

Akihisa Takeuchi

List of Publications by Year in descending order

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64
papers

1,607
citations

304743

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docs citations

64
times ranked

1448
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-Dimensional Structure of Hayabusa Samples: Origin and Evolution of Itokawa Regolith. <i>Science</i> , 2011, 333, 1125-1128.	12.6	249
2	Performance Test of Fresnel Zone Plate with 50 nm Outermost Zone Width in Hard X-ray Region. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 1994-1998.	1.5	98
3	The True Origin of Ductile Fracture in Aluminum Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 765-776.	2.2	91
4	Dendrite fragmentation induced by massive-like γ transformation in Fe-C alloys. <i>Nature Communications</i> , 2019, 10, 3183.	12.8	65
5	Construction and Commissioning of A 248 m-long Beamline with X-ray Undulator Light Source. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	64
6	Assessment of hydrogen embrittlement via image-based techniques in Al-Zn-Mg-Cu aluminum alloys. <i>Acta Materialia</i> , 2019, 176, 96-108.	7.9	63
7	Submicrometer-resolution three-dimensional imaging with hard x-ray imaging microtomography. <i>Review of Scientific Instruments</i> , 2002, 73, 4246-4249.	1.3	50
8	Differential Phase X-ray Imaging Microscopy with X-ray Talbot Interferometer. <i>Applied Physics Express</i> , 0, 1, 117002.	2.4	50
9	A method for estimating spatial resolution of real image in the Fourier domain. <i>Journal of Microscopy</i> , 2016, 261, 57-66.	1.8	45
10	Influences of hydrogen on deformation and fracture behaviors of high Zn 7XXX aluminum alloys. <i>International Journal of Fracture</i> , 2016, 200, 13-29.	2.2	37
11	Sub-100 nm Hard X-Ray Microbeam Generation with Fresnel Zone Plate Optics. <i>Japanese Journal of Applied Physics</i> , 2003, 42, L132-L134.	1.5	35
12	Development of micro-tomography system with Fresnel zone plate optics at SPring-8. , 2006, , .		35
13	Zernike phase-contrast x-ray microscope with pseudo-Kohler illumination generated by sectored (polygon) condenser plate. <i>Journal of Physics: Conference Series</i> , 2009, 186, 012020.	0.4	35
14	Microtomographic Analysis of Neuronal Circuits of Human Brain. <i>Cerebral Cortex</i> , 2010, 20, 1739-1748.	2.9	35
15	Discovery of fossil asteroidal ice in primitive meteorite Acfer 094. <i>Science Advances</i> , 2019, 5, eaax5078.	10.3	33
16	Development of an X-ray imaging detector to resolve 200-nm line-and-space patterns by using transparent ceramics layers bonded by solid-state diffusion. <i>Optics Letters</i> , 2019, 44, 1403.	3.3	31
17	Three-dimensional network of Drosophila brain hemisphere. <i>Journal of Structural Biology</i> , 2013, 184, 271-279.	2.8	30
18	Microstructural evolution of electrodes in sintering of multi-layer ceramic capacitors (MLCC) observed by synchrotron X-ray nano-CT. <i>Acta Materialia</i> , 2021, 206, 116605.	7.9	30

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19	Three-dimensional alteration of neurites in schizophrenia. <i>Translational Psychiatry</i> , 2019, 9, 85.	4.8	28
20	High-energy x-ray microbeam with total-reflection mirror optics. <i>Review of Scientific Instruments</i> , 2007, 78, 053713.	1.3	27
21	Confocal full-field X-ray microscope for novel three-dimensional X-ray imaging. <i>Journal of Synchrotron Radiation</i> , 2009, 16, 616-621.	2.4	27
22	3D multiscale-imaging of processing-induced defects formed during sintering of hierarchical powder packings. <i>Scientific Reports</i> , 2019, 9, 11595.	3.3	27
23	Nondestructive Multiscale X-Ray Tomography by Combining Microtomography and High-Energy Phase-Contrast Nanotomography. <i>Microscopy and Microanalysis</i> , 2018, 24, 108-109.	0.4	26
24	High-energy x-ray nanotomography introducing an apodization Fresnel zone plate objective lens. <i>Review of Scientific Instruments</i> , 2021, 92, 023701.	1.3	25
25	Hydrogen partitioning behavior and related hydrogen embrittlement in Al-Zn-Mg alloys. <i>Engineering Fracture Mechanics</i> , 2019, 216, 106503.	4.3	23
26	Morphology of subsurface cracks in glass-ceramics induced by Vickers indentation observed by synchrotron X-ray multiscale tomography. <i>Scientific Reports</i> , 2022, 12, 6994.	3.3	23
27	Kirkpatrick-Baez type x-ray focusing mirror fabricated by the bent-polishing method. <i>Review of Scientific Instruments</i> , 2005, 76, 093708.	1.3	22
28	Three-dimensional microtomographic imaging of human brain cortex. <i>Brain Research</i> , 2008, 1199, 53-61.	2.2	22
29	Recent progress in synchrotron radiation 3D→4D nano-imaging based on X-ray full-field microscopy. <i>Microscopy (Oxford, England)</i> , 2020, 69, 259-279.	1.5	19
30	Full-field x-ray fluorescence imaging microscope with a Wolter mirror. <i>Review of Scientific Instruments</i> , 2000, 71, 1279-1285.	1.3	17
31	Hard x-ray holographic microscopy using refractive prism and Fresnel zone plate objective. <i>Review of Scientific Instruments</i> , 2005, 76, 093702.	1.3	17
32	Discovery of primitive CO ₂ -bearing fluid in an aqueously altered carbonaceous chondrite. <i>Science Advances</i> , 2021, 7, .	10.3	16
33	Brain capillary structures of schizophrenia cases and controls show a correlation with their neuron structures. <i>Scientific Reports</i> , 2021, 11, 11768.	3.3	15
34	Three-dimensional phase-contrast X-ray microtomography with scanning X-ray microscope optics. <i>Journal of Synchrotron Radiation</i> , 2013, 20, 793-800.	2.4	14
35	Fresnel zone plate with apodized aperture for hard X-ray Gaussian beam optics. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 586-594.	2.4	14
36	Evaluation of the improved three-dimensional resolution of a synchrotron radiation computed tomograph using a micro-fabricated test pattern. <i>Journal of Synchrotron Radiation</i> , 2008, 15, 648-654.	2.4	13

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37	Observation of Morphology Changes of Fine Eutectic Si Phase in Al-10%Si Cast Alloy during Heat Treatment by Synchrotron Radiation Nanotomography. <i>Materials</i> , 2018, 11, 1308.	2.9	12
38	Hard X-Ray Microtomography Using X-Ray Imaging Optics. <i>Japanese Journal of Applied Physics</i> , 2001, 40, 1499-1503.	1.5	11
39	Recent progress of hard x-ray imaging microscopy and microtomography at BL37XU of SPring-8. AIP Conference Proceedings, 2016, , .	0.4	10
40	Initiation and propagation of small fatigue crack in beta titanium alloy observed through synchrotron radiation multiscale computed tomography. <i>Engineering Fracture Mechanics</i> , 2022, 263, 108308.	4.3	10
41	Three-dimensional X-ray fluorescence imaging with confocal full-field X-ray microscope. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 616, 261-265.	1.6	9
42	Hard X-ray Imaging Microscopy using X-ray Guide Tube as Beam Condenser for Field Illumination. <i>Journal of Physics: Conference Series</i> , 2013, 463, 012028.	0.4	9
43	Probing Surface Morphology using X-ray Grating Interferometry. <i>Scientific Reports</i> , 2019, 9, 14120.	3.3	8
44	Detection of small internal fatigue cracks in Ti-6Al-4V via synchrotron radiation nanocomputed tomography. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2022, 45, 2693-2702.	3.4	8
45	An experimental system for time-resolved x-ray diffraction of deforming silicate melt at high temperature. <i>Review of Scientific Instruments</i> , 2020, 91, 095113.	1.3	7
46	Direct observations of nucleant TiB ₂ particles in cast aluminum by synchrotron radiation multiscale tomography. <i>Materialia</i> , 2020, 10, 100663.	2.7	7
47	At wavelength focusing properties evaluation of the Wolter type grazing incidence mirror. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2001, 467-468, 302-304.	1.6	6
48	Hard X-ray Holographic Microscopy using Refractive Prism and Fresnel Zone Plate Objective. AIP Conference Proceedings, 2007, , .	0.4	6
49	X-ray Holographic Microscopy by Double-Prism Interferometer. <i>Japanese Journal of Applied Physics</i> , 2010, 49, 016601.	1.5	6
50	The Role of Hydrogen on the Local Fracture Toughness Properties of 7XXX Aluminum Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 5368-5381.	2.2	6
51	Structural diverseness of neurons between brain areas and between cases. <i>Translational Psychiatry</i> , 2021, 11, 49.	4.8	6
52	Differential Phase-Contrast Scanning X-Ray Microscope For Observation Of Low-Z element Specimen. AIP Conference Proceedings, 2010, , .	0.4	5
53	<title>X-ray imaging microscope with a partial coherent illumination</title>. , 2001, , .		5
54	Current Status of Microtomography with Synchrotron Radiation X-ray Source. <i>Journal of the Vacuum Society of Japan</i> , 2011, 54, 47-55.	0.3	5

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55	Three-dimensional microstructure and mineralogy of a cosmic symplectite in the Acfer 094 carbonaceous chondrite: Implication for its origin. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 323, 220-241.	3.9	5
56	Differential phase contrast x-ray microimaging with scanning-imaging x-ray microscope optics. <i>Review of Scientific Instruments</i> , 2012, 83, 083701.	1.3	4
57	X-ray Microfocusing by Combination of Grazing-Incidence Spherical-Concave Mirrors. <i>Japanese Journal of Applied Physics</i> , 2010, 49, 106701.	1.5	3
58	Nanoscale pore measurements in an all-solid-state lithium-ion battery with ultra-small-angle X-ray scattering (USAXS). <i>Journal of Power Sources Advances</i> , 2021, 12, 100076.	5.1	3
59	Multimodal assessment of mechanically induced transformation in metastable multi-phase steel using X-ray nano-tomography and pencil-beam diffraction tomography. <i>Acta Materialia</i> , 2022, 234, 117956.	7.9	3
60	Development of Scanning-Imaging X-Ray Microscope for Quantitative Three-Dimensional Phase Contrast Microimaging. <i>Journal of Physics: Conference Series</i> , 2013, 463, 012034.	0.4	1
61	Bilaterally Asymmetric Helical Myofibrils in Ascidian Tadpole Larvae. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 800455.	3.7	1
62	Imaging properties and its improvements of scanning/imaging x-ray microscope. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	0
63	Evaluation of Macroscopic Mechanical Properties from 3-D Visualization of Microstructure in Sintering. <i>Funtai Oyobi Fumatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , 2019, 66, 604-610.	0.2	0
64	3-D Observation with Synchrotron Radiation X-ray CT. <i>Materia Japan</i> , 2022, 61, 65-71.	0.1	0