Zenji Horita

List of Publications by Year
in descending order

334 papers	25,868 citations	5891 81 h-index	7944 149 g-index
344 all docs	344 docs citations	344 times ranked	6647 citing authors

#	Article	IF	Citations
1	Principle of equal-channel angular pressing for the processing of ultra-fine grained materials. Scripta Materialia, 1996, 35, 143-146.	2.6	1,683
2	Producing bulk ultrafine-grained materials by severe plastic deformation. Jom, 2006, 58, 33-39.	0.9	1,350
3	The process of grain refinement in equal-channel angular pressing. Acta Materialia, 1998, 46, 3317-3331.	3.8	1,166
4	The shearing characteristics associated with equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 257, 328-332.	2.6	885
5	Improving the mechanical properties of magnesium and a magnesium alloy through severe plastic deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 300, 142-147.	2.6	606
6	A review on high-pressure torsion (HPT) from 1935 to 1988. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 652, 325-352.	2.6	444
7	Equal-channel angular pressing of commercial aluminum alloys: Grain refinement, thermal stability and tensile properties. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 691-701.	1.1	408
8	Influence of channel angle on the development of ultrafine grains in equal-channel angular pressing. Acta Materialia, 1998, 46, 1589-1599.	3.8	398
9	Producing Bulk Ultrafine-Grained Materials by Severe Plastic Deformation: Ten Years Later. Jom, 2016, 68, 1216-1226.	0.9	346
10	The evolution of homogeneity in processing by high-pressure torsion. Acta Materialia, 2007, 55, 203-212.	3.8	337
11	Grain refinement and superplasticity in an aluminum alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 393, 344-351.	2.6	325
12	An investigation of grain boundaries in submicrometer-grained Al-Mg solid solution alloys using high-resolution electron microscopy. Journal of Materials Research, 1996, 11, 1880-1890.	1.2	317
13	Factors influencing the equilibrium grain size in equal-channel angular pressing: Role of Mg additions to aluminum. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 2503-2510.	1.1	270
14	Microstructural characteristics of ultrafine-grained aluminum produced using equal-channel angular pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 2245-2252.	1.1	257
15	Influence of stacking-fault energy on microstructural characteristics of ultrafine-grain copper and copperâ€"zinc alloys. Acta Materialia, 2008, 56, 809-820.	3.8	251
16	High-pressure torsion of pure magnesium: Evolution of mechanical properties, microstructures and hydrogen storage capacity with equivalent strain. Scripta Materialia, 2011, 64, 880-883.	2.6	239
17	Development of a multi-pass facility for equal-channel angular pressing to high total strains. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 281, 82-87.	2.6	234
18	The evolution of homogeneity and grain refinement during equal-channel angular pressing: A model for grain refinement in ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 398, 66-76.	2.6	232

#	Article	IF	Citations
19	Factors influencing the shearing patterns in equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 332, 97-109.	2.6	226
20	The potential for scaling ECAP: effect of sample size on grain refinement and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 318, 34-41.	2.6	222
21	Optimizing the rotation conditions for grain refinement in equal-channel angular pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 2011-2013.	1.1	221
22	Using ECAP to achieve grain refinement, precipitate fragmentation and high strain rate superplasticity in a spray-cast aluminum alloy. Acta Materialia, 2003, 51, 6139-6149.	3.8	219
23	Microstructural evolution in pure aluminum processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 503, 32-36.	2.6	218
24	Nanomaterials by severe plastic deformation: review of historical developments and recent advances. Materials Research Letters, 2022, 10, 163-256.	4.1	215
25	High-pressure torsion of pure metals: Influence of atomic bond parameters and stacking fault energy on grain size and correlation with hardness. Acta Materialia, 2011, 59, 6831-6836.	3.8	212
26	Microstructural evolution in high purity aluminum processed by ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 524, 143-150.	2.6	209
27	Microstructure and mechanical properties of pure Cu processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 497, 168-173.	2.6	202
28	Influence of pressing temperature on microstructural development in equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 287, 100-106.	2.6	200
29	An investigation of ductility and microstructural evolution in an Alâˆ'3% Mg alloy with submicron grain size. Journal of Materials Research, 1993, 8, 2810-2818.	1.2	199
30	Using equal-channel angular pressing for refining grain size. Jom, 2000, 52, 30-33.	0.9	199
31	Thermal stability of ultrafine-grained aluminum in the presence of Mg and Zr additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 265, 188-196.	2.6	183
32	Microstructures and microhardness of an aluminum alloy and pure copper after processing by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 422-425.	2.6	173
33	Influence of dislocationâ€"solute atom interactions and stacking fault energy on grain size of single-phase alloys after severe plastic deformation using high-pressure torsion. Acta Materialia, 2014, 69, 68-77.	3.8	173
34	Influence of stacking fault energy on microstructural development in equal-channel angular pressing. Journal of Materials Research, 1999, 14, 4044-4050.	1.2	172
35	Developing grain refinement and superplasticity in a magnesium alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 488, 117-124.	2.6	170
36	The evolution of homogeneity in an aluminum alloy processed using high-pressure torsion. Acta Materialia, 2008, 56, 5168-5176.	3.8	167

#	Article	IF	Citations
37	Production of aluminum-matrix carbon nanotube composite using high pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 490, 300-304.	2.6	164
38	Developing high-pressure torsion for use with bulk samples. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 406, 268-273.	2.6	163
39	Influence of ECAP on precipitate distributions in a spray-cast aluminum alloy. Acta Materialia, 2005, 53, 749-758.	3.8	162
40	Significance of homologous temperature in softening behavior and grain size of pure metals processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7514-7523.	2.6	160
41	High-pressure torsion for enhanced atomic diffusion and promoting solid-state reactions in the aluminumâ€"copper system. Acta Materialia, 2013, 61, 3482-3489.	3.8	159
42	Design and synthesis of a magnesium alloy for room temperature hydrogen storage. Acta Materialia, 2018, 149, 88-96.	3.8	157
43	Structural evolution and the Hall-Petch relationship in an Alî—,Mgî—,Liî—,Zr alloy with ultra-fine grain size. Acta Materialia, 1997, 45, 4751-4757.	3.8	153
44	The use of severe plastic deformation for microstructural control. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 324, 82-89.	2.6	153
45	Observations of grain boundary structure in submicrometer-grained Cu and Ni using high-resolution electron microscopy. Journal of Materials Research, 1998, 13, 446-450.	1.2	150
46	Processing Pure Ti by High-Pressure Torsion in Wide Ranges of Pressures and Strain. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2079-2086.	1.1	149
47	High-pressure torsion using ring specimens. Scripta Materialia, 2008, 58, 469-472.	2.6	145
48	Influence of pressing speed on microstructural development in equal-channel angular pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 1989-1997.	1.1	144
49	Microstructural characteristics and superplastic ductility in a Zn-22% Al alloy with submicrometer grain size. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 241, 122-128.	2.6	140
50	A two-step processing route for achieving a superplastic forming capability in dilute magnesium alloys. Scripta Materialia, 2002, 47, 255-260.	2.6	133
51	Optimizing the procedure of equal-channel angular pressing for maximum superplasticity. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 297, 111-118.	2.6	132
52	Grain refinement of pure nickel using equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 325, 54-58.	2.6	130
53	A new constitutive relationship for the homogeneous deformation of metals over a wide range of strain. Acta Materialia, 2004, 52, 3555-3563.	3.8	129
54	Exceptional superplasticity in an AZ61 magnesium alloy processed by extrusion and ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 420, 240-244.	2.6	128

#	Article	IF	Citations
55	High strain rate superplasticity in an Al-Mg alloy containing scandium. Scripta Materialia, 1998, 38, 1851-1856.	2.6	123
56	Fabrication of bulk ultrafine-grained materials through intense plastic straining. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 2237-2243.	1.1	123
57	High-pressure torsion of TiFe intermetallics for activation of hydrogen storage at room temperature with heterogeneous nanostructure. International Journal of Hydrogen Energy, 2013, 38, 4622-4627.	3.8	122
58	Influence of stacking fault energy on the minimum grain size achieved in severe plastic deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 463, 22-26.	2.6	119
59	Influence of rolling on the superplastic behavior of an Al-Mg-Sc alloy after ECAP. Scripta Materialia, 2001, 44, 759-764.	2.6	118
60	Effect of hydrogen on martensite formation in austenitic stainless steels in high-pressure torsion. Acta Materialia, 2009, 57, 2993-3002.	3.8	117
61	Evolution of Mechanical Properties and Microstructures with Equivalent Strain in Pure Fe Processed by High Pressure Torsion. Materials Transactions, 2009, 50, 44-50.	0.4	113
62	Microstructural and Mechanical Characteristics of AZ61 Magnesium Alloy Processed by High-Pressure Torsion. Materials Transactions, 2008, 49, 76-83.	0.4	112
63	Significance of temperature increase in processing by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7301-7305.	2.6	108
64	The significance of slippage in processing by high-pressure torsion. Scripta Materialia, 2009, 60, 9-12.	2.6	107
65	Significance of adiabatic heating in equal-channel angular pressing. Scripta Materialia, 1999, 41, 791-796.	2.6	104
66	The application of equal-channel angular pressing to an aluminum single crystal. Acta Materialia, 2004, 52, 1387-1395.	3.8	103
67	Developing superplastic properties in an aluminum alloy through severe plastic deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 272, 63-72.	2.6	101
68	High-pressure zinc oxide phase as visible-light-active photocatalyst with narrow band gap. Journal of Materials Chemistry A, 2017, 5, 20298-20303.	5.2	101
69	Room-Temperature Superplasticity in an Ultrafine-Grained Magnesium Alloy. Scientific Reports, 2017, 7, 2662.	1.6	100
70	Hydrogen storage capability of MgNi2 processed by high pressure torsion. Scripta Materialia, 2007, 57, 751-753.	2.6	99
71	Plastic deformation and allotropic phase transformations in zirconia ceramics during high-pressure torsion. Scripta Materialia, 2011, 65, 974-977.	2.6	95
72	Ultrahigh strength and high plasticity in TiAl intermetallics with bimodal grain structure and nanotwins. Scripta Materialia, 2012, 67, 814-817.	2.6	94

#	Article	IF	Citations
73	Plastic flow, structure and mechanical properties in pure Al deformed by twist extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 519, 105-111.	2.6	90
74	Development of High-Pressure Sliding Process for Microstructural Refinement of Rectangular Metallic Sheets. Materials Transactions, 2009, 50, 930-933.	0.4	90
75	Continuous high-pressure torsion. Journal of Materials Science, 2010, 45, 4578-4582.	1.7	90
76	Enhanced grain growth in an Al-Mg alloy with ultrafine grain size. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1996, 216, 41-46.	2.6	88
77	Ultrafine-grained magnesiumâ€"lithium alloy processed by high-pressure torsion: Low-temperature superplasticity and potential for hydroforming. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 640, 443-448.	2.6	87
78	Universal Plot for Hardness Variation in Pure Metals Processed by High-Pressure Torsion. Materials Transactions, 2010, 51, 1051-1054.	0.4	86
79	Grain refinement and superplastic flow in an aluminum alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 408, 141-146.	2.6	84
80	Equal-channel angular pressing: A novel tool for microstructural control. Metals and Materials International, 1998, 4, 1181-1190.	0.2	83
81	Mechanism of activation of TiFe intermetallics for hydrogen storage by severe plastic deformation using high-pressure torsion. Applied Physics Letters, 2013, 103, .	1.5	83
82	Significance of Microstructural Control for Superplastic Deformation and Forming. Materials Transactions, JIM, 1996, 37, 336-339.	0.9	82
83	Achieving exceptional superplasticity in a bulk aluminum alloy processed by high-pressure torsion. Scripta Materialia, 2008, 58, 1029-1032.	2.6	82
84	Equal-channel angular pressing using plate samples. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 361, 258-266.	2.6	81
85	Microstructural development in equal-channel angular pressing using a 60Â° die. Acta Materialia, 2004, 52, 2497-2507.	3.8	81
86	Using grain boundary engineering to evaluate the diffusion characteristics in ultrafine-grained Alâ€"Mg and Alâ€"Zn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 371, 241-250.	2.6	79
87	Formation of FeNi with<i>L</i>1₀-ordered structure using high-pressure torsion. Philosophical Magazine Letters, 2014, 94, 639-646.	0.5	79
88	Factors influencing the flow and hardness of materials with ultrafine grain sizes. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 203-216.	0.7	78
89	High-pressure torsion of titanium at cryogenic and room temperatures: Grain size effect on allotropic phase transformations. Acta Materialia, 2014, 68, 207-213.	3.8	78
90	Equal-Channel Angular Pressing and High-Pressure Torsion of Pure Copper: Evolution of Electrical Conductivity and Hardness with Strain. Materials Transactions, 2012, 53, 123-127.	0.4	77

#	Article	IF	Citations
91	Application of high-pressure torsion for consolidation of ceramic powders. Scripta Materialia, 2010, 63, 174-177.	2.6	76
92	High-pressure torsion of aluminum with ultrahigh purity (99.9999%) and occurrence of inverse Hall-Petch relationship. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 679, 428-434.	2.6	75
93	An Evaluation of Superplasticity in Aluminum-Scandium Alloys Processed by Equal-Channel Angular Pressing. Materials Transactions, JIM, 1999, 40, 772-778.	0.9	74
94	Effect of temperature rise on microstructural evolution during high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 714, 167-171.	2.6	74
95	Characteristics of diffusion in Al-Mg alloys with ultrafine grain sizes. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 2249-2262.	0.7	73
96	Softening of high purity aluminum and copper processed by high pressure torsion. International Journal of Materials Research, 2009, 100, 1668-1673.	0.1	73
97	Formation of metastable phases in magnesiumâ€“titanium system by high-pressure torsion and their hydrogen storage performance. Acta Materialia, 2015, 99, 150-156.	3.8	73
98	Visible-Light-Driven Photocatalytic Hydrogen Generation on Nanosized TiO₂-II Stabilized by High-Pressure Torsion. ACS Catalysis, 2016, 6, 5103-5107.	5.5	73
99	New nanostructured phases with reversible hydrogen storage capability in immiscible magnesiumâ€“zirconium system produced by high-pressure torsion. Acta Materialia, 2016, 108, 293-303.	3.8	72
100	Age hardening and thermal stability of Alâ€“Cu alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 627, 111-118.	2.6	70
101	Transition from poor ductility to room-temperature superplasticity in a nanostructured aluminum alloy. Scientific Reports, 2018, 8, 6740.	1.6	70
102	High-pressure torsion of pure cobalt: hcp-fcc phase transformations and twinning during severe plastic deformation. Applied Physics Letters, 2013, 102, .	1.5	69
103	Microstructural Evolution in Pure Aluminum in the Early Stages of Processing by High-Pressure Torsion. Materials Transactions, 2010, 51, 2-7.	0.4	67
104	Grain boundary structure in Alâ€“Mg and Alâ€“Mgâ€“Sc alloys after equal-channel angular pressing. Journal of Materials Research, 2001, 16, 583-589.	1.2	66
105	Severe plastic deformation as a processing tool for developing superplastic metals. Journal of Alloys and Compounds, 2004, 378, 27-34.	2.8	66
106	Using ring samples to evaluate the processing characteristics in high-pressure torsion. Acta Materialia, 2009, 57, 1147-1153.	3.8	66
107	Evaluating the influence of pressure and torsional strain on processing by high-pressure torsion. Journal of Materials Science, 2008, 43, 7286-7292.	1.7	65
108	Strong and ductile nanostructured Cu-carbon nanotube composite. Applied Physics Letters, 2009, 95, 071907.	1.5	65

#	Article	IF	Citations
109	Phase transformation and nanograin refinement of silicon by processing through high-pressure torsion. Applied Physics Letters, 2012, 101, .	1.5	65
110	Photocatalytic hydrogen generation on low-bandgap black zirconia (ZrO₂) produced by high-pressure torsion. Journal of Materials Chemistry A, 2020, 8, 3643-3650.	5.2	65
111	Plastic Deformation of BaTiO₃Ceramics by High-pressure Torsion and Changes in Phase Transformations, Optical and Dielectric Properties. Materials Research Letters, 2015, 3, 216-221.	4.1	64
112	Grain refinement and superplasticity in a magnesium alloy processed by equal-channel angular pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1705-1711.	1.1	62
113	Cold Consolidation of Ball-Milled Titanium Powders Using High-Pressure Torsion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 3308-3317.	1.1	62
114	Grain refinement and high strain rate superplasticity in alumunium 2024 alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 622, 139-145.	2.6	62
115	Ultra-severe plastic deformation: Evolution of microstructure, phase transformation and hardness in immiscible magnesium-based systems. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 701, 158-166.	2.6	62
116	Microstructural evolution in an aluminum solid solution alloy processed by ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 6059-6065.	2.6	61
117	Achieving superplasticity in ultrafine-grained copper: influence of Zn and Zr additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 352, 129-135.	2.6	59
118	Scaling-Up of High Pressure Torsion Using Ring Shape. Materials Transactions, 2009, 50, 92-95.	0.4	59
119	Correlations between hardness and atomic bond parameters of pure metals and semi-metals after processing by high-pressure torsion. Scripta Materialia, 2011, 64, 161-164.	2.6	58
120	Powder consolidation of Alâ€"10 wt% Fe alloy by High-Pressure Torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 558, 462-471.	2.6	58
121	Influence of crystal orientation on ECAP of aluminum single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 420, 79-86.	2.6	57
122	Using X-ray microdiffraction to determine grain sizes at selected positions in disks processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 444, 153-156.	2.6	57
123	High-pressure torsion for new hydrogen storage materials. Science and Technology of Advanced Materials, 2018, 19, 185-193.	2.8	57
124	Achieving superplasticity in a Cuâ€"40%Zn alloy through severe plastic deformation. Scripta Materialia, 2001, 45, 965-970.	2.6	56
125	High-Pressure Torsion of Machining Chips and Bulk Discs of Amorphous Zr₅₀Cu₃₀Al₁₀Ni₁₀. Materials Transactions, 2010, 51, 23-26.	0.4	56
126	Softening by severe plastic deformation and hardening by annealing of aluminumâ€"zinc alloy: Significance of elemental and spinodal decompositions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 610, 17-27.	2.6	56

#	Article	IF	Citations
127	Achieving enhanced ductility in a dilute magnesium alloy through severe plastic deformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 1735-1744.	1.1	55
128	Microstructures and Mechanical Properties of Pure V and Mo Processed by High-Pressure Torsion. Materials Transactions, 2010, 51, 1072-1079.	0.4	55
129	Effect of high-pressure torsion on hydrogen trapping in Feâ€"0.01 mass% C and type 310S austenitic stainless steel. Acta Materialia, 2010, 58, 649-657.	3.8	55
130	An evaluation of the flow behavior during high strain rate superplasticity in an Alâˆ'Mgâˆ'Sc alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 707-716.	1.1	54
131	Activation of titanium-vanadium alloy for hydrogen storage by introduction of nanograins and edge dislocations using high-pressure torsion. International Journal of Hydrogen Energy, 2016, 41, 8917-8924.	3.8	54
132	Structure and mechanical behavior of ultrafine-grained aluminum-iron alloy stabilized by nanoscaled intermetallic particles. Acta Materialia, 2019, 167, 89-102.	3.8	54
133	Development of Severe Torsion Straining Process for Rapid Continuous Grain Refinement. Materials Transactions, 2004, 45, 3338-3342.	0.4	53
134	Fabrication of submicrometer-grained Znâ€"22% Al by torsion straining. Journal of Materials Research, 1996, 11, 2128-2130.	1.2	52
135	Fabrication and thermal stability of a nanocrystalline Niâ€"Alâ€"Cr alloy: Comparison with pure Cu and Ni. Journal of Materials Research, 1999, 14, 4200-4207.	1.2	51
136	Influence of scandium on superplastic ductilities in an Alâ€"Mgâ€"Sc alloy. Journal of Materials Research, 2000, 15, 2571-2576.	1.2	51
137	Effect of initial grain sizes on hardness variation and strain distribution of pure aluminum severely deformed by compression tests. Acta Materialia, 2008, 56, 6291-6303.	3.8	50
138	Strengthening of Cuâ€"Niâ€"Si alloy using high-pressure torsion and aging. Materials Characterization, 2014, 90, 62-70.	1.9	50
139	Microstructure Evolution in Pure Al Processed with Twist Extrusion. Materials Transactions, 2009, 50, 96-100.	0.4	49
140	Long-time stability of metals after severe plastic deformation: Softening and hardening by self-annealing versus thermal stability. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 729, 340-348.	2.6	48
141	Severe Plastic Deformation under High Pressure: Upsizing Sample Dimensions. Materials Transactions, 2020, 61, 1177-1190.	0.4	47
142	High-Pressure Torsion for Pure Chromium and Niobium. Materials Transactions, 2012, 53, 38-45.	0.4	45
143	Strengthening of A2024 alloy by high-pressure torsion and subsequent aging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 704, 112-118.	2.6	45
144	Factors influencing microstructural development in equal-channel angular pressing. Metals and Materials International, 2003, 9, 141-149.	1.8	44

#	Article	IF	Citations
145	Evolution of Microstructure and Hardness in Pure Al by Twist Extrusion. Materials Transactions, 2008, 49, 2-6.	0.4	44
146	Continuous high-pressure torsion using wires. Journal of Materials Science, 2012, 47, 473-478.	1.7	44
147	Scaling up of High-Pressure Sliding (HPS) for Grain Refinement and Superplasticity. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 4669-4681.	1.1	44
148	Enhanced photocatalytic hydrogen production on GaNâ€“ZnO oxynitride by introduction of strain-induced nitrogen vacancy complexes. Acta Materialia, 2020, 185, 149-156.	3.8	44
149	Superplastic flow in a nanostructured aluminum alloy produced using high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 500, 170-175.	2.6	43
150	Methods for Designing Concurrently Strengthened Severely Deformed Age-Hardenable Aluminum Alloys by Ultrafine-Grained and Precipitation Hardenings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3921-3933.	1.1	43
151	High-pressure torsion of iron with various purity levels and validation of Hall-Petch strengthening mechanism. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 743, 597-605.	2.6	43
152	Mechanical Properties and Microstructures of Al-Fe Alloys Processed by High-Pressure Torsion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 5182-5192.	1.1	42
153	Phase transformations, vacancy formation and variations of optical and photocatalytic properties in TiO2-ZnO composites by high-pressure torsion. International Journal of Plasticity, 2020, 124, 170-185.	4.1	41
154	An extrapolation method for the determination of Cliffâ€Lorimer <i>k</i>_{AB} factors at zero foil thickness. Journal of Microscopy, 1986, 143, 215-231.	0.8	38
155	Strengthening of AA7075 alloy by processing with high-pressure sliding (HPS) and subsequent aging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 628, 56-61.	2.6	38
156	Using intense plastic straining for high-strain-rate superplasticity. Jom, 1998, 50, 41-45.	0.9	37
157	The aging characteristics of an Alâ€“Ag alloy processed by equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 437, 240-247.	2.6	37
158	Texture of bismuth telluride-based thermoelectric semiconductors processed by high-pressure torsion. Journal of Physics and Chemistry of Solids, 2009, 70, 1089-1092.	1.9	37
159	Softening and Microstructural Coarsening without Twin Formation in FCC Metals with Low Stacking Fault Energy after Processing by High-Pressure Torsion. Materials Transactions, 2009, 50, 1633-1637.	0.4	37
160	Dynamic recrystallization and recovery during high-pressure torsion: Experimental evidence by torque measurement using ring specimens. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 506-509.	2.6	37
161	Age hardening and the potential for superplasticity in a fine-grained Al-Mg-Li-Zr alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 169-177.	1.1	36
162	Low-Temperature Superplasticity in Aluminum Alloys Processed by Equal-Channel Angular Pressing. Materials Transactions, 2002, 43, 2364-2369.	0.4	36

#	Article	IF	Citations
163	Pitting Corrosion Resistance of Ultrafine-Grained Aluminum Processed by Severe Plastic Deformation. Materials Transactions, 2006, 47, 1163-1169.	0.4	36
164	Large enhancement of superconducting transition temperature in single-element superconducting rhenium by shear strain. Scientific Reports, 2016, 6, 36337.	1.6	35
165	Improved Photocatalytic Hydrogen Evolution on Tantalate Perovskites CsTaO₃ and LiTaO₃ by Strain-Induced Vacancies. ACS Applied Energy Materials, 2020, 3, 1710-1718.	2.5	35
166	A model investigation of the shearing characteristics in equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 347, 223-230.	2.6	34
167	Real Hydrostatic Pressure in High-Pressure Torsion Measured by Bismuth Phase Transformations and FEM Simulations. Materials Transactions, 2016, 57, 533-538.	0.4	34
168	Fabrication and Characterization of Supersaturated Al-Mg Alloys by Severe Plastic Deformation and Their Mechanical Properties. Materials Transactions, 2009, 50, 76-81.	0.4	33
169	High-pressure torsion for fabrication of high-strength and high-electrical conductivity Al micro-wires. Journal of Materials Science, 2014, 49, 6550-6557.	1.7	33
170	High strength and superconductivity in nanostructured niobiumâ€“titanium alloy by high-pressure torsion and annealing: Significance of elemental decomposition and supersaturation. Acta Materialia, 2014, 80, 149-158.	3.8	33
171	Using Equal-Channel Angular Pressing for the Production of Superplastic Aluminum and Magnesium Alloys. Journal of Materials Engineering and Performance, 2004, 13, 683-690.	1.2	32
172	Processing by equal-channel angular pressing: Applications to grain boundary engineering. Journal of Materials Science, 2005, 40, 909-917.	1.7	32
173	Production of Al/Al₂O₃ Nanocomposites through Consolidation by High-Pressure Torsion. Materials Transactions, 2012, 53, 13-16.	0.4	32
174	Fabrication of nanograined silicon by high-pressure torsion. Journal of Materials Science, 2014, 49, 6565-6569.	1.7	32
175	Hydrogen trapping on lattice defects produced by high-pressure torsion in Feâ€“0.01 mass% C alloy. Scripta Materialia, 2010, 63, 552-555.	2.6	31
176	Aging Behavior of Al 6061 Alloy Processed by High-Pressure Torsion and Subsequent Aging. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 2664-2673.	1.1	31
177	Incremental Feeding High-Pressure Sliding for Grain Refinement of Large-Scale Sheets: Application to Inconel 718. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1830-1840.	1.1	31
178	Evolution of grain boundary structure in submicrometer-grained Al-Mg alloy. Materials Characterization, 1996, 37, 285-294.	1.9	30
179	Developing superplasticity in a spray-cast aluminum 7034 alloy through equal-channel angular pressing. Materials Letters, 2003, 57, 3588-3592.	1.3	30
180	A quantitative study of cavity development in the tensile testing of an aluminum metal matrix composite processed by equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 402-407.	2.6	30

#	ARTICLE	IF	CITATIONS
181	An investigation of the deformation process during equal-channel angular pressing of an aluminum single crystal. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 194-200.	2.6	30
182	Pitting Corrosion Resistance of Anodized Aluminum Alloy Processed by Severe Plastic Deformation. Materials Transactions, 2007, 48, 21-28.	0.4	30
183	High Strength and High Uniform Ductility in a Severely Deformed Iron Alloy by Lattice Softening and Multimodal-structure Formation. Materials Research Letters, 2015, 3, 197-202.	4.1	30
184	Effect of gradient-structure versus uniform nanostructure on hydrogen storage of Ti-V-Cr alloys: Investigation using ultrasonic SMAT and HPT processes. Journal of Alloys and Compounds, 2018, 737, 337-346.	2.8	30
185	Analytical electron microscopy study of diffusion-bonded multiphase system. Journal of Materials Science, 1997, 4, 229.	1.2	29
186	Pitting Corrosion Resistance of Anodized Aluminum-Copper Alloy Processed by Severe Plastic Deformation. Materials Transactions, 2008, 49, 2648-2655.	0.4	29
187	Effect of High-Pressure Torsion Processing and Annealing on Hydrogen Embrittlement of Type 304 Metastable Austenitic Stainless Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 3110-3120.	1.1	29
188	High Strength and Electrical Conductivity of Alâ€Fe Alloys Produced by Synergistic Combination of Highâ€Pressure Torsion and Aging. Advanced Engineering Materials, 2015, 17, 1792-1803.	1.6	29
189	Impact of TiO₂-II phase stabilized in anatase matrix by high-pressure torsion on electrocatalytic hydrogen production. Materials Research Letters, 2019, 7, 334-339.	4.1	29
190	å·¨å§ã²ãšã¿åŠå·¥ã«ã‚ˆã‚‹è¶…å¾®ç´°çµ„ç¹”å¶å¾¡. Keikinzoku/Journal of Japan Institute of Light Metals, 2010, 60, 134-141.	0.4	28
191	Strengthening of Al through addition of Fe and by processing with high-pressure torsion. Journal of Materials Science, 2013, 48, 4713-4722.	1.7	27
192	Nanograin formation of GaAs by high-pressure torsion. Philosophical Magazine Letters, 2014, 94, 1-8.	0.5	27
193	Superplasticity of Inconel 718 after processing by high-pressure sliding (HPS). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 603-612.	2.6	27
194	Microstructural details of hydrogen diffusion and storage in Tiâ€“Vâ€“Cr alloys activated through surface and bulk severe plastic deformation. International Journal of Hydrogen Energy, 2020, 45, 5326-5336.	3.8	27
195	Effects of ball milling and high-pressure torsion for improving mechanical properties of Alâ€“Al2O3 nanocomposites. Journal of Materials Science, 2012, 47, 7821-7827.	1.7	26
196	Graphite to diamond-like carbon phase transformation by high-pressure torsion. Applied Physics Letters, 2013, 103, .	1.5	26
197	Microstructural evolution and mechanical properties of biomedical Coâ€“Crâ€“Mo alloy subjected to high-pressure torsion. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 226-235.	1.5	26
198	Severe Plastic Deformation for Nanostructure Controls. Materials Transactions, 2020, 61, 2241-2247.	0.4	26

#	Article	IF	Citations
199	An evaluation of the flow behavior during high strain rate superplasticity in an Al-Mg-Sc alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 707-716.	1.1	25
200	Using the stressâ€“strain relationships to propose regions of low and high temperature plastic deformation in aluminum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 234-238.	2.6	25
201	Influence of crystal orientation on the processing of copper single crystals by ECAP. Journal of Materials Science, 2007, 42, 1501-1511.	1.7	25
202	Strengthening via Microstructure Refinement in Bulk Al–4 mass% Fe Alloy Using High-Pressure Torsion. Materials Transactions, 2012, 53, 46-55.	0.4	25
203	Superconducting properties in bulk nanostructured niobium prepared by high-pressure torsion. Physica C: Superconductivity and Its Applications, 2013, 493, 132-135.	0.6	25
204	Phase Transformations in MgH₂â€“TiH₂ Hydrogen Storage System by Highâ€Pressure Torsion Process. Advanced Engineering Materials, 2020, 22, 1900027.	1.6	25
205	Microstructural Evolution in an Al-1.7 at%Cu Alloy Deformed by Equal-Channel Angular Pressing. Materials Transactions, JIM, 1999, 40, 938-941.	0.9	24
206	Microstructure control using severe plastic deformation. Science and Technology of Advanced Materials, 2006, 7, 649-654.	2.8	24
207	High-pressure torsion for production of magnetoresistance in Cuâ€“Co alloy. Journal of Materials Science, 2008, 43, 7349-7353.	1.7	24
208	Solid-state reactions and hydrogen storage in magnesium mixed with various elements by high-pressure torsion: experiments and first-principles calculations. RSC Advances, 2016, 6, 11665-11674.	1.7	24
209	Thermal conductivity reduction of crystalline silicon by high-pressure torsion. Nanoscale Research Letters, 2014, 9, 326.	3.1	23
210	High-resolution transmission electron microscopy analysis of nanograined germanium produced by high-pressure torsion. Materials Characterization, 2017, 132, 132-138.	1.9	23
211	Low-temperature anatase-to-rutile phase transformation and unusual grain coarsening in titanium oxide nanopowders by high-pressure torsion straining. Scripta Materialia, 2019, 162, 341-344.	2.6	23
212	Phase Separation and Lattice Misfit in NiAl(β₁)–Ni₂AlTi(<I>H</I>)–NiTi(&be System. Materials Transactions, JIM, 1997, 38, 99-106.	0.9	22
213	Multi-pass high-pressure sliding (MP-HPS) for grain refinement and superplasticity in metallic round rods. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 748, 108-118.	2.6	22
214	Effect of Hydrogen on Tensile Properties of Ultrafine-Grained Type 310S Austenitic Stainless Steel Processed by High-Pressure Torsion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 1619-1629.	1.1	21
215	Hydrogen generation from pure water using Alâ€“Sn powders consolidated through high-pressure torsion. Journal of Materials Research, 2016, 31, 775-782.	1.2	21
216	Allotropic phase transformation and photoluminescence of germanium nanograins processed by high-pressure torsion. Journal of Materials Science, 2016, 51, 138-143.	1.7	21

#	Article	IF	Citations
217	Phase transformation of germanium by processing through high-pressure torsion: strain and temperature effects. Philosophical Magazine Letters, 2017, 97, 27-34.	0.5	21
218	New Mgâ€“Vâ€“Cr BCC Alloys Synthesized by High-Pressure Torsion and Ball Milling. Materials Transactions, 2018, 59, 741-746.	0.4	21
219	Microstructural evolution in a spray-cast aluminum alloy during equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 303-307.	2.6	20
220	Evolution of lattice defects, disordered/ordered phase transformations and mechanical properties in Niâ€“Alâ€“Ti intermetallics by high-pressure torsion. Journal of Alloys and Compounds, 2013, 563, 221-228.	2.8	20
221	High-resolution transmission electron microscopy analysis of bulk nanograined silicon processed by high-pressure torsion. Materials Characterization, 2017, 129, 163-168.	1.9	19
222	Grain growth in nanograined aluminum oxide by high-pressure torsion: Phase transformation and plastic strain effects. Scripta Materialia, 2018, 152, 11-14.	2.6	19
223	Hydrolytic Hydrogen Production on Alâ€“Snâ€“Zn Alloys Processed by High-Pressure Torsion. Materials, 2018, 11, 1209.	1.3	19
224	Photocatalytic activity of aluminum oxide by oxygen vacancy generation using high-pressure torsion straining. Scripta Materialia, 2019, 173, 120-124.	2.6	19
225	An Evaluation of Superplastic Anisotropy after Processing by Equal-Channel Angular Pressing. Materials Transactions, 2004, 45, 3079-3081.	0.4	18
226	Microstructural Evolution and Mechanical Properties of High Purity Aluminium Processed by Equal-Channel Angular Pressing. Materials Transactions, 2008, 49, 15-19.	0.4	18
227	Hydrogen Effects on Ultrafine-Grained Steels Processed by High-Pressure Torsion. Materials Transactions, 2012, 53, 773-785.	0.4	18
228	Age Hardening in Ultrafine-Grained Al-2ÂPctÂFe Alloy Processed by High-Pressure Torsion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 2614-2624.	1.1	18
229	Microstructure and phase transformations of silica glass and vanadium oxide by severe plastic deformation via high-pressure torsion straining. Journal of Alloys and Compounds, 2019, 779, 394-398.	2.8	18
230	Application of High-Pressure Torsion to WC–Co Ceramic-Based Composites for Improvement of Consolidation, Microstructure and Hardness. Materials Transactions, 2013, 54, 1540-1548.	0.4	17
231	Effect of temperature on solid-state formation of bulk nanograined intermetallic Al₃Ni during high-pressure torsion. Philosophical Magazine, 2014, 94, 876-887.	0.7	17
232	Hydrostatic Compression Effects on Fifth-Group Element Superconductors V, Nb, and Ta Subjected to High-Pressure Torsion. Materials Transactions, 2019, 60, 1472-1483.	0.4	17
233	Thermoelectric Properties of Bi₂Te₃-Related Materials Finely Grained by Mechanical Alloying and High Pressure Torsion. Materials Transactions, 2009, 50, 1592-1595.	0.4	16
234	Severe plastic deformation in Gum Metal with composition at the structural stability limit. International Journal of Materials Research, 2009, 100, 1217-1221.	0.1	16

#	Article	IF	Citations
235	Application of equal-channel angular pressing to Cuâ€"Co alloy with ferromagnetic precipitates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 417, 149-157.	2.6	15
236	Effect of Annealing on the Pitting Corrosion Resistance of Anodized Aluminum-Magnesium Alloy Processed by Severe Plastic Deformation. Materials Transactions, 2008, 49, 2656-2663.	0.4	15
237	Effect of Equal-Channel Angular Pressing on Pitting Corrosion of Pure Aluminum. International Journal of Corrosion, 2012, 2012, 1-9.	0.6	15
238	Grain Refinement Mechanism and Evolution of Dislocation Structure of Coâ€"Crâ€"Mo Alloy Subjected to High-Pressure Torsion. Materials Transactions, 2016, 57, 1109-1118.	0.4	15
239	The Effect of Ultrafine-Grained Microstructure on Creep Behaviour of 9% Cr Steel. Materials, 2018, 11, 787.	1.3	15
240	Energy dispersive X-ray microanalysis in the analytical electron microscope.. ISIJ International, 1989, 29, 179-190.	0.6	15
241	Title is missing!. Journal of Materials Science, 2002, 37, 5223-5227.	1.7	14
242	A finite element analysis of the superplastic forming of an aluminum alloy processed by ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 456, 236-242.	2.6	14
243	Highâ€Pressure Torsion for Giant Magnetoresistance and Better Magnetic Properties. Advanced Engineering Materials, 2010, 12, 793-797.	1.6	14
244	Effects of High-Pressure Torsion on the Pitting Corrosion Resistance of Aluminum–Iron Alloys. Materials Transactions, 2013, 54, 1642-1649.	0.4	14
245	Incremental Feeding High-Pressure Sliding for Achieving Large Area of Severe Plastic Deformation. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2018, 82, 25-31.	0.2	14
246	Change in Magnetic Property of Cu-6.5 mass%Co Alloy through Processing by ECAP. Materials Transactions, 2008, 49, 102-106.	0.4	13
247	Grain refinement and high strengthening of 7075 aluminum alloy by high-pressure sliding. Keikinzoku/Journal of Japan Institute of Light Metals, 2012, 62, 454-458.	0.1	13
248	Electrical resistivity mapping of titanium and zirconium discs processed by high-pressure torsion for homogeneity and phase transformation evaluation. Journal of Materials Science, 2017, 52, 6778-6788.	1.7	12
249	Critical Temperature in Bulk Ultrafine-Grained Superconductors of Nb, V, and Ta Processed by High-Pressure Torsion. Materials Transactions, 2019, 60, 1367-1376.	0.4	12
250	High-pressure torsion to induce oxygen vacancies in nanocrystals of magnesium oxide: Enhanced light absorbance, photocatalysis and significance in geology. Materialia, 2020, 11, 100670.	1.3	12
251	Complex interactions between precipitation, grain growth and recrystallization in a severely deformed Al-Zn-Mg-Cu alloy and consequences on the mechanical behavior. Materialia, 2021, 15, 101028.	1.3	12
252	Achieving Superplasticity of Al-1%Mg-0.2%Sc Alloy in Plate Samples Processed by Equal-channel Angular Pressing. Materials Transactions, 2004, 45, 2521-2524.	0.4	11

#	Article	IF	Citations
253	Crystal and electronic structural changes during annealing in severely deformed Si containing metastable phases formed by high-pressure torsion. Applied Physics Letters, 2018, 113, .	1.5	11
254	Highâ€pressure torsion of SiO₂ quartz sand: Phase transformation, optical properties, and significance in geology. Journal of the American Ceramic Society, 2020, 103, 6594-6602.	1.9	11
255	Grain refinement and superplasticity of pipes processed by high-pressure sliding. Materials Science and Technology, 2020, 36, 877-886.	0.8	11
256	Combination of High-Pressure Torsion with Incremental Feeding for Upsizing Sample. Materials Transactions, 2018, 59, 1009-1012.	0.4	11
257	Cytocompatibility of Tiâ€“6Alâ€“7Nb through High-Pressure Torsion Processing. Materials Transactions, 2016, 57, 2020-2025.	0.4	11
258	Yield stress measurements on an Al-1.5% Mg alloy with submicron grain size using a miniature bending procedure. Materials Letters, 1995, 23, 283-287.	1.3	10
259	Enhancement of Strength and Ductility of Al-Ag Alloys Processed by High-Pressure Torsion and Aging. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3221-3231.	1.1	10
260	Achieving Superplasticity of Ultrafine-Grained Rod-Like AZ61 Alloy Using High-Pressure Sliding. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2015, 80, 128-133.	0.2	10
261	Hydrogen Embrittlement of Ultrafine-grained Austenitic Stainless Steels Processed by High-pressure Torsion at Moderate Temperature. ISIJ International, 2016, 56, 1083-1090.	0.6	10
262	Optimization of Microstructure and Mechanical Properties of Coâ€“Crâ€“Mo Alloys by High-Pressure Torsion and Subsequent Short Annealing. Materials Transactions, 2016, 57, 1887-1896.	0.4	10
263	Formation of metastable bc8 phase from crystalline Si0.5Ge0.5 by high-pressure torsion. Materials Characterization, 2020, 169, 110590.	1.9	10
264	Application of three-dimensional electron tomography using bright-field imagingâ€"Two types of Si-phases in Alâ€“Si alloy. Science and Technology of Advanced Materials, 2006, 7, 726-731.	2.8	9
265	Hydrogen behavior in ultrafine-grained palladium processed by high-pressure torsion. International Journal of Hydrogen Energy, 2013, 38, 14879-14886.	3.8	9
266	Effects of Grain Refinement and Predeformation Impact by Severe Plastic Deformation on Creep in P92 Martensitic Steel. Advanced Engineering Materials, 2020, 22, 1900448.	1.6	9
267	<i>In Situ</i> Synchrotron X-ray Analysis: Application of High-Pressure Sliding Process to Ti Allotropic Transformation. Materials Transactions, 2021, 62, 167-176.	0.4	9
268	Construction of Ti-Al-Cr Phase Diagram Using Quantitative X-ray Microanalysis in Analytical Electron Microscope. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2001, 65, 382-388.	0.2	8
269	Alâ€“Mgâ€“Siç³»å•é‡'ã®çµ„ç¹”ã•æ©Ÿæ¢°çš„æ€§è³ªâ€•é«˜å¼·åº¦åŒ–ã¸ã®å•çµ„ã¿. Keikinzoku/Journal of Japan Institute of Light Metal	0.1	8
270	Principles of deformation in single crystals of two different orientations processed by equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 503, 21-27.	2.6	8

#	Article	IF	Citations
271	Ultrahigh strength of nanocrystalline iron-based alloys produced by high-pressure torsion. Journal of Materials Science, 2010, 45, 4745-4753.	1.7	8
272	Extra Strengthening and Superplasticity of Ultrafine-Grained A2024 Alloy Produced by High-Pressure Sliding. Materials Transactions, 2017, 58, 1647-1655.	0.4	8
273	Hydrostatic pressure effects on superconducting transition of nanostructured niobium highly strained by high-pressure torsion. Journal of Applied Physics, 2019, 125, .	1.1	8
274	Phase transformations in Al-Ti-Mg powders consolidated by high-pressure torsion: Experiments and first-principles calculations. Journal of Alloys and Compounds, 2021, 889, 161815.	2.8	8
275	A new miniature mechanical testing procedure: Application to intermetallics. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1997, 28, 2577-2582.	1.1	7
276	Simultaneous strengthning due to grain refinement and fine precipitation. Keikinzoku/Journal of Japan Institute of Light Metals, 2012, 62, 398-405.	0.1	7
277	High-pressure torsion of metastable austenitic stainless steel at moderate temperatures. Philosophical Magazine Letters, 2015, 95, 269-276.	0.5	7
278	Low-Temperature and High-Strain-Rate Superplasticity of Ultrafine-Grained A7075 Processed by High-Pressure Torsion. Materials Transactions, 2018, 59, 1341-1347.	0.4	7
279	Synchrotron X-ray diffraction observation of phase transformation during annealing of Si processed by high-pressure torsion. Philosophical Magazine Letters, 2021, 101, 223-231.	0.5	7
280	Production of Superplastic Tiâ€"6Alâ€"7Nb Alloy Using High-Pressure Sliding Process. Materials Transactions, 2019, 60, 1785-1791.	0.4	7
281	Fatigue Property and Cytocompatibility of a Biomedical Coâ€"Crâ€"Mo Alloy Subjected to a High Pressure Torsion and a Subsequent Short Time Annealing. Materials Transactions, 2020, 61, 361-367.	0.4	7
282	Quantitative X-ray Microanalysis in Analytical Electron Microscopy. Materials Transactions, JIM, 1998, 39, 947-958.	0.9	6
283	High-pressure torsion of thick Cu and Alâ€"Mgâ€"Sc ring samples. Journal of Materials Science, 2015, 50, 4888-4897.	1.7	6
284	Microstructures and the Mechanical Properties of the Alâ€"Liâ€"Cu Alloy Strengthened by the Combined Use of Accumulative Roll Bonding and Aging. Advanced Engineering Materials, 2020, 22, 1900561.	1.6	6
285	The Effect of Predeformation on Creep Strength of 9% Cr Steel. Materials, 2020, 13, 5330.	1.3	6
286	Magnetic measurements of hydrogen desorption from palladium hydride PdH0.64 prepared by severe plastic deformation. Journal of Applied Physics, 2020, 127, .	1.1	6
287	Superplasticity of ultrafine-grained Al-3%Mg-0.2%Sc alloy produced by equal-channel angular pressing.. Keikinzoku/Journal of Japan Institute of Light Metals, 2000, 50, 376-380.	0.1	5
288	Distributions of Hardness and Strain during Compression in Pure Aluminum Processed with Equal-Channel Angular Pressing and Subsequent Annealing. Materials Transactions, 2009, 50, 27-33.	0.4	5

#	Article	IF	Citations
289	Effects of Low Rotational Speed on Crystal Orientation of Bi₂Te₃-Based Thermoelectric Semiconductors Deformed by High-Pressure Torsion. Materials Transactions, 2012, 53, 588-591.	0.4	5
290	Application of high-pressure torsion to Al-6Â%Cu-0.4Â%Zr alloy for ultrafine-grain refinement and superplasticity. Journal of Materials Science, 2014, 49, 6689-6695.	1.7	5
291	Aging Behavior of Ultrafine-Grained Al–Mg–Si–X (X = Cu, Ag, Pt, Pd) Alloys Produced by High-Pressure Torsion. Materials Transactions, 2014, 55, 640-645.	0.4	5
292	Contactless measurement of electrical conductivity for bulk nanostructured silver prepared by high-pressure torsion: A study of the dissipation process of giant strain. Journal of Applied Physics, 2017, 122, .	1.1	5
293	Microstructural Evolution During Processing by Severe Plastic Deformation. , 2000, , 149-154.		5
294	Influence of High Pressure Sliding and Rotary Swaging on Creep Behavior of P92 Steel at 500 Â°C. Metals, 2021, 11, 2044.	1.0	5
295	Structural and thermoelectric properties of CH₃NH₃SnI₃ perovskites processed by applying high pressure with shear strain. Materials Research Letters, 2022, 10, 521-529.	4.1	5
296	Development of ultra high strength (1GPa) aluminum alloy using severe plastic deformation under high pressure. Keikinzoku/Journal of Japan Institute of Light Metals, 2017, 67, 519-520.	0.1	4
297	Microstructures and Mechanical Properties of AZ61 Magnesium Alloy after Processing with High Presser Torsion. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2007, 71, 213-217.	0.2	3
298	Aging behavior of ultrafine-grained Al^|^ndash;Mg^|^ndash;Si^|^ndash;X (X=Cu, Ag, Pt, Pd) alloys produced by high-pressure torsion. Keikinzoku/Journal of Japan Institute of Light Metals, 2012, 62, 448-453.	0.1	3
299	Hydrogen diffusion in ultrafine-grained iron with the body-centered cubic crystal structure. Philosophical Magazine Letters, 2017, 97, 158-168.	0.5	3
300	Continuous high-pressure torsion of pure Al and Al-2Âwt% Fe alloy using multi-wires. Journal of Materials Science, 2021, 56, 8679-8688.	1.7	3
301	Achieving Superplasticity and Superplastic Forming through Severe Plastic Deformation. Materials Research Society Symposia Proceedings, 2000, 634, 851.	0.1	2
302	Severe Plastic Deformation under High Pressure for Production of Superplastic Materials. Materials Science Forum, 0, 838-839, 287-293.	0.3	2
303	Measurement of Interdiffusivity by Quantitative X-ray Microanalysis Using Analytical Electron Microscope in Ni-Al System. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 1993, 57, 604-611.	0.2	2
304	Phase Separation in TiAl(L1₀)-(Al,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Td (Cr)₃;T the Japan Institute of Metals, 2000, 64, 609-615.	0.2	2
305	Deformation of Second Phase Particles in Al Alloy Using Severe Plastic Deformation Process. Materia Japan, 2003, 42, 863-863.	0.1	2
306	Structural Evolution and Deformation in an Aluminum-Based Solid Solution Alloy with Submicron Grain Size. Materials Research Society Symposia Proceedings, 1993, 319, 293.	0.1	1

#	Article	IF	Citations
307	Rotation of Mo-Fibers in Directionally Solidified Ni-Al-Mo Eutectic Alloys. Journal of Materials Science, 1999, 7, 119-129.	1.2	1
308	The Nature of the Stress-Strain Relationship in Aluminum and Copper over a Wide Range of Strain. , 2005, , 87-94.		1
309	Influence of high-pressure torsion on formation/destruction of nano-sized spinodal structures. AIP Conference Proceedings, 2018, , .	0.3	1
310	Homogeneous Strain Introduction Using Reciprocation Technique in High-Pressure Sliding. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3860-3870.	1.1	1
311	Severe plastic deformation. Series in Materials Science and Engineering, 2004, , .	0.1	1
312	Recrystallization of Bi₈₈Sb₁₂ thermoelectric semiconductors processed by High Pressure Torsion. Transactions of the Materials Research Society of Japan, 2011, 36, 41-46.	0.2	1
313	Fabrication of high-strength and high-ductility laminated A2024 aluminum alloy/aluminum composite by severe plastic deformation under high pressure. Keikinzoku/Journal of Japan Institute of Light Metals, 2017, 67, 179-185.	0.1	1
314	Severe Plastic Deformation under High Pressure: Upsizing Sample Dimensions. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2022, 86, 107-120.	0.2	1
315	A New Analytical Procedure for the Identification of High Temperature Deformation Mechanisms Using the Strain Rate Change Test. Materials Transactions, JIM, 1991, 32, 339-344.	0.9	0
316	Miniaturized Double-Shear Testing Procedure for Evaluation of High Temperature Deformation in Al and Al–Mg Solid Solution Alloy. Materials Transactions, JIM, 1996, 37, 349-352.	0.9	0
317	An Examination of the Deformation Process in Equal-Channel Angular Pressing. Materials Research Society Symposia Proceedings, 1999, 601, 347.	0.1	0
318	Processing by Equal-Channel Angular Pressing: Potential for Achieving Superplasticity. Materials Research Society Symposia Proceedings, 1999, 601, 365.	0.1	0
319	Diffusion Analysis across Grain Boundary in Al-3.7 mass%Cu Alloy Using Analytical Electron Microscopy. Materials Transactions, 2003, 44, 1336-1342.	0.4	0
320	Properties of Aluminum Alloys Processed by Equal Channel Angular Pressing Using a 60 Degrees Die. , 2005, , 459-464.		0
321	High Resolution TEM Observation of Nanocrystalline Silicon Fabricated by High Pressure Torsion (HPT). Microscopy and Microanalysis, 2015, 21, 1783-1784.	0.2	0
322	GRAIN REFINEMENT AND MICROSTRUCTURE EVOLUTION IN ALUMINUM A2618 ALLOY BY HIGH-PRESSURE TORSION. Jurnal Teknologi (Sciences and Engineering), 2016, 78, .	0.3	0
323	PM-22Microstructure observation of HPT processed Al-2.5mass%Li(-2.0mass%Cu) alloy. Microscopy (Oxford, England), 2018, 67, i46-i46.	0.7	0
324	Developing high-performance light metallic materials through microstructural refinement using severe plastic deformation. Keikinzoku/Journal of Japan Institute of Light Metals, 2018, 68, 407-417.	0.1	0

#	Article	IF	Citations
325	Correlation between TEM, SAXS and DSC to investigate the influence of SPD on precipitation mechanisms of an Al-Zn-Mg-Cu alloy. MATEC Web of Conferences, 2020, 326, 08006.	0.1	0
326	Simultaneous Enhancement of Tensile Strength and Ductility in Commercial-Purity Aluminum (A1050) by Accumulative Roll Bonding (ARB). SSRN Electronic Journal, 0, , .	0.4	0
327	SIM Observation of Ultrafine-Grained Al Alloy After Superplastic Deformation. Materia Japan, 2000, 39, 984-984.	0.1	0
328	Relationship between Misorientation Angle and Precipitate Free Zones of Warm Rolled 7475 Based Aluminum Alloy Sheet. Materia Japan, 2003, 42, 857-857.	0.1	0
329	Observation of Deformed GP Zone on the Shear Bands and Quantitative Analysis of Relative Strain by Three-dimensional Electron Tomography. Materia Japan, 2007, 46, 788-788.	0.1	0
330	Microstructures and Mechanical properties of Al-Al2O3 Composites Processed by Disk-HPT and Ring-HPT. , 2012, , 1011-1016.		0
331	Significance of High-Pressure Torsion (HPT) on Solid-State Hydrogen Storage Properties. , 2017, , .		0
332	Thermal conductivity reduction of bulk Si and Si/Ge material prepared by HPT process. The Proceedings of Conference of Kyushu Branch, 2017, 2017.70, 104.	0.0	0
333	Thermal Conductivity Reduction of Bulk GaAs using Giant Strain. The Proceedings of the Thermal Engineering Conference, 2018, 2018, 0176.	0.0	0
334	ECAP: Processing Fundamentals and Recent Progresses. , 0, , 201-215.		0