Farzad Khodabakhshi

List of Publications by Year
in descending order

95 papers	4,492 citations	71061 41 h-index	123376 61 g-index
95 all docs	95 docs citations	95 times ranked	2103 citing authors

#	Article	IF	Citations
1	Hydrogen storage behavior of Mg/Ni layered nanostructured composite materials produced by accumulative fold-forging. International Journal of Hydrogen Energy, 2022, 47, 1048-1062.	3.8	13
2	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
3	Closed-loop control of microstructure and mechanical properties in additive manufacturing by directed energy deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 803, 140483.	2.6	34
4	Friction stir welding/processing of metals and alloys: A comprehensive review on microstructural evolution. Progress in Materials Science, 2021, 117, 100752.	16.0	436
5	Effects of friction stir processing on the microstructure, mechanical and corrosion behaviors of an aluminum-magnesium alloy. Surface and Coatings Technology, 2021, 405, 126647.	2.2	24
6	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
7	Depth-sensing thermal stability of accumulative fold-forged nanostructured materials. Materials and Design, 2021, 202, 109554.	3.3	3
8	Mechanical properties of HA@Ag/PLA nanocomposite structures prepared by extrusion-based additive manufacturing. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 118, 104455.	1.5	19
9	Stability of ultra-fine and nano-grains after severe plastic deformation: a critical review. Journal of Materials Science, 2021, 56, 15513-15537.	1.7	13
10	Effects of SiC nanoparticles on the dissimilar friction stir weldability of low-density polyethylene (LDPE) and AA7075 aluminum alloy. Journal of Materials Research and Technology, 2021, 13, 449-462.	2.6	12
11	Under glass transition temperature diffusion bonding of bulk metallic glass and aluminum. Materials Chemistry and Physics, 2021, 269, 124758.	2.0	4
12	Closed-loop deposition of martensitic stainless steel during laser additive manufacturing to control microstructure and mechanical properties. Optics and Lasers in Engineering, 2021, 145, 106680.	2.0	8
13	A novel fed friction-stir (FFS) technology for nanocomposite joining. Science and Technology of Welding and Joining, 2020, 25, 89-100.	1.5	34
14	Effects of laser additive manufacturing on microstructure and crystallographic texture of austenitic and martensitic stainless steels. Additive Manufacturing, 2020, 31, 100915.	1.7	33
15	Nanoindentation creep properties of lead-free nanocomposite solders reinforced by modified carbon nanotubes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 797, 140203.	2.6	30
16	Fabrication of a nanostructured high strength steel tube by friction-forging tubular additive manufacturing (FFTAM) technology. Journal of Manufacturing Processes, 2020, 58, 724-735.	2.8	29
17	Characterization of accumulative fold-forged magnesium-nickel multilayered composite structures. Materials Characterization, 2020, 167, 110478.	1.9	8
18	Friction-forging tubular additive manufacturing (FFTAM): A new route of solid-state layer-upon-layer metal deposition. Journal of Materials Research and Technology, 2020, 9, 15273-15285.	2.6	33

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19	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
20	On the correlation between indentation hardness and tensile strength in friction stir processed materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 789, 139682.	2.6	33
21	Monte Carlo simulation of grain refinement during friction stir processing. Journal of Materials Science, 2020, 55, 13438-13456.	1.7	31
22	Influence of graphene content and nickel decoration on the microstructural and mechanical characteristics of the Cu/Snâ€"Agâ€"Cu/Cu soldered joint. Journal of Materials Research and Technology, 2020, 9, 8953-8970.	2.6	20
23	Simulation and experimental study of underwater dissimilar friction-stir welding between aluminium and steel. Journal of Materials Research and Technology, 2020, 9, 3767-3781.	2.6	90
24	Development of fed friction-stir (FFS) process for dissimilar nanocomposite welding between AA2024 aluminum alloy and polycarbonate (PC). Journal of Manufacturing Processes, 2020, 54, 262-273.	2.8	35
25	Dynamic strain aging behavior of an ultra-fine grained Al-Mg alloy (AA5052) processed via classical constrained groove pressing. Journal of Materials Research and Technology, 2019, 8, 630-643.	2.6	24
26	Surface Modification of a Cold Gas Dynamic Spray-Deposited Titanium Coating on Aluminum Alloy by using Friction-Stir Processing. Journal of Thermal Spray Technology, 2019, 28, 1185-1198.	1.6	26
27	Tailoring the residual stress during two-step cold gas spraying and friction-stir surface integration of titanium coating. Surface and Coatings Technology, 2019, 380, 125008.	2.2	20
28	Production and characterization of an advanced AA6061-Graphene-TiB2 hybrid surface nanocomposite by multi-pass friction stir processing. Surface and Coatings Technology, 2019, 377, 124914.	2.2	51
29	Lead-free Sn-based/MW-CNTs nanocomposite soldering: effects of reinforcing content, Ni-coating modification, and isothermal ageing treatment. Journal of Materials Science: Materials in Electronics, 2019, 30, 4737-4752.	1.1	9
30	Orientation structural mapping and textural characterization of a CP-Ti/HA surface nanocomposite produced by friction-stir processing. Surface and Coatings Technology, 2019, 374, 460-475.	2.2	11
31	On the stability, microstructure, and mechanical property of powder metallurgy Alâ€"SiC nanocomposites during similar and dissimilar laser welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 688-702.	2.6	16
32	Dissimilar friction-stir welding of aluminum and polymer: a review. International Journal of Advanced Manufacturing Technology, 2019, 104, 333-358.	1.5	23
33	Dissimilar metals deposition by directed energy based on powder-fed laser additive manufacturing. Journal of Manufacturing Processes, 2019, 43, 83-97.	2.8	58
34	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
35	Solid-state joining of powder metallurgy Al-Al2O3 nanocomposites via friction-stir welding: Effects of powder particle size on the weldability, microstructure, and mechanical property. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 190-204.	2.6	27
36	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

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37	Finite element modeling and experimental validation of CGP classical and new cross routes for severe plastic deformation of an Al-Mg alloy. Journal of Manufacturing Processes, 2019, 37, 348-361.	2.8	18
38	Wear Resistance and Tribological Features of Ultra-Fine-Grained Al-Mg Alloys Processed by Constrained Groove Pressing-Cross Route. Journal of Materials Engineering and Performance, 2019, 28, 1235-1252.	1.2	7
39	Intermetallic compounds (IMCs) formation during dissimilar friction-stir welding of AA5005 aluminum alloy to St-52 steel: numerical modeling and experimental study. International Journal of Advanced Manufacturing Technology, 2019, 100, 2401-2422.	1.5	80
40	Nano-indentation behavior of layered ultra-fine grained AA8006 aluminum alloy and AA8006-B4C nanostructured nanocomposite produced by accumulative fold forging process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 120-136.	2.6	19
41	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
42	Effect of beam wobbling on laser welding of aluminum and magnesium alloy with nickel interlayer. Journal of Manufacturing Processes, 2019, 37, 212-219.	2.8	46
43	Effects of graphene nano-platelets (GNPs) on the microstructural characteristics and textural development of an Al-Mg alloy during friction-stir processing. Surface and Coatings Technology, 2018, 335, 288-305.	2.2	106
44	Microstructureâ€"mechanical property relationship in an Alâ€"Mg alloy processed by constrained groove pressing-cross route. Materials Science and Technology, 2018, 34, 1003-1017.	0.8	26
45	Accumulative fold-forging (AFF) as a novel severe plastic deformation process to fabricate a high strength ultra-fine grained layered aluminum alloy structure. Materials Characterization, 2018, 136, 229-239.	1.9	27
46	Friction-stir lap-joining of aluminium-magnesium/poly-methyl-methacrylate hybrid structures: thermo-mechanical modelling and experimental feasibility study. Science and Technology of Welding and Joining, 2018, 23, 35-49.	1.5	73
47	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
48	Dissimilar friction-stir lap-welding of aluminum-magnesium (AA5052) and aluminum-copper (AA2024) alloys: microstructural evolution and mechanical properties. International Journal of Advanced Manufacturing Technology, 2018, 94, 3713-3730.	1.5	17
49	Potentials and strategies of solid-state additive friction-stir manufacturing technology: A critical review. Journal of Manufacturing Processes, 2018, 36, 77-92.	2.8	142
50	Fabrication and characterization of a high strength ultra-fine grained metal-matrix AA8006-B4C layered nanocomposite by a novel accumulative fold-forging (AFF) process. Materials and Design, 2018, 157, 211-226.	3.3	22
51	Dynamic restoration and crystallographic texture of a friction-stir processed Alâ€"Mgâ€"SiC surface nanocomposite. Materials Science and Technology, 2018, 34, 1773-1791.	0.8	24
52	Influence of CNTs decomposition during reactive frictionâ€stir processing of an Alâ€"Mg alloy on the correlation between microstructural characteristics and microtextural components. Journal of Microscopy, 2018, 271, 188-206.	0.8	22
53	Microstructural evolution and mechanical properties of a friction-stir processed Ti-hydroxyapatite (HA) nanocomposite. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 88, 127-139.	1.5	18
54	Interfacial bonding mechanisms between aluminum and titanium during cold gas spraying followed by friction-stir modification. Applied Surface Science, 2018, 462, 739-752.	3.1	46

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55	Reactive friction-stir processing of nanocomposites: Effects of thermal history on microstructureâ€“mechanical property relationships. Materials Science and Technology, 2017, 33, 1776-1789.	0.8	13
56	The role of microstructural features on the electrical resistivity and mechanical properties of powder metallurgy Al-SiC-Al 2 O 3 nanocomposites. Materials and Design, 2017, 130, 26-36.	3.3	61
57	Fabrication of a high strength ultra-fine grained Al-Mg-SiC nanocomposite by multi-step friction-stir processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 698, 313-325.	2.6	86
58	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
59	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
60	Lead free Sn-Ag-Cu solders reinforced by Ni-coated graphene nanosheets prepared by mechanical alloying: Microstructural evolution and mechanical durability. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 702, 371-385.	2.6	43
61	Fabrication of a new Al-Mg/graphene nanocomposite by multi-pass friction-stir processing: Dispersion, microstructure, stability, and strengthening. Materials Characterization, 2017, 132, 92-107.	1.9	119
62	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
63	Microstructural characteristics and mechanical properties of the dissimilar friction-stir butt welds between an Alâ€"Mg alloy and A316L stainless steel. International Journal of Advanced Manufacturing Technology, 2017, 90, 2785-2801.	1.5	47
64	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
65	Influence of hard inclusions on microstructural characteristics and textural components during dissimilar friction-stir welding of an PM Alâ€"Al₂O₃â€"SiC hybrid nanocomposite with AA1050 alloy. Science and Technology of Welding and Joining, 2017, 22, 412-427.	1.5	38
66	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
67	Effect of alumina nanoparticles on the microstructure and mechanical durability of meltspun lead-free solders based on tin alloys. Journal of Alloys and Compounds, 2016, 688, 143-155.	2.8	42
68	Spark plasma sintering of a multilayer thermal barrier coating on Inconel 738 superalloy: Microstructural development and hot corrosion behavior. Ceramics International, 2016, 42, 2770-2779.	2.3	37
69	Fatigue fracture of friction-stir processed Alâ€"Al3Tiâ€"MgO hybrid nanocomposites. International Journal of Fatigue, 2016, 87, 266-278.	2.8	45
70	Friction-stir processing of an AA8026-TiB 2 -Al 2 O 3 hybrid nanocomposite: Microstructural developments and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 660, 84-96.	2.6	76
71	Reactive friction stir processing of AA 5052â€"TiO₂ nanocomposite: processâ€"microstructureâ€"mechanical characteristics. Materials Science and Technology, 2015, 31, 426-435.	0.8	69
72	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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73	Effects of nanometric inclusions on the microstructural characteristics and strengthening of a friction-stir processed aluminumâ€“magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 215-229.	2.6	52
74	Effects of stored strain energy on restoration mechanisms and texture components in an aluminumâ€“magnesium alloy prepared by friction stir processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 204-214.	2.6	66
75	Hardnessâˆ'strength relationships in fine and ultra-fine grained metals processed through constrained groove pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 636, 331-339.	2.6	117
76	Metallurgical characteristics and failure mode transition for dissimilar resistance spot welds between ultra-fine grained and coarse-grained low carbon steel sheets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 637, 12-22.	2.6	30
77	Friction stir processing of an aluminum-magnesium alloy with pre-placing elemental titanium powder: In-situ formation of an Al3Ti-reinforced nanocomposite and materials characterization. Materials Characterization, 2015, 108, 102-114.	1.9	75
78	Cryogenic friction-stir processing of ultrafine-grained Alâ€“Mgâ€“TiO2 nanocomposites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 620, 471-482.	2.6	89
79	Microstructure and texture development during friction stir processing of Alâ€“Mg alloy sheets with TiO2 nanoparticles. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 605, 108-118.	2.6	83
80	On the Failure Behavior of Highly Cold Worked Low Carbon Steel Resistance Spot Welds. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 1376-1389.	1.1	17
81	Strain Rate Sensitivity, Work Hardening, and Fracture Behavior of an Al-Mg TiO2 Nanocomposite Prepared by Friction Stir Processing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4073-4088.	1.1	45
82	Microstructure-property characterization of a friction-stir welded joint between AA5059 aluminum alloy and high density polyethylene. Materials Characterization, 2014, 98, 73-82.	1.9	90
83	Differential scanning calorimetry study of constrained groove pressed low carbon steel: Recovery, recrystallisation and ferrite to austenite phase transformation. Materials Science and Technology, 2014, 30, 765-773.	0.8	23
84	3D finite element analysis and experimental validation of constrained groove pressingâ€“cross route as an SPD process for sheet form metals. International Journal of Advanced Manufacturing Technology, 2014, 73, 1291-1305.	1.5	25
85	An investigation into failure analysis of interfering part of a steam turbine journal bearing. Case Studies in Engineering Failure Analysis, 2014, 2, 61-68.	1.2	13
86	Effects of post-annealing on the microstructure and mechanical properties of friction stir processed Alâ€“Mgâ€“TiO2 nanocomposites. Materials & Design, 2014, 63, 30-41.	5.1	42
87	Application of CGP-cross route process for microstructure refinement and mechanical properties improvement in steel sheets. Journal of Manufacturing Processes, 2013, 15, 533-541.	2.8	39
88	Friction stir welding of a P/M Alâ€“Al2O3 nanocomposite: Microstructure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 585, 222-232.	2.6	85
89	Resistance spot welding of ultra-fine grained steel sheets produced by constrained groove pressing: Optimization and characterization. Materials Characterization, 2012, 69, 71-83.	1.9	28
90	Mechanical properties and microstructure of resistance spot welded severely deformed low carbon steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 529, 237-245.	2.6	29

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91	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
92	The effect of constrained groove pressing on grain size, dislocation density and electrical resistivity of low carbon steel. Materials & Design, 2011, 32, 3280-3286.	5.1	96
93	Influence of autogenous seeding on densification and microstructure in processing of Î³-alumina nanopowders. Phase Transitions, 2011, 84, 1-14.	0.6	4
94	Constrained groove pressing of low carbon steel: Nano-structure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 4043-4049.	2.6	109
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