

# Rajiv S. Mishra

## List of Publications by Citations

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579  
papers

22,720  
citations

63  
h-index

134  
g-index

603  
ext. papers

26,000  
ext. citations

4.4  
avg, IF

7.56  
L-index

#	Paper	IF	Citations
579	Friction stir welding and processing. <i>Materials Science and Engineering Reports</i> , <b>2005</b> , 50, 1-78	30.9	4398
578	Microstructural investigation of friction stir welded 7050-T651 aluminium. <i>Acta Materialia</i> , <b>2003</b> , 51, 713-729	8.4	766
577	Friction stir processing: a novel technique for fabrication of surface composite. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2003</b> , 341, 307-310	5.3	756
576	High strain rate superplasticity in a friction stir processed 7075 Al alloy. <i>Scripta Materialia</i> , <b>1999</b> , 42, 163-168	5.68	624
575	Low-temperature superplasticity in nanostructured nickel and metal alloys. <i>Nature</i> , <b>1999</b> , 398, 684-686	50.4	526
574	Additive manufacturing of metals: a brief review of the characteristic microstructures and properties of steels, Ti-6Al-4V and high-entropy alloys. <i>Science and Technology of Advanced Materials</i> , <b>2017</b> , 18, 584-610	7.1	434
573	Superplastic deformation behaviour of friction stir processed 7075Al alloy. <i>Acta Materialia</i> , <b>2002</b> , 50, 4419-4430	8.4	343
572	Effects of grain size on the corrosion resistance of wrought magnesium alloys containing neodymium. <i>Corrosion Science</i> , <b>2012</b> , 58, 145-151	6.8	280
571	Influence of grain size and texture on HallPetch relationship for a magnesium alloy. <i>Scripta Materialia</i> , <b>2011</b> , 65, 994-997	5.6	252
570	StructureProperty correlations in Al 7050 and Al 7055 high-strength aluminum alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2008</b> , 478, 163-172	5.3	246
569	Superplasticity in powder metallurgy aluminum alloys and composites. <i>Acta Metallurgica Et Materialia</i> , <b>1995</b> , 43, 877-891		233
568	Steady state creep behaviour of silicon carbide particulate reinforced aluminium composites. <i>Acta Metallurgica Et Materialia</i> , <b>1992</b> , 40, 2045-2052		217
567	Friction stir processing: a tool to homogenize nanocomposite aluminum alloys. <i>Scripta Materialia</i> , <b>2001</b> , 44, 61-66	5.6	206
566	Friction Stir Processing: A New Grain Refinement Technique to Achieve High Strain Rate Superplasticity in Commercial Alloys. <i>Materials Science Forum</i> , <b>2001</b> , 357-359, 507-514	0.4	199
565	High strain rate superplasticity in a commercial 2024 Al alloy via friction stir processing. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2003</b> , 359, 290-296	5.3	196
564	Effect of friction stir processing on the microstructure of cast A356 aluminum. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2006</b> , 433, 269-278	5.3	167
563	Effect of friction stir processing on fatigue behavior of A356 alloy. <i>Scripta Materialia</i> , <b>2004</b> , 51, 237-241	5.6	166

562	Strengthening mechanisms in Ti-Nb-Zr-Ta and Ti-Mo-Zr-Fe orthopaedic alloys. <i>Biomaterials</i> , <b>2004</b> , 25, 3413-9	15.6	162
561	Microstructural modification of as-cast Al-Si-Mg alloy by friction stir processing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2006</b> , 37, 3323-3336	2.3	156
560	Low temperature superplasticity in a friction-stir-processed ultrafine grained Al <sub>70</sub> Mg <sub>30</sub> alloy. <i>Acta Materialia</i> , <b>2005</b> , 53, 4211-4223	8.4	154
559	Extreme creep resistance in a microstructurally stable nanocrystalline alloy. <i>Nature</i> , <b>2016</b> , 537, 378-81	50.4	147
558	Effect of multiple-pass friction stir processing on microstructure and tensile properties of a cast aluminum-silicon alloy. <i>Scripta Materialia</i> , <b>2006</b> , 54, 1623-1626	5.6	143
557	High strain-rate compressive deformation behavior of the Al <sub>0.1</sub> CrFeCoNi high entropy alloy. <i>Materials and Design</i> , <b>2015</b> , 86, 598-602	8.1	136
556	Mechanical behavior and superplasticity of a severe plastic deformation processed nanocrystalline Ti <sub>60</sub> Al <sub>40</sub> V alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 298, 44-50	5.3	128
555	Abnormal grain growth in friction stir processed alloys. <i>Scripta Materialia</i> , <b>2008</b> , 58, 367-371	5.6	123
554	Friction stir additive manufacturing for high structural performance through microstructural control in an Mg based WE43 alloy. <i>Materials &amp; Design</i> , <b>2015</b> , 65, 934-952		122
553	Superplasticity in cast A356 induced via friction stir processing. <i>Scripta Materialia</i> , <b>2004</b> , 50, 931-935	5.6	118
552	Multiple passes of friction stir processing for the creation of superplastic 7075 aluminum. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 464, 255-260	5.3	117
551	Corrosion behavior of a friction stir processed rare-earth added magnesium alloy. <i>Corrosion Science</i> , <b>2012</b> , 58, 321-326	6.8	113
550	Effect of tool design and process parameters on properties of Al alloy 6016 friction stir spot welds. <i>Journal of Materials Processing Technology</i> , <b>2011</b> , 211, 972-977	5.3	110
549	High strain rate superplasticity in friction stir processed Al <sub>70</sub> Mg <sub>30</sub> Zr alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2003</b> , 351, 148-153	5.3	109
548	Modifying transformation pathways in high entropy alloys or complex concentrated alloys via thermo-mechanical processing. <i>Acta Materialia</i> , <b>2018</b> , 153, 169-185	8.4	108
547	Superplastic deformation mechanism of an ultrafine-grained aluminum alloy produced by friction stir processing. <i>Acta Materialia</i> , <b>2010</b> , 58, 4693-4704	8.4	106
546	Influence of fraction of high angle boundaries on the mechanical behavior of an ultrafine grained Al <sub>70</sub> Mg <sub>30</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2010</b> , 527, 5246-5254	5.3	105
545	High-Pressure Sintering of Nanocrystalline Al <sub>2</sub> O <sub>3</sub> . <i>Journal of the American Ceramic Society</i> , <b>1996</b> , 79, 2989-2992	3.8	103

544	Development of ultrafine-grained microstructure and low temperature (0.48 Tm) superplasticity in friction stir processed AlMgZr. <i>Scripta Materialia</i> , <b>2005</b> , 53, 75-80	5.6	101
543	Grain size and texture effects on deformation behavior of AZ31 magnesium alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2012</b> , 558, 716-724	5.3	97
542	Properties of friction stir-processed Al 1100NiTi composite. <i>Scripta Materialia</i> , <b>2007</b> , 56, 541-544	5.6	94
541	Effect of texture on the mechanical behavior of ultrafine grained magnesium alloy. <i>Scripta Materialia</i> , <b>2011</b> , 64, 580-583	5.6	93
540	Multi-sheet structures in 7475 aluminum by friction stir welding in concert with post-weld superplastic forming. <i>Scripta Materialia</i> , <b>2002</b> , 47, 631-636	5.6	92
539	Some observations on the high-temperature creep behavior of 6061 Al-SiC composites. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , <b>1990</b> , 21, 2089-2090		92
538	Enhanced strength and ductility in a friction stir processing engineered dual phase high entropy alloy. <i>Scientific Reports</i> , <b>2017</b> , 7, 16167	4.9	91
537	High strain rate superplasticity in continuous cast AlMg alloys prepared via friction stir processing. <i>Scripta Materialia</i> , <b>2009</b> , 60, 850-853	5.6	89
536	High-strain-rate superplasticity from nanocrystalline Al alloy 1420 at low temperatures. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>2001</b> , 81, 37-48		89
535	Mechanism of high strain rate superplasticity in aluminium alloy composites. <i>Acta Materialia</i> , <b>1997</b> , 45, 561-568	8.4	88
534	Tensile superplasticity in a nanocrystalline nickel aluminide. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1998</b> , 252, 174-178	5.3	88
533	Analysis of microstructural evolution during friction stir welding of ultrahigh-strength steel. <i>Scripta Materialia</i> , <b>2010</b> , 63, 851-854	5.6	85
532	Enhancing strength and strain hardenability via deformation twinning in fcc-based high entropy alloys reinforced with intermetallic compounds. <i>Acta Materialia</i> , <b>2019</b> , 165, 420-430	8.4	84
531	Tensile yield strength of a single bulk Al <sub>0.3</sub> CoCrFeNi high entropy alloy can be tuned from 160 MPa to 1800 MPa. <i>Scripta Materialia</i> , <b>2019</b> , 162, 18-23	5.6	82
530	Effect of Microstructure on the Deformation Mechanism of Friction Stir-Processed Al <sub>0.1</sub> CoCrFeNi High Entropy Alloy. <i>Materials Research Letters</i> , <b>2015</b> , 3, 30-34	7.4	79
529	High-temperature creep behavior of TiC particulate reinforced Ti <sub>3</sub> Al <sub>2</sub> V alloy composite. <i>Acta Materialia</i> , <b>2002</b> , 50, 4293-4302	8.4	79
528	Effect of friction stir processing on fatigue behavior of an investment cast Al <sub>7</sub> Si <sub>0.6</sub> Mg alloy. <i>Acta Materialia</i> , <b>2010</b> , 58, 989-1003	8.4	77
527	Corrosion-resistant high entropy alloy with high strength and ductility. <i>Scripta Materialia</i> , <b>2019</b> , 166, 168-172	5.6	75

526	Tool wear mechanisms in friction stir welding of TiB <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> alloy. <i>Wear</i> , <b>2014</b> , 321, 25-32	3.5	70
525	Steady state creep behaviour of particulate-reinforced titanium matrix composites. <i>Acta Materialia</i> , <b>1996</b> , 44, 927-935	8.4	70
524	Microstructure and mechanical behavior of friction stir processed ultrafine grained AlMgSc alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 5883-5887	5.3	69
523	A conceptual model for the process variables related to heat generation in friction stir welding of aluminum. <i>Scripta Materialia</i> , <b>2008</b> , 58, 327-331	5.6	69
522	Dimensionally induced structural transformations in titanium-aluminum multilayers. <i>Physical Review Letters</i> , <b>1996</b> , 76, 3778-3781	7.4	68
521	Friction Stir Processing of a High Entropy Alloy Al <sub>0.1</sub> CoCrFeNi. <i>Jom</i> , <b>2015</b> , 67, 1007-1013	2.1	67
520	Evaluation of microstructure and superplasticity in friction stir processed 5083 Al alloy. <i>Journal of Materials Research</i> , <b>2004</b> , 19, 3329-3342	2.5	67
519	Understanding effect of 3.5 wt.% NaCl on the corrosion of Al <sub>0.1</sub> CoCrFeNi high-entropy alloy. <i>Journal of Nuclear Materials</i> , <b>2017</b> , 495, 154-163	3.3	66
518	Effect of microstructure on fatigue life and fracture morphology in an aluminum alloy. <i>Scripta Materialia</i> , <b>2009</b> , 60, 500-503	5.6	66
517	Development of nanocrystalline structure in Cu during friction stir processing (FSP). <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 5458-5464	5.3	65
516	Anomalies in the deformation mechanism and kinetics of coarse-grained high entropy alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 654, 256-263	5.3	63
515	Material flow and microstructural evolution during friction stir spot welding of AZ31 magnesium alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2012</b> , 543, 200-209	5.3	63
514	High strain rate superplasticity in friction stir processed ultrafine grained MgAlZn alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 562, 69-76	5.3	62
513	Extremely high strength and work hardening ability in a metastable high entropy alloy. <i>Scientific Reports</i> , <b>2018</b> , 8, 9920	4.9	61
512	Additivity of strengthening mechanisms in ultrafine grained AlMgSc alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 580, 175-183	5.3	61
511	Microstructure and mechanical properties of a friction stir processed TiB <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 573, 67-74	5.3	61
510	Ultrathin alumina-coated carbon nanotubes as an anode for high capacity Li-ion batteries. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 13621		61
509	Superplastic behavior of micro-regions in two-pass friction stir processed 7075Al alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2009</b> , 505, 70-78	5.3	61

508	Plasma activated sintering of nanocrystalline Al <sub>2</sub> O <sub>3</sub> . <i>Scripta Materialia</i> , <b>1995</b> , 5, 525-544		61
507	A Combinatorial Approach for Assessing the Magnetic Properties of High Entropy Alloys: Role of Cr in AlCo <sub>x</sub> Cr <sub>1-x</sub> FeNi. <i>Advanced Engineering Materials</i> , <b>2017</b> , 19, 1700048	3.5	60
506	Fatigue behavior of ultrafine grained triplex Al <sub>0.3</sub> CoCrFeNi high entropy alloy. <i>Scripta Materialia</i> , <b>2019</b> , 158, 116-120	5.6	60
505	Reciprocating sliding wear behavior of high entropy alloys in dry and marine environments. <i>Materials Chemistry and Physics</i> , <b>2018</b> , 210, 162-169	4.4	59
504	Hierarchical microstructure for improved fatigue properties in a eutectic high entropy alloy. <i>Scripta Materialia</i> , <b>2018</b> , 156, 105-109	5.6	59
503	A State-of-the-Art Review on Solid-State Metal Joining. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , <b>2019</b> , 141,	3.3	59
502	A study on the combined effect of forging and aging in Mg <sub>92</sub> RE alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 530, 28-35	5.3	59
501	Study of friction stir joining of thin aluminium sheets in lap joint configuration. <i>Science and Technology of Welding and Joining</i> , <b>2010</b> , 15, 70-75	3.7	59
500	Effect of Friction Stir Processing on Microstructure and Mechanical Properties of a Cast-Magnesium Rare Earth Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2010</b> , 41, 73-84	2.3	59
499	Survivability of single-walled carbon nanotubes during friction stir processing. <i>Nanotechnology</i> , <b>2006</b> , 17, 3081-3084	3.4	59
498	Cavitation in superplastic 7075Al alloys prepared via friction stir processing. <i>Acta Materialia</i> , <b>2003</b> , 51, 3551-3569	8.4	59
497	Friction Stir Additive Manufacturing: Route to High Structural Performance. <i>Jom</i> , <b>2015</b> , 67, 616-621	2.1	58
496	Spatially dependent properties in a laser additive manufactured Ti <sub>6</sub> Al <sub>4</sub> V component. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 654, 39-52	5.3	58
495	Reversed strength-ductility relationship in microstructurally flexible high entropy alloy. <i>Scripta Materialia</i> , <b>2018</b> , 154, 163-167	5.6	58
494	Friction stir welding of Al <sub>70</sub> Mg <sub>30</sub> 1424 alloy. <i>Materials and Design</i> , <b>2016</b> , 106, 146-152	8.1	57
493	Upper critical field in nanostructured Nb: Competing effects of the reduction in density of states and the mean free path. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	57
492	Creep behaviour of an aluminium-silicon carbide particulate composite. <i>Scripta Metallurgica Et Materialia</i> , <b>1990</b> , 24, 1565-1570		57
491	Development of a highly regenerable elite Acala cotton ( <i>Gossypium hirsutum</i> cv. Maxxa) as a step towards genotype-independent regeneration. <i>Plant Cell, Tissue and Organ Culture</i> , <b>2003</b> , 73, 21-35	2.7	56

490	Aging kinetics of friction stir welded Al-Cu-Li-Mg-Ag and Al-Cu-Li-Mg alloys. <i>Materials and Design</i> , <b>2016</b> , 110, 60-71	8.1	56
489	Friction stir lap welded advanced high strength steels: Microstructure and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 8111-8119	5.3	55
488	Microstructural Modification of Cast Aluminum Alloys via Friction Stir Processing. <i>Materials Science Forum</i> , <b>2003</b> , 426-432, 2891-2896	0.4	55
487	Influence of Texture on Mechanical Behavior of Friction-Stir-Processed Magnesium Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2010</b> , 41, 13-17	2.3	54
486	Electric pulse assisted rapid consolidation of ultrafine grained alumina matrix composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2000</b> , 287, 178-182	5.3	53
485	Contrasting mechanical behavior in precipitation hardenable AlXCoCrFeNi high entropy alloy microstructures: Single phase FCC vs. dual phase FCC-BCC. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2019</b> , 739, 158-166	5.3	53
484	Hierarchical features infused heterogeneous grain structure for extraordinary strength-ductility synergy. <i>Materials Research Letters</i> , <b>2018</b> , 6, 676-682	7.4	52
483	Lattice strain framework for plastic deformation in complex concentrated alloys including high entropy alloys. <i>Materials Science and Technology</i> , <b>2015</b> , 31, 1259-1263	1.5	50
482	Synthesis and characterization of self-organized multilayered graphene-carbon nanotube hybrid films. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 7289		49
481	Critical grain size for change in deformation behavior in ultrafine grained AlMgBc alloy. <i>Scripta Materialia</i> , <b>2011</b> , 64, 576-579	5.6	49
480	Enhanced superplasticity through friction stir processing in continuous cast AA5083 aluminum. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 464, 351-357	5.3	49
479	Observations of low-temperature superplasticity in electrodeposited ultrafine grained nickel. <i>Materials Letters</i> , <b>2000</b> , 45, 345-349	3.3	49
478	Influence of initial crystal structure and electrical pulsing on densification of nanocrystalline alumina powder. <i>Journal of Materials Research</i> , <b>1998</b> , 13, 86-89	2.5	49
477	Characterization of high cycle fatigue behavior of a new generation aluminum lithium alloy. <i>Acta Materialia</i> , <b>2011</b> , 59, 5946-5960	8.4	48
476	Oxide dispersion strengthened nickel based alloys via spark plasma sintering. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2015</b> , 630, 155-169	5.3	47
475	Effect of process parameters on abnormal grain growth during friction stir processing of a cast Al alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2010</b> , 528, 189-199	5.3	47
474	TEM/HREM observations of nanostructured superplastic Ni3Al. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>2001</b> , 81, 25-36		46
473	Process forces during friction stir channeling in an aluminum alloy. <i>Journal of Materials Processing Technology</i> , <b>2011</b> , 211, 305-311	5.3	45

472	Creep behaviour of an orthorhombic phase in a Ti-2Al-1Nb alloy. <i>Scripta Metallurgica Et Materialia</i> , <b>1993</b> , 28, 569-574		45
471	Microstructure and steady state creep in Ti-24Al-11Nb. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1990</b> , 130, 151-164	5.3	45
470	Strength and ductility optimization of Mg-10Nd-2Zr alloy by microstructural design. <i>International Journal of Plasticity</i> , <b>2015</b> , 68, 77-97	7.6	44
469	Effect of microstructure on the uniaxial tensile deformation behavior of Mg-10Y-2RE alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 590, 116-131	5.3	44
468	Microstructure and mechanical properties of friction stir welded oxide dispersion strengthened alloy. <i>Journal of Nuclear Materials</i> , <b>2013</b> , 432, 274-280	3.3	44
467	High-temperature creep of Al-TiB <sub>2</sub> particulate composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1994</b> , 189, 95-104	5.3	44
466	Stress corrosion cracking susceptibility of ultrafine grained Al-Mg-Si alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 565, 80-89	5.3	43
465	On superplasticity in silicon carbide reinforced aluminum composites. <i>Scripta Metallurgica Et Materialia</i> , <b>1991</b> , 25, 271-275		43
464	Hall-Petch and inverse Hall-Petch relations in high-entropy CoNiFeAl <sub>x</sub> Cu <sub>1-x</sub> alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2020</b> , 773, 138873	5.3	43
463	Evaluation of intermetallic compound layer at aluminum/steel interface joined by friction stir scribe technology. <i>Materials and Design</i> , <b>2019</b> , 174, 107795	8.1	42
462	In Situ Laser Synthesis of Fe-Based Amorphous Matrix Composite Coating on Structural Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2012</b> , 43, 4957-4966	2.3	42
461	Fatigue crack growth behavior of friction stir processed aluminum alloy. <i>Scripta Materialia</i> , <b>2008</b> , 59, 395-398	5.6	42
460	Effect of friction stir processing on the kinetics of superplastic deformation in an Al-Mg-Zr alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2005</b> , 36, 1447-1458	2.3	42
459	Enhanced superplastic properties in bulk metastable nanostructured alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 304-306, 206-210	5.3	42
458	Influence of friction stir processing on the room temperature fatigue cracking mechanisms of A356 aluminum alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2018</b> , 716, 165-178	5.3	39
457	Deformation mechanisms and tensile superplasticity in nanocrystalline materials. <i>Jom</i> , <b>1999</b> , 51, 37-40	2.1	39
456	The threshold stress for creep controlled by dislocation-particle interaction. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1994</b> , 69, 1097-1109		39
455	Extremely high fatigue resistance in an ultrafine grained high entropy alloy. <i>Applied Materials Today</i> , <b>2019</b> , 15, 525-530	6.6	38



454	The observation of tensile superplasticity in nanocrystalline materials. <i>Scripta Materialia</i> , <b>1997</b> , 9, 473-476		38
453	Microstructural Modification and Resultant Properties of Friction Stir Processed Cast NiAl Bronze. <i>Materials Science Forum</i> , <b>2003</b> , 426-432, 2843-2848	0.4	38
452	Microstructure and mechanical behavior of an additive manufactured (AM) WE43-Mg alloy. <i>Additive Manufacturing</i> , <b>2019</b> , 26, 53-64	6.1	38
451	Unexpected strength-ductility response in an annealed, metastable, high-entropy alloy. <i>Applied Materials Today</i> , <b>2018</b> , 13, 198-206	6.6	38
450	Influence of friction stir processing tool design on microstructure and superplastic behavior of Al-Mg alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 670, 9-16	5.3	37
449	Study of $\epsilon$ -precipitates and their effect on the directional yield asymmetry of friction stir processed and aged AZ91C alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 560, 500-509	5.3	37
448	Effect of stress ratio on the fatigue behavior of a friction stir processed cast AlSiMg alloy. <i>Scripta Materialia</i> , <b>2009</b> , 61, 992-995	5.6	37
447	Steady state creep behaviour of a rapidly solidified and further processed Al-5 wt% Ti alloy. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 2243-2251		37
446	High-entropy alloy strengthened by in situ formation of entropy-stabilized nano-dispersoids. <i>Scientific Reports</i> , <b>2018</b> , 8, 14085	4.9	37
445	Serration behavior and negative strain rate sensitivity of Al <sub>0.1</sub> CoCrFeNi high entropy alloy. <i>Intermetallics</i> , <b>2017</b> , 84, 20-24	3.5	36
444	Influence of process parameters on microstructural evolution and mechanical properties in friction stirred Al-2024 (T3) alloy. <i>Science and Technology of Welding and Joining</i> , <b>2009</b> , 14, 346-355	3.7	36
443	Laser additive manufacturing of compositionally graded AlCrFeMoV <sub>x</sub> (x = 0 to 1) high-entropy alloy system. <i>Optics and Laser Technology</i> , <b>2019</b> , 113, 330-337	4.2	35
442	Metastability-assisted fatigue behavior in a friction stir processed dual-phase high entropy alloy. <i>Materials Research Letters</i> , <b>2018</b> , 6, 613-619	7.4	35
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435	Towards heterogeneous Al <sub>x</sub> CoCrFeNi high entropy alloy via friction stir processing. <i>Materials Letters</i> , <b>2019</b> , 236, 472-475	3.3	34
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431	Saturation magnetization and Curie temperature of nanocrystalline nickel. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>1997</b> , 75, 803-811		32
430	Impact of thermal management on post weld heat treatment efficacy in friction stir welded 2050-T3 alloy. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 722, 330-338	5.7	31
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419	Grain size dependence of strain rate sensitivity in a single phase FCC high entropy alloy Al <sub>0.3</sub> CoCrFeNi. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2018</b> , 736, 344-348	5.3	29

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4 <sup>17</sup>	Effect of hook characteristics on the fracture behaviour of dissimilar friction stir welded aluminium alloy and mild steel sheets. <i>Science and Technology of Welding and Joining</i> , <b>2019</b> , 24, 178-184	3.7	28
4 <sup>16</sup>	Superplasticity and microstructural stability in a Mg alloy processed by hot rolling and friction stir processing. <i>Scripta Materialia</i> , <b>2013</b> , 68, 447-450	5.6	28
4 <sup>15</sup>	Deep cup forming by superplastic punch stretching of friction stir processed 7075 Al alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2005</b> , 395, 173-179	5.3	28
4 <sup>14</sup>	Grain size dependence of fatigue properties of friction stir processed ultrafine-grained Al-5024 alloy. <i>International Journal of Fatigue</i> , <b>2018</b> , 109, 1-9	5	28
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4 <sup>11</sup>	Effect of inhomogeneous deformation on anisotropy of AZ31 magnesium sheet. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 567, 101-109	5.3	27
4 <sup>10</sup>	Finite element simulation of selective superplastic forming of friction stir processed 7075 Al alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 463, 245-248	5.3	27
4 <sup>09</sup>	Effect of Welding Parameters on Properties of 5052 Al Friction Stir Spot Welds <b>2006</b> ,		27
4 <sup>08</sup>	Characterization of the effects of friction stir processing on microstructural changes in DRA composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2006</b> , 428, 80-90	5.3	27
4 <sup>07</sup>	Effect of particle size distribution on strength of precipitation-hardened alloys. <i>Journal of Materials Research</i> , <b>2004</b> , 19, 2765-2773	2.5	27
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4 <sup>02</sup>	Integrated Computational Materials Engineering (ICME) Approach to Design of Novel Microstructures for Ti-Alloys. <i>Jom</i> , <b>2014</b> , 66, 1287-1298	2.1	26
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400	Strength versus ductility in carbon nanotube reinforced nickel matrix nanocomposites. <i>Journal of Materials Research</i> , <b>2014</b> , 29, 761-769	2.5	26
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