Daiji Kato

List of Publications by Year in descending order

135 papers	1,779 citations	304743 22 h-index	330143 37 g-index
136 all docs	136 docs citations	136 times ranked	1369 citing authors

#	Article	IF	Citations
1	Systematic opacity calculations for kilonovae. Monthly Notices of the Royal Astronomical Society, 2020, 496, 1369-1392.	4.4	144
2	Properties of Kilonovae from Dynamical and Post-merger Ejecta of Neutron Star Mergers. Astrophysical Journal, 2018, 852, 109.	4.5	105
3	Two-Electron Correlations ine+Hâ†'e+e+pNear Threshold. Physical Review Letters, 1995, 74, 2443-2446.	7.8	100
4	Evidence for Strong Breit Interaction in Dielectronic Recombination of Highly Charged Heavy Ions. Physical Review Letters, 2008, 100, 073203.	7.8	83
5	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
6	Simulations of Early Kilonova Emission from Neutron Star Mergers. Astrophysical Journal, 2020, 901, 29.	4.5	50
7	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
8	Ab initiostudy of interelectronic correlations in electron-impact ionization of hydrogen. Physical Review A, 1997, 56, 3687-3700.	2.5	44
9	Intensity ratio between Lyman-Î±1and -Î±2lines of hydrogenlike titanium observed in an electron-beam ion trap. Physical Review A, 2001, 63, .	2.5	43
10	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
11	Formation of vacancy clusters in tungsten crystals under hydrogen-rich condition. Journal of Nuclear Materials, 2011, 417, 1115-1118.	2.7	40
12	Evidence for strong configuration mixing inn=3excited levels in neonlike ions. Physical Review A, 2000, 61, .	2.5	32
13	Extreme ultraviolet and visible spectroscopy of promethiumlike heavy ions. Physical Review A, 2015, 92, .	2.5	31
14	Ionization of atomic hydrogen by antiproton impact:â€ƒA direct solution of the time-dependent SchrÃ¶dinger equation. Physical Review A, 2001, 64, .	2.5	30
15	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
16	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
17	INTENSITY RATIO OF DENSITY-SENSITIVE LINES IN Fe IONS OBSERVED WITH A WELL-DEFINED LABORATORY PLASMA. Astrophysical Journal, 2011, 739, 17.	4.5	28
18	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

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19	Visible Transitions in Highly Charged Tungsten Ions: 365 - 475 nm. Plasma and Fusion Research, 2012, 7, 1201158-1201158.	0.7	26
20	Nebular Emission from Lanthanide-rich Ejecta of Neutron Star Merger. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	25
21	Time-dependent SchrÃ¶dinger equation method:â€ƒApplication to charge transfer and excitation in H andH+collisions. Physical Review A, 2000, 62, .	2.5	24
22	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
23	Direct Observation of the M1 Transition between the Ground Term Fine Structure Levels of W VIII. Atoms, 2017, 5, 13.	1.6	23
24	Energy Level Structure and Transition Data of Er²⁺. Astrophysical Journal, Supplement Series, 2020, 248, 13.	7.7	22
25	Visible spectroscopy of highly charged tungsten ions. Physica Scripta, 2011, T144, 014012.	2.5	21
26	Ab initiomulti-configuration Diracâ€“Fock calculation of M1 visible transitions among the ground state multiplets of the W^{26 +}ion. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 145004.	1.5	21
27	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
28	Atomic-number dependence of the magnetic-sublevel population in the autoionization state formed in dielectronic recombination. Physical Review A, 2014, 90, .	2.5	20
29	Quantum diffraction and threshold law for the Temkin-Poet model of electron-hydrogen ionization. Physical Review A, 1999, 59, 4385-4389.	2.5	19
30	M1 transition energies and probabilities between the multiplets of the ground state of Ag-like ions withZ= 47â€“92. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 035003.	1.5	19
31	Lines from highly charged tungsten ions observed in the visible region between 340 and 400Ânm. Canadian Journal of Physics, 2012, 90, 497-501.	1.1	19
32	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
33	Collisional-Radiative Modeling of W²⁷⁺. Plasma and Fusion Research, 2012, 7, 2403128-2403128.	0.7	17
34	Asymmetric profiles observed in the recombination of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:mtext>Bi</mml:mtext></mml:mrow><mml:mrow><mml:mn>79</mml:m A benchmark for relativistic theories involving interference. Physical Review A, 2009, 80, .	2.5	16
35	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
36	Observation of resonant-excitation double autoionization in electron-I50+collisions. Physical Review A, 2006, 73, .	2.5	15

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37	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
38	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
39	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
40	Scaling relation in the collision of hydrogenlike ions with antiprotons. Physical Review A, 2002, 66, .	2.5	13
41	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
42	Identification of visible lines from multiply charged <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi mathvariant="normal">W</mml:mi></mml:mrow><mml:mrow><mml:mn>8</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msu and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi mathvariant="normal">W</mml:mi></mml:mrow><mml:mrow><mml:mn>9</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msu ions. Physical Review A, 2020, 102, .	2.5	13
43	Theoretical investigation of energy levels and transition for Ce IV. Astronomy and Astrophysics, 2022, 658, A82.	5.1	13
44	Fineâ€structure in 3d⁴ States of Highly Charged Tiâ€like Ions. Journal of the Chinese Chemical Society, 2001, 48, 525-529.	1.4	12
45	Extreme ultraviolet spectra of multiply charged tungsten ions. Journal of Physics: Conference Series, 2017, 875, 012019.	0.4	12
46	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:mo>€’</mml:m spectrum of WÂxivâ€“WÂxvi ions. Physical Review A, 2020, 101, .	2.5	12
47	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
48	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
49	Extended Calculations of Energy Levels and Transition Rates for Singly Ionized Lanthanide Elements. II. Tbâ^Yb. Astrophysical Journal, Supplement Series, 2021, 257, 29.	7.7	11
50	HypersphericalL2-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
51	Interference between dielectronic and radiative recombination in electron - highly charged Bi collisions. Journal of Physics: Conference Series, 2007, 58, 239-242.	0.4	10
52	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
53	Charge capture and impact excitation processes in H+on He+collisions: a case study by the time-dependent SchrÃ¶dinger equation method. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 5585-5591.	1.5	9
54	Quantum effects on the entanglement fidelity in elastic scatterings in strongly coupled semiclassical plasmas. Physics of Plasmas, 2008, 15, .	1.9	9

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55	Resonant Electron Impact Excitation of 3d Levels in Fe¹⁴⁺ and Fe¹⁵⁺. Astrophysical Journal, 2017, 851, 82.	4.5	9
56	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
57	Spectroscopy of highly charged tungsten ions with Electron Beam Ion Traps. , 2012, , .		7
58	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
59	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
60	Electron Impact Ionization Cross Sections of Tungsten Atoms and Tungsten Ions. Plasma and Fusion Research, 2018, 13, 3401026-3401026.	0.7	7
61	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
62	Observation of electric octupole emission lines strongly enhanced by the anomalous behavior of a cascading contribution. Physical Review A, 2019, 100, .	2.5	7
63	Plasma Diagnostics with Tracer-Encapsulated Solid Pellet. Plasma and Fusion Research, 2014, 9, 1402039-1402039.	0.7	6
64	Characteristics of x-ray emission from optically thin high-Zplasmas in the soft x-ray region. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144011.	1.5	6
65	Experimental evaluation of fractional abundance data for W23+â€“W28+. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 055004.	1.5	6
66	Energy levels, lifetimes and radiative data ofÂW LV. Atomic Data and Nuclear Data Tables, 2018, 119, 354-425.	2.4	6
67	Analysis of Fe XXI Spectral Lines Measured in LHD Plasma. Plasma and Fusion Research, 2010, 5, S2021-S2021.	0.7	6
68	Electron Density Dependence of Extreme Ultraviolet Line Intensity Ratios in Ar XIV. Astrophysical Journal, 2021, 921, 115.	4.5	6
69	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
70	Properties of the extreme ultraviolet emission from germanium and gallium plasmas. Journal of Applied Physics, 2015, 118, .	2.5	5
71	NIFS Atomic and Molecular Numerical Database for Collision Processes. Atoms, 2020, 8, 71.	1.6	5
72	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

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73	Pair annihilation effects on a surface ion cyclotron wave in semibounded electron-positron-ion plasmas. Physics of Plasmas, 2008, 15, 092105.	1.9	4
74	Effects of turbulence on the elastic electronâ€“ion collision in turbulent plasmas. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 2351-2354.	2.1	4
75	Resonance charge exchange between excited states in slow proton-hydrogen collisions. Physical Review A, 2010, 82, .	2.5	4
76	Visible transitions of highly charged tungsten ions observed with a compact electron beam ion trap. Physica Scripta, 2013, T156, 014010.	2.5	4
77	Intensity ratio measurements for density sensitive lines of highly charged Fe ions. Hyperfine Interactions, 2015, 235, 45-49.	0.5	4
78	Photon Emission from Solid Surfaces Irradiated with Highly Charged Ions. Journal of the Vacuum Society of Japan, 2015, 58, 147-149.	0.3	4
79	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
80	Observation of line emissions from Ni-like W46 + ions in wavelength range of 7â€“8 Ã... in the Large Helical Device. Physica Scripta, 2021, 96, 025602.	2.5	4
81	Ion-Beam Induced Luminescence and Damage of Er₂O₃. Plasma and Fusion Research, 2012, 7, 2405043-2405043.	0.7	4
82	Resonant electron processes with open-shell highly charged ion targets. Journal of Physics: Conference Series, 2007, 58, 267-270.	0.4	3
83	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
84	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
85	Total and Partial Dielectronic and Radiative Recombination of Xe¹⁰⁺ Ions. Journal of the Physical Society of Japan, 2008, 77, 064302.	1.6	3
86	Database and Related Activities in Japan. , 2011, , .		3
87	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
88	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
89	Simultaneous Observation of Tungsten Spectra of W0 to W46+ Ions in Visible, VUV and EUV Wavelength Ranges in the Large Helical Device. Atoms, 2021, 9, 69.	1.6	3
90	Fusion Research and International Collaboration in the Asian Region. Plasma and Fusion Research, 2018, 13, 3502046-3502046.	0.7	3

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91	Collision Strength Measurement for Electron-Impact Excitation of Neonlike Barium. Journal of the Physical Society of Japan, 2000, 69, 3228-3232.	1.6	2
92	X-ray Spectroscopy of Highly Charged Ions at the Tokyo EBIT. Journal of the Chinese Chemical Society, 2001, 48, 535-537.	1.4	2
93	Plasmon and spin interference effects on electron collisions in hot quantum plasmas. Plasma Physics and Controlled Fusion, 2009, 51, 065008.	2.1	2
94	Electronâ€“electron collision effects on the bremsstrahlung emission in Lorentzian plasmas. Plasma Physics and Controlled Fusion, 2009, 51, 015014.	2.1	2
95	Turbulence Effects on Bremsstrahlung Emission in the Turbulent Solar Plasma. Publication of the Astronomical Society of Japan, 2012, 64, 19.	2.5	2
96	Mean velocity of 5d56p excited tungsten atoms sputtered by Kr+ ion bombardment. Nuclear Instruments & Methods in Physics Research B, 2012, 283, 59-62.	1.4	2
97	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
98	Charge state distribution of 16O from the 4He(12C,16O)Î³ reaction of astrophysical interest studied both experimentally and theoretically. Nuclear Instruments & Methods in Physics Research B, 2014, 328, 14-19.	1.4	2
99	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
100	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
101	Collisional-radiative model including recombination processes for W27+ ion. European Physical Journal D, 2017, 71, 1.	1.3	2
102	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
103	Spectral evolution of soft x-ray emission from optically thin, high electron temperature platinum plasmas. APL Photonics, 2017, 2, .	5.7	2
104	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
105	Emission Lines in 290â€“360 nm of Highly Charged Tungsten Ions W20+â€“W29+. Atoms, 2021, 9, 63.	1.6	2
106	Interstitial Diffusion of C Interacting with Ambient H in Tungsten Crystals. Plasma and Fusion Research, 2011, 6, 2405062-2405062.	0.7	2
107	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Z</mml:mi></mml:math> -dependent crossing of excited-state energy levels in highly charged galliumlike lanthanide atomic ions. Physical Review A, 2022, 105, .	2.5	2
108	Comparison of Excitation Processes by Proton and Antiproton Impacts on Hydrogen Atoms; Direct Solution of Time Dependent SchrÃ¶dinger Equation. Journal of the Chinese Chemical Society, 2001, 48, 505-508.	1.4	1

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109	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
110	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
111	EBIT spectroscopy of highly charged heavy ions relevant to hot plasmas. , 2013, , .		1
112	Intensity ratio measurements of EUV spectra from Fe ions relevant to solar corona diagnostics. AIP Conference Proceedings, 2017, , .	0.4	1
113	Characterization of functional materials for liquid blanket systems by cathodoluminescence measurement. Fusion Engineering and Design, 2017, 125, 573-576.	1.9	1
114	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
115	Interaction of highly charged ions with carbonâ€based materials using <scp>Kobe EBIS</scp>. X-Ray Spectrometry, 2020, 49, 99-103.	1.4	1
116	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
117	Laser Induced Breakdown Spectroscopy of Er II for Transition Probability Measurements. Applied Sciences (Switzerland), 2022, 12, 2219.	2.5	1
118	Effect of uniaxial tensile strain on binding energy of hydrogen atoms to vacancy-carbon-hydrogen complexes in Î±-iron. Nuclear Materials and Energy, 2022, 31, 101179.	1.3	1
119	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
120	X-Ray Spectroscopy On Neon-Like Heavy Ions. AIP Conference Proceedings, 2003, , .	0.4	0
121	Investigation of resonant inner-shell processes with an electron beam ion trap. Radiation Physics and Chemistry, 2006, 75, 1749-1752.	2.8	0
122	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
123	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
124	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
125	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
126	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

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127	Atomic and Molecular Data and their Applications. European Physical Journal D, 2018, 72, 1.	1.3	0
128	Characteristics of highly charged ions produced at <scp>Kobe EBIS</scp> under modulated operation. X-Ray Spectrometry, 2020, 49, 74-77.	1.4	0
129	Evaluation of Fe XIV Intensity Ratio for Electron Density Diagnostics by Laboratory Measurements. Atoms, 2021, 9, 60.	1.6	0
130	ãƒ—ãƒ©ã‚ºãƒžã‚¤ã‚¯ãƒæ³¢ã‚¤ã‚ªãƒ³æº. Shinku/Journal of the Vacuum Society of Japan, 2005, 48, 483-488.	0.2	0
131	Structure and dynamics of highly charged heavy ions studied with the electron beam ion trap in Tokyo. , 2011, , 123-130.		0
132	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
133	Plasma Diagnostics Required for a Heliotron-Type DEMO Reactor. Plasma and Fusion Research, 2012, 7, 2405053-2405053.	0.7	0
134	Database of Differential Cross Sections for Hydrogen Ionization by Proton Impact. Lecture Notes in Computer Science, 2014, , 144-151.	1.3	0
135	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