Masao Kimura

List of Publications by Year
in descending order

111 papers	1,440 citations	331670 21 h-index	377865 34 g-index
111 all docs	111 docs citations	111 times ranked	893 citing authors

#	Article	IF	Citations
1	Unique atomic structure of metals at the moment of fracture induced by laser shock. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 831, 142199.	5.6	1
2	Nanoscale in situ observation of damage formation in carbon fiber/epoxy composites under mixed-mode loading using synchrotron radiation X-ray computed tomography. Composites Science and Technology, 2022, 230, 109332.	7.8	8
3	<i>In situ</i> Observation of Reduction Behavior of Multicomponent Calcium Ferrites by XRD and XAFS. ISIJ International, 2022, 62, 1159-1167.	1.4	1
4	Determination of the Size Distribution of Nanoparticles Using Asymmetric Flow Field-flow Fractionation (AF4). Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2021, 107, 82-91.	0.4	0
5	Time-Resolved Observation of Phase Transformation in Feâ€“C System during Cooling via X-ray Absorption Spectroscopy. Materials Transactions, 2021, 62, 155-160.	1.2	3
6	<i>In situ</i> Observation of Cracking and Degradation of Structural Materials âˆ¼X-ray Microscopy and Time-resolved Observation Using Synchrotron Radiationâˆ¼. Vacuum and Surface Science, 2021, 64, 206-211.	0.1	0
7	Investigation of the Suppression of Dendritic Lithium Growth with a Lithium-Iodide-Containing Solid Electrolyte. Chemistry of Materials, 2021, 33, 4907-4914.	6.7	30
8	<i>In situ</i> Observation of Reduction Behavior of Multicomponent Calcium Ferrites by XRD and XAFS. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2021, 107, 517-526.	0.4	2
9	Accuracy Improvement of the XRD-Rietveld Method for the Quantification of Crystalline Phases in Iron Sintered Ores Through the Correction of Micro-absorption Effects. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2021, 107, 210-218.	0.4	0
10	Chemical-state Imaging of Materials Using X-ray Microscopes. Vacuum and Surface Science, 2021, 64, 556-561.	0.1	0
11	Development of in situ cell for simultaneous XAFS/XRD measurements at high temperatures. Radiation Physics and Chemistry, 2020, 175, 108153.	2.8	3
12	Determination of Size Distribution of Nanoparticles Using Asymmetric Flow Field-flow Fractionation (AF4). ISIJ International, 2020, 60, 979-987.	1.4	4
13	3D Crystal Orientation Mapping of Recrystallization in Severely Cold-rolled Pure Iron Using Laboratory Diffraction Contrast Tomography. ISIJ International, 2020, 60, 528-533.	1.4	11
14	Nanoscale crack initiation and propagation in carbon fiber/epoxy composites using synchrotron: 3D image data. Data in Brief, 2020, 31, 105894.	1.0	0
15	Observation of Distribution of Ï€-Orbital-Oriented Domains in PAN- and Pitch-Based Carbon Fibers Using Scanning Transmission X-ray Microscopy. Applied Sciences (Switzerland), 2020, 10, 4836.	2.5	1
16	A surface sensitive hard X-ray spectroscopic method applied to observe the surface layer reduction reaction of Co oxide to Co metal. Physical Chemistry Chemical Physics, 2020, 22, 24974-24977.	2.8	3
17	Nanoscale in situ observations of crack initiation and propagation in carbon fiber/epoxy composites using synchrotron radiation X-ray computed tomography. Composites Science and Technology, 2020, 197, 108244.	7.8	29
18	Azimuthal-rotation sample holder for molecular orientation analysis. Journal of Synchrotron Radiation, 2020, 27, 1167-1171.	2.4	2

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19	Accuracy Improvement of the XRD-Rietveld Method for the Quantification of Crystalline Phases in Iron Sintered Ores through the Correction of Micro-absorption Effects. ISIJ International, 2020, 60, 2851-2858.	1.4	7
20	Nano-Scale Observation of Cracks in Materials Using Synchrotron Radiation and X-ray. Journal of the Japan Society for Precision Engineering, 2020, 86, 193-196.	0.1	0
21	In situ TREXS Observation of Surface Reduction Reaction of NiO Film with â^¼2â€‰nm Surface Sensitivity. Chemical Record, 2019, 19, 1457-1461.	5.8	2
22	Finding Degradation Trigger Sites of Structural Materials for Airplanes Using Xâ€Ray Microscopy. Chemical Record, 2019, 19, 1462-1468.	5.8	3
23	Microstructural deformation process of shock-compressed polycrystalline aluminum. Scientific Reports, 2019, 9, 7604.	3.3	27
24	Development of spectromicroscopes for multiscale observation of heterogeneity in materials at photon factory, IMSS, KEK. AIP Conference Proceedings, 2019, , .	0.4	4
25	Free volumes introduced by fractures of CFRP probed using positron annihilation. Composites Part A: Applied Science and Manufacturing, 2019, 122, 54-58.	7.6	10
26	Development of multi-modal surface research equipment by combining TREXS with IRRAS. AIP Conference Proceedings, 2019, , .	0.4	0
27	Sample exchange robot under an oxygen-free atmosphere for DXAFS experiments. AIP Conference Proceedings, 2019, , .	0.4	1
28	Thermodynamic Modeling of the SFCA Phase Ca₂(Fe, Ca)₆(Fe, Al,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 T 105, 493-501.	0.4	2
29	Nanoscopic origin of cracks in carbon fibre-reinforced plastic composites. Scientific Reports, 2019, 9, 19300.	3.3	27
30	Non-empirical identification of trigger sites in heterogeneous processes using persistent homology. Scientific Reports, 2018, 8, 3553.	3.3	40
31	In situ transmission electron microscopy of high-temperature degradation of yttria-stabilized zirconia thermal barrier coatings. Scripta Materialia, 2018, 150, 50-53.	5.2	11
32	In situ XRM Observation of Cracking in CFRP during Nanomechanical Testing. Microscopy and Microanalysis, 2018, 24, 432-433.	0.4	2
33	Thermodynamic Modeling of the SFCA Phase Ca₂(Fe,Ca)₆(Fe,Al,Si)₆O₂₀. ISIJ International, 2018, 58, 259-266.	1.4	25
34	3D Spectromicroscopic Observation of Yb-Silicate Ceramics Using XAFS-CT. Microscopy and Microanalysis, 2018, 24, 484-485.	0.4	6
35	The challenge of constructing an international XAFSÂdatabase. Journal of Synchrotron Radiation, 2018, 25, 967-971.	2.4	17
36	Quantitative Analysis of Mineral Phases in Iron-ore Sinter by the Rietveld Method of X-ray Diffraction Patterns. ISIJ International, 2018, 58, 1069-1078.	1.4	23

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37	A call for a round robin study of XAFS stability and platform dependence at synchrotron beamlines on well defined samples. Journal of Synchrotron Radiation, 2018, 25, 935-943.	2.4	4
38	Persistence diagrams with linear machine learning models. Journal of Applied and Computational Topology, 2018, 1, 421-449.	2.0	61
39	<i>In situ</i> Observation of Reactions at Liquid/Solid Interfaces and Chemical States Mapping Using Synchrotron Radiation. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2018, 69, 16-21.	0.2	0
40	Chemical state mapping of heterogeneous reduction of iron ore sinter. Journal of Physics: Conference Series, 2017, 849, 012015.	0.4	2
41	In Situ XAFS Observation of Chemical Species Near Solid/Liquid Interface in a Model Reaction of Pitting Process. ECS Transactions, 2017, 77, 831-836.	0.5	0
42	Nature of the transformation in liquid iodine at 4 GPa. Physical Review B, 2017, 96, .	3.2	5
43	Recent Investigations of Structural Materials Using Synchrotron Radiation. Synchrotron Radiation News, 2017, 30, 23-28.	0.8	1
44	Observation of Interface between Resin and Carbon Fiber by Scanning Transmission X-ray Microscopy. Journal of Physics: Conference Series, 2017, 849, 012029.	0.4	0
45	Research progress at the Slow Positron Facility in the Institute of Materials Structure Science, KEK. Journal of Physics: Conference Series, 2017, 791, 012003.	0.4	4
46	Quantitative Analysis of Mineral Phases in Sinter Ore by Rietveld Method. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2017, 103, 397-406.	0.4	4
47	Observation of the Interface between Resin and Carbon Fiber by Scanning Transmission X-ray Microscopy. Journal of Physics: Conference Series, 2017, 849, 012023.	0.4	5
48	Newly designed double surface bimorph mirror for BL-15A of the photon factory. AIP Conference Proceedings, 2016, , .	0.4	6
49	<i>In situ</i>observation of reduction kinetics and 2D mapping of chemical state for heterogeneous reduction in iron-ore sinters. Journal of Physics: Conference Series, 2016, 712, 012077.	0.4	6
50	Time-resolved observation of structural change of copper induced by laser shock using synchrotron radiation with dispersive XAFS. High Pressure Research, 2016, 36, 471-478.	1.2	11
51	X-ray analyzer-based phase-contrast computed laminography. Journal of Synchrotron Radiation, 2016, 23, 1484-1489.	2.4	2
52	Observation of Reactions using X-ray Absorption Spectroscopy (XAS). Journal of the Vacuum Society of Japan, 2016, 59, 327-332.	0.3	0
53	Gritty Surface Sample Holder Invented To Obtain Correct X-ray Absorption Fine Structure Spectra for Concentrated Materials by Fluorescence Yield. Analytical Chemistry, 2016, 88, 3455-3458.	6.5	2
54	New Era of Materials Structure Science by Multi-probe Experiments. Nihon Kessho Gakkaishi, 2015, 57, 1-1.	0.0	0

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55	Synchrotron Radiation Shed Light to <i>In Situ </i>and Dynamic Observation of High-Temperature Processes. E-Journal of Surface Science and Nanotechnology, 2014, 12, 165-170.	0.4	0
56	^|^quot;Continuous Cooling Transformation (CCT)^|^quot; Concept for Iron Ore Sintering Using in situ Quick X-ray Diffraction and Confocal Laser Microscope. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2014, 100, 170-179.	0.4	0
57	Development of in situ and dynamic observation of changes in mineralogical structures and their application to steel-relating materials and steel making processes. Ganseki Kobutsu Kagaku, 2014, 43, 30-36.	0.1	0
58	<i>In situ</i>QXAFS observation of the reduction of Fe₂O₃and CaFe₂O₄. Journal of Physics: Conference Series, 2013, 430, 012074.	0.4	11
59	<i>In Situ</i> and Simultaneous Observation of Palladium Redox and Oxygen Storage/Release in Pd/Sr–Fe–O Perovskite Catalysts Using Dispersive XAFS. Materials Transactions, 2013, 54, 246-254.	1.2	18
60	â€œContinuous Cooling Transformation (CCT)â€•Concept for Iron Ore Sintering Using In Situ Quick X-ray Diffraction and Confocal Laser Microscope. ISIJ International, 2013, 53, 2047-2055.	1.4	19
61	Formation and oxidation mechanisms of Pdâ€"Zn nanoparticles on a ZnO supported Pd catalyst studied by in situ time-resolved QXAFS and DXAFS. Physical Chemistry Chemical Physics, 2012, 14, 2152-2158.	2.8	23
62	Advancements of Weathering Steel Technologies in Japan. Corrosion, 2011, 67, 095002-095002-13.	1.1	18
63	Effects of titanium carbide (TiC) and anodizing voltages on discoloration resistance of colored-titanium sheets. Corrosion Science, 2010, 52, 1889-1896.	6.6	8
64	State of Chlorides in Rusts Formed on 3 mass% Ni-added Weathering Steel. ECS Transactions, 2009, 16, 63-69.	0.5	6
65	<i>In situ</i>observation of RedOx reactions of Pd/Sr-Fe-O catalysts for automotive emission. Journal of Physics: Conference Series, 2009, 190, 012163.	0.4	11
66	æ”¾å°„å…‰ã«ã‚ˆã‚‹é‰„é‹¼ææ–™ã®è¡¨é¢/ç•Œé¢ã®ç ”ç©¶. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2009, 6	0.2	0
67	Various Scale Analyses to Create Functioning Corrosion Products. , 2006, , 245-272.		10
68	Atomic-Structure Characterization of Passive Film of Fe by Grazing Incidence X-ray Scattering at SPring-8. , 2006, , 95-100.		9
69	Quantitative characterization of the atomic-scale structure of oxyhydroxides in rusts formed on steel surfaces. Materials Characterization, 2005, 55, 288-297.	4.4	3
70	Magnetic property based characterization of rust on weathering steels. Corrosion Science, 2005, 47, 2477-2491.	6.6	37
71	Control of Fe(O,OH)6 nano-network structures of rust for high atmospheric-corrosion resistance. Corrosion Science, 2005, 47, 2499-2509.	6.6	124
72	Structural characterization of group III nitrides grown by pulsed laser deposition. Thin Solid Films, 2004, 457, 114-117.	1.8	3

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73	Fe(O,OH)6 network structure of rust formed on weathering steel. Surface and Interface Analysis, 2003, 35, 66-71.	1.8	11
74	Structural properties of GaN grown on LiGaO2 by PLD. Journal of Crystal Growth, 2003, 259, 36-39.	1.5	13
75	Generalized grazing-incidence-angle x-ray scattering analysis of quantum dots. Journal of Applied Physics, 2003, 93, 2034-2040.	2.5	11
76	A New Method for Describing the Atomic-scale Structure of Rusts Formed on the Iron Based Alloy Surlaces.. ISIJ International, 2003, 43, 366-372.	1.4	31
77	Characterization of Nanostructure of Rusts Formed on Weathering Steel.. ISIJ International, 2002, 42, 1534-1540.	1.4	38
78	In Situ Analysis of Pitting Corrosion in Artificial Crevice of Stainless Steel by X-ray Absorption Fine Structure.. ISIJ International, 2002, 42, 1399-1403.	1.4	17
79	Fe(O, OH)₆ Network Structure of Rusts Formed on Weathering Steel Surfaces. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2002, 66, 166-175.	0.4	12
80	Characterization of strain distribution in quantum dots by X-ray diffraction. Journal of Crystal Growth, 2002, 234, 197-201.	1.5	21
81	G-GIXD characterization of GaN grown by laser MBE. Journal of Crystal Growth, 2002, 237-239, 1158-1162.	1.5	11
82	In situobservation of pitting of stainless steel by XAFS. Journal of Synchrotron Radiation, 2001, 8, 487-489.	2.4	3
83	EXAFS characterization of ferric oxyhydroxides. Applied Surface Science, 2001, 169-170, 109-112.	6.1	29
84	In situobservation of Si(001) surface in He atmosphere at high temperatures near the bulk melting temperature. Journal of Applied Physics, 2001, 89, 2138-2145.	2.5	3
85	Generalized Grazing Incidence-Angle X-Ray Diffraction Studies on InAs Quantum Dots on Si (100) Substrates. Japanese Journal of Applied Physics, 2000, 39, 4483-4485.	1.5	9
86	In-situ Observation of Structural Evolution of Zr60Al15Ni25 Bulk Metallic Glass in the Supercooled Liquid Region. High Temperature Materials and Processes, 2000, 19, 299-306.	1.4	2
87	In situ observation of phase transformation in an Feâ€"Zn system at high temperatures using an image plate. Journal of Synchrotron Radiation, 1998, 5, 983-985.	2.4	4
88	Generalized grazing-incidence-angle X-ray diffraction (G-GIXD) using image plates. Journal of Synchrotron Radiation, 1998, 5, 488-490.	2.4	8
89	Alloy design of gamma titanium aluminides based on phase diagrams. Intermetallics, 1998, 6, 667-672.	3.9	51
90	Highâ€Temperature Diffusion of Hydrogen and Deuterium in Titanium and Ti3Al. Journal of the Electrochemical Society, 1998, 145, 2471-2475.	2.9	9

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91	Short-range ordering of Cu3Au above Tc in the topmost 80 A of a (001) face. Journal of Materials Research, 1997, 12, 75-82.	2.6	9
92	Diffusion of hydrogen in titanium, Ti88Al12 and Ti3Al. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 483.	1.7	14
93	Isotope effect in the diffusion of hydrogen and deuterium in titanium, Ti88Al12 and Ti3Al. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 3407.	1.7	6
94	Surface atomic ordering of Cu3Au (001) above Tc. Physica B: Condensed Matter, 1996, 221, 101-104.	2.7	3
95	Sloping plateaux in the pressureâ€“composition isotherms of the titaniumâ€“hydrogen and Ti94Al6â€“hydrogen systems. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 4143-4147.	1.7	5
96	Dissolution of hydrogen and deuterium in titanium, Ti94Al6 and Ti3Al. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 1967.	1.7	8
97	Faraday communications. Diffusion of hydrogen in Ti3Al. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 2423.	1.7	6
98	Faraday communications. Solubility of hydrogen and deuterium in Ti3Al. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 1355.	1.7	5
99	Structural Transition between HCP and FCC Structures with Considering Configurations of the Position Vectors Defined by Several Common Stacked Model Hamiltonian. Journal of the Physical Society of Japan, 1994, 63, 3714-3728.	1.6	1
100	A Theoretical Model for the Several Common Stacked Crystals in Arrangement of the Stacking Sequence of Parallel Atomic Layers in a Simple Crystal Solid. Journal of the Physical Society of Japan, 1994, 63, 3661-3670.	1.6	2
101	Critical current characteristics in melt-processed Y-Ba-Cu-O superconductor. Superconductor Science and Technology, 1992, 5, S15-S18.	3.5	17
102	X-Ray diffraction study on the hydrogenâ€“hafnium system at high temperatures. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 2221-2226.	1.7	5
103	Study on phase stability in Tiî—¸Alî—¸X systems at high temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 152, 54-59.	5.6	44
104	High Temperature Deformation Behavior of Titanium-Aluminide Based Gamma Plus Beta Microduplex Alloy.. ISIJ International, 1991, 31, 728-737.	1.4	75
105	A new domain structure in YBa2Cu3O7â^'x prepared by the quench and melt growth (QMG) process. Physica C: Superconductivity and Its Applications, 1991, 174, 263-272.	1.2	29
106	High Magnetic Flux Trapping by Melt-Grown YBaCuO Superconductors. Japanese Journal of Applied Physics, 1991, 30, L1157-L1159.	1.5	101
107	Critical Current Characteristics in Superconducting Y-Ba-Cu-O Prepared by the Melt Process. Japanese Journal of Applied Physics, 1991, 30, L342-L345.	1.5	71
108	Microstructural characterization of twin-roll cast gamma titanium aluminide sheets.. ISIJ International, 1991, 31, 289-297.	1.4	15

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109	Crystallographic characterization of YBa2Cu3O7-x prepared by the quench and melt growth (QMG) process.. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 1990, 37, 145-148.	0.2	0
110	Microstructure of a unidirectionally grown YBaCuO superconductor by the Quench and Melt Growth process. Physica B: Condensed Matter, 1990, 165-166, 1673-1674.	2.7	0
111	Investigation on the Molecular Structures of Titanium Tetrachloride and Zirconium Tetrachloride by Gas Electron Diffraction. Bulletin of the Chemical Society of Japan, 1956, 29, 95-100.	3.2	23