Ali Reza Eivani

List of Publications by Year
in descending order

120	2,422	159585	302126
papers	citations	30 h-index	39 g-index

121	121	121	1392
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The influence of austenitization temperature on microstructural developments, mechanical properties, fracture mode and wear mechanism of Hadfield high manganese steel. Journal of Materials Research and Technology, 2021, 10, 819-831.	5.8	74
2	Correlation between Electrical Resistivity, Particle Dissolution, Precipitation of Dispersoids, and Recrystallization Behavior of AA7020 Aluminum Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2435-2446.	2.2	68
3	Simultaneous improvements of the strength and ductility of fine-grained AA6063 alloy with increasing number of ECAP passes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 669, 350-357.	5.6	66
4	A new method for producing bimetallic rods. Materials Letters, 2007, 61, 4110-4113.	2.6	62
5	An upper bound solution of ECAE process with outer curved corner. Journal of Materials Processing Technology, 2007, 182, 555-563.	6.3	56
6	Comparing the effect of continuous and pulsed current in the GTAW process of AISI 316L stainless steel welded joint: microstructural evolution, phase equilibrium, mechanical properties and fracture mode. Journal of Materials Research and Technology, 2021, 15, 199-212.	5.8	56
7	Applying multi-pass friction stir processing to refine the microstructure and enhance the strength, ductility and corrosion resistance of WE43 magnesium alloy. Journal of Materials Research and Technology, 2021, 12, 1946-1957.	5.8	53
8	The effect of pulse current changes in PCGTAW on microstructural evolution, drastic improvement in mechanical properties, and fracture mode of dissimilar welded joint of AISI 316L-AISI 310S stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 823, 141700.	5.6	53
9	The effect of dead metal zone formation on strain and extrusion force during equal channel angular extrusion. Computational Materials Science, 2008, 42, 14-20.	3.0	51
10	An experimental and theoretical study on the prediction of forming limit diagrams using new BBC yield criteria and Mâ€“K analysis. Computational Materials Science, 2009, 44, 1272-1280.	3.0	50
11	Sensitivity to hydrogen induced cracking, and corrosion performance of an API X65 pipeline steel in H2S containing environment: influence of heat treatment and its subsequent microstructural changes. Journal of Materials Research and Technology, 2021, 15, 1-16.	5.8	48
12	Strengthening of AA5052 aluminum alloy by equal channel angular pressing followed by softening at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 720, 160-168.	5.6	46
13	Effect of the Size Distribution of Nanoscale Dispersed Particles on the Zener Drag Pressure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 1109-1116.	2.2	43
14	A comprehensive investigation of the strengthening effects of dislocations, texture and low and high angle grain boundaries in ultrafine grained AA6063 aluminum alloy. Materials Characterization, 2018, 136, 60-68.	4.4	43
15	Through-thickness inhomogeneity in microstructure and tensile properties and tribological performance of friction stir processed AA1050-Al2O3 nanocomposite. Composites Part B: Engineering, 2019, 174, 107061.	12.0	43
16	The influence of aluminum on microstructure, mechanical properties and wear performance of Feâ€“14%Mnâ€“1.05%C manganese steel. Journal of Materials Research and Technology, 2021, 15, 4768-4780.	5.8	42
17	Application of artificial neural networks to predict the grain size of nano-crystalline nickel coatings. Computational Materials Science, 2009, 45, 499-504.	3.0	41
18	Investigation of anodizing time and pulse voltage modes on the corrosion behavior of nanostructured anodic layer in commercial pure aluminum. Surface and Coatings Technology, 2019, 358, 741-752.	4.8	40

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19	Effect of FSW process parameters on microstructure and mechanical properties of the dissimilar AA2024 Al alloy and 304 stainless steel joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 814, 140981.	5.6	39
20	Experimental and analytical studies on the prediction of forming limit diagrams. Computational Materials Science, 2009, 44, 1252-1257.	3.0	38
21	An experimental and theoretical investigation of the formation of Zr-containing dispersoids in Alâ€“4.5Znâ€“1Mg aluminum alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2418-2430.	5.6	38
22	Effects of reduced surface grain structure and improved particle distribution on pitting corrosion of AA6063 aluminum alloy. Journal of Alloys and Compounds, 2020, 838, 155464.	5.5	37
23	Engineering tensile properties by controlling welding parameters and microstructure in a mild steel processed by friction stir welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 670, 68-74.	5.6	36
24	Effects of deformation routes on the evolution of microstructure, texture and tensile properties of AA5052 aluminum alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 732, 120-128.	5.6	36
25	Improvement of mechanical properties of AA6063 aluminum alloy after equal channel angular pressing by applying a two-stage solution treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 687, 54-62.	5.6	35
26	A comprehensive study of microstructure development and its corresponding tensile properties in nano/ultrafine-grained metastable austenitic steel during accumulative roll bonding (ARB). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 703, 196-204.	5.6	35
27	Microstructure analysis and observation of peculiar mechanical properties of Al/Cu/Zn/Ni multi-layered composite produced by Accumulative-Roll-Bonding (ARB). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 805, 140556.	5.6	34
28	An experimental investigation on the effect of gas tungsten arc welding current modes upon the microstructure, mechanical, and fractography properties of welded joints of two grades of AISI 316L and AISI310S alloy metal sheets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 142877.	5.6	34
29	A new method for estimating strain in equal channel angular extrusion. Journal of Materials Processing Technology, 2007, 183, 148-153.	6.3	33
30	Modeling age hardening kinetics of an Alâ€“Mgâ€“Siâ€“Cu aluminum alloy. Journal of Materials Processing Technology, 2008, 205, 388-393.	6.3	32
31	Evolution of Grain Boundary Phases during the Homogenization of AA7020 Aluminum Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 717-728.	2.2	32
32	The effect of addition of hardystonite on the strength, ductility and corrosion resistance of WE43 magnesium alloy. Journal of Materials Research and Technology, 2021, 13, 1855-1865.	5.8	30
33	An investigation of microstructural background for improved corrosion resistance of WE43 magnesium-based composites with ZnO and Cu/ZnO additions. Journal of Alloys and Compounds, 2022, 908, 164437.	5.5	29
34	A new severe plastic deformation technique based on pure shear. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 423-431.	5.6	27
35	Inhomogeneity in strain, microstructure and mechanical properties of AA1050 alloy during twist extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 667, 349-357.	5.6	27
36	Microstructure, mechanical and electrical properties of dissimilar friction stir welded 2024 aluminum alloy and copper joints. Journal of Materials Research and Technology, 2021, 14, 1945-1957.	5.8	27

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37	Optimization of interpass annealing for a minimum recrystallized grain size and further grain refinement towards nanostructured AA6063 during equal channel angular pressing. Materials Characterization, 2016, 112, 160-168.	4.4	25
38	A new approach to incorporating the effect of nano-sized dispersoids on recrystallization inhibition into Monte Carlo simulation. Computational Materials Science, 2012, 54, 370-377.	3.0	24
39	Inhomogeneity in microstructure and mechanical properties during twist extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 652, 186-191.	5.6	23
40	Mechanism of the formation of peripheral coarse grain structure in hot extrusion of Al-4.5Zn-1Mg. Philosophical Magazine, 2016, 96, 1188-1196.	1.6	21
41	Characterization of the anodic oxide layer deposited on severely deformed and aged AA6063 aluminum alloy. Journal of Materials Research and Technology, 2021, 15, 68-85.	5.8	21
42	Effect of pre-deformation thermomechanical processing on the development of ultrafine grain structure during equal channel angular extrusion. Materials and Design, 2016, 89, 377-384.	7.0	20
43	An investigation of workability and flow instability of Sn-5Sb lead free solder alloy during hot deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 718, 87-95.	5.6	20
44	Application of hot forming cold die quenching for facilitating equal channel angular pressing of AA2024 aluminum alloy. Journal of Alloys and Compounds, 2019, 791, 265-277.	5.5	20
45	A novel approach to determine residual stress field during FSW of AZ91 Mg alloy using combined smoothed particle hydrodynamics/neuro-fuzzy computations and ultrasonic testing. Journal of Magnesium and Alloys, 2021, , .	11.9	20
46	Texture development and microstructure evolution in metastable austenitic steel processed by accumulative roll bonding and subsequent annealing. Journal of Materials Science, 2014, 49, 6570-6578.	3.7	19
47	Evolution of microstructure and mechanical properties of Fe-24Ni-0.3C TRIP steel during friction stir processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 718, 335-344.	5.6	19
48	Comprehensive investigation on wear and microstructure development in Al/ti ultrafine grained multi-layered composite produced by Accumulative Roll Bonding (ARB). Materials Research Express, 2019, 6, 116572.	1.6	19
49	Studying the age hardening kinetics of A357 aluminum alloys through the Johnsonâ€“Mehlâ€“Avrami theory. Metal Powder Report, 2017, 72, 420-424.	0.1	18
50	Effects of hot forming cold die quenching and inter-pass solution treatment on the evolution of microstructure and mechanical properties of AA2024 aluminum alloy after equal channel angular pressing. Journal of Materials Research and Technology, 2020, 9, 1683-1697.	5.8	18
51	An experimental and theoretical investigation of the effect of second-phase particles on grain growth during the annealing of hot-rolled AZ61 magnesium alloy. Journal of Materials Research and Technology, 2021, 15, 3585-3597.	5.8	18
52	Effect of die design parameters on the deformation behavior in pure shear extrusion. Materials and Design, 2015, 83, 144-153.	7.0	17
53	Design of an expert system based on neuro-fuzzy inference analyzer for on-line microstructural characterization using magnetic NDT method. Journal of Magnetism and Magnetic Materials, 2015, 379, 131-136.	2.3	17
54	Application of constitutive description and integrated ANFIS â€“ ICA analysis to predict hot deformation behavior of Sn-5Sb lead-free solder alloy. Journal of Alloys and Compounds, 2017, 697, 287-299.	5.5	17

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55	Effects of pin diameter and number of cycles on microstructure and tensile properties of friction stir fabricated AA1050-Al2O3 nanocomposite. Journal of Materials Research and Technology, 2020, 9, 4506-4517.	5.8	17
56	TEM study of S' hardening precipitates in the cold rolled and aged AA2024 aluminum alloy: influence on the microstructural evolution, tensile properties & electrical conductivity. Journal of Materials Research and Technology, 2021, 13, 798-807.	5.8	17
57	Strength-ductility synergic enhancement in friction stir welded AA2024 alloy and copper joints: Unravelling the role of Zn interlayer's thickness. Journal of Materials Research and Technology, 2022, 16, 251-262.	5.8	17
58	Observation austenite memory and significant enhancement of tensile properties during cyclic reverse martensite transformation in a Fe-Ni-C TRIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 676, 342-350.	5.6	16
59	Application of physical and numerical simulations for interpretation of peripheral coarse grain structure during hot extrusion of AA7020 aluminum alloy. Journal of Alloys and Compounds, 2017, 725, 41-53.	5.5	15
60	Creep life prediction for Sn-5Sb lead-free solder alloy: Model and experiment. Microelectronic Engineering, 2019, 207, 55-65.	2.4	15
61	Modeling high temperature deformation characteristics of AA7020 aluminum alloy using substructure-based constitutive equations and mesh-free approximation method. Mechanics of Materials, 2019, 129, 104-112.	3.2	15
62	Simulation of peripheral coarse grain structure during hot extrusion of AA7020 aluminum alloy. Journal of Manufacturing Processes, 2020, 57, 881-892.	5.9	15
63	Effects of hot forming cold die quenching and solution treatment on formability and pressing load during equal channel angular deformation of AA2024 aluminum alloy. Journal of Materials Research and Technology, 2020, 9, 5599-5609.	5.8	15
64	An investigation of hot deformation behavior of Znâ€“22Al alloy and development of its processing maps during isothermal compression. Journal of Materials Research and Technology, 2021, 14, 507-520.	5.8	15
65	Modified Monte Carlo approach for simulation of grain growth and Ostwald ripening in two-phase Znâ€“22Al alloy. Journal of Materials Research and Technology, 2020, 9, 9620-9631.	5.8	14
66	Correlative evolution of microstructure, particle dissolution, hardness and strength of ultrafine grained AA6063 alloy during annealing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 644, 284-296.	5.6	13
67	Towards bulk nanostructured materials in pure shear. Materials Letters, 2015, 139, 15-18.	2.6	13
68	Towards engineering of mechanical properties through stabilization of austenite in ultrafine grained martensiteâ€“austenite dual phase steel processed by accumulative roll bonding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 684, 120-126.	5.6	13
69	Achieving extraordinary strength and ductility in TRIP steels through stabilization of austenite up to 99.8 % by friction stir welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 773, 138876.	5.6	13
70	Investigation of joint interface and cracking mechanism of thick cladding of copper on aluminum by equal channel angular pressing (ECAP). Journal of Materials Research and Technology, 2020, 9, 3394-3405.	5.8	13
71	On the evolution of microstructure and fracture behavior of multilayered copper sheet fabricated by accumulative roll bonding. Journal of Materials Research and Technology, 2021, 10, 291-305.	5.8	13
72	Microstructural evolution and fatigue properties of severely deformed AA1050 aluminum alloy. Materials Characterization, 2017, 130, 204-210.	4.4	12

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73	Finite element simulation of deformation and heat transfer during friction stir processing of as-cast AZ91 magnesium alloy. Journal of Materials Research and Technology, 2021, 14, 2998-3017.	5.8	12
74	The effect of deformations passes on the extrusion pressure in axi-symmetric equal channel angular extrusion. Computational Materials Science, 2009, 44, 1116-1125.	3.0	10
75	A comparison between routine vs. normalized Cockroft-Latham fracture criteria for prediction of fracture during equal channel angular pressing. Engineering Fracture Mechanics, 2018, 199, 721-729.	4.3	10
76	Grain boundary versus particle stimulated nucleation in hot deformed Alâ€“4Â·5Znâ€“1Mg alloy. Materials Science and Technology, 2013, 29, 517-528.	1.6	9
77	High throughput deposition of hydrogenated amorphous carbon coatings on rubber with expanding thermal plasma. Surface and Coatings Technology, 2014, 245, 74-83.	4.8	9
78	Hybrid Monte Carlo â€“ Finite element simulation of microstructural evolution during annealing of severely deformed Sn-5Sb alloy. Computational Materials Science, 2019, 163, 196-208.	3.0	9
79	Characterisation of different types of dispersoids present in homogenised Alâ€“4Â·5Znâ€“1Mg alloy containing Zr, Cr and Mn. Materials Science and Technology, 2011, 27, 1294-1298.	1.6	8
80	Numerical modeling of subgrain growth of hot extruded Alâ€“4.5Znâ€“1Mg alloy in the presence of nanosized dispersoids. Computational Materials Science, 2014, 86, 9-16.	3.0	8
81	Simulation of transient-state recrystallization of Alâ€“4.5Mgâ€“1Zn alloy after hot deformation. Computational Materials Science, 2014, 86, 193-199.	3.0	8
82	Incorporating the Johnsonâ€“Cook Constitutive Model and a Soft Computational Approach for Predicting the High-Temperature Flow Behavior of Sn-5Sb Solder Alloy: A Comparative Study for Processing Map Development. Journal of Electronic Materials, 2017, 46, 467-477.	2.2	8
83	Correlation between microstructure, tensile properties and fatigue life of AA1050 aluminum alloy processed by pure shear extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 679, 292-298.	5.6	8
84	Effect of pre-deformation cooling rate on the age-hardening response of ultrafine grained AA6063. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 713, 180-189.	5.6	8
85	The effect of amount of pre-strain using equal channel angular pressing on softening response of AA5052 alloy. Journal of Materials Research and Technology, 2020, 9, 6682-6695.	5.8	8
86	Superior mechanical properties in high-Ni transformation induced plasticity steels after friction stir welding. Journal of Materials Research and Technology, 2020, 9, 5431-5441.	5.8	8
87	Effects of annealing temperature on microstructure and mechanical behavior of conventionally and severely deformed Feâ€“24Ni steel by accumulative roll bonding. Journal of Materials Research and Technology, 2021, 14, 2428-2440.	5.8	8
88	Effective strain based on shear and principal strains in equal channel angular extrusion with outer curved corner. Computational Materials Science, 2008, 41, 409-419.	3.0	7
89	Modelling dissolution of low melting point phases during the homogenisation of AA7020 aluminium alloy. Materials Science and Technology, 2010, 26, 215-222.	1.6	7
90	Modeling the TDFD dissolution of Alâ€“Feâ€“Mnâ€“Si particles in an Alâ€“4.5Znâ€“1Mg alloy. Philosophical Magazine, 2010, 90, 2865-2897.	1.6	7

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91	Die Design Modification to Improve Workability during Equal Channel Angular Pressing. Advanced Engineering Materials, 2016, 18, 1469-1477.	3.5	7
92	Effect of plasma nitriding on nanostructure of TRD coating. Surface Engineering, 2016, 32, 547-553.	2.2	7
93	Modelling and prediction impression creep behaviour of Alâ€“Cu cast alloy. International Journal of Cast Metals Research, 2017, 30, 70-80.	1.0	7
94	Fabrication of Cu-CuG nanocomposites with enhanced mechanical strength and reduced electrical resistivity. Journal of Materials Research and Technology, 2021, 11, 650-666.	5.8	7
95	Production of Ti-CNTs surface nanocomposites for biomedical applications by friction stir processing: Microstructure and mechanical properties. Materials Letters, 2021, 300, 130138.	2.6	7
96	Friction stir processing of thick tempered martensitic steels: Correlation between microstructure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 836, 142698.	5.6	7
97	Modeling the electrical resistivity of Znâ€“Mnâ€“S nanocrystalline semiconductors. Computational Materials Science, 2009, 46, 124-127.	3.0	6
98	Using high temperature tensile testing data to analyze hot formability of Sn-5Sb alloy: instability and critical damage criteria. Journal of Materials Research and Technology, 2020, 9, 4159-4172.	5.8	6
99	Micromechanical simulation of plastic deformation behavior and failure commencement in high silicon bainitic steel after austempering. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 799, 140131.	5.6	6
100	Simulation of deformation and fracture initiation during equal channel angular pressing of AZ31 magnesium alloy with covered tube casing. Journal of Materials Research and Technology, 2021, 12, 1913-1923.	5.8	6
101	Microstructural development and its effects on tensile properties of a high Ni TRIP steel produced by repetitive corrugation and straightening via rolling (RCSR). Journal of Materials Research and Technology, 2020, 9, 2279-2288.	5.8	5
102	Numerical and experimental analysis of creep deformation and stress-relaxation in Sn-5Sb lead-free alloy. Engineering Failure Analysis, 2021, 120, 105075.	4.0	5
103	Flow behavior and strain rate sensitivity assessment of Î³ and Î³ÊÌ phases in Coâ€“Alâ€“W-based superalloy using experimental and computational approaches. Journal of Materials Research and Technology, 2022, 18, 4617-4630.	5.8	5
104	Optimization of the Chemical Composition and Homogenization Treatment of AA7020 Aluminum Alloy. Advanced Materials Research, 0, 89-91, 177-183.	0.3	4
105	Subgrain growth in presence of nanosized dispersoids in Alâ€“4Â·5Znâ€“1Mg alloy. Materials Science and Technology, 2013, 29, 1297-1303.	1.6	4
106	Microstructure and mechanical properties development of nano/ultrafine grained AISI 316L austenitic stainless steel prepared by repetitive corrugation and straightening by rolling (RCSR). Materials Research Express, 2018, 5, 126519.	1.6	4
107	Regulating of tensile properties through microstructure engineering in Fe-Ni-C TRIP steel processed by different strain routes of severe deformation. Journal of Materials Research and Technology, 2020, 9, 2903-2913.	5.8	4
108	Effect of pure shear strain on mechanical properties and microstructural evolution. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 679, 133-142.	5.6	3

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109	Inhomogeneity in deformation, microstructure, tensile properties and damage development in AA1050 during multiple cycles of pure shear extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 745, 159-167.	5.6	3
110	Regulating tensile properties through bainitic transformation temperature in a hot-rolled Î´-TRIP steel. Materials Science and Technology, 2020, 36, 223-232.	1.6	3
111	Combined Physical Modeling and Monte Carlo Simulation of Recrystallization of Hot Deformed AA7020 Aluminum Alloy. Materials Science Forum, 2012, 715-716, 480-485.	0.3	2
112	Prediction of the thickness loss of nanocrystalline nickel at elevated temperatures. Solid State Sciences, 2013, 17, 151-155.	3.2	2
113	Quantitative Assessment of Dynamic Recovery Kinetics in Sn-5Sb Lead-Free Solder Alloy During Hot Working. Journal of Electronic Materials, 2018, 47, 6868-6877.	2.2	2
114	The effect of accumulative roll bonding on the precipitation behavior of a single step artificially aged Alâ€“Ag-Sc alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 823, 141769.	5.6	2
115	FEM simulation of splatting of a molten metal droplet in thermal spray coating. Computational Materials Science, 2010, 48, 65-70.	3.0	1
116	Grains versus subgrains: How growth kinetics is affected by the presence of nanosized dispersoids. Solid State Communications, 2016, 228, 16-21.	1.9	1
117	Effect of process conditions on the evolution of microstructure and mechanical properties of AA3003 vacuum furnace brazing joints. Materials Research Express, 2020, 7, 016561.	1.6	1
118	Numerical Prediction of Ductile Fracture in Sn-5Sb Alloy Hot Deformation Based on Phenomenological Models and Finite Element Analysis. Journal of Materials Engineering and Performance, 2021, 30, 5524-5540.	2.5	1
119	The effects of cold rolling and aging conditions on the microstructure and magnetic properties of a semi-hard Feâ€“Moâ€“Ni magnetic alloy. Journal of Materials Research and Technology, 2021, 12, 521-529.	5.8	0
120	Evaluating the performance of sputter-deposited Aluminium alloy-based coatings on steel in the light of grain orientation, surface roughness, and corrosion behaviour. Canadian Metallurgical Quarterly, 0, , 1-14.	1.2	0