Marc A Meyers

List of Publications by Citations

402 papers	28,934 citations	81 h-index	160 g-index
452 ext. papers	32,708 ext. citations	8.1 avg, IF	7.45 L-index

#	Paper	IF	Citations
402	Mechanical properties of nanocrystalline materials. *Progress in Materials Science*, **2006**, 51, 427-556	42.2	3294
401	Biological materials: Structure and mechanical properties. *Progress in Materials Science*, **2008**, 53, 1-206	42.2	1675
400	The onset of twinning in metals: a constitutive description. *Acta Materialia*, **2001**, 49, 4025-4039	8.4	1187
399	**1994**,		1172
398	Structural biological materials: critical mechanics-materials connections. *Science*, **2013**, 339, 773-9	33.3	669
397	Biomedical applications of titanium and its alloys. *Jom*, **2008**, 60, 46-49	2.1	507
396	Biological materials: Functional adaptations and bioinspired designs. *Progress in Materials Science*, **2012**, 57, 1492-1704	42.2	457
395	Keratin: Structure, mechanical properties, occurrence in biological organisms, and efforts at bioinspiration. *Progress in Materials Science*, **2016**, 76, 229-318	42.2	376
394	Microstructural evolution in copper subjected to severe plastic deformation: Experiments and analysis. *Acta Materialia*, **2007**, 55, 13-28	8.4	363
393	Microstructural evolution in adiabatic shear localization in stainless steel. *Acta Materialia*, **2003**, 51, 1307-1325	8.4	355
392	Functional gradients and heterogeneities in biological materials: Design principles, functions, and bioinspired applications. *Progress in Materials Science*, **2017**, 88, 467-498	42.2	331
391	Dynamic recrystallization in high-strain, high-strain-rate plastic deformation of copper. *Acta Metallurgica Et Materialia*, **1994**, 42, 3183-3195		318
390	Structural Design Elements in Biological Materials: Application to Bioinspiration. *Advanced Materials*, **2015**, 27, 5455-76	24	316
389	Structure and mechanical properties of crab exoskeletons. *Acta Biomaterialia*, **2008**, 4, 587-96	10.8	308
388	Mechanical properties of high-entropy alloys with emphasis on face-centered cubic alloys. *Progress in Materials Science*, **2019**, 102, 296-345	42.2	306
387	Quasi-static and dynamic mechanical response of Haliotis rufescens (abalone) shells. *Acta Materialia*, **2000**, 48, 2383-2398	8.4	299
386	Mechanical strength of abalone nacre: role of the soft organic layer. *Journal of the Mechanical Behavior of Biomedical Materials*, **2008**, 1, 76-85	4.1	278

385	Structure and mechanical properties of selected biological materials. *Journal of the Mechanical Behavior of Biomedical Materials*, **2008**, 1, 208-26	4.1	264
384	Dynamic fracture (spalling) of metals. *Progress in Materials Science*, **1983**, 28, 1-96	42.2	262
383	Shear localization in dynamic deformation of materials: microstructural evolution and self-organization. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 317, 204-225	5.3	254
382	Void growth by dislocation emission. *Acta Materialia*, **2004**, 52, 1397-1408	8.4	249
381	Natural flexible dermal armor. *Advanced Materials*, **2013**, 25, 31-48	24	241
380	Analytical and computational description of effect of grain size on yield stress of metals. *Acta Materialia*, **2001**, 49, 2567-2582	8.4	234
379	Direct observation of the alpha-epsilon transition in shock-compressed iron via nanosecond x-ray diffraction. *Physical Review Letters*, **2005**, 95, 075502	7.4	233
378	A model for the effect of grain size on the yield stress of metals. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1982**, 46, 737-759		228
377	The effect of grain size on the high-strain, high-strain-rate behavior of copper. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 2881-2893	2.3	223
376	Self-organization of shear bands in titanium and Ti□Al□V alloy. *Acta Materialia*, **2002**, 50, 575-596	8.4	221
375	Evolution of microstructure and shear-band formation in □hcp titanium. *Mechanics of Materials*, **1994**, 17, 175-193	3.3	219
374	Laser-induced shock compression of monocrystalline copper: characterization and analysis. *Acta Materialia*, **2003**, 51, 1211-1228	8.4	207
373	On the tear resistance of skin. *Nature Communications*, **2015**, 6, 6649	17.4	206
372	Mechanical adaptability of the Bouligand-type structure in natural dermal armour. *Nature Communications*, **2013**, 4, 2634	17.4	202
371	Void growth in metals: Atomistic calculations. *Acta Materialia*, **2008**, 56, 3874-3886	8.4	196
370	Growth and structure in abalone shell. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 390, 27-41	5.3	193
369	The Structure, Functions, and Mechanical Properties of Keratin. *Jom*, **2012**, 64, 449-468	2.1	190
368	Shear Localization in Dynamic Deformation: Microstructural Evolution. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 811-843	2.3	189

367	A model for the formation of annealing twins in F.C.C. metals and alloys. *Acta Metallurgica*, **1978**, 26, 951-962		175
366	Anomalous elastic response of silicon to uniaxial shock compression on nanosecond time scales. *Physical Review Letters*, **2001**, 86, 2349-52	7.4	161
365	Shear localization and recrystallization in dynamic deformation of 8090 Al□i alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 299, 287-295	5.3	159
364	Observation of an adiabatic shear band in titanium by high-voltage transmission electron microscopy. *Acta Metallurgica*, **1986**, 34, 2493-2499		147
363	Constitutive description of dynamic deformation: physically-based mechanisms. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2002**, 322, 194-216	5.3	146
362	The materials science of collagen. *Journal of the Mechanical Behavior of Biomedical Materials*, **2015**, 52, 22-50	4.1	141
361	Shear localization and recrystallization in high-strain, high-strain-rate deformation of tantalum. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **1997**, 229, 23-41	5.3	137
360	Quasi-static and dynamic mechanical response of Strombus gigas (conch) shells. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 297, 203-211	5.3	135
359	Energy absorbent natural materials and bioinspired design strategies: A review. *Materials Science and Engineering C*, **2010**, 30, 331-342	8.3	134
358	High-strain-rate response of ultra-fine-grained copper. *Acta Materialia*, **2008**, 56, 2770-2783	8.4	134
357	Void initiation in fcc metals: Effect of loading orientation and nanocrystalline effects. *Acta Materialia*, **2010**, 58, 4458-4477	8.4	131
356	Grain-size dependent mechanical behavior of nanocrystalline metals. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 646, 101-134	5.3	129
355	Biological materials: a materials science approach. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 626-57	4.1	128
354	A mechanism for dislocation generation in shock-wave deformation. *Scripta Metallurgica*, **1978**, 12, 21-26		127
353	Shock-induced deformation twinning in tantalum. *Acta Materialia*, **1997**, 45, 157-175	8.4	126
352	Adiabatic shear localization in titanium and Ti-6 pct Al-4 pct V alloy. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1985**, 16, 761-775		125
351	Protective role of Arapaima gigas fish scales: structure and mechanical behavior. *Acta Biomaterialia*, **2014**, 10, 3599-614	10.8	115
350	Mechanical properties and the laminate structure of Arapaima gigas scales. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 1145-56	4.1	114

349	Explosive welding of aluminum to aluminum: analysis, computations and experiments. *International Journal of Impact Engineering*, **2004**, 30, 1333-1351	4	114
348	Plastic deformation in nanoindentation of tantalum: A new mechanism for prismatic loop formation. *Acta Materialia*, **2014**, 78, 378-393	8.4	112
347	Titanium alloy mini-implants for orthodontic anchorage: immediate loading and metal ion release. *Acta Biomaterialia*, **2007**, 3, 331-9	10.8	111
346	Mechanical properties and structure of Strombus gigas, Tridacna gigas, and Haliotis rufescens sea shells: A comparative study. *Materials Science and Engineering C*, **2006**, 26, 1380-1389	8.3	108
345	High-strain, high-strain-rate behavior of tantalum. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 2493-2501	2.3	105
344	Observation of an adiabatic shear band in AISI 4340 steel by high-voltage transmission electron microscopy. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1990**, 21, 707-716		103
343	Material dynamics under extreme conditions of pressure and strain rate. *Materials Science and Technology*, **2006**, 22, 474-488	1.5	101
342	Magnetic freeze casting inspired by nature. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 556, 741-750	5.3	100
341	Damage evolution in dynamic deformation of silicon carbide. *Acta Materialia*, **2000**, 48, 2399-2420	8.4	99
340	Armadillo armor: mechanical testing and micro-structural evaluation. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 713-22	4.1	98
339	Spark plasma sintering of tantalum carbide. *Scripta Materialia*, **2010**, 63, 577-580	5.6	98
338	An improved method for shock consolidation of powders. *Acta Metallurgica*, **1988**, 36, 925-936		98
337	Additive Manufacturing as a Method to Design and Optimize Bioinspired Structures. *Advanced Materials*, **2018**, 30, e1800940	24	98
336	The growth of nacre in the abalone shell. *Acta Biomaterialia*, **2008**, 4, 131-8	10.8	95
335	Ultrafine grained titanium for biomedical applications: An overview of performance. *Journal of Materials Research and Technology*, **2013**, 2, 340-350	5.5	94
334	Bioinspired Scaffolds with Varying Pore Architectures and Mechanical Properties. *Advanced Functional Materials*, **2014**, 24, 1978-1987	15.6	93
333	Structural biological composites: An overview. *Jom*, **2006**, 58, 35-41	2.1	92
332	Interfacial shear strength in abalone nacre. *Journal of the Mechanical Behavior of Biomedical Materials*, **2009**, 2, 607-12	4.1	89

331	Self-organization in the initiation of adiabatic shear bands. *Acta Materialia*, **1998**, 46, 327-340	8.4	89
330	Molecular dynamics simulations of shock compression of nickel: From monocrystals to nanocrystals. *Acta Materialia*, **2008**, 56, 5584-5604	8.4	89
329	Ultrafine-grain-sized zirconium by dynamic deformation. *Acta Materialia*, **2006**, 54, 4111-4127	8.4	89
328	Structure and mechanical behavior of a toucan beak. *Acta Materialia*, **2005**, 53, 5281-5296	8.4	89
327	Adiabatic shear localization in the CrMnFeCoNi high-entropy alloy. *Acta Materialia*, **2018**, 151, 424-431	8.4	88
326	Atomistic modeling of shock-induced void collapse in copper. *Applied Physics Letters*, **2005**, 86, 161902	3.4	87
325	Structure and fracture resistance of alligator gar (Atractosteus spatula) armored fish scales. *Acta Biomaterialia*, **2013**, 9, 5876-89	10.8	86
324	High-velocity deformation of AlCoCrFeNi high-entropy alloy: Remarkable resistance to shear failure. *Scientific Reports*, **2017**, 7, 42742	4.9	85
323	Computational description of nanocrystalline deformation based on crystal plasticity. *Acta Materialia*, **2004**, 52, 4413-4425	8.4	81
322	Microstructural evolution in copper processed by severe plastic deformation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 410-411, 290-298	5.3	81
321	Amorphization and nanocrystallization of silicon under shock compression. *Acta Materialia*, **2016**, 103, 519-533	8.4	77
320	Atomistic simulation of tantalum nanoindentation: Effects of indenter diameter, penetration velocity, and interatomic potentials on defect mechanisms and evolution. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 613, 390-403	5.3	76
319	Pangolin armor: Overlapping, structure, and mechanical properties of the keratinous scales. *Acta Biomaterialia*, **2016**, 41, 60-74	10.8	75
318	Inverse Hall-Petch relationship in nanocrystalline tantalum. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 580, 414-426	5.3	74
317	Materials science under extreme conditions of pressure and strain rate. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 2587-2607	2.3	74
316	Effect of strain rate on plastic flow and failure in polycrystalline tungsten. *Acta Materialia*, **1998**, 46, 6267-6290	8.4	73
315	Structure and mechanical behavior of human hair. *Materials Science and Engineering C*, **2017**, 73, 152-163	8.3	72
314	Growth and collapse of nanovoids in tantalum monocrystals. *Acta Materialia*, **2011**, 59, 1354-1372	8.4	71

313	High-strain, high-strain-rate flow and failure in PTFE/Al/W granular composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 472, 308-315	5.3	71
312	Effect of metallurgical parameters on shear band formation in low-carbon (~0.20 Wt Pct) steels. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1990**, 21, 3153-3164		70
311	Battle in the Amazon: Arapaima versus Piranha. *Advanced Engineering Materials*, **2012**, 14, B279-B288	3.5	67
310	Self organization of shear bands in stainless steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 384, 35-46	5.3	67
309	On the effect of grain size on yield stress: extension into nanocrystalline domain. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 319-321, 854-861	5.3	67
308	The deformation physics of nanocrystalline metals: Experiments, analysis, and computations. *Jom*, **2006**, 58, 41-48	2.1	65
307	Ductile tensile failure in metals through initiation and growth of nanosized voids. *Acta Materialia*, **2012**, 60, 4856-4865	8.4	64
306	Predation versus protection: Fish teeth and scales evaluated by nanoindentation. *Journal of Materials Research*, **2012**, 27, 100-112	2.5	63
305	Extreme lightweight structures: avian feathers and bones. *Materials Today*, **2017**, 20, 377-391	21.8	61
304	Modeling the elastic properties and damage evolution in Ti□Al3Ti metal□ntermetallic laminate (MIL) composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 374, 10-26	5.3	61
303	The strength of single crystal copper under uniaxial shock compression at 100 GPa. *Journal of Physics Condensed Matter*, **2010**, 22, 065404	1.8	60
302	Shock consolidation: microstructurally-based analysis and computational modeling. *Acta Materialia*, **1999**, 47, 2089-2108	8.4	60
301	Dynamic deformation and failure of ultrafine-grained titanium. *Acta Materialia*, **2017**, 125, 210-218	8.4	59
300	BIOMECHANICS. Why the seahorse tail is square. *Science*, **2015**, 349, aaa6683	33.3	59
299	Quasistatic and dynamic regimes of granular material deformation under impulse loading. *Journal of the Mechanics and Physics of Solids*, **1997**, 45, 1955-1999	5	59
298	Deforming nanocrystalline nickel at ultrahigh strain rates. *Applied Physics Letters*, **2006**, 88, 061917	3.4	59
297	The prospects for superplasticity at high strain rates: Preliminary considerations and an example. *Scripta Metallurgica Et Materialia*, **1990**, 24, 605-610		59
296	Directional amorphization of boron carbide subjected to laser shock compression. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 12088-12093	11.5	58

295	Laser compression of monocrystalline tantalum. *Acta Materialia*, **2012**, 60, 6601-6620	8.4	58
294	Controlled high-rate localized shear in porous reactive media. *Applied Physics Letters*, **1994**, 65, 3069-3071	3.4	58
293	On the ultimate tensile strength of tantalum. *Acta Materialia*, **2017**, 126, 313-328	8.4	57
292	Spall strength dependence on grain size and strain rate in tantalum. *Acta Materialia*, **2018**, 158, 313-329	8.4	57
291	Transmission Electron Microscopy Study of Strain-Induced Low- and High-Angle Boundary Development in Equal-Channel Angular-Pressed Commercially Pure Aluminum. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 181-189	2.3	57
290	Solid-state experiments at high pressure and strain rate. *Physics of Plasmas*, **2000**, 7, 1999-2006	2.1	57
289	High-strain-rate deformation and comminution of silicon carbide. *Journal of Applied Physics*, **1998**, 83, 4660-4671	2.5	57
288	Structure and mechanical properties of selected protective systems in marine organisms. *Materials Science and Engineering C*, **2016**, 59, 1143-1167	8.3	56
287	Damage evolution in Ti6Al4V/Al3Ti metal-intermetallic laminate composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 443, 1-15	5.3	56
286	Combustion synthesis/densification of an Al2O3/TiB2 composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 311, 83-99	5.3	56
285	Biological Materials Science: Biological Materials, Bioinspired Materials, and Biomaterials **2014**,		56
284	Structural characterization and mechanical behavior of a bivalve shell (Saxidomus purpuratus). *Materials Science and Engineering C*, **2011**, 31, 724-729	8.3	55
283	Kinetics of isothermal martensitic transformation. *Progress in Materials Science*, **1986**, 30, 1-37	42.2	55
282	The role of organic intertile layer in abalone nacre. *Materials Science and Engineering C*, **2009**, 29, 2398-2410	8.3	54
281	Shock synthesis of silicides: II. Thermodynamics and kinetics. *Acta Metallurgica Et Materialia*, **1994**, 42, 715-729		54
280	Leatherback sea turtle shell: A tough and flexible biological design. *Acta Biomaterialia*, **2015**, 28, 2-12	10.8	53
279	High-strain-rate deformation of granular silicon carbide. *Acta Materialia*, **1998**, 46, 4037-4065	8.4	53
278	Biomimetic Materials by Freeze Casting. *Jom*, **2013**, 65, 720-727	2.1	52

277	Toucan and hornbill beaks: a comparative study. *Acta Biomaterialia*, **2010**, 6, 331-43	10.8	51
276	The toucan beak: Structure and mechanical response. *Materials Science and Engineering C*, **2006**, 26, 1412-1420	8.3	51
275	Systemic levels of metallic ions released from orthodontic mini-implants. *American Journal of Orthodontics and Dentofacial Orthopedics*, **2009**, 135, 522-9	2.1	50
274	Laser shock compression of copper and copper–aluminum alloys. *International Journal of Impact Engineering*, **2005**, 32, 473-507	4	50
273	Organic interlamellar layers, mesolayers and mineral nanobridges: contribution to strength in abalone (Haliotis rufescence) nacre. *Acta Biomaterialia*, **2014**, 10, 2056-64	10.8	48
272	Structure and mechanical properties of Saxidomus purpuratus biological shells. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 1514-30	4.1	48
271	Dynamic nanoindentation of articular porcine cartilage. *Materials Science and Engineering C*, **2011**, 31, 789-795	8.3	48
270	Effect of Mo on microstructure and mechanical properties of TiC–Ni-based cermets produced by combustion synthesis–impact forging technique. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1996**, 206, 71-80	5.3	48
269	Shock synthesis of silicides– experimentation and microstructural evolution. *Acta Metallurgica Et Materialia*, **1994**, 42, 701-714		48
268	Highly deformable bones: unusual deformation mechanisms of seahorse armor. *Acta Biomaterialia*, **2013**, 9, 6763-70	10.8	47
267	The role of dislocations in the growth of nanosized voids in ductile failure of metals. *Jom*, **2009**, 61, 35-41	2.1	47
266	The armored carapace of the boxfish. *Acta Biomaterialia*, **2015**, 23, 1-10	10.8	46
265	Strain-rate effects in rheological models of inelastic response. *International Journal of Plasticity*, **2003**, 19, 1097-1118	7.6	46
264	Spontaneous and forced shear localization in high-strain-rate deformation of tantalum. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1999**, 268, 70-82	5.3	46
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262	Structural architectures with toughening mechanisms in Nature: A review of the materials science of Type-I collagenous materials. *Progress in Materials Science*, **2019**, 103, 425-483	42.2	46
261	Laser shock-induced spalling and fragmentation in vanadium. *Acta Materialia*, **2010**, 58, 4604-4628	8.4	45
260	Shock Compression of Monocrystalline Copper: Atomistic Simulations. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2007**, 38, 2681-2688	2.3	45

259	Shear localization in high-strain-rate deformation of granular alumina. *Acta Materialia*, **1996**, 44, 2017-2026	8.4	45
258	Amorphization in extreme deformation of the CrMnFeCoNi high-entropy alloy. *Science Advances*, **2021**, 7,	14.3	45
257	Quasi-static and dynamic response of explosively consolidated metal–aluminum powder mixtures. *Acta Materialia*, **2012**, 60, 1418-1432	8.4	43
256	Combustion Synthesis/Dynamic Densification of a TiB2-SiC Composite. *Journal of the American Ceramic Society*, **1996**, 79, 177-182	3.8	43
255	Effect of stress state and microstructural parameters on impact damage of alumina-based ceramics. *Journal of Materials Science*, **1989**, 24, 2516-2532	4.3	43
254	Strain-induced structural changes and chemical reactions– Thermomechanical and kinetic models. *Acta Materialia*, **1998**, 46, 5929-5945	8.4	42
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252	Deformation and failure in extreme regimes by high-energy pulsed lasers: A review. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 688, 429-458	5.3	41
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250	Magnetic enhancement of thermal conductivity in copper–carbon nanotube composites produced by electroless plating, freeze drying, and spark plasma sintering. *Materials Letters*, **2012**, 79, 256-258	3.3	41
249	Laser compression of nanocrystalline tantalum. *Acta Materialia*, **2013**, 61, 7767-7780	8.4	41
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247	Reproducibility of ZrO2-based freeze casting for biomaterials. *Materials Science and Engineering C*, **2016**, 61, 105-12	8.3	40
246	Structure and mechanical properties of naturally occurring lightweight foam-filled cylinder--the peacock's tail coverts shaft and its components. *Acta Biomaterialia*, **2015**, 17, 137-51	10.8	40
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244	Torsional properties of helix-reinforced composites fabricated by magnetic freeze casting. *Composite Structures*, **2015**, 119, 174-184	5.3	39
243	Potential Bone Replacement Materials Prepared by Two Methods. *Materials Research Society Symposia Proceedings*, **2012**, 1418, 177		39
242	Sequential bone healing of immediately loaded mini-implants: histomorphometric and fluorescence analysis. *American Journal of Orthodontics and Dentofacial Orthopedics*, **2010**, 137, 80-90	2.1	39

241	Densification of Reaction-Synthesized Titanium Carbide by High-Velocity Forging. *Journal of the American Ceramic Society*, **1992**, 75, 592-602	3.8	39
240	Reaction synthesis/dynamic compaction of titanium diboride. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1992**, 23, 77-86		39
239	Sequential bone healing of immediately loaded mini-implants. *American Journal of Orthodontics and Dentofacial Orthopedics*, **2008**, 134, 44-52	2.1	38
238	Evaluation of the collapsing thick-walled cylinder technique for shear-band spacing. *International Journal of Impact Engineering*, **2003**, 28, 257-280	4	38
237	Effect of shock compression method on the defect substructure in monocrystalline copper. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2005**, 409, 270-281	5.3	38
236	Plastic deformation of a porous bcc metal containing nanometer sized voids. *Computational Materials Science*, **2014**, 88, 92-102	3.2	37
235	A lightweight, biological structure with tailored stiffness: The feather vane. *Acta Biomaterialia*, **2016**, 41, 27-39	10.8	37
234	Novel Defense Mechanisms in the Armor of the Scales of the Living Fossil Coelacanth Fish. *Advanced Functional Materials*, **2018**, 28, 1804237	15.6	37
233	Underwater adhesion of abalone: The role of van der Waals and capillary forces. *Acta Materialia*, **2009**, 57, 4178-4185	8.4	36
232	The structure of controlled shear bands in dynamically deformed reactive mixtures. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 2511-2519	2.3	36
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230	Laser-induced shock compression of copper: Orientation and pressure decay effects. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 2633-2646	2.3	35
229	Shock synthesis and synthesis-assisted shock consolidation of suicides. *Journal of Materials Science*, **1991**, 26, 601-611	4.3	35
228	A model for elastic precursor waves in the shock loading of polycrystalline metals. *Materials Science and Engineering*, **1977**, 30, 99-111		35
227	Structural characterization and viscoelastic constitutive modeling of skin. *Acta Biomaterialia*, **2017**, 53, 460-469	10.8	34
226	Generating gradient germanium nanostructures by shock-induced amorphization and crystallization. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 9791-9796	11.5	34
225	A comparative study of piscine defense: The scales of Arapaima gigas, Latimeria chalumnae and Atractosteus spatula. *Journal of the Mechanical Behavior of Biomedical Materials*, **2017**, 73, 1-16	4.1	34
224	Chapter 89 Dislocations in Shock Compression and Release. *Dislocations in Solids*, **2009**, 15, 91-197		34

223	Shear localization and chemical reaction in high-strain, high-strain-rate deformation of Ti□Si powder mixtures. *Acta Materialia*, **1998**, 46, 3033-3046	8.4	34
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220	Tensile behavior and structural characterization of pig dermis. *Acta Biomaterialia*, **2019**, 86, 77-95	10.8	33
219	Pressure and shear-induced amorphization of silicon. *Extreme Mechanics Letters*, **2015**, 5, 74-80	3.9	33
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