 166, 346-356	8.4	22
235	Traditional and additive manufacturing of a new Tungsten heavy alloy alternative. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018 , 73, 22-28	4.1	47
234	Grain growth and second-phase precipitation in nanocrystalline aluminum-manganese electrodeposits. <i>Journal of Materials Science</i> , 2018 , 53, 3709-3719	4.3	8
233	In-situ observations of single micro-particle impact bonding. <i>Scripta Materialia</i> , 2018 , 145, 9-13	5.6	114
232	The role of W on the thermal stability of nanocrystalline NiTiW _x thin films. <i>Acta Materialia</i> , 2018 , 142, 181-192	8.4	15
231	Adiabatic shear instability is not necessary for adhesion in cold spray. <i>Acta Materialia</i> , 2018 , 158, 430-439	8.4	143
230	3D printing metals like thermoplastics: Fused filament fabrication of metallic glasses. <i>Materials Today</i> , 2018 , 21, 697-702	21.8	73
229	Wear: Achieving Ultralow Wear with Stable Nanocrystalline Metals (Adv. Mater. 32/2018). <i>Advanced Materials</i> , 2018 , 30, 1870242	24	2
228	Stress-dependence of kinetic transitions at atomistic defects. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2018 , 26, 015007	2	
227	Nano-phase separation sintering in nanostructure-stable vs. bulk-stable alloys. <i>Acta Materialia</i> , 2018 , 145, 123-133	8.4	18
226	Texture mediated grain boundary network design in three dimensions. <i>Mechanics of Materials</i> , 2018 , 118, 94-105	3.3	6

225	Interplay between thermodynamic and kinetic stabilization mechanisms in nanocrystalline Fe-Mg alloys. <i>Acta Materialia</i> , 2018 , 144, 447-458	8.4	40
224	Incorporating the Element of Stochasticity in Coarse-Grained Modeling of Materials Mechanics 2018 , 1-14		
223	Melt-driven erosion in microparticle impact. <i>Nature Communications</i> , 2018 , 9, 5077	17.4	45
222	Higher Temperatures Yield Smaller Grains in a Thermally Stable Phase-Transforming Nanocrystalline Alloy. <i>Physical Review Letters</i> , 2018 , 121, 145503	7.4	9
221	Solute interaction effects on grain boundary segregation in ternary alloys. <i>Acta Materialia</i> , 2018 , 161, 285-294	8.4	31
220	Nanocrystalline Ag-W alloys lose stability upon solute desegregation from grain boundaries. <i>Acta Materialia</i> , 2018 , 161, 194-206	8.4	24
219	Nanostructure stability and nano-phase separation sintering in the titanium-magnesium system. <i>Materialia</i> , 2018 , 1, 89-98	3.2	6
218	Achieving Ultralow Wear with Stable Nanocrystalline Metals. <i>Advanced Materials</i> , 2018 , 30, e1802026	24	40
217	Mesostructure optimization in multi-material additive manufacturing: a theoretical perspective. <i>Journal of Materials Science</i> , 2017 , 52, 4288-4298	4.3	17
216	Fast finite element calculation of effective conductivity of random continuum microstructures: The recursive Poincaré-Steklov operator method. <i>Journal of Computational Physics</i> , 2017 , 342, 1-12	4.1	
215	Spontaneous solid-state foaming of nanocrystalline thermoelectric compounds at elevated temperatures. <i>Nano Energy</i> , 2017 , 36, 223-232	17.1	10
214	Granular shape memory ceramic packings. <i>Acta Materialia</i> , 2017 , 132, 455-466	8.4	16
213	Stability criteria for nanocrystalline alloys. <i>Acta Materialia</i> , 2017 , 132, 128-137	8.4	93
212	In-situ studies on martensitic transformation and high-temperature shape memory in small volume zirconia. <i>Acta Materialia</i> , 2017 , 134, 257-266	8.4	19
211	Phase transitions in stable nanocrystalline alloys. <i>Journal of Materials Research</i> , 2017 , 32, 1993-2002	2.5	13
210	Shape memory zirconia foams through ice templating. <i>Scripta Materialia</i> , 2017 , 135, 50-53	5.6	12
209	Materials selection considerations for high entropy alloys. <i>Scripta Materialia</i> , 2017 , 138, 145-150	5.6	47
208	Modeling localized corrosion with an effective medium approximation. <i>Corrosion Science</i> , 2017 , 116, 53-65	6.8	5

207	Melting Can Hinder Impact-Induced Adhesion. <i>Physical Review Letters</i> , 2017 , 119, 175701	7.4	44
206	Influences of crystallographic texture and nanostructural features on corrosion properties of electrogalvanized and chromate conversion coatings. <i>Surface and Coatings Technology</i> , 2017 , 329, 120-130	4.4	16
205	Effect of crystal orientation on incipient plasticity during nanoindentation of magnesium. <i>Acta Materialia</i> , 2017 , 139, 21-29	8.4	24
204	Synthesis of monodisperse CeO ₂ /ZrO ₂ particles exhibiting cyclic superelasticity over hundreds of cycles. <i>Journal of the American Ceramic Society</i> , 2017 , 100, 4199-4208	3.8	11
203	Alloy design as an inverse problem of cluster expansion models. <i>Acta Materialia</i> , 2017 , 139, 254-260	8.4	5
202	Enhanced shape memory and superelasticity in small-volume ceramics: a perspective on the controlling factors. <i>MRS Communications</i> , 2017 , 7, 747-754	2.7	12
201	Superelasticity in micro-scale shape memory ceramic particles. <i>Acta Materialia</i> , 2017 , 123, 255-263	8.4	42
200	Orientation dependence in superelastic Cu-Al-Mn-Ni micropillars. <i>Journal of Alloys and Compounds</i> , 2017 , 693, 1205-1213	5.7	17
199	Preferred nanocrystalline configurations in ternary and multicomponent alloys. <i>Scripta Materialia</i> , 2017 , 127, 136-140	5.6	26
198	Melt-driven mechanochemical phase transformations in moderately exothermic powder mixtures. <i>Nature Materials</i> , 2016 , 15, 1280-1286	27	35
197	Microstructure, crystallization and shape memory behavior of titania and yttria co-doped zirconia. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 1277-1283	6	24
196	Grain boundary segregation in AlMn electrodeposits prepared from ionic liquid. <i>Journal of Materials Science</i> , 2016 , 51, 438-448	4.3	18
195	A compound unit method for incorporating ordered compounds into lattice models of alloys. <i>Computational Materials Science</i> , 2016 , 118, 172-179	3.2	9
194	Sputtered HfTi nanostructures: A segregation and high-temperature stability study. <i>Acta Materialia</i> , 2016 , 108, 8-16	8.4	29
193	Deformation of metallic glasses: Recent developments in theory, simulations, and experiments. <i>Acta Materialia</i> , 2016 , 109, 375-393	8.4	315
192	Sub-scale ballistic testing of an ultrafine grained tungsten alloy into concrete targets. <i>International Journal of Impact Engineering</i> , 2016 , 91, 1-5	4	3
191	A compilation of ab-initio calculations of embrittling potencies in binary metallic alloys. <i>Data in Brief</i> , 2016 , 6, 143-8	1.2	14
190	Elasticity of Random Multiphase Materials: Percolation of the Stiffness Tensor. <i>Journal of Statistical Physics</i> , 2016 , 162, 232-241	1.5	4

189	A survey of ab-initio calculations shows that segregation-induced grain boundary embrittlement is predicted by bond-breaking arguments. <i>Scripta Materialia</i> , 2016 , 113, 55-58	5.6	29
188	Study on behaviors of crystal reorientation and twinning in Ni alloys using crystal plasticity. <i>The Proceedings of the Materials and Mechanics Conference</i> , 2016 , 2016, OS08-06	0	
187	Nanoindentation: High Temperature 2016 ,		2
186	Crystal orientation dependence of the stress-induced martensitic transformation in zirconia-based shape memory ceramics. <i>Acta Materialia</i> , 2016 , 116, 124-135	8.4	46
185	Effect of twin boundaries on indentation behavior of magnesium alloys. <i>Journal of Alloys and Compounds</i> , 2016 , 685, 1016-1023	5.7	14
184	Six decades of the Hall-Petch effect: a survey of grain-size strengthening studies on pure metals. <i>International Materials Reviews</i> , 2016 , 61, 495-512	16.1	334
183	A high-throughput technique for determining grain boundary character non-destructively in microstructures with through-thickness grains. <i>Npj Computational Materials</i> , 2016 , 2,	10.9	15
182	Melt-cast microfibers of Cu-based shape memory alloy adopt a favorable texture for superelasticity. <i>Scripta Materialia</i> , 2016 , 117, 46-50	5.6	12
181	Effect of Crystal Orientation on Nanoindentation Behavior in Magnesium. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016 , 47, 3227-3234	2.3	18
180	Texture mediated grain boundary network design in two dimensions. <i>Journal of Materials Research</i> , 2016 , 31, 1171-1184	2.5	4
179	Kinetic Monte Carlo Modeling of Nanomechanics in Amorphous Systems. <i>Springer Series in Materials Science</i> , 2016 , 441-468	0.9	1
178	Ternary alloying additions and multilayering as strategies to enhance the galvanic protection ability of Al-Zn coatings electrodeposited from ionic liquid solution. <i>Electrochimica Acta</i> , 2016 , 211, 860-870	6.7	5
177	Towards the reliable calculation of residence time for off-lattice kinetic Monte Carlo simulations. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2016 , 24, 065014	2	9
176	Micropillar compression testing of powders. <i>Journal of Materials Science</i> , 2015 , 50, 7058-7063	4.3	5
175	Experimental assessment and simulation of surface nanocrystallization by severe shot peening. <i>Acta Materialia</i> , 2015 , 97, 105-115	8.4	115
174	W-based amorphous phase stable to high temperatures. <i>Acta Materialia</i> , 2015 , 85, 331-342	8.4	4
173	Effects of surface diffusion on high temperature selective emitters. <i>Optics Express</i> , 2015 , 23, 9979-93	3.3	19
172	Thermally induced martensitic transformations in Cu-based shape memory alloy microwires. <i>Journal of Materials Science</i> , 2015 , 50, 7473-7487	4.3	10

171	Inferring grain boundary structure-property relations from effective property measurements. <i>Journal of Materials Science</i> , 2015 , 50, 6907-6919	4.3	12
170	A coupled kinetic Monte Carlo-finite element mesoscale model for thermoelastic martensitic phase transformations in shape memory alloys. <i>Acta Materialia</i> , 2015 , 83, 431-447	8.4	22
169	Phase strength effects on chemical mixing in extensively deformed alloys. <i>Acta Materialia</i> , 2015 , 82, 123-136	8.4	37
168	Grain boundary networks in nanocrystalline alloys from atom probe tomography quantization and autocorrelation mapping. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015 , 212, 2302-2308	1.6	3
167	Accelerated sintering in phase-separating nanostructured alloys. <i>Nature Communications</i> , 2015 , 6, 6858	17.4	51
166	Segregation-induced changes in grain boundary cohesion and embrittlement in binary alloys. <i>Acta Materialia</i> , 2015 , 95, 145-155	8.4	64
165	Size effects and shape memory properties in ZrO ₂ ceramic micro- and nano-pillars. <i>Scripta Materialia</i> , 2015 , 101, 40-43	5.6	52
164	Nanocrystalline Materials at Equilibrium: A Thermodynamic Review. <i>Jom</i> , 2015 , 67, 2834-2843	2.1	52
163	Duplex nanocrystalline alloys: Entropic nanostructure stabilization and a case study on W-Cr. <i>Journal of Materials Research</i> , 2015 , 30, 151-163	2.5	39
162	OS0120-150 Deformation behavior during indentation in magnesium. <i>The Proceedings of the Materials and Mechanics Conference</i> , 2015 , 2015, _OS0120-15-_OS0120-15	0	
161	GS0303-209 Texture evolution modeling of Ni alloys by crystal plasticity including twinning mechanism. <i>The Proceedings of the Materials and Mechanics Conference</i> , 2015 , 2015, _GS0303-20-_GS0303-20	0	
160	Nanoscale segregation behavior and high-temperature stability of nanocrystalline W ₂₀ at.% Ti. <i>Acta Materialia</i> , 2014 , 73, 128-138	8.4	79
159	Powder-Route Synthesis and Mechanical Testing of Ultrafine Grain Tungsten Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 3609-3618	2.3	16
158	Validated numerical modeling of galvanic corrosion of zinc and aluminum coatings. <i>Corrosion Science</i> , 2014 , 88, 226-233	6.8	22
157	Thermodynamics of stable nanocrystalline alloys: A Monte Carlo analysis. <i>Physical Review B</i> , 2014 , 89,	3.3	71
156	Surface roughness-controlled superelastic hysteresis in shape memory microwires. <i>Scripta Materialia</i> , 2014 , 82, 1-4	5.6	13
155	The triple junction hull: Tools for grain boundary network design. <i>Journal of the Mechanics and Physics of Solids</i> , 2014 , 69, 2-13	5	10
154	Diffusion of tungsten in chromium: Experiments and atomistic modeling. <i>Journal of Alloys and Compounds</i> , 2014 , 611, 433-439	5.7	9

153	Anomalous grain refinement trends during mechanical milling of Bi ₂ Te ₃ . <i>Acta Materialia</i> , 2014 , 75, 167-179	8.2	14
152	Microstructure and mechanical properties of electrodeposited Al _{1-x} Mnx/Al _{1-y} Mny nanostructured multilayers. <i>Journal of Materials Research</i> , 2014 , 29, 2229-2239	2.5	2
151	Grain growth and structural relaxation of nanocrystalline Bi ₂ Te ₃ . <i>Journal of Applied Physics</i> , 2014 , 116, 153502	2.5	4
150	Suppression of grain growth in nanocrystalline Bi ₂ Te ₃ through oxide particle dispersions. <i>Journal of Applied Physics</i> , 2014 , 116, 173505	2.5	16
149	Grain boundary and triple junction constraints during martensitic transformation in shape memory alloys. <i>Journal of Applied Physics</i> , 2013 , 114, 053503	2.5	67
148	Symmetries in the representation of grain boundary-plane distributions. <i>Philosophical Magazine</i> , 2013 , 93, 524-573	1.6	34
147	Finite Element Simulation of Hot Nanoindentation in Vacuum. <i>Experimental Mechanics</i> , 2013 , 53, 1201-1210	12.1	14
146	Densification and strain hardening of a metallic glass under tension at room temperature. <i>Physical Review Letters</i> , 2013 , 111, 135504	7.4	109
145	Computational design and optimization of multilayered and functionally graded corrosion coatings. <i>Corrosion Science</i> , 2013 , 77, 297-307	6.8	18
144	Shape memory and superelastic ceramics at small scales. <i>Science</i> , 2013 , 341, 1505-8	33.3	175
143	Estimation of grain boundary segregation enthalpy and its role in stable nanocrystalline alloy design. <i>Journal of Materials Research</i> , 2013 , 28, 2154-2163	2.5	128
142	Representation of single-axis grain boundary functions. <i>Acta Materialia</i> , 2013 , 61, 3068-3081	8.4	3
141	Transition from many domain to single domain martensite morphology in small-scale shape memory alloys. <i>Acta Materialia</i> , 2013 , 61, 5618-5625	8.4	35
140	Shear transformation zone dynamics model for metallic glasses incorporating free volume as a state variable. <i>Acta Materialia</i> , 2013 , 61, 3347-3359	8.4	117
139	Nanoindentation behavior and deformed microstructures in coarse-grained magnesium alloys. <i>Scripta Materialia</i> , 2013 , 68, 416-419	5.6	47
138	Abrasive wear response of nanocrystalline NiW alloys across the Hall-Petch breakdown. <i>Wear</i> , 2013 , 298-299, 120-126	3.5	51
137	The uncorrelated triple junction distribution function: Towards grain boundary network design. <i>Acta Materialia</i> , 2013 , 61, 2863-2873	8.4	19
136	Stability of binary nanocrystalline alloys against grain growth and phase separation. <i>Acta Materialia</i> , 2013 , 61, 2121-2132	8.4	173

135	Exploring grain boundary energy landscapes with the activation-relaxation technique. <i>Scripta Materialia</i> , 2013 , 68, 937-940	5.6	16
134	Tuning nanoscale grain size distribution in multilayered Al/Mn alloys. <i>Scripta Materialia</i> , 2012 , 66, 194-197	5.6	13
133	Design of stable nanocrystalline alloys. <i>Science</i> , 2012 , 337, 951-4	33.3	571
132	Improved representations of misorientation information for grain boundary science and engineering. <i>Progress in Materials Science</i> , 2012 , 57, 1383-1425	42.2	65
131	Residual stress in electrodeposited nanocrystalline nickel-tungsten coatings. <i>Journal of Materials Research</i> , 2012 , 27, 1271-1284	2.5	20
130	Tool steel coatings based on niobium carbide and carbonitride compounds. <i>Surface and Coatings Technology</i> , 2012 , 207, 472-479	4.4	23
129	Towards electroformed nanostructured aluminum alloys with high strength and ductility. <i>Journal of Materials Research</i> , 2012 , 27, 1638-1651	2.5	14
128	Atomistic mechanisms of cyclic hardening in metallic glass. <i>Applied Physics Letters</i> , 2012 , 100, 251909	3.4	46
127	Oligocrystalline Shape Memory Alloys. <i>Advanced Functional Materials</i> , 2012 , 22, 2094-2099	15.6	96
126	Superelasticity and fatigue in oligocrystalline shape memory alloy microwires. <i>Acta Materialia</i> , 2012 , 60, 282-292	8.4	80
125	Superelastic cycling of Cu ₃₀ Al ₇₀ Ni shape memory alloy micropillars. <i>Acta Materialia</i> , 2012 , 60, 4093-4106	8.4	52
124	Effect of a Rising R-Curve on the Sliding Wear of Silicon-Disilicide In Situ Composites. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 1406-1413	3.8	1
123	Mechanically driven grain boundary relaxation: a mechanism for cyclic hardening in nanocrystalline Ni. <i>Philosophical Magazine Letters</i> , 2012 , 92, 20-28	1	46
122	High-strain-rate nanoindentation behavior of fine-grained magnesium alloys. <i>Journal of Materials Research</i> , 2012 , 27, 1295-1302	2.5	44
121	Grain boundary relaxation strengthening of nanocrystalline Ni ₃ W alloys. <i>Journal of Materials Research</i> , 2012 , 27, 1285-1294	2.5	120
120	Corrosion of nanocrystalline Ni ₃ W alloys in alkaline and acidic 3.5wt.% NaCl solutions. <i>Corrosion Science</i> , 2011 , 53, 1066-1071	6.8	95
119	Microstructure and fracture of anomalous eutectic silicon-disilicide composites. <i>Intermetallics</i> , 2011 , 19, 1661-1673	3.5	9
118	The topology of homophase misorientation spaces. <i>Philosophical Magazine</i> , 2011 , 91, 1489-1508	1.6	5

117	Gallium-enhanced phase contrast in atom probe tomography of nanocrystalline and amorphous Al-Mn alloys. <i>Ultramicroscopy</i> , 2011 , 111, 1062-72	3.1	19
116	The nanocrystalline thermoelectric compound Bi ₂ Te ₃ forms by a particle-wise explosive reaction during mechanical alloying. <i>Scripta Materialia</i> , 2011 , 65, 516-519	5.6	11
115	Diffusive-to-ballistic transition in grain boundary motion studied by atomistic simulations. <i>Physical Review B</i> , 2011 , 84,	3.3	35
114	Effect of solid solution elements on nanoindentation hardness, rate dependence, and incipient plasticity in fine grained magnesium alloys. <i>Acta Materialia</i> , 2011 , 59, 7554-7563	8.4	97
113	Enhanced solid solution effects on the strength of nanocrystalline alloys. <i>Acta Materialia</i> , 2011 , 59, 161981-1631	8.4	161
112	Nonlocal superelastic model of size-dependent hardening and dissipation in single crystal Cu-Al-Ni shape memory alloys. <i>Physical Review Letters</i> , 2011 , 106, 085504	7.4	16
111	Percolation of diffusively evolved two-phase systems. <i>Physical Review E</i> , 2011 , 83, 021119	2.4	13
110	Atomistic simulation of slow grain boundary motion. <i>Physical Review Letters</i> , 2011 , 106, 045503	7.4	52
109	Size effects in shape memory alloy microwires. <i>Acta Materialia</i> , 2011 , 59, 537-553	8.4	127
108	A continuous and one-to-one coloring scheme for misorientations. <i>Acta Materialia</i> , 2011 , 59, 554-562	8.4	21
107	Thermomechanical behavior at the nanoscale and size effects in shape memory alloys. <i>Journal of Materials Research</i> , 2011 , 26, 2461-2469	2.5	33
106	Thermo-Mechanical behavior at Nano-Scale and Size Effects in Shape Memory Alloys. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1297, 83		
105	Towards an integrated materials characterization toolbox. <i>Journal of Materials Research</i> , 2011 , 26, 1341-1383	2.5	75
104	Nanoindentation: High Temperature 2010 , 1-6		
103	Three-dimensional shear transformation zone dynamics model for amorphous metals. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2010 , 18, 065009	2	32
102	Hot nanoindentation in inert environments. <i>Review of Scientific Instruments</i> , 2010 , 81, 073901	1.7	78
101	Kinetic Monte Carlo simulations of nanocrystalline film deposition. <i>Journal of Applied Physics</i> , 2010 , 107, 073512	2.5	15
100	Nanoscale strength distribution in amorphous versus crystalline metals. <i>Journal of Materials Research</i> , 2010 , 25, 2251-2263	2.5	56

99	Temperature dependence of the indentation size effect. <i>Journal of Materials Research</i> , 2010 , 25, 1225-1229	3.3	40
98	Kinetic Monte Carlo study of activated states and correlated shear-transformation-zone activity during the deformation of an amorphous metal. <i>Physical Review B</i> , 2010 , 81,	3.3	57
97	Cyclic hardening of metallic glasses under Hertzian contacts: Experiments and STZ dynamics simulations. <i>Philosophical Magazine</i> , 2010 , 90, 1373-1390	1.6	63
96	Sliding wear of nanocrystalline NiW: Structural evolution and the apparent breakdown of Archard scaling. <i>Acta Materialia</i> , 2010 , 58, 4137-4148	8.4	226
95	Shape memory and superelasticity in polycrystalline Cu ₄₀ Al ₁₀ Ni microwires. <i>Applied Physics Letters</i> , 2009 , 95, 171906	3.4	58
94	In situ measurements of surface tension-driven shape recovery in a metallic glass. <i>Scripta Materialia</i> , 2009 , 60, 1145-1148	5.6	27
93	Hot nanoindentation of nanocrystalline NiW alloys. <i>Scripta Materialia</i> , 2009 , 61, 1056-1059	5.6	17
92	Electrodeposited AlMn alloys with microcrystalline, nanocrystalline, amorphous and nano-quasicrystalline structures. <i>Acta Materialia</i> , 2009 , 57, 3810-3822	8.4	70
91	Expressing Crystallographic Textures through the Orientation Distribution Function: Conversion between Generalized Spherical Harmonic and Hyperspherical Harmonic Expansions. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 2590-2602	2.3	10
90	Nanoscale shape-memory alloys for ultrahigh mechanical damping. <i>Nature Nanotechnology</i> , 2009 , 4, 415-417	8.7	197
89	Mesoscale modeling of amorphous metals by shear transformation zone dynamics. <i>Acta Materialia</i> , 2009 , 57, 2823-2833	8.4	116
88	The generalized Mackenzie distribution: Disorientation angle distributions for arbitrary textures. <i>Acta Materialia</i> , 2009 , 57, 4186-4197	8.4	40
87	Analytical homogenization method for periodic composite materials. <i>Physical Review B</i> , 2009 , 79,	3.3	2
86	Representations of Texture 2009 , 35-51		10
85	Grain boundary segregation and thermodynamically stable binary nanocrystalline alloys. <i>Physical Review B</i> , 2009 , 79,	3.3	212
84	Distribution of thermally activated plastic events in a flowing glass. <i>Physical Review Letters</i> , 2009 , 102, 235503	7.4	155
83	Yield stress in metallic glasses: The jamming-unjamming transition studied through Monte Carlo simulations based on the activation-relaxation technique. <i>Physical Review B</i> , 2009 , 80,	3.3	60
82	Effective transport properties of random composites: continuum calculations versus mapping to a network. <i>Physical Review E</i> , 2009 , 80, 040103	2.4	9

81	Grain Boundary Networks 2009 , 201-214		4
80	Mesoscale structure and segregation in electrodeposited nanocrystalline alloys. <i>Scripta Materialia</i> , 2008 , 59, 1218-1221	5.6	46
79	Superplastic deformation induced by cyclic hydrogen charging. <i>Journal of Applied Physics</i> , 2008 , 103, 103518	2.5	5
78	Hardening of a metallic glass during cyclic loading in the elastic range. <i>Applied Physics Letters</i> , 2008 , 92, 171911	3.4	71
77	The Hall-Petch breakdown at high strain rates: Optimizing nanocrystalline grain size for impact applications. <i>Applied Physics Letters</i> , 2008 , 93, 171916	3.4	66
76	Thickness of Anodic Titanium Oxides as a Function of Crystallographic Orientation of the Substrate. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 2143-2147	7.3	21
75	Superelasticity and Shape Memory in Micro- and Nanometer-scale Pillars. <i>Advanced Materials</i> , 2008 , 20, 272-278	24	127
74	Mechanics of indentation of plastically graded materials II: Experiments on nanocrystalline alloys with grain size gradients. <i>Journal of the Mechanics and Physics of Solids</i> , 2008 , 56, 172-183	5	62
73	Hyperspherical harmonics for the representation of crystallographic texture. <i>Acta Materialia</i> , 2008 , 56, 6141-6155	8.4	34
72	Percolation of diffusional creep: a new universality class. <i>Physical Review Letters</i> , 2007 , 98, 035701	7.4	12
71	Coble creep in heterogeneous materials: The role of grain boundary engineering. <i>Physical Review B</i> , 2007 , 76,	3.3	9
70	Correlation-space description of the percolation transition in composite microstructures. <i>Physical Review E</i> , 2007 , 76, 041108	2.4	16
69	Microstructural evolution during the heat treatment of nanocrystalline alloys. <i>Journal of Materials Research</i> , 2007 , 22, 3233-3248	2.5	170
68	Tailoring and patterning the grain size of nanocrystalline alloys. <i>Acta Materialia</i> , 2007 , 55, 371-379	8.4	252
67	Temperature, strain rate and reinforcement volume fraction dependence of plastic deformation in metallic glass matrix composites. <i>Acta Materialia</i> , 2007 , 55, 3059-3071	8.4	47
66	Mechanical behavior of amorphous alloys. <i>Acta Materialia</i> , 2007 , 55, 4067-4109	8.4	2539
65	Grain boundary segregation, chemical ordering and stability of nanocrystalline alloys: Atomistic computer simulations in the Ni-W system. <i>Acta Materialia</i> , 2007 , 55, 4221-4232	8.4	185
64	Initiation of shear bands near a stress concentration in metallic glass. <i>Acta Materialia</i> , 2007 , 55, 5348-5358	8.4	202

63	The Hall-Petch breakdown in nanocrystalline metals: A crossover to glass-like deformation. <i>Acta Materialia</i> , 2007 , 55, 5948-5958	8.4	201
62	Correlated grain-boundary distributions in two-dimensional networks. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2007 , 63, 315-28		6
61	Mechanical properties of metallic glass matrix composites: Effects of reinforcement character and connectivity. <i>Scripta Materialia</i> , 2007 , 56, 617-620	5.6	42
60	Contribution of triple junctions to the diffusion anomaly in nanocrystalline materials. <i>Scripta Materialia</i> , 2007 , 57, 253-256	5.6	57
59	Strategy to Improve the High-Temperature Mechanical Properties of Cr-Alloy Coatings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007 , 38, 1367-1370	2.3	4
58	Homogeneous flow of bulk metallic glass composites with a high volume fraction of reinforcement. <i>Journal of Materials Research</i> , 2007 , 22, 1564-1573	2.5	25
57	Critical length scales for the deformation of amorphous metals containing nanocrystals. <i>Philosophical Magazine Letters</i> , 2007 , 87, 603-611	1	23
56	Measuring grain-boundary segregation in nanocrystalline alloys: direct validation of statistical techniques using atom probe tomography. <i>Philosophical Magazine Letters</i> , 2007 , 87, 581-587	1	42
55	Geometric considerations for diffusion in polycrystalline solids. <i>Journal of Applied Physics</i> , 2007 , 101, 063524	2.5	36
54	Correlations beyond the nearest-neighbor level in grain boundary networks. <i>Scripta Materialia</i> , 2006 , 54, 1023-1028	5.6	15
53	Nanoindentation and contact-mode imaging at high temperatures. <i>Journal of Materials Research</i> , 2006 , 21, 725-736	2.5	91
52	Solute distribution in nanocrystalline NiW alloys examined through atom probe tomography. <i>Philosophical Magazine</i> , 2006 , 86, 4459-4475	1.6	76
51	Nanoindentation studies of materials. <i>Materials Today</i> , 2006 , 9, 32-40	21.8	468
50	Characterization of the microstructure and texture of nanostructured electrodeposited NiCo using electron backscatter diffraction (EBSD). <i>Acta Materialia</i> , 2006 , 54, 2451-2462	8.4	58
49	Diffusion on grain boundary networks: Percolation theory and effective medium approximations. <i>Acta Materialia</i> , 2006 , 54, 4709-4720	8.4	72
48	Strength asymmetry in nanocrystalline metals under multiaxial loading. <i>Acta Materialia</i> , 2005 , 53, 3193-3205	3.4	115
47	Grain boundary networks: Scaling laws, preferred cluster structure, and their implications for grain boundary engineering. <i>Acta Materialia</i> , 2005 , 53, 4323-4335	8.4	57
46	Quantitative insight into dislocation nucleation from high-temperature nanoindentation experiments. <i>Nature Materials</i> , 2005 , 4, 617-21	27	335

45	An atom probe tomography study of grain boundary segregation in nanocrystalline Ni-W. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 903, 1		2
44	Processing and Properties of Nanostructured Alloy Coatings in the Binary Ni-Cr System. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 903, 1		
43	Contributions to the homogeneous plastic flow of in situ metallic glass matrix composites. <i>Applied Physics Letters</i> , 2005 , 87, 241904	3.4	7
42	Topological and chemical arrangement of binary alloys during severe deformation. <i>Journal of Applied Physics</i> , 2004 , 95, 4815-4822	2.5	23
41	Incipient plasticity during nanoindentation at elevated temperatures. <i>Applied Physics Letters</i> , 2004 , 85, 1362-1364	3.4	68
40	Application of nucleation theory to the rate dependence of incipient plasticity during nanoindentation. <i>Journal of Materials Research</i> , 2004 , 19, 2152-2158	2.5	191
39	Modeling and Simulation of the Percolation Problem in High-Tc Superconductors: Role of Crystallographic Constraints on Grain Boundary Connectivity. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 819, N7.7.1		
38	Optical and Nanomechanical Characterization of an Omnidirectional Reflector Encompassing 850 nm Wavelength. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 817, 112		
37	A survey of instrumented indentation studies on metallic glasses. <i>Journal of Materials Research</i> , 2004 , 19, 46-57	2.5	222
36	Molecular simulation of amorphization by mechanical alloying. <i>Acta Materialia</i> , 2004 , 52, 2123-2132	8.4	18
35	Effect of a controlled volume fraction of dendritic phases on tensile and compressive ductility in La-based metallic glass matrix composites. <i>Acta Materialia</i> , 2004 , 52, 4121-4131	8.4	202
34	New regime of homogeneous flow in the deformation map of metallic glasses: elevated temperature nanoindentation experiments and mechanistic modeling. <i>Acta Materialia</i> , 2004 , 52, 5879-5891	8.4	372
33	Percolation and statistical properties of low- and high-angle interface networks in polycrystalline ensembles. <i>Physical Review B</i> , 2004 , 69,	3.3	48
32	The Mohr-Coulomb criterion from unit shear processes in metallic glass. <i>Intermetallics</i> , 2004 , 12, 1159-1165	3.5	86
31	Solid-state foaming of titanium by hydrogen-induced internal-stress superplasticity. <i>Scripta Materialia</i> , 2003 , 49, 879-883	5.6	29
30	Rapid assessment of anisotropic surface processes: experiments on the corrosion of Inconel 600. <i>Surface Science</i> , 2003 , 544, 183-192	1.8	30
29	The effect of solid solution W additions on the mechanical properties of nanocrystalline Ni. <i>Acta Materialia</i> , 2003 , 51, 431-443	8.4	373
28	Yield surface of a simulated metallic glass. <i>Acta Materialia</i> , 2003 , 51, 5399-5411	8.4	159

27	Atomistic basis for the plastic yield criterion of metallic glass. <i>Nature Materials</i> , 2003 , 2, 449-52	27	417
26	A nanoindentation study of serrated flow in bulk metallic glasses. <i>Acta Materialia</i> , 2003 , 51, 87-99	8.4	549
25	Analysis of grain boundary networks and their evolution during grain boundary engineering. <i>Acta Materialia</i> , 2003 , 51, 687-700	8.4	224
24	Combination rule for deviant CSL grain boundaries at triple junctions. <i>Acta Materialia</i> , 2003 , 51, 3731-3743	8.4	30
23	Connectivity of CSL Grain Boundaries and the Role of Deviations from Exact Coincidence. <i>International Journal of Materials Research</i> , 2003 , 94, 323-328		11
22	Nonrandom percolation behavior of grain boundary networks in high-Tc superconductors. <i>Applied Physics Letters</i> , 2003 , 83, 3755-3757	3.4	30
21	Connectivity and percolation in simulated grain-boundary networks. <i>Philosophical Magazine</i> , 2003 , 83, 711-726	1.6	99
20	Plasticity in Nanocrystalline and Amorphous Metals: Similarities at the Atomic Scale. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 806, 309		2
19	Strength Variations during Mechanical Alloying Through the Nanostructural Range. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 791, 1		
18	Atomistic simulation of strain-induced amorphization. <i>Applied Physics Letters</i> , 2003 , 82, 2017-2019	3.4	74
17	Driven alloys in the athermal limit. <i>Physical Review Letters</i> , 2003 , 91, 235505	7.4	62
16	Amorphization of Nanolaminates during Severe Plastic Deformation: Molecular Simulations in the Cu-Zr System. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 778, 131		
15	Hall-Petch breakdown manifested in abrasive wear resistance of nanocrystalline nickel. <i>Scripta Materialia</i> , 2002 , 46, 735-740	5.6	275
14	Enhanced densification of zinc powders through thermal cycling. <i>Acta Materialia</i> , 2002 , 50, 1349-1358	8.4	16
13	Dynamic steady state during cyclic diffusional phase transformations. <i>Journal of Applied Physics</i> , 2002 , 91, 9083-9090	2.5	2
12	Pack aluminisation kinetics of nickel rods and foams. <i>Materials Science and Technology</i> , 2002 , 18, 326-332	1.5	13
11	Hardness and Abrasion Resistance of Nanocrystalline Nickel Alloys Near the Hall-Petch Breakdown Regime. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 740, 1		13
10	Approaches to modelling chemically induced transformation superplasticity. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2002 , 82, 2441-2459		2

9	Role of topological constraints on the statistical properties of grain boundary networks. <i>Physical Review B</i> , 2002 , 66,	3.3	41
8	Strain rate-dependent deformation in bulk metallic glasses. <i>Intermetallics</i> , 2002 , 10, 1177-1182	3.5	104
7	Whisker alignment of Ti ₃ Al ₂ V/TiB composites during deformation by transformation superplasticity. <i>International Journal of Plasticity</i> , 2001 , 17, 317-340	7.6	56
6	Non-isothermal transformation-mismatch plasticity: modeling and experiments on Ti ₃ Al ₂ V. <i>Acta Materialia</i> , 2001 , 49, 199-210	8.4	41
5	Internal stress plasticity due to chemical stresses. <i>Acta Materialia</i> , 2001 , 49, 3387-3400	8.4	12
4	Solid-state foaming of titanium by superplastic expansion of argon-filled pores. <i>Journal of Materials Research</i> , 2001 , 16, 1508-1519	2.5	101
3	Pressure-induced transformation plasticity of H ₂ O ice. <i>Physical Review Letters</i> , 2001 , 86, 668-71	7.4	20
2	Enhanced densification of metal powders by transformation-mismatch plasticity. <i>Acta Materialia</i> , 2000 , 48, 1639-1653	8.4	34
1	Thermal-cycling creep of TiAl-based alloys. <i>Intermetallics</i> , 2000 , 8, 339-343	3.5	7