

Takaki Hatsui

List of Publications by Year in descending order

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101
papers

5,520
citations

109321

35
h-index

79698

73
g-index

103
all docs

103
docs citations

103
times ranked

5481
citing authors

#	ARTICLE	IF	CITATIONS
1	A Global Shutter Wide Dynamic Range Soft X-Ray CMOS Image Sensor With Backside- Illuminated Pinned Photodiode, Two-Stage Lateral Overflow Integration Capacitor, and Voltage Domain Memory Bank. IEEE Transactions on Electron Devices, 2021, 68, 2056-2063.	3.0	10
2	Compression of Time Evolutionary Image Data through Predictive Deep Neural Networks. , 2021, , .		0
3	Physical and chemical imaging of adhesive interfaces with soft X-rays. Communications Materials, 2021, 2, .	6.9	6
4	Development and application of a tender X-ray ptychographic coherent diffraction imaging system on BL27SU at SPring-8. Journal of Synchrotron Radiation, 2021, 28, 1610-1615.	2.4	6
5	Development of a scanning soft X-ray spectromicroscope to investigate local electronic structures on surfaces and interfaces of advanced materials under conditions ranging from low vacuum to helium atmosphere. Journal of Synchrotron Radiation, 2020, 27, 664-674.	2.4	16
6	Soft X-ray Absorption Spectroscopy Probes OH ⁻ Interactions in Epoxy-Based Polymers. Journal of Physical Chemistry C, 2020, 124, 9622-9627.	3.1	9
7	Refinement for single-nanoparticle structure determination from low-quality single-shot coherent diffraction data. IUCr, 2020, 7, 10-17.	2.2	6
8	Investigation of radiation hardness improvement by applying back-gate bias for FD-SOI MOSFETs. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 924, 404-408.	1.6	3
9	Ultrafast Structural Dynamics of Nanoparticles in Intense Laser Fields. Physical Review Letters, 2019, 123, 123201.	7.8	14
10	Critical absorbed dose of resinous adhesive material towards non-destructive chemical-state analysis using soft X-rays. Journal of Electron Spectroscopy and Related Phenomena, 2019, 232, 11-15.	1.7	11
11	Multispectroscopic Study of Single Xe Clusters Using XFEL Pulses. Applied Sciences (Switzerland), 2019, 9, 4932.	2.5	2
12	A statistical approach to correct X-ray response non-uniformity in microstrip detectors for high-accuracy and high-resolution total-scattering measurements. Journal of Synchrotron Radiation, 2019, 26, 762-773.	2.4	38
13	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. Optics Letters, 2019, 44, 1403.	3.3	31
14	Crystal Structures of Human Orexin 2 Receptor Bound to the Subtype-Selective Antagonist EMPA. Structure, 2018, 26, 7-19.e5.	3.3	55
15	Advancement of X-ray radiography using microfocus X-ray source in conjunction with amplitude grating and SOI pixel detector, SOPHIAS. Optics Express, 2018, 26, 21044.	3.4	4
16	Single-shot 3D coherent diffractive imaging of core-shell nanoparticles with elemental specificity. Scientific Reports, 2018, 8, 8284.	3.3	10
17	Software for the data analysis of the arrival-timing monitor at SACLA. Journal of Synchrotron Radiation, 2018, 25, 592-603.	2.4	13
18	Data Analysis Environment for X-ray Free-Electron Laser Experiments at SACLA. Synchrotron Radiation News, 2017, 30, 16-21.	0.8	3

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19	Light-induced structural changes and the site of O=O bond formation in PSII caught by XFEL. <i>Nature</i> , 2017, 543, 131-135.	27.8	515
20	Hydroxyethyl cellulose matrix applied to serial crystallography. <i>Scientific Reports</i> , 2017, 7, 703.	3.3	74
21	Atomic resolution structure of serine protease proteinase K at ambient temperature. <i>Scientific Reports</i> , 2017, 7, 45604.	3.3	25
22	Nanosecond pump-probe device for time-resolved serial femtosecond crystallography developed at SACLA. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 1086-1091.	2.4	28
23	Experimental phase determination with selenomethionine or mercury-derivatization in serial femtosecond crystallography. <i>IUCr</i> , 2017, 4, 639-647.	2.2	24
24	Protein-ligand complex structure from serial femtosecond crystallography using soaked thermolysin microcrystals and comparison with structures from synchrotron radiation. <i>Acta Crystallographica Section D: Structural Biology</i> , 2017, 73, 702-709.	2.3	8
25	Tradeoff Between Low-Power Operation and Radiation Hardness of Fully Depleted SOI pMOSFET by Changing LDD Conditions. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 2293-2298.	3.0	8
26	A scintillator fabricated by solid-state diffusion bonding for high spatial resolution x-ray imaging. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	3
27	A three-dimensional movie of structural changes in bacteriorhodopsin. <i>Science</i> , 2016, 354, 1552-1557.	12.6	350
28	Oil-free hyaluronic acid matrix for serial femtosecond crystallography. <i>Scientific Reports</i> , 2016, 6, 24484.	3.3	46
29	Membrane protein structure determination by SAD, SIR, or SIRAS phasing in serial femtosecond crystallography using an iododetergent. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 13039-13044.	7.1	43
30	Redox-coupled structural changes in nitrite reductase revealed by serial femtosecond and microfocus crystallography. <i>Journal of Biochemistry</i> , 2016, 159, 527-538.	1.7	26
31	Redox-coupled proton transfer mechanism in nitrite reductase revealed by femtosecond crystallography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 2928-2933.	7.1	88
32	An isomorphous replacement method for efficient de novo phasing for serial femtosecond crystallography. <i>Scientific Reports</i> , 2015, 5, 14017.	3.3	54
33	X-ray imaging detectors for synchrotron and XFEL sources. <i>IUCr</i> , 2015, 2, 371-383.	2.2	78
34	Improving charge-collection efficiency of SOI pixel sensors for X-ray astronomy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2015, 794, 255-259.	1.6	18
35	Native sulfur/chlorine SAD phasing for serial femtosecond crystallography. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015, 71, 2519-2525.	2.5	51
36	Data acquisition system for X-ray free-electron laser experiments at SACLA. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 571-576.	2.4	41

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37	Diverse application platform for hard X-ray diffraction in SACLA (DAPHNIS): application to serial protein crystallography using an X-ray free-electron laser. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 532-537.	2.4	80
38	Analysis of Effective Gate Length Modulation by X-Ray Irradiation for Fully Depleted SOI p-MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 2371-2376.	3.0	15
39	Grease matrix as a versatile carrier of proteins for serial crystallography. <i>Nature Methods</i> , 2015, 12, 61-63.	19.0	193
40	Data acquisition system of over Giga-Bps of data rate for user experiment at X-ray Free-Electron Laser facility SACLA. , 2014, , .		1
41	Development of an X-ray pixel detector with multi-port charge-coupled device for X-ray free-electron laser experiments. <i>Review of Scientific Instruments</i> , 2014, 85, 033110.	1.3	224
42	Macromolecular structures probed by combining single-shot free-electron laser diffraction with synchrotron coherent X-ray imaging. <i>Nature Communications</i> , 2014, 5, 3798.	12.8	61
43	Developments of X-ray Imaging Detectors at SACLA/SPring-8: Current Status and Future Outlook. <i>Synchrotron Radiation News</i> , 2014, 27, 20-23.	0.8	9
44	Development of Experimental Methodology for Highly Efficient Wafer-Level Evaluation of X-Ray Radiation Effects on Semiconductor Devices. <i>IEEE Transactions on Nuclear Science</i> , 2014, 61, 1444-1450.	2.0	8
45	<i>In vivo</i> crystallography at X-ray free-electron lasers: the next generation of structural biology?. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130497.	4.0	39
46	Single-shot three-dimensional structure determination of nanocrystals with femtosecond X-ray free-electron laser pulses. <i>Nature Communications</i> , 2014, 5, 4061.	12.8	91
47	Multiple application X-ray imaging chamber for single-shot diffraction experiments with femtosecond X-ray laser pulses. <i>Journal of Applied Crystallography</i> , 2014, 47, 188-197.	4.5	49
48	Decoupling Architecture for All-to-all Computation. , 2014, , .		0
49	Femtosecond x-ray absorption spectroscopy with hard x-ray free electron laser. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	70
50	Transmission-grating spectrometer for highly efficient and high-resolution soft X-ray emission studies. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 188, 155-160.	1.7	9
51	Deep Inner-Shell Multiphoton Ionization by Intense X-Ray Free-Electron Laser Pulses. <i>Physical Review Letters</i> , 2013, 110, 173005.	7.8	136
52	Evaluation of data-acquisition front ends for handling high-bandwidth data from X-ray 2D detectors: A feasibility study. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2013, 731, 229-233.	1.6	7
53	Theoretical study on valence excitations of multiply ionized states for envelope measurement of x-ray free-electron-laser pulses. <i>Physical Review A</i> , 2013, 87, .	2.5	0
54	Double Core-Hole Creation by Sequential Attosecond Photoionization. <i>Physical Review Letters</i> , 2013, 111, 043001.	7.8	55

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55	Sequential multiphoton multiple ionization of atomic argon and xenon irradiated by x-ray free-electron laser pulses from SACLA. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164024.	1.5	50
56	Anomalous signal from S atoms in protein crystallographic data from an X-ray free-electron laser. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013, 69, 838-842.	2.5	48
57	High-speed classification of coherent X-ray diffraction patterns on the K computer for high-resolution single biomolecule imaging. <i>Journal of Synchrotron Radiation</i> , 2013, 20, 899-904.	2.4	6
58	Full-coherent free electron laser seeded by 13th- and 15th-order harmonics of near-infrared femtosecond laser pulses. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164006.	1.5	2
59	A photodiode amplifier system for pulse-by-pulse intensity measurement of an x-ray free electron laser. <i>Review of Scientific Instruments</i> , 2012, 83, 043108.	1.3	11
60	Interplay of strong chemical bonds and the repulsive Coulomb force in the metastable states of triply ionized homonuclear molecules: A theoretical study of N ²³⁺ and O ²³⁺ . <i>Physical Review A</i> , 2012, 85, .	2.5	3
61	Control and data acquisition system for X-ray Free-Electron Laser experiments at SACLA. , 2012, , .		2
62	Undulator commissioning by characterization of radiation in x-ray free electron lasers. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2012, 15, .	1.8	37
63	A compact X-ray free-electron laser emitting in the sub-Å region. <i>Nature Photonics</i> , 2012, 6, 540-544.	31.4	1,542
64	Determination of the Pulse Duration of an X-Ray Free Electron Laser Using Highly Resolved Single-Shot Spectra. <i>Physical Review Letters</i> , 2012, 109, 144801.	7.8	162
65	Progress of FD-SOI technology for monolithic pixel detectors. , 2012, , .		11
66	Effect of Ultrahigh-Density Ionization of Resist Films on Sensitivity Using Extreme-Ultraviolet Free-Electron Laser. <i>Applied Physics Express</i> , 2012, 5, 096701.	2.4	2
67	Extreme ultraviolet free electron laser seeded with high-order harmonic of Ti:sapphire laser. <i>Optics Express</i> , 2011, 19, 317.	3.4	123
68	Site-specific intermolecular interaction in $\hat{\pm}$ -phase crystalline films of phthalocyanines studied by soft x-ray emission spectroscopy. <i>Journal of Chemical Physics</i> , 2011, 135, 034704.	3.0	4
69	Inner-shell spectroscopy and exchange interaction of Rydberg electrons bound by singly and doubly charged Kr and Xe atoms in small clusters. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2011, 183, 29-35.	1.7	15
70	Development of SOI pixel process technology. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 636, S31-S36.	1.6	142
71	Radiation Properties of SPring-8 XFEL (SACLA) and Developments in User-experiment Facilities. <i>Hyomen Kagaku</i> , 2011, 32, 433-438.	0.0	0
72	Developments of SOI monolithic pixel detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 623, 186-188.	1.6	76

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73	Development of a liquid flow cell to measure soft X-ray absorption in transmission mode: A test for liquid water. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2010, 177, 130-134.	1.7	84
74	Systematic Study of Soft X-ray Spectra of Poly(Dg)-Poly(Dc) and Poly(Da)-Poly(Dt) DNA Duplexes. <i>Journal of Physical Chemistry B</i> , 2010, 114, 7016-7021.	2.6	24
75	Electronic state observation of inner organic thin films beneath electrodes: Fluorescence-yield X-ray absorption spectra of pentacene derivative films. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2009, 174, 93-99.	1.7	2
76	Exchange interaction in Kr 3d excitations of small krypton clusters. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2008, 166-167, 16-20.	1.7	7
77	Electronic states of the DNA polynucleotides poly(dG)-poly(dC) in the presence of iodine. <i>Physical Review B</i> , 2007, 75, .	3.2	16
78	Design of a novel transmission-grating spectrometer for soft X-ray emission studies. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2005, 144-147, 1059-1062.	1.7	12
79	S 2p excited states of OCS in rare gas matrices. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2005, 144-147, 87-89.	1.7	0
80	Photoionization of small krypton clusters in the Kr 3d regime: Evidence for site-specific photoemission. <i>Journal of Chemical Physics</i> , 2005, 123, 154304.	3.0	42
81	Electronic Structure of Bases in DNA Duplexes Characterized by Resonant Photoemission Spectroscopy Near the Fermi Level. <i>Physical Review Letters</i> , 2004, 93, 086403.	7.8	33
82	Design of a transmission grating spectrometer and an undulator beamline for soft x-ray emission studies. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	38
83	Spin-forbidden shake-up states of OCS molecule studied by resonant photoelectron spectroscopy. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2004, 137-140, 351-355.	1.7	7
84	Ar 2p excited states of argon in non-polar media. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2004, 137-140, 435-439.	1.7	6
85	Metal-to-ligand charge transfer in polarized metal L-edge X-ray absorption of Ni and Cu complexes. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2004, 136, 67-75.	1.7	9
86	Cu L _{2,3} -edge X-ray absorption spectra of (2,5-dimethyl-N,N'-dicyanoquinonediimine) ₂ Li ⁺ xCu _x alloys. <i>Chemical Physics</i> , 2004, 298, 189-193.	1.9	2
87	Angle-resolved photoion spectroscopy of NO ₂ and SO ₂ . <i>Chemical Physics</i> , 2003, 289, 15-29.	1.9	41
88	Structures and Acid-Base Properties of La/Al ₂ O ₃ Role of La Addition to Enhance Thermal Stability of γ -Al ₂ O ₃ . <i>Chemistry of Materials</i> , 2003, 15, 4830-4840.	6.7	74
89	Double and triple excitations near the K-shell ionization threshold of N ₂ revealed by symmetry-resolved spectroscopy. <i>Physical Review A</i> , 2002, 66, .	2.5	32
90	Valence excitations observed in resonant soft X-ray emission spectra of K ₂ Ni(CN) ₄ ·H ₂ O at the Ni 2p edge. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2001, 114-116, 909-913.	1.7	3

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91	Synthesis of troponoid analogues of calix[4]arene by the reaction of dichlorocarbene with calix[4]arene. <i>Tetrahedron Letters</i> , 2001, 42, 6855-6858.	1.4	2
92	Sulfur K-edge X-ray absorption spectra for BETS and BEDT-TTF charge transfer salts: a novel probe for the determination of hole concentration. <i>Chemical Physics Letters</i> , 2000, 330, 309-314.	2.6	3
93	Metal-to-ligand charge transfer bands observed in polarized Ni 2p photoabsorption spectra of [Ni(mnt) ₂] ²⁻ . <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1999, 101-103, 827-832.	1.7	4
94	Strong metal-to-ligand charge transfer bands observed in NiK- andL-edge XANES of planar Ni complexes. <i>Journal of Synchrotron Radiation</i> , 1999, 6, 376-378.	2.4	14
95	Polarized NiK- andL-edge and SK-edge XANES study of [Ni(III)(mnt) ₂] ¹⁻ . <i>Journal of Synchrotron Radiation</i> , 1999, 6, 379-380.	2.4	5
96	A unified view of resonant photoemission of metallic, molecular, and correlated solid systems. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1999, 101-103, 443-447.	1.7	8
97	Ni 2p→3d photoabsorption and strong charge transfer satellites in divalent Ni complexes with molecular ligands. Evaluation of π-back donation based on the density functional theory approach. <i>Chemical Physics Letters</i> , 1999, 311, 299-305.	2.6	19
98	Strong metal-to-ligand charge transfer bands in Ni 2p photoabsorption of K ₂ Ni(CN) ₄ ·H ₂ O. <i>Chemical Physics Letters</i> , 1998, 284, 320-324.	2.6	19
99	Ni 2p resonant photoelectron spectra of some planar nickel complexes. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1998, 88-91, 235-239.	1.7	3
100	Ni 2p excitation spectra of some planar Ni complexes. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1998, 88-91, 405-409.	1.7	10
101	Resonant behavior in Ni 3d, 3p and 3s photoelectron spectra at the Ni 2p excitation of planar molecular complex, nickel dimethylglyoxime. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1998, 93, 109-113.	1.7	1