

# Farzad Khodabakhshi

## List of Publications by Year in descending order

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95  
papers

4,492  
citations

71061

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123376

61  
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95  
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95  
docs citations

95  
times ranked

2103  
citing authors

#	ARTICLE	IF	CITATIONS
1	Friction stir welding/processing of metals and alloys: A comprehensive review on microstructural evolution. <i>Progress in Materials Science</i> , 2021, 117, 100752.	16.0	436
2	Potentials and strategies of solid-state additive friction-stir manufacturing technology: A critical review. <i>Journal of Manufacturing Processes</i> , 2018, 36, 77-92.	2.8	142
3	Fabrication of a new Al-Mg/graphene nanocomposite by multi-pass friction-stir processing: Dispersion, microstructure, stability, and strengthening. <i>Materials Characterization</i> , 2017, 132, 92-107.	1.9	119
4	Hardness~strength relationships in fine and ultra-fine grained metals processed through constrained groove pressing. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 636, 331-339.	2.6	117
5	Constrained groove pressing of low carbon steel: Nano-structure and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 4043-4049.	2.6	109
6	Effects of graphene nano-platelets (GNPs) on the microstructural characteristics and textural development of an Al-Mg alloy during friction-stir processing. <i>Surface and Coatings Technology</i> , 2018, 335, 288-305.	2.2	106
7	The effect of constrained groove pressing on grain size, dislocation density and electrical resistivity of low carbon steel. <i>Materials &amp; Design</i> , 2011, 32, 3280-3286.	5.1	96
8	Microstructure-property characterization of a friction-stir welded joint between AA5059 aluminum alloy and high density polyethylene. <i>Materials Characterization</i> , 2014, 98, 73-82.	1.9	90
9	Simulation and experimental study of underwater dissimilar friction-stir welding between aluminium and steel. <i>Journal of Materials Research and Technology</i> , 2020, 9, 3767-3781.	2.6	90
10	Cryogenic friction-stir processing of ultrafine-grained Al~Mg~TiO <sub>2</sub> nanocomposites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 620, 471-482.	2.6	89
11	Fabrication of a high strength ultra-fine grained Al-Mg-SiC nanocomposite by multi-step friction-stir processing. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 698, 313-325.	2.6	86
12	Friction stir welding of a P/M Al~Al <sub>2</sub> O <sub>3</sub> nanocomposite: Microstructure and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 585, 222-232.	2.6	85
13	Microstructure and texture development during friction stir processing of Al~Mg alloy sheets with TiO <sub>2</sub> nanoparticles. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 605, 108-118.	2.6	83
14	Intermetallic compounds (IMCs) formation during dissimilar friction-stir welding of AA5005 aluminum alloy to St-52 steel: numerical modeling and experimental study. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 2401-2422.	1.5	80
15	Friction-stir processing of an AA8026-TiB <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> hybrid nanocomposite: Microstructural developments and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 660, 84-96.	2.6	76
16	Friction stir processing of an aluminum-magnesium alloy with pre-placing elemental titanium powder: In-situ formation of an Al <sub>3</sub> Ti-reinforced nanocomposite and materials characterization. <i>Materials Characterization</i> , 2015, 108, 102-114.	1.9	75
17	Friction-stir lap-joining of aluminium-magnesium/poly-methyl-methacrylate hybrid structures: thermo-mechanical modelling and experimental feasibility study. <i>Science and Technology of Welding and Joining</i> , 2018, 23, 35-49.	1.5	73
18	Reactive friction stir processing of AA 5052~TiO <sub>2</sub> nanocomposite: process~microstructure~mechanical characteristics. <i>Materials Science and Technology</i> , 2015, 31, 426-435.	0.8	69

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19	Underwater submerged dissimilar friction-stir welding of AA5083 aluminum alloy and A441 AISI steel. International Journal of Advanced Manufacturing Technology, 2019, 102, 4383-4395.	1.5	67
20	A review on metallurgical aspects of laser additive manufacturing (LAM): Stainless steels, nickel superalloys, and titanium alloys. Journal of Materials Research and Technology, 2022, 16, 1029-1068.	2.6	67
21	Effects of stored strain energy on restoration mechanisms and texture components in an aluminum-magnesium alloy prepared by friction stir processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 204-214.	2.6	66
22	Microstructure, strain-rate sensitivity, work hardening, and fracture behavior of laser additive manufactured austenitic and martensitic stainless steel structures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 756, 545-561.	2.6	65
23	Effects of processing parameters on the characteristics of dissimilar friction-stir-welded joints between AA5058 aluminum alloy and PMMA polymer. Welding in the World, Le Soudage Dans Le Monde, 2018, 62, 117-130.	1.3	64
24	Bonding mechanism and interface characterisation during dissimilar friction stir welding of an aluminium/polymer bi-material joint. Science and Technology of Welding and Joining, 2017, 22, 182-190.	1.5	63
25	Similar and dissimilar friction-stir welding of an PM aluminum-matrix hybrid nanocomposite and commercial pure aluminum: Microstructure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 666, 225-237.	2.6	62
26	The role of microstructural features on the electrical resistivity and mechanical properties of powder metallurgy Al-SiC-Al <sub>2</sub> O <sub>3</sub> nanocomposites. Materials and Design, 2017, 130, 26-36.	3.3	61
27	Surface modifications of an aluminum-magnesium alloy through reactive stir friction processing with titanium oxide nanoparticles for enhanced sliding wear resistance. Surface and Coatings Technology, 2017, 309, 114-123.	2.2	59
28	Dissimilar metals deposition by directed energy based on powder-fed laser additive manufacturing. Journal of Manufacturing Processes, 2019, 43, 83-97.	2.8	58
29	Friction-stir processing of a cold sprayed AA7075 coating layer on the AZ31B substrate: Structural homogeneity, microstructures and hardness. Surface and Coatings Technology, 2017, 331, 116-128.	2.2	57
30	Effects of nanometric inclusions on the microstructural characteristics and strengthening of a friction-stir processed aluminum-magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 215-229.	2.6	52
31	Reactive friction-stir processing of an Al-Mg alloy with introducing multi-walled carbon nano-tubes (MW-CNTs): Microstructural characteristics and mechanical properties. Materials Characterization, 2017, 131, 359-373.	1.9	52
32	Dissimilar laser welding of an AA6022-AZ31 lap-joint by using Ni-interlayer: Novel beam-wobbling technique, processing parameters, and metallurgical characterization. Optics and Laser Technology, 2019, 112, 349-362.	2.2	52
33	Production and characterization of an advanced AA6061-Graphene-TiB <sub>2</sub> hybrid surface nanocomposite by multi-pass friction stir processing. Surface and Coatings Technology, 2019, 377, 124914.	2.2	51
34	The annealing phenomena and thermal stability of severely deformed steel sheet. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5212-5218.	2.6	50
35	Evaluation of a polymer-steel laminated sheet composite structure produced by friction stir additive manufacturing (FSAM) technology. Polymer Testing, 2020, 90, 106690.	2.3	50
36	Hot deformation behavior of an aluminum-matrix hybrid nanocomposite fabricated by friction stir processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 458-466.	2.6	48

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37	Microstructural characteristics and mechanical properties of the dissimilar friction-stir butt welds between an Al-Mg alloy and A316L stainless steel. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 90, 2785-2801.	1.5	47
38	Interfacial bonding mechanisms between aluminum and titanium during cold gas spraying followed by friction-stir modification. <i>Applied Surface Science</i> , 2018, 462, 739-752.	3.1	46
39	Effect of beam wobbling on laser welding of aluminum and magnesium alloy with nickel interlayer. <i>Journal of Manufacturing Processes</i> , 2019, 37, 212-219.	2.8	46
40	Strain Rate Sensitivity, Work Hardening, and Fracture Behavior of an Al-Mg TiO <sub>2</sub> Nanocomposite Prepared by Friction Stir Processing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 4073-4088.	1.1	45
41	Fatigue fracture of friction-stir processed Al <sub>3</sub> Ti-MgO hybrid nanocomposites. <i>International Journal of Fatigue</i> , 2016, 87, 266-278.	2.8	45
42	Lead free Sn-Ag-Cu solders reinforced by Ni-coated graphene nanosheets prepared by mechanical alloying: Microstructural evolution and mechanical durability. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 702, 371-385.	2.6	43
43	Effects of post-annealing on the microstructure and mechanical properties of friction stir processed Al-Mg-TiO <sub>2</sub> nanocomposites. <i>Materials &amp; Design</i> , 2014, 63, 30-41.	5.1	42
44	Effect of alumina nanoparticles on the microstructure and mechanical durability of meltspun lead-free solders based on tin alloys. <i>Journal of Alloys and Compounds</i> , 2016, 688, 143-155.	2.8	42
45	Application of CGP-cross route process for microstructure refinement and mechanical properties improvement in steel sheets. <i>Journal of Manufacturing Processes</i> , 2013, 15, 533-541.	2.8	39
46	Influence of hard inclusions on microstructural characteristics and textural components during dissimilar friction-stir welding of an PM Al <sub>2</sub> O <sub>3</sub> -SiC hybrid nanocomposite with AA1050 alloy. <i>Science and Technology of Welding and Joining</i> , 2017, 22, 412-427.	1.5	38
47	Spark plasma sintering of a multilayer thermal barrier coating on Inconel 738 superalloy: Microstructural development and hot corrosion behavior. <i>Ceramics International</i> , 2016, 42, 2770-2779.	2.3	37
48	Development of fed friction-stir (FFS) process for dissimilar nanocomposite welding between AA2024 aluminum alloy and polycarbonate (PC). <i>Journal of Manufacturing Processes</i> , 2020, 54, 262-273.	2.8	35
49	A novel fed friction-stir (FFS) technology for nanocomposite joining. <i>Science and Technology of Welding and Joining</i> , 2020, 25, 89-100.	1.5	34
50	Closed-loop control of microstructure and mechanical properties in additive manufacturing by directed energy deposition. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 803, 140483.	2.6	34
51	Effects of laser additive manufacturing on microstructure and crystallographic texture of austenitic and martensitic stainless steels. <i>Additive Manufacturing</i> , 2020, 31, 100915.	1.7	33
52	Friction-forging tubular additive manufacturing (FFTAM): A new route of solid-state layer-upon-layer metal deposition. <i>Journal of Materials Research and Technology</i> , 2020, 9, 15273-15285.	2.6	33
53	On the correlation between indentation hardness and tensile strength in friction stir processed materials. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 789, 139682.	2.6	33
54	Monte Carlo simulation of grain refinement during friction stir processing. <i>Journal of Materials Science</i> , 2020, 55, 13438-13456.	1.7	31

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55	Metallurgical characteristics and failure mode transition for dissimilar resistance spot welds between ultra-fine grained and coarse-grained low carbon steel sheets. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 637, 12-22.	2.6	30
56	Nanoindentation creep properties of lead-free nanocomposite solders reinforced by modified carbon nanotubes. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 797, 140203.	2.6	30
57	Mechanical properties and microstructure of resistance spot welded severely deformed low carbon steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 529, 237-245.	2.6	29
58	Fabrication of a nanostructured high strength steel tube by friction-forging tubular additive manufacturing (FFTAM) technology. <i>Journal of Manufacturing Processes</i> , 2020, 58, 724-735.	2.8	29
59	Resistance spot welding of ultra-fine grained steel sheets produced by constrained groove pressing: Optimization and characterization. <i>Materials Characterization</i> , 2012, 69, 71-83.	1.9	28
60	Accumulative fold-forging (AFF) as a novel severe plastic deformation process to fabricate a high strength ultra-fine grained layered aluminum alloy structure. <i>Materials Characterization</i> , 2018, 136, 229-239.	1.9	27
61	Solid-state joining of powder metallurgy Al-Al <sub>2</sub> O <sub>3</sub> nanocomposites via friction-stir welding: Effects of powder particle size on the weldability, microstructure, and mechanical property. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 754, 190-204.	2.6	27
62	Microstructure-mechanical property relationship in an Al-Mg alloy processed by constrained groove pressing-cross route. <i>Materials Science and Technology</i> , 2018, 34, 1003-1017.	0.8	26
63	Surface Modification of a Cold Gas Dynamic Spray-Deposited Titanium Coating on Aluminum Alloy by using Friction-Stir Processing. <i>Journal of Thermal Spray Technology</i> , 2019, 28, 1185-1198.	1.6	26
64	3D finite element analysis and experimental validation of constrained groove pressing-cross route as an SPD process for sheet form metals. <i>International Journal of Advanced Manufacturing Technology</i> , 2014, 73, 1291-1305.	1.5	25
65	Dynamic restoration and crystallographic texture of a friction-stir processed Al-Mg-SiC surface nanocomposite. <i>Materials Science and Technology</i> , 2018, 34, 1773-1791.	0.8	24
66	Dynamic strain aging behavior of an ultra-fine grained Al-Mg alloy (AA5052) processed via classical constrained groove pressing. <i>Journal of Materials Research and Technology</i> , 2019, 8, 630-643.	2.6	24
67	Effects of friction stir processing on the microstructure, mechanical and corrosion behaviors of an aluminum-magnesium alloy. <i>Surface and Coatings Technology</i> , 2021, 405, 126647.	2.2	24
68	Differential scanning calorimetry study of constrained groove pressed low carbon steel: Recovery, recrystallisation and ferrite to austenite phase transformation. <i>Materials Science and Technology</i> , 2014, 30, 765-773.	0.8	23
69	Dissimilar friction-stir welding of aluminum and polymer: a review. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 104, 333-358.	1.5	23
70	Fabrication and characterization of a high strength ultra-fine grained metal-matrix AA8006-B4C layered nanocomposite by a novel accumulative fold-forging (AFF) process. <i>Materials and Design</i> , 2018, 157, 211-226.	3.3	22
71	Influence of CNTs decomposition during reactive friction-stir processing of an Al-Mg alloy on the correlation between microstructural characteristics and microtextural components. <i>Journal of Microscopy</i> , 2018, 271, 188-206.	0.8	22
72	Tailoring the residual stress during two-step cold gas spraying and friction-stir surface integration of titanium coating. <i>Surface and Coatings Technology</i> , 2019, 380, 125008.	2.2	20

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73	Influence of graphene content and nickel decoration on the microstructural and mechanical characteristics of the Cu/Sn-Ag-Cu/Cu soldered joint. <i>Journal of Materials Research and Technology</i> , 2020, 9, 8953-8970.	2.6	20
74	Nano-indentation behavior of layered ultra-fine grained AA8006 aluminum alloy and AA8006-B4C nanostructured nanocomposite produced by accumulative fold forging process. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 744, 120-136.	2.6	19
75	Mechanical properties of HA@Ag/PLA nanocomposite structures prepared by extrusion-based additive manufacturing. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 118, 104455.	1.5	19
76	Microstructural evolution and mechanical properties of a friction-stir processed Ti-hydroxyapatite (HA) nanocomposite. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 88, 127-139.	1.5	18
77	Finite element modeling and experimental validation of CGP classical and new cross routes for severe plastic deformation of an Al-Mg alloy. <i>Journal of Manufacturing Processes</i> , 2019, 37, 348-361.	2.8	18
78	On the Failure Behavior of Highly Cold Worked Low Carbon Steel Resistance Spot Welds. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 1376-1389.	1.1	17
79	Dissimilar friction-stir lap-welding of aluminum-magnesium (AA5052) and aluminum-copper (AA2024) alloys: microstructural evolution and mechanical properties. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 94, 3713-3730.	1.5	17
80	On the stability, microstructure, and mechanical property of powder metallurgy Al-SiC nanocomposites during similar and dissimilar laser welding. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 759, 688-702.	2.6	16
81	An investigation into failure analysis of interfering part of a steam turbine journal bearing. <i>Case Studies in Engineering Failure Analysis</i> , 2014, 2, 61-68.	1.2	13
82	Reactive friction-stir processing of nanocomposites: Effects of thermal history on microstructure-mechanical property relationships. <i>Materials Science and Technology</i> , 2017, 33, 1776-1789.	0.8	13
83	Stability of ultra-fine and nano-grains after severe plastic deformation: a critical review. <i>Journal of Materials Science</i> , 2021, 56, 15513-15537.	1.7	13
84	Hydrogen storage behavior of Mg/Ni layered nanostructured composite materials produced by accumulative fold-forging. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 1048-1062.	3.8	13
85	Effects of SiC nanoparticles on the dissimilar friction stir weldability of low-density polyethylene (LDPE) and AA7075 aluminum alloy. <i>Journal of Materials Research and Technology</i> , 2021, 13, 449-462.	2.6	12
86	Orientation structural mapping and textural characterization of a CP-Ti/HA surface nanocomposite produced by friction-stir processing. <i>Surface and Coatings Technology</i> , 2019, 374, 460-475.	2.2	11
87	Lead-free Sn-based/MW-CNTs nanocomposite soldering: effects of reinforcing content, Ni-coating modification, and isothermal ageing treatment. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 4737-4752.	1.1	9
88	Characterization of accumulative fold-forged magnesium-nickel multilayered composite structures. <i>Materials Characterization</i> , 2020, 167, 110478.	1.9	8
89	Closed-loop deposition of martensitic stainless steel during laser additive manufacturing to control microstructure and mechanical properties. <i>Optics and Lasers in Engineering</i> , 2021, 145, 106680.	2.0	8
90	Wear Resistance and Tribological Features of Ultra-Fine-Grained Al-Mg Alloys Processed by Constrained Groove Pressing-Cross Route. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 1235-1252.	1.2	7

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91	Influence of autogenous seeding on densification and microstructure in processing of $\hat{\alpha}$ -alumina nanopowders. Phase Transitions, 2011, 84, 1-14.	0.6	4
92	Under glass transition temperature diffusion bonding of bulk metallic glass and aluminum. Materials Chemistry and Physics, 2021, 269, 124758.	2.0	4
93	Depth-sensing thermal stability of accumulative fold-forged nanostructured materials. Materials and Design, 2021, 202, 109554.	3.3	3
94	Small-scale plasticity of ultra-fine grained alloy and nanostructured nanocomposite: Ambient and elevated-temperature nanoindentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 807, 140873.	2.6	2
95	Effect of Post Annealing Treatment on Nano-Structured Low Carbon Steel Sheets Processed by Constrained Groove Pressing. Materials Science Forum, 0, 667-669, 1009-1014.	0.3	1