Sung Hyuk Park

List of Publications by Year
in descending order

96 papers	3,982 citations	126907 33 h-index	133252 59 g-index
97 all docs	97 docs citations	97 times ranked	1408 citing authors

#	Article	IF	Citations
1	Role of {10â€“12} twinning characteristics in the deformation behavior of a polycrystalline magnesium alloy. Acta Materialia, 2010, 58, 5873-5885.	7.9	680
2	Effects of cerium addition on the microstructure, mechanical properties and hot workability of ZK60 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 798-807.	5.6	220
3	Improving the mechanical properties of extruded Mgâ€“3Alâ€“1Zn alloy by cold pre-forging. Scripta Materialia, 2013, 69, 250-253.	5.2	169
4	Activation mode dependent {10â^'12} twinning characteristics in a polycrystalline magnesium alloy. Scripta Materialia, 2010, 62, 202-205.	5.2	166
5	Development of extraordinary high-strength Mgâ€“8Alâ€“0.5Zn alloy via a low temperature and slow speed extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 610, 445-449.	5.6	162
6	Effects of extrusion parameters on the microstructure and mechanical properties of Mgâ€“Znâ€“(Mn)â€“Ce/Gd alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 598, 396-406.	5.6	117
7	Improved mechanical properties of Mgâ€“7.6Alâ€“0.4Zn alloy through aging prior to extrusion. Scripta Materialia, 2014, 93, 8-11.	5.2	109
8	High-speed indirect extrusion of Mgâ€“Snâ€“Alâ€“Zn alloy and its influence on microstructure and mechanical properties. Journal of Alloys and Compounds, 2016, 667, 170-177.	5.5	104
9	Prediction of grain size and yield strength of Mg-7Sn-1Al-1Zn alloys extruded at various temperatures and speeds. Metals and Materials International, 2014, 20, 291-296.	3.4	102
10	Effects of extrusion speed on the microstructure and mechanical properties of ZK60 alloys with and without 1wt% cerium addition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 583, 25-35.	5.6	87
11	Twinning and slip behaviors and microstructural evolutions of extruded Mg-1Gd alloy with rare-earth texture during tensile deformation. Journal of Alloys and Compounds, 2019, 791, 700-710.	5.5	76
12	Recent Progress and Development in Extrusion of Rare Earth Free Mg Alloys: A Review. Acta Metallurgica Sinica (English Letters), 2019, 32, 145-168.	2.9	74
13	Microstructural evolution of indirect-extruded ZK60 alloy by adding Ce. Journal of Alloys and Compounds, 2012, 545, 139-143.	5.5	65
14	Microstructure and texture variation with Gd addition in extruded magnesium. Journal of Alloys and Compounds, 2017, 695, 344-350.	5.5	64
15	Influence of Sn addition on the microstructure and mechanical properties of extruded Mgâ€“8Alâ€“2Zn alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 128-135.	5.6	63
16	Influence of Bi addition on dynamic recrystallization and precipitation behaviors during hot extrusion of pure Mg. Journal of Materials Science and Technology, 2020, 44, 62-75.	10.7	62
17	Dynamic recrystallization behavior and microstructural evolution of Mg alloy AZ31 through high-speed rolling. Journal of Materials Science and Technology, 2018, 34, 1747-1755.	10.7	59
18	Accelerated precipitation behavior of cast Mg-Al-Zn alloy by grain refinement. Journal of Materials Science and Technology, 2018, 34, 265-276.	10.7	54

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19	Improvement in extrudability and mechanical properties of AZ91 alloy through extrusion with artificial cooling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 703, 1-8.	5.6	51
20	Microstructural evolution and grain growth mechanism of pre-twinned magnesium alloy during annealing. Journal of Magnesium and Alloys, 2020, 9, 1233-1233.	11.9	50
21	Microstructure and mechanical properties of an extruded Mg-8Bi-1Al-1Zn (wt%) alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 690, 80-87.	5.6	49
22	Microstructural evolution and improvement in mechanical properties of extruded AZ31 alloy by combined addition of Ca and Y. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 725, 309-318.	5.6	48
23	Inspecting Method for Defective Casting Products with Convolutional Neural Network (CNN). International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 583-594.	4.9	47
24	Effect of billet diameter on hot extrusion behavior of Mgâ€"Alâ€"Zn alloys and its influence on microstructure and mechanical properties. Journal of Alloys and Compounds, 2017, 690, 417-423.	5.5	43
25	Influence of extrusion temperature on dynamic deformation behaviors and mechanical properties of Mg-8Al-0.5Zn-0.2Mn-0.3Ca-0.2Y alloy. Journal of Materials Research and Technology, 2019, 8, 5254-5270.	5.8	43
26	Variation in dynamic deformation behavior and resultant yield asymmetry of AZ80 alloy with extrusion temperature. Journal of Materials Science and Technology, 2020, 46, 225-236.	10.7	41
27	Influence of undissolved second-phase particles on dynamic recrystallization behavior of Mgâ€"7Snâ€"1Alâ€"1Zn alloy during low- and high-temperature extrusions. Journal of Materials Science and Technology, 2021, 71, 87-97.	10.7	41
28	Controlling the microstructure and improving the tensile properties of extruded Mg-Sn-Zn alloy through Al addition. Journal of Alloys and Compounds, 2018, 751, 1-11.	5.5	40
29	Microstructure and mechanical properties of non-flammable Mg-8Al-0.3Zn-0.1Mn-0.3Ca-0.2Y alloy subjected to low-temperature, low-speed extrusion. Journal of Alloys and Compounds, 2018, 739, 69-76.	5.5	38
30	Texture tailoring and bendability improvement of rolled AZ31 alloy using {10â€"12} twinning: The effect of precompression levels. Journal of Magnesium and Alloys, 2019, 7, 648-660.	11.9	38
31	Effects of homogenization time on aging behavior and mechanical properties of AZ91 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 714, 49-58.	5.6	37
32	Novel Mgâ€"Biâ€"Al alloy with extraordinary extrudability and high strength. Journal of Alloys and Compounds, 2020, 843, 156026.	5.5	37
33	Improvement of mechanical properties and reduction of yield asymmetry of extruded Mg-Al-Zn alloy through Sn addition. Journal of Alloys and Compounds, 2018, 766, 748-758.	5.5	35
34	Effect of Initial Grain Size on Microstructure and Mechanical Properties of Extruded Mg-9Al-0.6Zn Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 5482-5488.	2.2	34
35	Improvement in bending formability of rolled magnesium alloy through precompression and subsequent annealing. Journal of Alloys and Compounds, 2019, 787, 519-526.	5.5	33
36	Effects of Ca addition on the microstructures and mechanical properties of as-extruded Mgâ€"Bi alloys. Journal of Alloys and Compounds, 2020, 834, 155216.	5.5	33

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37	Grain size effect on twinning and annealing behaviors of rolled magnesium alloy with bimodal structure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 38-45.	5.6	31
38	Effects of initial texture on deformation behavior during cold rolling and static recrystallization during subsequent annealing of AZ31 alloy. Journal of Materials Science and Technology, 2021, 66, 139-149.	10.7	31
39	Effects of cold pre-forging on microstructure and tensile properties of extruded AZ80 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 708, 405-410.	5.6	29
40	Effects of Ti addition on the microstructure and mechanical properties of Alâ€"Znâ€"Mgâ€"Cuâ€"Zr alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140437.	5.6	29
41	Anisotropic twinning and slip behaviors and their relative activities in rolled alpha-phase titanium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 698, 54-62.	5.6	28
42	Dynamic deformation behavior and microstructural evolution during high-speed rolling of Mg alloy having non-basal texture. Journal of Materials Science and Technology, 2019, 35, 473-482.	10.7	27
43	Microstructural characteristics of AZ31 alloys rolled at room and cryogenic temperatures and their variation during annealing. Journal of Magnesium and Alloys, 2020, 8, 537-545.	11.9	26
44	Influence of Ce addition and homogenization temperature on microstructural evolution and mechanical properties of extruded Mg-Sn-Al-Zn alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 676, 232-240.	5.6	25
45	Effects of Extrusion Speed on the Microstructure and Mechanical Properties of Mgâ€"9Alâ€"0.8Znâ€"0.9Caâ€"0.6Yâ€"0.5MM Alloy. Metals and Materials International, 2021, 27, 530-537.	3.4	24
46	Effects of homogenization temperature on microstructure and mechanical properties of high-speed-extruded Mgâ€"5Biâ€"3Al alloy. Journal of Magnesium and Alloys, 2022, 10, 2833-2846.	11.9	24
47	Significant improvement in the mechanical properties of an extruded Mgâ€"5Bi alloy through the addition of Al. Journal of Alloys and Compounds, 2020, 821, 153442.	5.5	23
48	Relationship between mechanical properties and high-cycle fatigue strength of medium-carbon steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 690, 185-194.	5.6	22
49	High-Strength AZ91 Alloy Fabricated by Rapidly Solidified Flaky Powder Metallurgy and Hot Extrusion. Metals and Materials International, 2019, 25, 372-380.	3.4	22
50	Comparative study of extrudability, microstructure, and mechanical properties of AZ80 and BA53 alloys. Journal of Magnesium and Alloys, 2023, 11, 249-258.	11.9	21
51	Comparative study of tensile and high-cycle fatigue properties of extruded AZ91 and AZ91â€"0.3Caâ€"0.2Y alloys. Journal of Materials Science and Technology, 2021, 93, 41-52.	10.7	20
52	Effect of initial twins on the stress-controlled fatigue behavior of rolled magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 680, 214-220.	5.6	19
53	Underlying mechanisms of drastic reduction in yield asymmetry of extruded Mg-Sn-Zn alloy by Al addition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 733, 285-290.	5.6	19
54	Improving the tensile strength of Mgâ€"7Snâ€"1Alâ€"1Zn alloy through artificial cooling during extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 625, 369-373.	5.6	18

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55	Microstructural characteristics of magnesium alloy sheets subjected to high-speed rolling and their rolling temperature dependence. Journal of Materials Research and Technology, 2019, 8, 3167-3174.	5.8	18
56	Significant Improvement in Extrudability of Mgâ€“9Alâ€“0.8Znâ€“0.9Caâ€“0.6Y Alloy Through Mischmetal Addition. Metals and Materials International, 2021, 27, 514-521.	3.4	18
57	Variation in Crystallographic Orientation and Twinning Activation with Size of Individual Grains in Rolled Magnesium Alloy. Metals and Materials International, 2019, 25, 1541-1547.	3.4	17
58	Static recrystallization mechanism in cold-rolled magnesium alloy with off-basal texture based on quasi in situ EBSD observations. Journal of Alloys and Compounds, 2020, 844, 156185.	5.5	17
59	Effects of post-heat treatment on microstructure, tensile properties, and bending properties of extruded AZ80 alloy. Journal of Materials Research and Technology, 2021, 12, 1039-1050.	5.8	16
60	Extrusion limit diagram of AZ91â€“0.9Caâ€“0.6Yâ€“0.5MM alloy and effects of extrusion parameters on its microstructure and mechanical properties. Journal of Magnesium and Alloys, 2022, 10, 3447-3458.	11.9	15
61	Acceleration of aging behavior and improvement of mechanical properties of extruded AZ80 alloy through (10â€“12) twinning. Journal of Magnesium and Alloys, 2023, 11, 671-683.	11.9	15
62	Effects of Sn addition on the microstructure and mechanical properties of extruded Mgâ€“Bi binary alloy. Journal of Magnesium and Alloys, 2022, 10, 850-861.	11.9	14
63	Evolution of high-cycle fatigue behavior of extruded AZ91 alloy by artificial cooling during extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 620-628.	5.6	13
64	Microstructural evolution of extruded AZ31 alloy with bimodal structure during compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 702, 1-9.	5.6	13
65	Stripping failure of punching pin in GPa-grade steels. International Journal of Advanced Manufacturing Technology, 2018, 94, 73-83.	3.0	13
66	Loading Direction Dependence of Yield-Point Phenomenon and Bauschinger Effect in API X70 Steel Sheet. Metals and Materials International, 2020, 26, 14-24.	3.4	13
67	Improvement in Mechanical Properties of Rolled AZ31 Alloy Through Combined Addition of Ca and Gd. Metals and Materials International, 2020, 26, 1779-1785.	3.4	13
68	Image Processing Algorithm for Real-Time Crack Inspection in Hole Expansion Test. International Journal of Precision Engineering and Manufacturing, 2019, 20, 1139-1148.	2.2	12
69	Improvement in tensile strength of extruded Mgâ€“5Bi alloy through addition of Sn and its underlying strengthening mechanisms. Journal of Magnesium and Alloys, 2022, 10, 3100-3112.	11.9	12
70	Variations in microstructure and bending formability of extruded Mgâ€“Alâ€“Znâ€“Caâ€“Yâ€“MM alloy with precompression and subsequent annealing treatment conditions. Journal of Magnesium and Alloys, 2022, 10, 2475-2490.	11.9	11
71	Effect of Rolling and Coiling Temperatures on Microstructure and Mechanical Properties of Medium-Carbon Pipeline Steel. Metals and Materials International, 2020, 26, 1757-1765.	3.4	10
72	Unusual relationship between extrusion temperature and tensile strength of extruded Mgâ€“Alâ€“Znâ€“Caâ€“Yâ€“MM alloy. Journal of Alloys and Compounds, 2021, 862, 158051.	5.5	10

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73	Performance Test for Laminated-Type Prosthetic Foot with Composite Plates. International Journal of Precision Engineering and Manufacturing, 2019, 20, 1777-1786.	2.2	9
74	Bending properties of extruded AZ91â€“0.9Caâ€“0.6Y alloy and their improvement through precompression and annealing. Journal of Magnesium and Alloys, 2022, 10, 2238-2251.	11.9	9
75	Tensile and High-Cycle Fatigue Properties of Extruded AZ91â€“0.3Caâ€“0.2Y Alloy with Excellent Corrosion and Ignition Resistances. Metals and Materials International, 2022, 28, 385-396.	3.4	9
76	Microstructural characteristics and low-cycle fatigue properties of AZ91 and AZ91â€“Caâ€“Y alloys extruded at different temperatures. Journal of Magnesium and Alloys, 2023, 11, 892-902.	11.9	9
77	Difference in extrusion temperature dependences of microstructure and mechanical properties between extruded AZ61 and AZ91 alloys. Journal of Magnesium and Alloys, 2023, 11, 1683-1696.	11.9	9
78	Graphitization behavior of medium-carbon high-silicon steel and its dependence on temperature and grain size. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 785, 139392.	5.6	8
79	Grain-Refined AZ92 Alloy with Superior Strength and Ductility. Metals and Materials International, 2018, 24, 730-737.	3.4	7
80	Microstructural evolution of twin-roll-cast Alâ€“Mn alloy during cold rolling and subsequent annealing: Effect of number of cold-rolling passes. Journal of Alloys and Compounds, 2019, 797, 504-513.	5.5	7
81	Partial strengthening method for cold stamped B-pillar with minimal shape change. International Journal of Advanced Manufacturing Technology, 2019, 102, 4241-4255.	3.0	6
82	Effects of surface roughness on bending properties of rolled AZ31 alloy. Journal of Magnesium and Alloys, 2023, 11, 1224-1235.	11.9	6
83	Fabrication of very-high-strength pure copper with fine grain structure through multi-axial diagonal forging. Materials Letters, 2020, 269, 127663.	2.6	5
84	Aging Hardening and Precipitation Characteristics of Extruded Mgâ€“9Alâ€“0.8Znâ€“0.2Mnâ€“0.3Caâ€“0.2Y Alloy. Metals and Materials International, 2023, 29, 381-389.	3.4	5
85	Effects of {10â€“12} Twins on Dynamic Torsional Properties of Extruded AZ31 Magnesium Alloy. Metals and Materials International, 2018, 24, 283-289.	3.4	4
86	Microstructural evolution of rolled AZ31 alloy plate during in-plane compression and annealing: Effect of amount of compressive strain. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 826, 141974.	5.6	4
87	Low-cycle fatigue properties and unified fatigue life prediction equation of hot-rolled twin-roll-cast AZ31 sheets with different thicknesses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 833, 142349.	5.6	4
88	Effects of B and Ti addition and heat treatment temperature on graphitization behavior of Fe-0.55C-2.3Si steel. Journal of Materials Research and Technology, 2020, 9, 11189-11200.	5.8	3
89	Evolution of Microstructure and Mechanical Properties of Graphitized Feâ€“0.55Câ€“2.3Si Steel During Quenching and Tempering Treatment. Metals and Materials International, 2020, 27, 3730.	3.4	3
90	Effect of Multi-Pass Caliber Rolling on Dilute Extruded Mg-Bi-Ca Alloy. Metals, 2020, 10, 332.	2.3	3

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91	Automated picking-sorting system for assembling components in an IKEA chair based on the robotic vision system. International Journal of Computer Integrated Manufacturing, 2022, 35, 583-597.	4.6	3
92	Effect of initial microstructure on graphitization behavior of Feâ€"0.55Câ€"2.3Si steel. Journal of Materials Research and Technology, 2021, 15, 4529-4540.	5.8	3
93	Effects of drawing strain and post-annealing conditions on microstructural evolution and tensile properties of medium- and high-carbon steels. Metals and Materials International, 2017, 23, 1176-1187.	3.4	2
94	Hot Rolling of Flame Retardant Magnesium and Aluminum Alloys to Produce a Cladding Plate. International Journal of Precision Engineering and Manufacturing, 2018, 19, 521-527.	2.2	2
95	Bending-deformation-induced inhomogeneous aging behavior and accelerated precipitation kinetics of extruded AZ80 alloy. Journal of Alloys and Compounds, 2022, 918, 165613.	5.5	2
96	Effect of laser patterning on the material behaviour of 22MnB5 steel with induced local strengthening. International Journal of Advanced Manufacturing Technology, 2020, 107, 4983-4994.	3.0	1