Satoshi Semboshi

List of Publications by Year
in descending order

115 papers	1,692 citations	304368 22 h-index	377514 34 g-index
117 all docs	117 docs citations	117 times ranked	1183 citing authors

#	Article	IF	Citations
1	Enhanced photocatalytic activity of rutile TiO2 prepared by anodic oxidation in a high concentration sulfuric acid electrolyte. Applied Catalysis B: Environmental, 2009, 90, 255-261.	10.8	78
2	Visible light responses of sulfur-doped rutile titanium dioxide photocatalysts fabricated by anodic oxidation. Applied Catalysis B: Environmental, 2009, 91, 152-156.	10.8	76
3	Mechanical properties and microstructures of Î² Tiâ€“25Nbâ€“11Sn ternary alloy for biomedical applications. Materials Science and Engineering C, 2013, 33, 1629-1635.	3.8	58
4	Degradation of hydrogen absorbing capacity in cyclically hydrogenated TiMn2. Acta Materialia, 2001, 49, 927-935.	3.8	55
5	Microstructure and mechanical properties of Cuâ€“3at.% Ti alloy aged in a hydrogen atmosphere. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 105-113.	2.6	54
6	Discontinuous precipitates in age-hardening CuNiSi alloys. Materials Characterization, 2016, 115, 39-45.	1.9	54
7	Effect of aging in hydrogen atmosphere on electrical conductivity of Cuâ€“3at.%Ti alloy. Journal of Materials Research, 2008, 23, 473-477.	1.2	48
8	Fabrication of high-strength and high-conductivity Cuâ€“Ti alloy wire by aging in a hydrogen atmosphere. Journal of Alloys and Compounds, 2013, 580, S397-S400.	2.8	47
9	Extraction of precipitates from age-hardenable Cuâ€“Ti alloys. Materials Characterization, 2013, 82, 23-31.	1.9	42
10	Microstructure and superhydrophilicity of anodic TiO2 films on pure titanium. Thin Solid Films, 2008, 516, 7488-7496.	0.8	38
11	Microstructural evolution of Cu-1at% Ti alloy aged in a hydrogen atmosphere and its relation with the electrical conductivity. Ultramicroscopy, 2009, 109, 593-598.	0.8	36
12	Effect of composition on hydrogen absorbing properties in binary TiMn2 based alloys. Journal of Alloys and Compounds, 2003, 352, 210-217.	2.8	34
13	Alloy design and fabrication of ingots in Cu-Zn-Mn-Ni-Sn high-entropy and Cu-Zn-Mn-Ni medium-entropy brasses. Materials and Design, 2019, 181, 107900.	3.3	34
14	Effects of Aging Temperature on Electrical Conductivity and Hardness of Cu-3 at. pct Ti Alloy Aged in a Hydrogen Atmosphere. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2136-2143.	1.1	31
15	Aging behavior of Cuâ€“Tiâ€“Al alloy observed by transmission electron microscopy. Journal of Materials Science, 2008, 43, 3761-3768.	1.7	30
16	Photo-induced properties of anodic oxide films on Ti6Al4V. Thin Solid Films, 2012, 520, 4956-4964.	0.8	30
17	Thin hydroxyapatite coating on titanium fabricated by chemical coating process using calcium phosphate slurry. Surface and Coatings Technology, 2012, 206, 2616-2621.	2.2	29
18	Investigation of Precipitation Behavior in Age-Hardenable Cu-Ti Alloys by an Extraction-Based Approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3401-3411.	1.1	29

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19	Grain Boundary Character Dependence on Nucleation of Discontinuous Precipitates in Cu-Ti Alloys. Materials, 2017, 10, 415.	1.3	27
20	Visible light response of nitrogen and sulfur co-doped TiO2 photocatalysts fabricated by anodic oxidation. Catalysis Today, 2011, 164, 399-403.	2.2	26
21	Kinetics and Equilibrium of Age-Induced Precipitation in Cu-4 At. Pct Ti Binary Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 1501-1511.	1.1	26
22	Effect of Boron Doping on Cellular Discontinuous Precipitation for Age-Hardenable Cuâ€"Ti Alloys. Materials, 2015, 8, 3467-3478.	1.3	25
23	Effect of Composition on the Strength and Electrical Conductivity of Cu-Ti Binary Alloy Wires Fabricated by Aging and Intense Drawing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1389-1396.	1.1	24
24	Calcium-hydroxide slurry processing for bioactive calcium-titanate coating on titanium. Surface and Coatings Technology, 2008, 202, 5110-5115.	2.2	23
25	First-principles studies of complex hydride YMn2H6 and its synthesis from metal hydride YMn2H4.5. Applied Physics Letters, 2011, 98, 221908.	1.5	22
26	High Strength and High Electrical Conductivity Cu-Ti Alloy Wires Fabricated by Aging and Severe Drawing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4956-4965.	1.1	22
27	Low Young's modulus of cold groove-rolled Î² Tiâ€"Nbâ€"Sn alloys for orthopedic applications. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 802, 140645.	2.6	22
28	Effect of microstructure on hydrogen pulverization of two phase alloys. Intermetallics, 1998, 6, 61-69.	1.8	21
29	Laminates based on an iron aluminide intermetallic alloy and a CrMo steel. Intermetallics, 2005, 13, 717-726.	1.8	21
30	A new concept of hip joint stem and its fabrication using metastable TiNbSn alloy. Journal of Alloys and Compounds, 2012, 536, S582-S585.	2.8	21
31	In-Situ Transmission Electron Microscopy Observation on the Phase Transformation of Ti-Nb-Sn Shape Memory Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2820-2829.	1.1	20
32	Age-hardening behavior of a single-crystal Cuâ€"ti alloy. Materials Letters, 2014, 131, 90-93.	1.3	20
33	Photo-induced characteristics of a Tiâ€"Nbâ€"Sn biometallic alloy with low Young's modulus. Thin Solid Films, 2010, 519, 276-283.	0.8	19
34	Aging of Copper-Titanium Dilute Alloys in Hydrogen Atmosphere: Influence of Prior-Deformation on Strength and Electrical Conductivity. Materials Transactions, 2011, 52, 2137-2142.	0.4	19
35	Hardening of Alâ€"Cuâ€"Mg alloy by energetic ion irradiation. Journal of Nuclear Materials, 2011, 408, 201-204.	1.3	17
36	Hydrogenation-induced fragmentation in Taâ€"Ni alloy. Journal of Alloys and Compounds, 2003, 359, 236-243.	2.8	15

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37	Surface hardening of age-hardenable Cuâ€"Ti dilute alloys by plasma nitriding. Surface and Coatings Technology, 2014, 258, 691-698.	2.2	15
38	Composition dependence of hydrogen absorbing properties in melt quenched and annealed TiMn2 based alloys. Journal of Alloys and Compounds, 2004, 379, 290-297.	2.8	14
39	Surface hardening of age-hardenable Cuâ€"Ti alloy by plasma carburization. Surface and Coatings Technology, 2015, 283, 262-267.	2.2	14
40	Superhydrophilicity of Rutile TiO2 Prepared by Anodic Oxidation in High Concentration Sulfuric Acid Electrolyte. Chemistry Letters, 2008, 37, 1126-1127.	0.7	13
41	Lattice structure transformation and change in surface hardness of Ni 3 Nb and Ni 3 Ta intermetallic compounds induced by energetic ion beam irradiation. Nuclear Instruments & Methods in Physics Research B, 2016, 372, 72-77.	0.6	13
42	Hydrogen absorption of Nbâ€"Al alloy bulk specimens. Journal of Alloys and Compounds, 1998, 281, 268-274.	2.8	12
43	Multiple cracking of tantalum by hydrogenation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 685-690.	1.1	12
44	Structural and Hydrogen Desorption Properties of Aluminum Hydride. Materials Transactions, 2011, 52, 598-601.	0.4	12
45	Hardness modification of aluminum-alloys by means of energetic ion irradiation and subsequent thermal aging. Nuclear Instruments & Methods in Physics Research B, 2012, 272, 49-52.	0.6	12
46	Effect of structural changes on degradation of hydrogen absorbing capacity in cyclically hydrogenated TiMn2 based alloys. Journal of Alloys and Compounds, 2004, 376, 232-240.	2.8	11
47	Structural and dielectric properties of anodic oxide film on Nbâ€"Ti alloy. Thin Solid Films, 2008, 516, 8613-8619.	0.8	11
48	Fabrication of composite coating comprising bioactive calcium and sodium titanates on titanium using calcium hydroxide slurry containing sodium ions. Surface and Coatings Technology, 2011, 205, 3785-3790.	2.2	11
49	Energetic ion beam induced crystal phase transformation and resulting hardness change in Ni3Al intermetallic compound. Nuclear Instruments & Methods in Physics Research B, 2015, 354, 287-291.	0.6	11
50	Structure of thermal-aging induced Fe clusters and their effects on physical properties for Cu-1.2Âat.% Fe alloy. Journal of Alloys and Compounds, 2016, 682, 805-814.	2.8	11
51	Synthesis of Au nanorods via autocatalytic growth of Au seeds formed by sonochemical reduction of Au(I): Relation between formation rate and characteristic of Au nanorods. Ultrasonics Sonochemistry, 2020, 69, 105229.	3.8	11
52	Effects of energetic heavy ion irradiation on hardness of Alâ€"Mgâ€"Si alloys. Nuclear Instruments & Methods in Physics Research B, 2013, 314, 107-111.	0.6	10
53	Effect of high temperature annealing on non-thermal equilibrium phases induced by energetic ion irradiation in FeRh and Ni3V intermetallic compounds. Japanese Journal of Applied Physics, 2014, 53, 05FC08.	0.8	10
54	Precipitation Behavior and Properties of Cu-Ti Alloys with Added Nitrogen. Materials Transactions, 2015, 56, 297-302.	0.4	10

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55	Fine Precipitation in the Channel Region of Two-Phase Ni3Al and Ni3V Intermetallic Alloys Containing Mo and W. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 998-1008.	1.1	10
56	Suppression of Discontinuous Precipitation in Cu-Ti Alloys by Aging in a Hydrogen Atmosphere. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 3704-3712.	1.1	10
57	Photoactivity of an anodized biocompatible TiNbSn alloy prepared in sodium tartrate/hydrogen peroxide aqueous solution. Applied Surface Science, 2021, 543, 148829.	3.1	10
58	Hardening induced by energetic electron beam for Cuâ€“Ti alloys. Japanese Journal of Applied Physics, 2014, 53, 05FC04.	0.8	9
59	Microstructure evolution and hardness change in ordered Ni 3 V intermetallic alloy by energetic ion irradiation. Nuclear Instruments & Methods in Physics Research B, 2014, 338, 72-76.	0.6	9
60	Electroforming of oxide-nanoparticle-reinforced copper-matrix composite. Journal of Materials Research, 2015, 30, 521-527.	1.2	9
61	Control of optical absorption of silica glass by Ag ion implantation and subsequent heavy ion irradiation. Nanotechnology, 2020, 31, 455706.	1.3	9
62	Effects of Second Phases on the Pulverization of Nb₃Al-Base Alloys by Hydrogenation. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 1997, 61, 1132-1138.	0.2	9
63	Effect of Prior Cold Working before Aging on the Precipitation Behavior in a Cu-3.5 wt% Ti Alloy. Journal of Korean Institute of Metals and Materials, 2019, 57, 10-17.	0.4	9
64	Fracture behavior of niobium by hydrogenation and its application for fine powder fabrication. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1301-1309.	1.1	8
65	Aging of Cu-3 at% Ti Alloys in Hydrogen Atmosphere: Influence of Hydrogen Pressure on Strength and Electrical Conductivity. Materials Transactions, 2011, 52, 605-609.	0.4	8
66	Formation of Titanium Hydride in Dilute Cu–Ti Alloy by Aging in Hydrogen Atmosphere and Its Effects on Electrical and Mechanical Properties. Materials Transactions, 2013, 54, 520-527.	0.4	8
67	Ion Species/Energy Dependence of Irradiation-Induced Lattice Structure Transformation and Surface Hardness of Ni₃Nb and Ni₃Ta Intermetallic Compounds. Materials Transactions, 2017, 58, 739-748.	0.4	8
68	Solid-state bonding of alloy-designed Cuâ€“Zn brass and steel associated with phase transformation by spark plasma sintering. Journal of Materials Science, 2013, 48, 5801-5809.	1.7	7
69	Microstructural stability and age-hardening behavior of Re-added dual two-phase Ni3Al and Ni3V intermetallic alloys. Philosophical Magazine, 2015, 95, 3859-3875.	0.7	7
70	Thermal conductivity of Ni3Vâ€“Ni3Al pseudo-binary alloys. Intermetallics, 2015, 59, 1-7.	1.8	7
71	Microstructural Subsequence and Phase Equilibria in an Age-Hardenable Cu-Ni-Si Alloy. Materials Transactions, 2018, 59, 182-187.	0.4	7
72	Transmission Electron Microscopy Observations on Cu-Mg Alloy Systems. Solid State Phenomena, 2007, 127, 103-108.	0.3	6

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73	Cyclic Hydrogenation and Dehydrogenation Property of LiNH₂ Impregnated into Ni Foam. Materials Transactions, 2011, 52, 623-626.	0.4	6
74	Experimental studies of complex hydride YMn2H6 on formation kinetics and x-ray absorption fine structure analyses. Applied Physics Letters, 2012, 100, .	1.5	6
75	Modification of surface hardness for dual two-phase Ni3Alâ€“Ni3V intermetallic compound by using energetic ion beam and subsequent thermal treatment. Nuclear Instruments & Methods in Physics Research B, 2015, 345, 22-26.	0.6	6
76	Thermal conductivity of Ni3(Si,Ti) single-phase alloys. Intermetallics, 2018, 92, 119-125.	1.8	6
77	Effect of transition metal addition on microstructure and hardening behavior of two-phase Ni3Al-Ni3V intermetallic alloys. Materialia, 2019, 5, 100173.	1.3	6
78	Age-Induced Precipitating and Strengthening Behaviors in a Cuâ€“Niâ€“Al Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 4934-4945.	1.1	6
79	Transmission Electron Microscopy Observations on Cu-Ti Alloy Systems. Materials Science Forum, 2005, 502, 163-168.	0.3	5
80	Effect of pressure application on microstructure evolution in a composite of Feâ€“Al alloy and CrMo steel. Journal of Alloys and Compounds, 2006, 413, 281-288.	2.8	5
81	Effect of Prior Cold-Working on Strength and Electrical Conductivity of Cu-Ti Dilute Alloy Aged in a Hydrogen Atmosphere. Materials Science Forum, 0, 654-656, 1315-1318.	0.3	5
82	Hardness modification of Alâ€“Mgâ€“Si alloy by using energetic ion beam irradiation. Nuclear Instruments & Methods in Physics Research B, 2015, 351, 1-5.	0.6	5
83	Microstructures and hardness properties of laser clad Ni base two-phase intermetallic alloy coating. Journal of Materials Research, 2017, 32, 4531-4540.	1.2	5
84	Accelerating heterogeneous nucleation to increase hardness and electrical conductivity by deformation prior to ageing for Cu-4 at.% Ti alloy. Philosophical Magazine Letters, 2019, 99, 275-283.	0.5	5
85	Strong flux pinning by columnar defects with directionally dependent morphologies in GdBCO-coated conductors irradiated with 80 MeV Xe ions. Japanese Journal of Applied Physics, 2020, 59, 023001.	0.8	5
86	Isothermal Aging Behaviors of Copperâ€“Titaniumâ€“Magnesium Supersaturated Solid-Solution Alloys. Materials Transactions, 2020, 61, 1912-1921.	0.4	5
87	Effect of magnesium doping on discontinuous precipitation in age-hardenable copperâ€“titanium alloys. Materials Characterization, 2022, 189, 111911.	1.9	5
88	Hydrogen pulverization of refractory metals, alloys and intermetallics. Metals and Materials International, 2004, 10, 45-53.	1.8	4
89	Modification of microstructure and hardness for Cuâ€“Ti alloy by means of energetic ion beam irradiation. Nuclear Instruments & Methods in Physics Research B, 2014, 341, 53-57.	0.6	4
90	Thermal stability of energetic ion irradiation induced amorphization for Ni₃Nb and Ni₃Ta intermetallic compounds. Transactions of the Materials Research Society of Japan, 2017, 42, 41-45.	0.2	4

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91	Age-Induced Precipitation and Hardening Behavior of Ni3Al Intermetallic Alloys Containing Vanadium. Metals, 2019, 9, 160.	1.0	4
92	Effects of Tungsten Addition and Isothermal Annealing on Microstructural Evolution and Hardening Behavior of Two-Phase Ni₃Al-Ni₃V Intermetallic Alloys. Materials Transactions, 2018, 59, 204-213.	0.4	4
93	Three-Dimensional Imaging of Dislocations in a Tiâ€“35mass%Nb Alloy by Electron Tomography. Materials, 2015, 8, 1924-1933.	1.3	3
94	Effect of elastic collisions and electronic excitation on lattice structure of NiTi bulk intermetallic compound irradiated with energetic ions. Nuclear Instruments & Methods in Physics Research B, 2018, 427, 14-19.	0.6	3
95	Microstructures and tensile properties of off-stoichiometric Ni3Alâ€“Ni3V pseudo-binary alloys. Journal of Materials Research, 2019, 34, 3061-3070.	1.2	3
96	Effects of Iron Addition on the Microstructures and Mechanical Properties of Two-Phase Ni3Al-Ni3V Intermetallic Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2469-2479.	1.1	3
97	Microstructure, Morphology and Magnetic Property of (001)-Textured MnAlGe Films on Si/SiO₂ Substrate. Materials Transactions, 2021, 62, 680-687.	0.4	3
98	Fabrication of the Casting Products in Cuâ€“Znâ€“Mnâ€“Ni Medium-Entropy Brasses. Materials Transactions, 2021, 62, 856-863.	0.4	3
99	Anomalous hardening behavior accompanied by reordering of plastically deformed Ni3(Si,Ti) intermetallic alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 610, 228-236.	2.6	2
100	Effect of Dislocations on Spinodal Decomposition, Precipitation, and Age-hardening of Cuâ€“Ti Alloy. High Temperature Materials and Processes, 2015, 34, .	0.6	2
101	Processing parameter, microstructure and hardness of Ni base intermetallic alloy coating fabricated by laser cladding. MRS Advances, 2017, 2, 1381-1386.	0.5	2
102	Radiation enhanced precipitation of solute atoms in AlCu binary alloys. Transactions of the Materials Research Society of Japan, 2017, 42, 9-14.	0.2	2
103	Morphology of Columnar Defects Dependent on Irradiation Direction in High-<i>T</i> _c Superconductors. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-4.	1.1	2
104	Phase diagram of the Cuâ€“Ni3Al pseudo-binary system. Journal of Alloys and Compounds, 2022, 921, 166124.	2.8	2
105	Microstructural Observation of Ordered Î²-Ta2H in Hydrogenated Tantalum. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 956-963.	1.1	1
106	Dielectric properties of anodic oxide film on Nb solid solution/Nb2N two phase alloys. Thin Solid Films, 2010, 519, 719-724.	0.8	1
107	Synthesis and Structural Investigation of Metal Hydride, Y(Mn_{1-<i>x</i>}Fe_{<i>x</i>})₂H<sub>< (<i>x</i> â‰ 0.3, 4.0 â‰ <i>y</i> â‰ 4.5) and Complex Hydride, Y(Mn_{1-<i>x</i>}Fe_{<i>x</i>})₂H<sub>6&l Key Engineering Materials, 0, 508, 310-314.	0.4	1
108	Formation of Titanium Hydride in Dilute Cu-Ti Alloy by Aging in Hydrogen Atmosphere and Its Effects on Electrical and Mechanical Properties. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2012, 76, 496-503.	0.2	1

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109	Microstructure and Properties of Laser Clad Ni-Base Intermetallic Alloys Reinforced with Carbide Particles. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2018, 82, 451-460.	0.2	1
110	Superplastic Deformation Mechanisms of Monolithic Intermetallics. Materials Science Forum, 1999, 304-306, 147-154.	0.3	0
111	Hydrogen Pulverization in Intermetallic-based Alloys. Materials Research Society Symposia Proceedings, 2000, 646, 312.	0.1	0
112	Fracture Behaviors of Niobium Alloys by Hydrogenation and its Application for Fine Powder Fabrication. Materials Science Forum, 2007, 539-543, 2719-2724.	0.3	0
113	Anomalous hardening and microstructural evolution accompanied by reordering and restoring of plastically deformed Co3Ti. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 620, 411-419.	2.6	0
114	Unidirectional Crystal Orientation of Dual-Phase Ni3Al-Based Alloy via Laser Irradiation. Metals, 2020, 10, 1011.	1.0	0
115	Production of Tantalum Powder by Hydrogenation Process. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2004, 12, 124-130.	0.0	0