Eiji Abe

List of Publications by Year in descending order

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134	6,386	36	78
papers	citations	h-index	g-index
136	136 docs citations	136	4068
all docs		times ranked	citing authors

#	Article	IF	CITATIONS
1	Long-period ordered structure in a high-strength nanocrystalline Mg-1 at% Zn-2 at% Y alloy studied by atomic-resolution Z-contrast STEM. Acta Materialia, 2002, 50, 3845-3857.	7.9	650
2	A stable binary quasicrystal. Nature, 2000, 408, 537-538.	27.8	481
3	The structure of long period stacking/order Mg–Zn–RE phases with extended non-stoichiometry ranges. Acta Materialia, 2012, 60, 166-178.	7.9	374
4	Direct imaging of hydrogen-atom columns in a crystal by annular bright-field electron microscopy. Nature Materials, 2011, 10, 278-281.	27.5	313
5	Transmission electron microscopy study of the evolution of precipitates in aged Al–Li–Cu alloys: the θ′ and T1 phases. Acta Materialia, 2003, 51, 4251-4266.	7.9	222
6	Polytypes of long-period stacking structures synchronized with chemical order in a dilute Mg–Zn–Y alloy. Philosophical Magazine Letters, 2011, 91, 690-696.	1.2	220
7	Influence of bone mineral density on pedicle screw fixation. Spine Journal, 2001, 1, 402-407.	1.3	201
8	Stability of Transpedicle Screwing for the Osteoporotic Spine. Spine, 1993, 18, 2240-2245.	2.0	197
9	Outcome of One-Level Posterior Lumbar Interbody Fusion for Spondylolisthesis and Postoperative Intervertebral Disc Degeneration Adjacent to the Fusion. Spine, 2000, 25, 1837-1842.	2.0	167
10	Experimental verification of the quasi-unit-cell model of quasicrystal structure. Nature, 1998, 396, 55-57.	27.8	160
11	Stable icosahedral quasicrystals in binary Cd-Ca and Cd-Yb systems. Physical Review B, 2000, 62, R14605-R14608.	3.2	153
12	Direct observation of a local thermal vibration anomaly in a quasicrystal. Nature, 2003, 421, 347-350.	27.8	134
13	Quasicrystals as cluster aggregates. Nature Materials, 2004, 3, 759-767.	27.5	131
14	Highly ordered 10H-type long-period stacking order phase in a Mg–Zn–Y ternary alloy. Scripta Materialia, 2014, 78-79, 13-16.	5 . 2	129
15	Transmission electron microscopy study of the early stage of precipitates in aged Al–Li–Cu alloys. Acta Materialia, 2003, 51, 2891-2903.	7.9	124
16	Microstructure of Co–Al–O granular thin films. Journal of Applied Physics, 1997, 82, 5646-5652.	2.5	120
17	Posterior lumbar interbody fusion: A retrospective study of complications after facet joint excision and pedicle screw fixation in 148 cases. Acta Orthopaedica, 1999, 70, 329-334.	1.4	114
18	Can Insertional Torque Predict Screw Loosening and Related Failures?. Spine, 2000, 25, 858-864.	2.0	112

#	Article	IF	CITATIONS
19	Quasi-Unit-Cell Model for an Al-Ni-Co Ideal Quasicrystal based on Clusters with Broken Tenfold Symmetry. Physical Review Letters, 2000, 84, 4609-4612.	7.8	107
20	Superconductivity of Ternary Silicide with the AlB2-Type Structure Sr (Ga0.37, Si0.63)2. Physical Review Letters, 2001, 87, 077003.	7.8	93
21	Outcome of Anterior Decompression and Stabilization for Thoracolumbar Unstable Burst Fractures in the Absence of Neurologic Deficits. Spine, 1996, 21, 620-625.	2.0	84
22	Microstructure Evolutions of Rapidly-Solidified and Conventionally-Cast Mg ₉₇ Zn ₁ Y ₂ Alloys. Materials Transactions, 2008, 49, 990-994.	1.2	71
23	Surface Strain Distribution on Thoracic and Lumbar Vertebrae Under Axial Compression. Spine, 1999, 24, 1197-1202.	2.0	68
24	Micro-Kinking of the Long-Period Stacking/Order (LPSO) Phase in a Hot-Extruded Mg ₉₇ Zn ₁ Y ₂ Alloy. Materials Transactions, 2013, 54, 698-702.	1.2	65
25	Giant Cauda Equina Schwannoma. Spine, 2000, 25, 268.	2.0	61
26	Spinal subdural hematoma. Skeletal Radiology, 1996, 25, 477-480.	2.0	59
27	Stable Icosahedral Quasicrystals in the Cd-Mg-RE (RE = Rare Earth Element) Systems. Japanese Journal of Applied Physics, 2000, 39, L770-L771.	1.5	58
28	Quasicrystal-Crystal Transformation in Zn-Mg–Rare-Earth Alloys. Physical Review Letters, 1999, 83, 753-756.	7.8	56
29	Anterior Decompression of Foraminal Stenosis Below a Lumbosacral Transitional Vertebra. Spine, 1997, 22, 823-826.	2.0	53
30	Hexagonal superstructures in the Zn–Mg–rare-earth alloys. Journal of Alloys and Compounds, 1999, 283, 169-172.	5.5	53
31	Anterior Decompression With Single Segmental Spinal Interbody Fusion for Lumbar Burst Fracture. Spine, 1999, 24, 67-73.	2.0	53
32	Fusion of Multiple Segments Can Increase the Incidence of Sacroiliac Joint Pain After Lumbar or Lumbosacral Fusion. Spine, 2016, 41, 999-1005.	2.0	52
33	Composition and stability of decagonal quasicrystals in the Zn-Mg-rare-earth systems. Philosophical Magazine Letters, 1998, 77, 213-219.	1.2	47
34	Giant cell tumor of fifth lumbar vertebrae: two case reports and review of the literature. Spine Journal, 2007, 7, 499-505.	1.3	45
35	A hexagonal phase related to quasicrystalline phases in Zn-Mg-rare-earth system. Philosophical Magazine Letters, 1998, 77, 95-104.	1.2	39
36	Structure, expression, and chromosomal localization of the human gene encoding a germinal center-associated nuclear protein (GANP) that associates with MCM3 involved in the initiation of DNA replication. Gene, 2000, 255, 219-227.	2.2	38

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37	New ordered structure of TiAl studied by high-resolution electron microscopy. Intermetallics, 1996, 4, 327-333.	3.9	36
38	Clinical experience of functional electrical stimulation in complete paraplegia. Spinal Cord, 1996, 34, 615-619.	1.9	35
39	Production of single quasicrystals and their electrical resistivity in the Al-Pd-Re system. Philosophical Magazine Letters, 2000, 80, 495-502.	1.2	35
40	Electron microscopy of quasicrystals – where are the atoms?. Chemical Society Reviews, 2012, 41, 6787.	38.1	35
41	A Diagnostic Scoring System for Sacroiliac Joint Pain Originating from the Posterior Ligament. Pain Medicine, 2016, 18, pnw117.	1.9	35
42	A novel long-period stacking/order structure in Mg-Ni-Y alloys. Journal of Alloys and Compounds, 2019, 788, 277-282.	5.5	35
43	The structure of an Al-Pd decagonal quasicrystal studied by high-resolution electron microscopy. Philosophical Magazine Letters, 1994, 70, 163-168.	1.2	34
44	Stable Cd-Mg-Yb and Cd-Mg-Ca icosahedral quasicrystals with wide composition ranges. Philosophical Magazine Letters, 2002, 82, 27-35.	1.2	34
45	In-plane positional correlations among dopants in 10H type long period stacking ordered Mg75Zn10Y15 alloy studied by X-ray fluorescence holography. Materialia, 2018, 3, 256-259.	2.7	34
46	Pseudohypoparathyroidism-Associated Spinal Stenosis. Spine, 1994, 19, 1186-1189.	2.0	33
47	Probing Single Pt Atoms in Complex Intermetallic Al ₁₃ Fe ₄ . Journal of the American Chemical Society, 2018, 140, 3838-3841.	13.7	33
48	Stress Fractures of the Medial Malleolus: A Case Report. Foot and Ankle International, 1995, 16, 49-52.	2.3	31
49	A Novel Decagonal Quasicrystal in Zn-Mg-Dy System. Japanese Journal of Applied Physics, 1997, 36, L1038-L1039.	1.5	30
50	Short-range order clusters in the long-period stacking/order phases with an intrinsic-I type stacking fault in Mg-Co-Y alloys. Scripta Materialia, 2022, 207, 114282.	5.2	30
51	Diagnostic accuracy of fine-needle aspiration cytology of the breast in Japan: Report from the Working Group on the Accuracy of Breast Fine-Needle Aspiration Cytology of the Japanese Society of Clinical Cytology. Oncology Reports, 2012, 28, 1606-1612.	2.6	28
52	Sacropelvic Fixation With S2 Alar Iliac Screws May Prevent Sacroiliac Joint Pain After Multisegment Spinal Fusion. Spine, 2019, 44, E1024-E1030.	2.0	28
53	Studies on the a \hat{a}^{\dagger} \hat{l}^3 phase transformation mechanism in Ti[sbnd]48at.% Al alloy by high-resolution electron microscopy. Philosophical Magazine Letters, 1995, 72, 291-296.	1.2	25
54	Platelet precipitate in an age-hardening Mg-Zn-Gd alloy. Journal of Alloys and Compounds, 2018, 752, 407-411.	5.5	25

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55	Density functional theory study of solute cluster growth processes in Mg-Y-Zn LPSO alloys. Acta Materialia, 2021, 203, 116491.	7.9	25
56	Microstructures and mechanical properties of as-cast Mg-Sm-Zn-Zr alloys with varying Gd contents. Journal of Magnesium and Alloys, 2022, 10, 1220-1234.	11.9	25
57	Structure of a Quasicrystal without Atomic Clusters. Physical Review Letters, 1999, 82, 5269-5272.	7.8	24
58	Spine-Shortening Vertebral Osteotomy for Tethered Cord Syndrome. Spine, 2009, 34, E823-E825.	2.0	24
59	Total Spondylectomy for Solitary Spinal Metastasis of the Thoracolumbar Spine: A Preliminary Report. Tohoku Journal of Experimental Medicine, 2000, 190, 33-49.	1.2	22
60	Production of Single Decagonal Quasicrystal in Al-Co-Cu System. Japanese Journal of Applied Physics, 1999, 38, L1049-L1051.	1.5	21
61	A new stable icosahedral quasicrystal in the Cd-Mg-Dy system. Philosophical Magazine Letters, 2001, 81, 17-21.	1.2	21
62	Periosteal ganglion: a report of three new cases including MRI findings and a review of the literature. Skeletal Radiology, 1996, 25, 153-157.	2.0	20
63	High-resolution electron microscopy of twin interfaces in massively transformed Î ³ -TiAl. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 75, 975-991.	0.6	20
64	Five-dimensional model of the S1-superstructure phase in Alâ^'Niâ^'Coquasicrystals. Physical Review B, 2005, 72, .	3.2	20
65	Electrochemical immobilization of Cs in single-crystalline SYNROC. Journal of Solid State Chemistry, 2006, 179, 1521-1524.	2.9	18
66	Abrupt InGaPâ^•GaAs heterointerface grown by optimized gas-switching sequence in metal organic vapor phase epitaxy. Applied Physics Letters, 2008, 92, 112106.	3.3	17
67	Local cluster symmetry of a highly ordered quasicrystalline Al58Cu26Ir16extracted through multivariate analysis of STEM images. Microscopy (Oxford, England), 2015, 64, 341-349.	1.5	17
68	A long-period superlattice phase in Mg97Zn1Yb2 alloys synthesized under high-pressure. Scripta Materialia, 2016, 121, 45-49.	5.2	17
69	Dilute long period stacking/order (LPSO)-variant phases along the composition gradient in a Mg-Ho-Cu alloy. Journal of Magnesium and Alloys, 2022, 10, 1573-1580.	11.9	17
70	Case report 858. Skeletal Radiology, 1994, 23, 471-4.	2.0	16
71	The structure of a Frank-Kasper decagonal quasicrystal in the Zn-Mg-Dy system: Comparison with the Al-Ni-Co system. Philosophical Magazine Letters, 1998, 77, 205-211.	1.2	16
72	The structure of a new Îμ-phase formed during the early stage of crystallization of Ti–48 at.% Al amorphous film. Acta Materialia, 1999, 47, 3607-3616.	7.9	16

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73	Modeling of Heat Transfer Coefficient of Oxide Scale in Hot Forging. Procedia Engineering, 2014, 81, 492-497.	1.2	16
74	The LPSO Structure with an Extra Order beyond Stacking Periodicity. Materials Transactions, 2020, 61, 833-838.	1.2	16
75	Anterior Decompression and Shortening Reconstruction with a Titanium Mesh Cage through a Posterior Approach Alone for the Treatment of Lumbar Burst Fractures. Asian Spine Journal, 2012, 6, 123.	2.0	16
76	Thoracolumbar Burst Fracture With Horizontal Fracture of the Posterior Column. Spine, 1997, 22, 83-87.	2.0	15
77	Decagonal quasicrystals in the Zn–Mg–R alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 304-306, 867-870.	5.6	15
78	Structure of a metastable Al3Ni decagonal quasicrystal: comparison with a highly perfect Al72Ni2OCo8. Journal of Alloys and Compounds, 2002, 342, 96-100.	5.5	15
79	Atomic-Scale Characterization of Nanostructured Metallic Materials by HAADF/Z-contrast STEM. Materials Transactions, 2003, 44, 2035-2041.	1.2	15
80	A structural model for charoite. Mineralogical Magazine, 2009, 73, 883-890.	1.4	15
81	Microstructure control and high temperature properties of TiAl base alloys. Intermetallics, 1998, 6, 637-641.	3.9	14
82	Zr segregation and associated Al vacancies in alumina grain boundaries. Journal of the Ceramic Society of Japan, 2011, 119, 840-844.	1.1	14
83	Lumbar Intradiscal Pressure after Posterolateral Fusion and Pedicle Screw Fixation Tohoku Journal of Experimental Medicine, 1998, 186, 243-253.	1.2	13
84	Ho arrangement in the Zn6Mg3Ho icosahedral quasicrystal studied by atomic-resolution Z-contrast STEM. Microscopy (Oxford, England), 2001, 50, 187-195.	1.5	13
85	Recovery features of kink boundaries upon post-annealing of a hot-extruded Mg-Zn-Y alloy. Materials Characterization, 2021, 177, 111153.	4.4	13
86	Hydrogenation-induced microstructure changes of pseudo-binary (Pr Mg1â^')Ni2 Laves compounds. Journal of Alloys and Compounds, 2013, 580, S81-S84.	5.5	12
87	Integrated contrast-transfer-function for aberration-corrected phase-contrast STEM. Ultramicroscopy, 2018, 194, 193-198.	1.9	12
88	Grain boundary plasticity in solid solution Mg–Li binary alloy. Materials Science & Direction A: Structural Materials: Properties, Microstructure and Processing, 2020, 790, 139705.	5.6	12
89	Hypertrophic Dens Resulting in Cervical Myelopathy. Spine, 2000, 25, 1303-1307.	2.0	11
90	Orthorhombic τ-Zn–Mg–Dy phase related to a Frank-Kasper type decagonal quasicrystal. Acta Crystallographica Section B: Structural Science, 2000, 56, 915-917.	1.8	9

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91	Quasicrystalline Tenfold Symmetry Order in Boron Compounds. Journal of the Physical Society of Japan, 2010, 79, 073601.	1.6	9
92	The quasiperiodic average structure of highly disordered decagonal Zn–Mg–Dy and its temperature dependence. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2014, 70, 315-330.	1.1	9
93	Title is missing!. Spine, 2003, 28, E125-E128.	2.0	8
94	One-Step Synthesis of a High Performance Pt-Fe3O4 Catalyst: Intermetallic Al13Fe4 as a Platform and Precursor. Catalysis Letters, 2016, 146, 1309-1316.	2.6	8
95	Strengthening of mille-feuille structured high-density polyethylene by heat elongation. Polymer, 2021, 236, 124343.	3.8	7
96	Quantitative X-ray diffraction analysis of solute-enriched stacking faults in hcp-Mg alloys based on peak asymmetry analysis. Materials Today Communications, 2022, 31, 103344.	1.9	7
97	Decagonal structure of Al72Ni2OCo8 studied by atomic-resolution electron microscopy. Journal of Non-Crystalline Solids, 2004, 334-335, 198-201.	3.1	6
98	Defects and their reduction in Ge selective epitaxy and coalescence layer on Si with semicylindrical voids on SiO <formula> <tex>\$_{2}\$</tex> </formula> masks. IEEE Journal of Selected Topics in Quantum Electronics, 2018, , 1-1.	2.9	6
99	Microstructure Evolutions at Severely-deformed Austenite/Martensite Interfaces of a Layer-integrated Steel. ISIJ International, 2009, 49, 1406-1413.	1.4	6
100	Phase Equilibria in the TiAl-rich Portion of Ti-Al-Sb System at 1373 and 1573 K. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 1997, 61, 385-390.	0.4	5
101	Tensile Properties of TiAl Based Alloy in a Gaseous Hydrogen Atmosphere in a Temperature Range from Room Temperature to 973 K. ISIJ International, 2003, 43, 489-495.	1.4	5
102	Direct imaging of icosahedral clusters in a cubic Cd6Ca approximant crystal. Journal of Non-Crystalline Solids, 2004, 334-335, 190-193.	3.1	4
103	Precise structure control of GaAs/InGaP hetero-interfaces using metal organic vapor phase epitaxy and its abruptness analyzed by STEM. Journal of Crystal Growth, 2012, 347, 25-30.	1.5	4
104	Abe and Tsai Reply:. Physical Review Letters, 2000, 84, 3731-3731.	7.8	3
105	Microstructure Evolution at Severely-deformed Ferrite/Martensite Interfaces in a Layer-integrated Steel. ISIJ International, 2010, 50, 272-278.	1.4	3
106	The Atomic Structure Of The Zn-Mg-Rare-Earth Quasicrystals Studied By High-Resolution Electron Microscopy. Materials Research Society Symposia Proceedings, 1998, 553, 123.	0.1	2
107	Microstructure of a High-Strength Nanocrystalline Mg-1at.%Zn-2at.%Y Alloy Studied by Atomic-Resolution Z-Contrast STEM. Materials Science Forum, 2003, 419-422, 727-732.	0.3	2
108	Structure of Quasicrystals. , 2011, , 583-614.		2

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109	Direct observations of local electronic states in an Al-based quasicrystal by STEM-EELS. Microscopy (Oxford, England), 2014, 63, i17.2-i18.	1.5	2
110	HREM and EDS analysis of sintered SiC fibre reinforced MAS glass composites. Journal of Electron Microscopy, 2002, 51, S159-S164.	0.9	1
111	Structural Characteristics and Crystallography of the Synchronized LPSO-Mg Alloys. Materia Japan, 2015, 54, 50-54.	0.1	1
112	Influence of Work Roll Surface Oxide Scale on Interface Thermal Transfer. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2018, 104, 735-741.	0.4	1
113	Work Softening Phenomena in Al–Fe Alloys: The Impurity-Scavenging Effect of the θ-Al ₁₃ Fe ₄ Phase. Materials Transactions, 2021, 62, 532-538.	1.2	1
114	Fascinating LPSO-Structured Mg Alloys. , 2016, , 11-12.		1
115	Local Symmetry and Phason Fluctuations of an Ideal Al-Ni-Co Quasicrystal Studied by Atomic-resolution HAADF-STEM. Microscopy and Microanalysis, 2002, 8, 1218-1219.	0.4	0
116	Direct Observation of Icosahedral Clusters in Quasicrystals and Crystals. Microscopy and Microanalysis, 2002, 8, 1220-1221.	0.4	0
117	HAADF Observation of a High-Strength Mg ₉₇ Zn ₁ Y ₂ Nanocrystalline Alloy. Materia Japan, 2003, 42, 868-868.	0.1	0
118	Stacking Faults and a Novel Structural Polytype in a Hydrogen-Storage (La _{0.8} Mg _{0.2})Ni _{3.5} Alloy with Block-Stacking Superstructures. Materials Transactions, 2009, 50, 943-947.	1.2	0
119	STEM-EDS Observations of Roll-bonded Interfaces in a Layer-integrated Steel. Materia Japan, 2009, 48, 627-627.	0.1	0
120	Synthesis of Nanotube Array Composed of an Amorphous Matrix Embedded with NaClâ€Type SiC Crystallites by Chemical Vapor Infiltration Techniques. Journal of the American Ceramic Society, 2010, 93, 1557-1560.	3.8	0
121	Complex Oxide Layer at a Nickel/Steel Interface Bonded under a Moderate Vacuum Condition. ISIJ International, 2011, 51, 1859-1863.	1.4	0
122	B11-P-07Phase-contrast characteristics of annular bright-field imaging in STEM. Microscopy (Oxford,) Tj ETQq0 0	OfgBT/O	verlock 10 Tf
123	OM-II-1Complex Structure Determinations Through Advanced STEM Combined with CBED. Microscopy (Oxford, England), 2016, 65, i14.1-i14.	1.5	0
124	2pA_SS3-4Microscopic investigations of Kinks formed in dilute Mg Alloys. Microscopy (Oxford,) Tj ETQq0 0 0 rgB	3T <u> Q</u> verloc	:k
125	PM-19Impurity Effects on Mechanical Properties of 1000 Series Aluminum Alloys. Microscopy (Oxford,) Tj ETQq1	1 0,78431	14 rgBT /Over
126	PM-03Intrinsic Rotation-angle Fluctuations of Twinning in HCP Mg Alloys. Microscopy (Oxford,) Tj ETQq0 0 0 rgB	IT Overloc	k 10 Tf 50 62

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127	OS05W0273 AFM observation of evolution of slip deformation by high cycle fatigue in low carbon steels. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, _OS05W0273OS05W0273.	0.0	O
128	OS5(2)-7(OS05W0273) AFM Observation of Evolution of Slip Deformation by High Cycle Fatigue in Low Carbon Steels. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 93.	0.0	0
129	Direct Observation of a Local Thermal Vibration Anomaly by ADF-STEM. Materia Japan, 2004, 43, 983-983.	0.1	O
130	Atomic-Resolution Observations of Nano-Size Precipitates Developed in a Mg-Zia-Ce-Y Alloy. Materia Japan, 2005, 44, 980-980.	0.1	0
131	Reduction of threading dislocations by image force in Ge selective epilayers on Si. , 2018, , .		O
132	Work Softening Phenomena in Al-Fe Alloys: the Impurity-Scavenging Effect of the $\langle i \rangle \hat{I}_{s} / i \rangle -Al \langle sub \rangle 13 < sub \rangle + 4 < sub \rangle $	0.4	0
133	The Future of Crystallography Led by Electron Beams. Nihon Kessho Gakkaishi, 2020, 62, 248-252.	0.0	0
134	Theoretical Calculation and Experimental Verification for Dislocation Reduction in Germanium Epitaxial Layers with Semicylindrical Voids on Silicon. Journal of Visualized Experiments, 2020, , .	0.3	0