

# Daiji Kato

## List of Publications by Year in descending order

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135  
papers

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304743

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136  
all docs

136  
docs citations

136  
times ranked

1369  
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical investigation of energy levels and transition for Ce IV. Astronomy and Astrophysics, 2022, 658, A82.	5.1	13
2	Laser Induced Breakdown Spectroscopy of Er II for Transition Probability Measurements. Applied Sciences (Switzerland), 2022, 12, 2219.	2.5	1
3	$Z$ -dependent crossing of excited-state energy levels in highly charged galliumlike lanthanide atomic ions. Physical Review A, 2022, 105, .	2.5	2
4	Effect of uniaxial tensile strain on binding energy of hydrogen atoms to vacancy-carbon-hydrogen complexes in $\delta$ -iron. Nuclear Materials and Energy, 2022, 31, 101179.	1.3	1
5	Identification of forbidden emission lines from highly ionized tungsten ions in VUV wavelength range in LHD for ITER edge plasma diagnostics. Nuclear Materials and Energy, 2021, 26, 100932.	1.3	2
6	Evaluation of Fe XIV Intensity Ratio for Electron Density Diagnostics by Laboratory Measurements. Atoms, 2021, 9, 60.	1.6	0
7	Emission Lines in 290–360 nm of Highly Charged Tungsten Ions $W^{20+}$ – $W^{29+}$ . Atoms, 2021, 9, 63.	1.6	2
8	Simultaneous Observation of Tungsten Spectra of $W^0$ to $W^{46+}$ Ions in Visible, VUV and EUV Wavelength Ranges in the Large Helical Device. Atoms, 2021, 9, 69.	1.6	3
9	Assessment of W density in LHD core plasmas using visible forbidden lines of highly charged W ions. Nuclear Fusion, 2021, 61, 116008.	3.5	5
10	Observation of line emissions from Ni-like $W^{46+}$ ions in wavelength range of 7–8 Å in the Large Helical Device. Physica Scripta, 2021, 96, 025602.	2.5	4
11	Electron Density Dependence of Extreme Ultraviolet Line Intensity Ratios in Ar XIV. Astrophysical Journal, 2021, 921, 115.	4.5	6
12	Extended Calculations of Energy Levels and Transition Rates for Singly Ionized Lanthanide Elements. II. Tb–Yb. Astrophysical Journal, Supplement Series, 2021, 257, 29.	7.7	11
13	Characteristics of highly charged ions produced at <i>Kobe EBIS</i> under modulated operation. X-Ray Spectrometry, 2020, 49, 74-77.	1.4	0
14	Interaction of highly charged ions with carbon-based materials using <i>Kobe EBIS</i> . X-Ray Spectrometry, 2020, 49, 99-103.	1.4	1
15	Observation of light and secondary ion emissions from surfaces irradiated with highly charged ions. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, .	1.2	3
16	Identification of visible lines from multiply charged $W^{8+}$ and $W^{9+}$ ions. Physical Review A, 2020, 102, .	2.5	13
17	NIFS Atomic and Molecular Numerical Database for Collision Processes. Atoms, 2020, 8, 71.	1.6	5
18	Resonant electron impact excitation of highly charged Fe ions studied with a compact electron beam ion trap. X-Ray Spectrometry, 2020, 49, 511-514.	1.4	1

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19	Extended Calculations of Energy Levels and Transition Rates for Singly Ionized Lanthanide Elements. I. Prâ€“Gd. Astrophysical Journal, Supplement Series, 2020, 248, 17.	7.7	24
20	Energy Level Structure and Transition Data of Er<sup>2+</sup>. Astrophysical Journal, Supplement Series, 2020, 248, 13.	7.7	22
21	Collisional-radiative modeling of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>5</mml:mn><mml:mi>p</mml:mi></mml:mrow></mml:math> spectrum of W&Axi&Agrave; ions. Physical Review A, 2020, 101, .	2.5	12
22	Systematic opacity calculations for kilonovae. Monthly Notices of the Royal Astronomical Society, 2020, 496, 1369-1392.	4.4	144
23	Simulations of Early Kilonova Emission from Neutron Star Mergers. Astrophysical Journal, 2020, 901, 29.	4.5	50
24	Atomic kinetics calculations of complex highly-charged ions in plasmas in non-local thermodynamic equilibrium by using a Monte-Carlo approach. High Energy Density Physics, 2019, 32, 1-7.	1.5	1
25	Extended Calculations of Energy Levels and Transition Rates of Nd ii-iv Ions for Application to Neutron Star Mergers. Astrophysical Journal, Supplement Series, 2019, 240, 29.	7.7	45
26	Observation of electric octupole emission lines strongly enhanced by the anomalous behavior of a cascading contribution. Physical Review A, 2019, 100, .	2.5	7
27	Electron temperature optimization for efficient water-window soft x-ray emission from discharge-produced highly charged zirconium ions. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 3555.	2.1	0
28	Properties of Kilonovae from Dynamical and Post-merger Ejecta of Neutron Star Mergers. Astrophysical Journal, 2018, 852, 109.	4.5	105
29	Atomic and Molecular Data and their Applications. European Physical Journal D, 2018, 72, 1.	1.3	0
30	Energy levels, lifetimes and radiative data of&Agrave; LV. Atomic Data and Nuclear Data Tables, 2018, 119, 354-425.	2.4	6
31	Theoretical investigation on the soft X-ray spectrum of the highly-charged W54+ ions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 7-11.	2.3	14
32	Electron Impact Ionization Cross Sections of Tungsten Atoms and Tungsten Ions. Plasma and Fusion Research, 2018, 13, 3401026-3401026.	0.7	7
33	Collisional radiative model for the M1 transition spectrum of the highly-charged W 54+ ions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 2321-2325.	2.1	7
34	Fusion Research and International Collaboration in the Asian Region. Plasma and Fusion Research, 2018, 13, 3502046-3502046.	0.7	3
35	E1, M1, E2 transition energies and probabilities of W54+ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 045004.	1.5	14
36	Intensity ratio measurements of EUV spectra from Fe ions relevant to solar corona diagnostics. AIP Conference Proceedings, 2017, , .	0.4	1

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37	Experimental evaluation of fractional abundance data for W23+ and W28+. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 055004.	1.5	6
38	Resonant excitation of Fe 14+ observed with a compact electron beam ion trap. Nuclear Instruments & Methods in Physics Research B, 2017, 408, 191-193.	1.4	4
39	Neon-like Iron Ion Lines Measured in NIFS/Large Helical Device (LHD) and Hinode/EUV Imaging Spectrometer (EIS). Astrophysical Journal, 2017, 842, 12.	4.5	2
40	Characterization of functional materials for liquid blanket systems by cathodoluminescence measurement. Fusion Engineering and Design, 2017, 125, 573-576.	1.9	1
41	Correlation, Breit and Quantum Electrodynamics effects on energy level and transition properties of W54+ ion. European Physical Journal D, 2017, 71, 1.	1.3	7
42	Measurements of density dependent intensity ratios of extreme ultraviolet line emission from Fe X, XI, and XII. Astronomy and Astrophysics, 2017, 601, A111.	5.1	15
43	Collisional-radiative model including recombination processes for W27+ ion. European Physical Journal D, 2017, 71, 1.	1.3	2
44	Population trapping: The mechanism for the lost resonance lines in Pm-like ions. Nuclear Instruments & Methods in Physics Research B, 2017, 408, 16-20.	1.4	2
45	Spectral evolution of soft x-ray emission from optically thin, high electron temperature platinum plasmas. APL Photonics, 2017, 2, .	5.7	2
46	Theoretical study on the soft X-ray spectra of E1 transition of W LV ion. Journal of Physics: Conference Series, 2017, 875, 052029.	0.4	0
47	Resonant Electron Impact Excitation of 3d Levels in Fe <sup>14+</sup> and Fe <sup>15+</sup> . Astrophysical Journal, 2017, 851, 82.	4.5	9
48	Direct Observation of the M1 Transition between the Ground Term Fine Structure Levels of W VIII. Atoms, 2017, 5, 13.	1.6	23
49	Extreme ultraviolet spectra of multiply charged tungsten ions. Journal of Physics: Conference Series, 2017, 875, 012019.	0.4	12
50	Potential Effects in the Interaction of Highly Charged Ions with Solid Surfaces. E-Journal of Surface Science and Nanotechnology, 2016, 14, 1-3.	0.4	10
51	Collisional-radiative model for the visible spectrum of W 26+ ions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 874-877.	2.1	21
52	Extreme ultraviolet and visible spectroscopy of promethiumlike heavy ions. Physical Review A, 2015, 92, .	2.5	31
53	Intensity ratio measurements for density sensitive lines of highly charged Fe ions. Hyperfine Interactions, 2015, 235, 45-49.	0.5	4
54	Intensity ratio in EUV spectra of highly charged Fe ions: Experimental evaluation of astrophysical plasma model. Journal of Physics: Conference Series, 2015, 635, 052061.	0.4	0

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55	Photon Emission from Solid Surfaces Irradiated with Highly Charged Ions. Journal of the Vacuum Society of Japan, 2015, 58, 147-149.	0.3	4
56	Level-energy-dependent mean velocities of excited tungsten atoms sputtered by krypton-ion bombardment. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, 061602.	2.1	2
57	Intensity ratio of EUV emission lines in Fe XV studied with electron beam ion traps. Journal of Physics: Conference Series, 2015, 583, 012019.	0.4	7
58	Mechanism of dominance of the Breit interaction in dielectronic recombination. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144002.	1.5	11
59	Characteristics of x-ray emission from optically thin high-Z plasmas in the soft x-ray region. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144011.	1.5	6
60	Properties of the extreme ultraviolet emission from germanium and gallium plasmas. Journal of Applied Physics, 2015, 118, .	2.5	5
61	Atomic-number dependence of the magnetic-sublevel population in the autoionization state formed in dielectronic recombination. Physical Review A, 2014, 90, .	2.5	20
62	Charge state distribution of $^{16}\text{O}$ from the $4\text{He}(^{12}\text{C},^{16}\text{O})\hat{I}^3$ reaction of astrophysical interest studied both experimentally and theoretically. Nuclear Instruments & Methods in Physics Research B, 2014, 328, 14-19.	1.4	2
63	Spectroscopic study of promethiumlike bismuth with an electron-beam ion trap: Search for alkali-metal-like resonance lines. Physical Review A, 2014, 89, .	2.5	16
64	Quasi-Moseley's law for strong narrow bandwidth soft x-ray sources containing higher charge-state ions. Applied Physics Letters, 2014, 104, .	3.3	43
65	Validation of Spectroscopic Model for Fe Ions in Non-Equilibrium Ionization Plasma in LHD and Hinode. Plasma and Fusion Research, 2014, 9, 1401056-1401056.	0.7	5
66	Plasma Diagnostics with Tracer-Encapsulated Solid Pellet. Plasma and Fusion Research, 2014, 9, 1402039-1402039.	0.7	6
67	Alignment in magnetic sub-level populations of excited atomic hydrogen formed by single-electron capture from metal surfaces. Journal of Physics: Conference Series, 2014, 488, 132012.	0.4	0
68	Database of Differential Cross Sections for Hydrogen Ionization by Proton Impact. Lecture Notes in Computer Science, 2014, , 144-151.	1.3	0
69	EBIT spectroscopy of highly charged heavy ions relevant to hot plasmas. , 2013, , .		1
70	Visible transitions of highly charged tungsten ions observed with a compact electron beam ion trap. Physica Scripta, 2013, T156, 014010.	2.5	4
71	Evaluation of Spectroscopic Modeling for Iron Ions and Study on Non-Equilibrium Ionization Phenomena for Solar and LHD Plasmas. Plasma and Fusion Research, 2013, 8, 2501105-2501105.	0.7	2
72	Atomic and Molecular Databases and Data Evaluation Activities at the National Institute for Fusion Science. Fusion Science and Technology, 2013, 63, 400-405.	1.1	3

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73	Turbulence Effects on Bremsstrahlung Emission in the Turbulent Solar Plasma. Publication of the Astronomical Society of Japan, 2012, 64, 19.	2.5	2
74	Spectroscopy of highly charged tungsten ions with Electron Beam Ion Traps. , 2012, , .		7
75	Experimental Demonstration of the Breit Interaction which Dominates the Angular Distribution of X-ray Emission in Dielectronic Recombination. Physical Review Letters, 2012, 108, 073002.	7.8	76
76	Spectra of highly charged Fe ions excited by electron collisions: Dependence on electron energy and density. Journal of Physics: Conference Series, 2012, 388, 062011.	0.4	0
77	M1 transition energies and probabilities between the multiplets of the ground state of Ag-like ions with $Z = 47$ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 035003.	1.5	19
78	Lines from highly charged tungsten ions observed in the visible region between 340 and 400 nm. Canadian Journal of Physics, 2012, 90, 497-501.	1.1	19
79	Collisional-Radiative Modeling of W <sup>27+</sup> and W <sup>28+</sup> . Plasma and Fusion Research, 2012, 7, 2403128-2403128.	0.7	17
80	Visible Transitions in Highly Charged Tungsten Ions: 365 - 475 nm. Plasma and Fusion Research, 2012, 7, 1201158-1201158.	0.7	26
81	Mean velocity of 5d56p excited tungsten atoms sputtered by Kr <sup>+</sup> ion bombardment. Nuclear Instruments & Methods in Physics Research B, 2012, 283, 59-62.	1.4	2
82	Ion-Beam Induced Luminescence and Damage of Er <sub>2</sub> O <sub>3</sub> . Plasma and Fusion Research, 2012, 7, 2405043-2405043.	0.7	4
83	Influence of the Isotope Effect on the Charge-Exchange Process between Hydrogen Isotopes and Ions and Atoms of Plasma Facing Component Materials. Plasma and Fusion Research, 2012, 7, 2401078-2401078.	0.7	0
84	Plasma Diagnostics Required for a Heliotron-Type DEMO Reactor. Plasma and Fusion Research, 2012, 7, 2405053-2405053.	0.7	0
85	Visible spectroscopy of highly charged tungsten ions. Physica Scripta, 2011, T144, 014012.	2.5	21
86	INTENSITY RATIO OF DENSITY-SENSITIVE LINES IN Fe IONS OBSERVED WITH A WELL-DEFINED LABORATORY PLASMA. Astrophysical Journal, 2011, 739, 17.	4.5	28
87	Formation of vacancy clusters in tungsten crystals under hydrogen-rich condition. Journal of Nuclear Materials, 2011, 417, 1115-1118.	2.7	40
88	Structure and dynamics of highly charged heavy ions studied with the electron beam ion trap in Tokyo. Hyperfine Interactions, 2011, 199, 123-130.	0.5	1
89	<i>Ab initio</i> multi-configuration Dirac-Fock calculation of M1 visible transitions among the ground state multiplets of the W <sup>26+</sup> ion. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 145004.	1.5	21
90	Influence of the isotope effect on the charge exchange in slow collisions of Li, Be, and C ions with H, D, and T. Physical Review A, 2011, 84, .	2.5	13

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91	Database and Related Activities in Japan. , 2011, , .		3
92	Interstitial Diffusion of C Interacting with Ambient H in Tungsten Crystals. Plasma and Fusion Research, 2011, 6, 2405062-2405062.	0.7	2
93	Structure and dynamics of highly charged heavy ions studied with the electron beam ion trap in Tokyo. , 2011, , 123-130.		0
94	Resonance charge exchange between excited states in slow proton-hydrogen collisions. Physical Review A, 2010, 82, .	2.5	4
95	Analysis of Fe XXI Spectral Lines Measured in LHD Plasma. Plasma and Fusion Research, 2010, 5, S2021-S2021.	0.7	6
96	Asymmetric profiles observed in the recombination of $Bi$ A benchmark for relativistic theories involving interference. Physical Review A, 2009, 80, .	2.5	16
97	Plasmon and spin interference effects on electron collisions in hot quantum plasmas. Plasma Physics and Controlled Fusion, 2009, 51, 065008.	2.1	2
98	Electron-electron collision effects on the bremsstrahlung emission in Lorentzian plasmas. Plasma Physics and Controlled Fusion, 2009, 51, 015014.	2.1	2
99	Effects of magnetic field and temperature on the nonrelativistic bremsstrahlung process in magnetized anisotropic plasmas. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 1959-1961.	2.1	0
100	Effects of turbulence on the elastic electron-ion collision in turbulent plasmas. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 2351-2354.	2.1	4
101	Experimental evidence and theoretical analysis of photoionized plasma under x-ray radiation produced by an intense laser. Physics of Plasmas, 2008, 15, .	1.9	28
102	Quantum effects on the formation of negative hydrogen ion by polarization electron capture in partially ionized dense hydrogen plasmas. Applied Physics Letters, 2008, 93, 141501.	3.3	3
103	Fast ion charge exchange spectroscopy measurement using a radially injected neutral beam on the large helical device. Review of Scientific Instruments, 2008, 79, 10E519.	1.3	28
104	Pair annihilation effects on a surface ion cyclotron wave in semibounded electron-positron-ion plasmas. Physics of Plasmas, 2008, 15, 092105.	1.9	4
105	Quantum and plasma screening effects on the Wannier threshold law for the double-electron escape in strongly coupled semiclassical plasmas. Physics of Plasmas, 2008, 15, .	1.9	3
106	Quantum effects on the entanglement fidelity in elastic scatterings in strongly coupled semiclassical plasmas. Physics of Plasmas, 2008, 15, .	1.9	9
107	Evidence for Strong Breit Interaction in Dielectronic Recombination of Highly Charged Heavy Ions. Physical Review Letters, 2008, 100, 073203.	7.8	83
108	Total and Partial Dielectronic and Radiative Recombination of $Xe^{10+}$ Ions. Journal of the Physical Society of Japan, 2008, 77, 064302.	1.6	3

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109	Resonant electron processes with open-shell highly charged ion targets. Journal of Physics: Conference Series, 2007, 58, 267-270.	0.4	3
110	Interference between dielectronic and radiative recombination in electron - highly charged Bi collisions. Journal of Physics: Conference Series, 2007, 58, 239-242.	0.4	10
111	Observation of resonant-excitation double autoionization in electron-150+collisions. Physical Review A, 2006, 73, .	2.5	15
112	Investigation of resonant inner-shell processes with an electron beam ion trap. Radiation Physics and Chemistry, 2006, 75, 1749-1752.	2.8	0
113	Shinku/Journal of the Vacuum Society of Japan, 2005, 48, 483-488.	0.2	0
114	Electron transfer and decay processes of highly charged iodine ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 403-415.	1.5	8
115	X-ray spectroscopy of high-Z highly charged ions with the Tokyo EBIT. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 57-61.	1.4	1
116	X-Ray Spectroscopy On Neon-Like Heavy Ions. AIP Conference Proceedings, 2003, , .	0.4	0
117	Single ionization of helium by antiprotons: A case study by self-interaction-free time-dependent density-functional theory. Physical Review A, 2002, 66, .	2.5	26
118	Scaling relation in the collision of hydrogenlike ions with antiprotons. Physical Review A, 2002, 66, .	2.5	13
119	X-ray Spectroscopy of Highly Charged Ions at the Tokyo EBIT. Journal of the Chinese Chemical Society, 2001, 48, 535-537.	1.4	2
120	Density Functional Theory with Optimized Effective Potential: An Application to Hollow Atoms in the Bulk of Metallic Materials. Journal of the Chinese Chemical Society, 2001, 48, 477-482.	1.4	0
121	Fine structure in $3d^4$ States of Highly Charged Ti-like Ions. Journal of the Chinese Chemical Society, 2001, 48, 525-529.	1.4	12
122	Hyperspherical-integrable basis method for energetic proton and anti-proton impact autoionization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, L475-L484.	1.5	10
123	Ionization of atomic hydrogen by antiproton impact: A direct solution of the time-dependent Schrödinger equation. Physical Review A, 2001, 64, .	2.5	30
124	Intensity ratio between Lyman- $\hat{1}\pm 1$ and $\hat{1}\pm 2$ lines of hydrogenlike titanium observed in an electron-beam ion trap. Physical Review A, 2001, 63, .	2.5	43
125	Comparison of Excitation Processes by Proton and Antiproton Impacts on Hydrogen Atoms; Direct Solution of Time Dependent Schrödinger Equation. Journal of the Chinese Chemical Society, 2001, 48, 505-508.	1.4	1
126	Collision Strength Measurement for Electron-Impact Excitation of Neonlike Barium. Journal of the Physical Society of Japan, 2000, 69, 3228-3232.	1.6	2



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127	Mechanisms of giant resonance in 4d photoionization of Eu. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 717-725.	1.5	11
128	Time-dependent Schrödinger equation method: Application to charge transfer and excitation in H and H <sup>+</sup> collisions. Physical Review A, 2000, 62, .	2.5	24
129	Evidence for strong configuration mixing in n=3 excited levels in neonlike ions. Physical Review A, 2000, 61, .	2.5	32
130	Charge capture and impact excitation processes in H <sup>+</sup> on He <sup>+</sup> collisions: a case study by the time-dependent Schrödinger equation method. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 5585-5591.	1.5	9
131	Quantum diffraction and threshold law for the Temkin-Poet model of electron-hydrogen ionization. Physical Review A, 1999, 59, 4385-4389.	2.5	19
132	Ab initio study of interelectronic correlations in electron-impact ionization of hydrogen. Physical Review A, 1997, 56, 3687-3700.	2.5	44
133	Fully quantal treatment of the ionization threshold law: e + H with frozen angular degrees of freedom. Journal of Physics B: Atomic, Molecular and Optical Physics, 1996, 29, L779-L785.	1.5	17
134	Two-Electron Correlations in e + H <sup>+</sup> → e + p Near Threshold. Physical Review Letters, 1995, 74, 2443-2446.	7.8	100
135	Nebular Emission from Lanthanide-rich Ejecta of Neutron Star Merger. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	25