Takaki Hatsui

List of Publications by Year
in descending order

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 compact X-ray free-electron laser emitting in the sub-Ã¥ngstrÃ¶m region. Nature Photonics, 2012, 6, 540-544.	31.4	1,542
2	Light-induced structural changes and the site of O=O bond formation in PSII caught by XFEL. Nature, 2017, 543, 131-135.	27.8	515
3	A three-dimensional movie of structural changes in bacteriorhodopsin. Science, 2016, 354, 1552-1557.	12.6	350
4	Development of an X-ray pixel detector with multi-port charge-coupled device for X-ray free-electron laser experiments. Review of Scientific Instruments, 2014, 85, 033110.	1.3	224
5	Grease matrix as a versatile carrier of proteins for serial crystallography. Nature Methods, 2015, 12, 61-63.	19.0	193
6	Determination of the Pulse Duration of an X-Ray Free Electron Laser Using Highly Resolved Single-Shot Spectra. Physical Review Letters, 2012, 109, 144801.	7.8	162
7	Development of SOI pixel process technology. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 636, S31-S36.	1.6	142
8	Deep Inner-Shell Multiphoton Ionization by Intense X-Ray Free-Electron Laser Pulses. Physical Review Letters, 2013, 110, 173005.	7.8	136
9	Extreme ultraviolet free electron laser seeded with high-orderâ€¨harmonic of Ti:sapphire laser. Optics Express, 2011, 19, 317.	3.4	123
10	Single-shot three-dimensional structure determination of nanocrystals with femtosecond X-ray free-electron laser pulses. Nature Communications, 2014, 5, 4061.	12.8	91
11	Redox-coupled proton transfer mechanism in nitrite reductase revealed by femtosecond crystallography. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2928-2933.	7.1	88
12	Development of a liquid flow cell to measure soft X-ray absorption in transmission mode: A test for liquid water. Journal of Electron Spectroscopy and Related Phenomena, 2010, 177, 130-134.	1.7	84
13	Diverse application platform for hard X-ray diffraction in SACLA (DAPHNIS): application toÂserial protein crystallography using an X-ray free-electron laser. Journal of Synchrotron Radiation, 2015, 22, 532-537.	2.4	80
14	X-ray imaging detectors for synchrotron and XFEL sources. IUCrJ, 2015, 2, 371-383.	2.2	78
15	Developments of SOI monolithic pixel detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 623, 186-188.	1.6	76
16	Structures and Acidâ€"Base Properties of La/Al2O3 Role of La Addition to Enhance Thermal Stability of Î³-Al2O3. Chemistry of Materials, 2003, 15, 4830-4840.	6.7	74
17	Hydroxyethyl cellulose matrix applied to serial crystallography. Scientific Reports, 2017, 7, 703.	3.3	74
18	Femtosecond x-ray absorption spectroscopy with hard x-ray free electron laser. Applied Physics Letters, 2013, 103, .	3.3	70

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19	Macromolecular structures probed by combining single-shot free-electron laser diffraction with synchrotron coherent X-ray imaging. Nature Communications, 2014, 5, 3798.	12.8	61
20	Double Core-Hole Creation by Sequential Attosecond Photoionization. Physical Review Letters, 2013, 111, 043001.	7.8	55
21	Crystal Structures of Human Orexin 2 Receptor Bound to the Subtype-Selective Antagonist EMPA. Structure, 2018, 26, 7-19.e5.	3.3	55
22	An isomorphous replacement method for efficient de novo phasing for serial femtosecond crystallography. Scientific Reports, 2015, 5, 14017.	3.3	54
23	Native sulfur/chlorine SAD phasing for serial femtosecond crystallography. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 2519-2525.	2.5	51
24	Sequential multiphoton multiple ionization of atomic argon and xenon irradiated by x-ray free-electron laser pulses from SACLA. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164024.	1.5	50
25	Multiple application X-ray imaging chamber for single-shot diffraction experiments with femtosecond X-ray laser pulses. Journal of Applied Crystallography, 2014, 47, 188-197.	4.5	49
26	Anomalous signal from S atoms in protein crystallographic data from an X-ray free-electron laser. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 838-842.	2.5	48
27	Oil-free hyaluronic acid matrix for serial femtosecond crystallography. Scientific Reports, 2016, 6, 24484.	3.3	46
28	Membrane protein structure determination by SAD, SIR, or SIRAS phasing in serial femtosecond crystallography using an iododetergent. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13039-13044.	7.1	43
29	Photoionization of small krypton clusters in the Kr 3d regime: Evidence for site-specific photoemission. Journal of Chemical Physics, 2005, 123, 154304.	3.0	42
30	Angle-resolved photoion spectroscopy of NO2 and SO2. Chemical Physics, 2003, 289, 15-29.	1.9	41
31	Data acquisition system for X-ray free-electron laser experiments at SACLA. Journal of Synchrotron Radiation, 2015, 22, 571-576.	2.4	41
32	In vivo crystallography at X-ray free-electron lasers: the next generation of structural biology?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130497.	4.0	39
33	Design of a transmission grating spectrometer and an undulator beamline for soft x-ray emission studies. AIP Conference Proceedings, 2004, , .	0.4	38
34	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
35	Undulator commissioning by characterization of radiation in x-ray free electron lasers. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	37
36	Electronic Structure of Bases in DNA Duplexes Characterized byResonant Photoemission Spectroscopy Near the Fermi Level. Physical Review Letters, 2004, 93, 086403.	7.8	33

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37	Double and triple excitations near theK-shell ionization threshold ofN2revealed by symmetry-resolved spectroscopy. Physical Review A, 2002, 66, .	2.5	32
38	Development of an X-ray imaging detector to resolve 200â€‰â€‰nm line-and-space patterns by using transparent ceramics layers bonded by solid-state diffusion. Optics Letters, 2019, 44, 1403.	3.3	31
39	Nanosecond pumpâ€“probe device for time-resolved serial femtosecond crystallography developed at SACLA. Journal of Synchrotron Radiation, 2017, 24, 1086-1091.	2.4	28
40	Redox-coupled structural changes in nitrite reductase revealed by serial femtosecond and microfocus crystallography. Journal of Biochemistry, 2016, 159, 527-538.	1.7	26
41	Atomic resolution structure of serine protease proteinase K at ambient temperature. Scientific Reports, 2017, 7, 45604.	3.3	25
42	Systematic Study of Soft X-ray Spectra of Poly(Dg)Â·Poly(Dc) and Poly(Da)Â·Poly(Dt) DNA Duplexes. Journal of Physical Chemistry B, 2010, 114, 7016-7021.	2.6	24
43	Experimental phase determination with selenomethionine or mercury-derivatization in serial femtosecond crystallography. IUCrJ, 2017, 4, 639-647.	2.2	24
44	Strong metal-to-ligand charge transfer bands in Ni 2p photoabsorption of K2Ni(CN)4Â·H2O. Chemical Physics Letters, 1998, 284, 320-324.	2.6	19
45	Ni 2pâ€“3d photoabsorption and strong charge transfer satellites in divalent Ni complexes with molecular ligands. Evaluation of Ï€-back donation based on the density functional theory approach. Chemical Physics Letters, 1999, 311, 299-305.	2.6	19
46	Improving charge-collection efficiency of SOI pixel sensors for X-ray astronomy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 794, 255-259.	1.6	18
47	Electronic states of the DNA polynucleotides poly(dG)-poly(dC) in the presence of iodine. Physical Review B, 2007, 75, .	3.2	16
48	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
49	Inner-shell spectroscopy and exchange interaction of Rydberg electrons bound by singly and doubly charged Kr and Xe atoms in small clusters. Journal of Electron Spectroscopy and Related Phenomena, 2011, 183, 29-35.	1.7	15
50	Analysis of Effective Gate Length Modulation by X-Ray Irradiation for Fully Depleted SOI p-MOSFETs. IEEE Transactions on Electron Devices, 2015, 62, 2371-2376.	3.0	15
51	Strong metal-to-ligand charge transfer bands observed in NiK- andL-edge XANES of planar Ni complexes. Journal of Synchrotron Radiation, 1999, 6, 376-378.	2.4	14
52	Ultrafast Structural Dynamics of Nanoparticles in Intense Laser Fields. Physical Review Letters, 2019, 123, 123201.	7.8	14
53	Software for the data analysis of the arrival-timing monitor at SACLA. Journal of Synchrotron Radiation, 2018, 25, 592-603.	2.4	13
54	Design of a novel transmission-grating spectrometer for soft X-ray emission studies. Journal of Electron Spectroscopy and Related Phenomena, 2005, 144-147, 1059-1062.	1.7	12

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55	A photodiode amplifier system for pulse-by-pulse intensity measurement of an x-ray free electron laser. Review of Scientific Instruments, 2012, 83, 043108.	1.3	11
56	Progress of FD-SOI technology for monolithic pixel detectors. , 2012, , .		11
57	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
58	Ni 2p excitation spectra of some planar Ni complexes. Journal of Electron Spectroscopy and Related Phenomena, 1998, 88-91, 405-409.	1.7	10
59	Single-shot 3D coherent diffractive imaging of core-shell nanoparticles with elemental specificity. Scientific Reports, 2018, 8, 8284.	3.3	10
60	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
61	Metal-to-ligand charge transfer in polarized metal L-edge X-ray absorption of Ni and Cu complexes. Journal of Electron Spectroscopy and Related Phenomena, 2004, 136, 67-75.	1.7	9
62	Transmission-grating spectrometer for highly efficient and high-resolution soft X-ray emission studies. Journal of Electron Spectroscopy and Related Phenomena, 2013, 188, 155-160.	1.7	9
63	Developments of X-ray Imaging Detectors at SACLA/SPring-8: Current Status and Future Outlook. Synchrotron Radiation News, 2014, 27, 20-23.	0.8	9
64	Soft X-ray Absorption Spectroscopy Probes OHÂ·Â·Â·Ï€ Interactions in Epoxy-Based Polymers. Journal of Physical Chemistry C, 2020, 124, 9622-9627.	3.1	9
65	A unified view of resonant photoemission of metallic, molecular, and correlated solid systems. Journal of Electron Spectroscopy and Related Phenomena, 1999, 101-103, 443-447.	1.7	8
66	Development of Experimental Methodology for Highly Efficient Wafer-Level Evaluation of X-Ray Radiation Effects on Semiconductor Devices. IEEE Transactions on Nuclear Science, 2014, 61, 1444-1450.	2.0	8
67	Tradeoff Between Low-Power Operation and Radiation Hardness of Fully Depleted SOI pMOSFET by Changing LDD Conditions. IEEE Transactions on Electron Devices, 2016, 63, 2293-2298.	3.0	8
68	Proteinâ€“ligand complex structure from serial femtosecond crystallography using soaked thermolysin microcrystals and comparison with structures from synchrotron radiation. Acta Crystallographica Section D: Structural Biology, 2017, 73, 702-709.	2.3	8
69	Spin-forbidden shake-up states of OCS molecule studied by resonant photoelectron spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 2004, 137-140, 351-355.	1.7	7
70	Exchange interaction in Kr 3d excitations of small krypton clusters. Journal of Electron Spectroscopy and Related Phenomena, 2008, 166-167, 16-20.	1.7	7
71	Evaluation of data-acquisition front ends for handling high-bandwidth data from X-ray 2D detectors: A feasibility study. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 731, 229-233.	1.6	7
72	Ar 2p excited states of argon in non-polar media. Journal of Electron Spectroscopy and Related Phenomena, 2004, 137-140, 435-439.	1.7	6

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73	High-speed classification of coherent X-ray diffractionÂpatterns on the K computer for high-resolution single biomolecule imaging. Journal of Synchrotron Radiation, 2013, 20, 899-904.	2.4	6
74	Physical and chemical imaging of adhesive interfaces with soft X-rays. Communications Materials, 2021, 2, .	6.9	6
75	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
76	Refinement for single-nanoparticle structure determination from low-quality single-shot coherent diffraction data. IUCrJ, 2020, 7, 10-17.	2.2	6
77	Polarized NiK- andL-edge and SK-edge XANES study of [Ni(III)(mnt)2]1â˜. Journal of Synchrotron Radiation, 1999, 6, 379-380.	2.4	5
78	Metal-to-ligand charge transfer bands observed in polarized Ni 2p photoabsorption spectra of [Ni(mnt)2]2â˜. Journal of Electron Spectroscopy and Related Phenomena, 1999, 101-103, 827-832.	1.7	4
79	Site-specific intermolecular interaction in Î±-phase crystalline films of phthalocyanines studied by soft x-ray emission spectroscopy. Journal of Chemical Physics, 2011, 135, 034704.	3.0	4
80	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
81	Ni 2p resonant photoelectron spectra of some planar nickel complexes. Journal of Electron Spectroscopy and Related Phenomena, 1998, 88-91, 235-239.	1.7	3
82	Sulfur K-edge X-ray absorption spectra for BETS and BEDT-TTF charge transfer salts: a novel probe for the determination of hole concentration. Chemical Physics Letters, 2000, 330, 309-314.	2.6	3
83	Valence excitations observed in resonant soft X-ray emission spectra of K2Ni(CN)4Â·H2O at the Ni 2p edge. Journal of Electron Spectroscopy and Related Phenomena, 2001, 114-116, 909-913.	1.7	3
84	Interplay of strong chemical bonds and the repulsive Coulomb force in the metastable states of triply ionized homonuclear molecules: A theoretical study of N23+and O23+. Physical Review A, 2012, 85, .	2.5	3
85	A scintillator fabricated by solid-state diffusion bonding for high spatial resolution x-ray imaging. AIP Conference Proceedings, 2016, , .	0.4	3
86	Data Analysis Environment for X-ray Free-Electron Laser Experiments at SACLA. Synchrotron Radiation News, 2017, 30, 16-21.	0.8	3
87	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
88	Synthesis of troponoid analogues of calix[4]arene by the reaction of dichlorocarbene with calix[4]arene. Tetrahedron Letters, 2001, 42, 6855-6858.	1.4	2
89	Cu L2,3-edge X-ray absorption spectra of (2,5-dimethyl-N,Nâ€²-dicyanoquinonediimine)2Li1â˜’xCux alloys. Chemical Physics, 2004, 298, 189-193.	1.9	2
90	Electronic state observation of inner organic thin films beneath electrodes: Fluorescence-yield X-ray absorption spectra of pentacene derivative films. Journal of Electron Spectroscopy and Related Phenomena, 2009, 174, 93-99.	1.7	2

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91	Control and data acquisition system for X-ray Free-Electron Laser experiments at SACLA. , 2012, , .		2
92	Effect of Ultrahigh-Density Ionization of Resist Films on Sensitivity Using Extreme-Ultraviolet Free-Electron Laser. Applied Physics Express, 2012, 5, 096701.	2.4	2
93	Full-coherent free electron laser seeded by 13th- and 15th-order harmonics of near-infrared femtosecond laser pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164006.	1.5	2
94	Multispectroscopic Study of Single Xe Clusters Using XFEL Pulses. Applied Sciences (Switzerland), 2019, 9, 4932.	2.5	2
95	Resonant behavior in Ni 3d, 3p and 3s photoelectron spectra at the Ni 2p excitation of planar molecular complex, nickel dimethylglyoxime. Journal of Electron Spectroscopy and Related Phenomena, 1998, 93, 109-113.	1.7	1
96	Data acquisition system of over Giga-Bps of data rate for user experiment at X-ray Free-Electron Laser facility SACLA. , 2014, , .		1
97	S 2p excited states of OCS in rare gas matrices. Journal of Electron Spectroscopy and Related Phenomena, 2005, 144-147, 87-89.	1.7	0
98	Theoretical study on valence excitations of multiply ionized states for envelope measurement of x-ray free-electron-laser pulses. Physical Review A, 2013, 87, .	2.5	0
99	Compression of Time Evolutionary Image Data through Predictive Deep Neural Networks. , 2021, , .		0
100	Radiation Properties of SPring-8 XFEL (SACLA) and Developments in User-experiment Facilities. Hyomen Kagaku, 2011, 32, 433-438.	0.0	0
101	Decoupling Architecture for All-to-all Computation. , 2014, , .		0