Shoichi Hirosawa

List of Publications by Year
in descending order

61 papers	1,360 citations	331538 21 h-index	360920 35 g-index
62 all docs	62 docs citations	62 times ranked	815 citing authors

#	Article	IF	Citations
1	Classification of the role of microalloying elements in phase decomposition of Al based alloys. Acta Materialia, 2000, 48, 1797-1806.	3.8	105
2	Atom probe tomography of nanoscale microstructures within precipitate free zones in Alâ€“Znâ€“Mg(â€“Ag) alloys. Acta Materialia, 2010, 58, 5714-5723.	3.8	98
3	Quantitative characterization of precipitate free zones in Alâ€“Znâ€“Mg(â€“Ag) alloys by microchemical analysis and nanoindentation measurement. Science and Technology of Advanced Materials, 2004, 5, 491-496.	2.8	84
4	Roles of microalloying elements on the cluster formation in the initial stage of phase decomposition of Al-based alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2745-2755.	1.1	79
5	Determining the composition of small features in atom probe: bcc Cu-rich precipitates in an Fe-rich matrix. Ultramicroscopy, 2009, 109, 535-540.	0.8	66
6	First-Principles Calculation of Interaction Energies between Solutes and/or Vacancies for Predicting Atomistic Behaviors of Microalloying Elements in Aluminum Alloys. Materials Science Forum, 0, 561-565, 283-286.	0.3	65
7	Effects of Mg addition on the kinetics of low-temperature precipitation in Alâ€“Liâ€“Cuâ€“Agâ€“Zr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 242, 195-201.	2.6	57
8	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
9	Achieving highly strengthened Alâ€“Cuâ€“Mg alloy by grain refinement and grain boundary segregation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 793, 139668.	2.6	50
10	3DAP Characterization and Thermal Stability of Nano-Scale Clusters in Al-Mg-Si Alloys. Materials Science Forum, 2006, 519-521, 245-250.	0.3	49
11	Age-hardening of an Alâ€“Liâ€“Cuâ€“Mg alloy (2091) processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 546, 82-89.	2.6	48
12	Concurrent strengthening of ultrafine-grained age-hardenable Al-Mg alloy by means of high-pressure torsion and spinodal decomposition. Acta Materialia, 2017, 131, 57-64.	3.8	45
13	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
14	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
15	Effects of Microalloying Tin and Combined Addition of Silver and Tin on the Formation of Precipitate Free Zones and Mechanical Properties in Al-Zn-Mg Alloys. Materials Transactions, 2011, 52, 900-905.	0.4	36
16	Combined Effect of Pre-Straining and Pre-Aging on Bake-Hardening Behavior of an Al-0.6 mass%Mg-1.0 mass%Si Alloy. Materials Transactions, 2010, 51, 325-332.	0.4	35
17	Comparison between Resistivity Changes and Monte Carlo Simulation for GP Zone Formation in Al–Cu Base Ternary Alloys. Materials Transactions, JIM, 1998, 39, 139-146.	0.9	32
18	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

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19	Improvement of Bake-Hardening Response of Al-Mg-Cu Alloys by Means of Nanocluster Assist Processing (NCAP) Technique. Materials Science Forum, 2006, 519-521, 215-220.	0.3	29
20	Title is missing!. Keikinzoku/Journal of Japan Institute of Light Metals, 2006, 56, 621-628.	0.1	27
21	Quantitative Correlation between Strength, Ductility and Precipitate Microstructures with PFZ in Al-Zn-Mg(-Ag, Cu) Alloys. Materials Science Forum, 2006, 519-521, 431-436.	0.3	26
22	Experimental and Computational Investigation of Formation of Precipitate Free Zones in an Al–Cu Alloy. Materials Transactions, 2005, 46, 1230-1234.	0.4	21
23	Effects of precipitate microstructures near grain boundaries on strength and ductility in Al-Zn-Mg (-Ag) alloys. Keikinzoku/Journal of Japan Institute of Light Metals, 2006, 56, 644-650.	0.1	19
24	Precipitate microstructures, mechanical properties and corrosion resistance of Al-1.0 wt%Cu-2.5 wt%Li alloys with different micro-alloyed elements addition. Materials Characterization, 2020, 167, 110528.	1.9	18
25	Comparative and complementary characterization of precipitate microstructures in Alâ€“Mgâ€“Si(â€“Li) alloys by transmission electron microscopy, energy dispersive X-ray spectroscopy and atom probe tomography. Journal of Alloys and Compounds, 2015, 622, 765-770.	2.8	17
26	Microstructure evolution and mechanical properties of Al-Cu-Li alloys with different rolling schedules and subsequent artificial ageing heat treatment. Materials Characterization, 2020, 170, 110676.	1.9	17
27	Monte Carlo computer simulation of the atomistic behaviour of microalloying elements in Al-Li alloys. Modelling and Simulation in Materials Science and Engineering, 2001, 9, 129-141.	0.8	14
28	Nano-Scale Clusters Formed in the Early Stage of Phase Decomposition of Al-Mg-Si Alloys. Materials Science Forum, 2005, 475-479, 357-360.	0.3	13
29	Effects of Ag addition on age-hardening and nano-scale precipitate microstructures of an Al-3%Mg-1%Cu alloy. Keikinzoku/Journal of Japan Institute of Light Metals, 2006, 56, 673-679.	0.1	12
30	Experimental and Computational Studies of Competitive Precipitation Behavior Observed in an Al-Mg-Si Alloy with High Dislocation Density and Ultrafine-Grained Microstructures. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2011, 75, 283-290.	0.2	12
31	Mechanical properties and microstructure of 6061 aluminum alloy severely deformed by ARB process and subsequently aged at low temperatures. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012088.	0.3	12
32	First-principles calculation of elastic properties of Cu-Zn intermetallic compounds for improving the stiffness of aluminum alloys. Computational Materials Science, 2020, 174, 109479.	1.4	11
33	Aging behavior and microstructure of aged excess Mg type Al^|^#8211;Mg^|^#8211;Si alloys after HPT processing. Keikinzoku/Journal of Japan Institute of Light Metals, 2013, 63, 406-412.	0.1	8
34	3DAP nano-scale analysis of solute clusters formed in a naturally aged Al-Zn alloy. Keikinzoku/Journal of Japan Institute of Light Metals, 2006, 56, 662-666.	0.1	7
35	Simultaneous strengthning due to grain refinement and fine precipitation. Keikinzoku/Journal of Japan Institute of Light Metals, 2012, 62, 398-405.	0.1	7
36	Experimental and Computational Studies of Competitive Precipitation Behavior Observed in Microstructures with High Dislocation Density and Ultra-Fine Grains. Materials Science Forum, 0, 706-709, 1787-1792.	0.3	6

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37	Thermodynamic Assessment and Determination of Spinodal Lines for Al-Zn Binary System. Materials Science Forum, 0, 794-796, 634-639.	0.3	6
38	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
39	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
40	Atomic-scale analysis of phase decomposition behavior of alloys by Monte Carlo computer simulation. Keikinzoku/Journal of Japan Institute of Light Metals, 2004, 54, 121-127.	0.1	5
41	Computer simulation of the effects of trace-additional Cu and Mg elements on the .DELTA.' phase precipitation in an Al-Li alloy.. Keikinzoku/Journal of Japan Institute of Light Metals, 1999, 49, 51-56.	0.1	4
42	3DAP Analysis and Computer Simulation of Nanocluster Formation in the Initial Aging Stage of Al-Zn Alloys. Materials Science Forum, 2006, 519-521, 437-442.	0.3	4
43	Three Strategies to Achieve Concurrent Strengthening by Ultrafine-Grained and Precipitation Hardenings for Severely Deformed Age-Hardnable Aluminum Alloys. Advanced Materials Research, 0, 1135, 161-166.	0.3	4
44	Aging Behavior of Al-Mg-Si Alloys Processed by High-Pressure Torsion. Materials Science Forum, 2010, 667-669, 259-264.	0.3	3
45	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
46	Effects of Cu or Li Addition and Multi-Step Aging Conditions on the Bake-Hardenability of an Al-Mg-Si Alloy. Materials Science Forum, 0, 794-796, 1152-1156.	0.3	3
47	Development of thermally stable powder metallurgy Alâ€“Mn alloy extrusions and prediction of their terminal strength after prolonged service periods at high temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 793, 139813.	2.6	3
48	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
49	Development of High-Strength Bolt Material of Alâ€“Mgâ€“Si Alloy by ECAP and Various Aging Treatments. Materials Transactions, 2019, 60, 1680-1687.	0.4	3
50	Aging Behavior of Al-Li-Cu-Mg Alloy Processed by High-Pressure Torsion. Materials Science Forum, 2010, 654-656, 1243-1246.	0.3	1
51	Effects of microalloying tin and combined addition of silver and tin on the formation of precipitate free zones and mechanical properties in Alâ€“Znâ€“Mg alloys. Keikinzoku/Journal of Japan Institute of Light Metals, 2011, 61, 316-321.	0.1	1
52	Nano-scale microstructural analysis of aluminum alloys by three-dimensional atom probe. Keikinzoku/Journal of Japan Institute of Light Metals, 2014, 64, 542-550.	0.1	1
53	Three Strategies to Achieve Concurrent Strengthening by Ultrafine-grained and Precipitation Hardenings for Severely Deformed Age-hardenable Aluminum Alloys. Materia Japan, 2016, 55, 45-52.	0.1	1
54	Considerable improvement in elastic moduli and the underlying mechanism of Al-Cu-Zn alloy subjected to aging treatments. Materialia, 2020, 14, 100911.	1.3	1

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55	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
56	Development of Age-Hardening Technology for Ultrafine-Grained Al-Li-Cu Alloys Fabricated by High-Pressure Torsion. , 2012, , 939-944.		1
57	Influence of HPT or Rolling on Age-Hardening in Al-Mg-Si Alloys. Advanced Materials Research, 0, 409, 603-606.	0.3	0
58	TEM Observation of HPT-Processed Cu-Added Excess Mg-Type Al-Mg-Si Alloys. Materials Science Forum, 0, 794-796, 811-814.	0.3	0
59	Effect of HPT on Age-Hardening Behavior in Cu-Added Excess Mg-Type Al-Mg-Si Alloys. Advanced Materials Research, 0, 922, 487-490.	0.3	0
60	Simultaneous Enhancement of Tensile Strength and Ductility in Commercial-Purity Aluminum (A1050) by Accumulative Roll Bonding (ARB). SSRN Electronic Journal, 0, , .	0.4	0
61	Microstructural Change and Mechanical Properties with Isochronal Aging in Al-Ni-Gd Metallic Glasses. , 0, , 1235-1240.		0