

Marek Polasik

List of Publications by Year in descending order

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121
papers

1,900
citations

201575

27
h-index

315616

38
g-index

121
all docs

121
docs citations

121
times ranked

493
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of changes in the valence electronic configuration on the K_{L2} -to- K_{L1} x-ray intensity ratios of the 3d transition metals. <i>Physical Review A</i> , 1998, 58, 1840-1845.	1.0	74
2	Theoretical multiconfiguration Dirac-Fock method study on the x-ray spectra of multiply ionized heavy atoms: The structure of the K_{L1} lines. <i>Physical Review A</i> , 1989, 39, 616-627.	1.0	65
3	Systematic multiconfiguration-Dirac-Fock study of the x-ray spectra accompanying the ionization in collision processes: The structure of the K_{L1} lines. <i>Physical Review A</i> , 1995, 52, 227-235.	1.0	60
4	Valence electronic structure of Ti, Cr, Fe and Co in some alloys from K_{L2} -to- K_{L1} X-ray intensity ratio studies. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2002, 195, 367-373.	0.6	52
5	Isomer depletion as experimental evidence of nuclear excitation by electron capture. <i>Nature</i> , 2018, 554, 216-218.	13.7	52
6	Influence of solid-state effects on the K_{L2} -to- K_{L1} x-ray intensity ratios of Ni and Cu in various silicide compounds. <i>Physical Review B</i> , 1998, 58, 9025-9029.	1.1	51
7	M- and L-shell ionization in near-central collisions of 5.5-MeV/amu O^{16} ions with Mo atoms deduced from theoretical analysis of high-resolution Kx-ray spectra. <i>Physical Review A</i> , 1992, 46, 3893-3903.	1.0	49
8	Influence of chemical effect on the K_{L2} -to- K_{L1} x-ray intensity ratios of Cr, Mn and Co in CrSe, MnSe, MnS and CoS. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2000, 160, 443-448.	0.6	49
9	Second-order correlation energies for F^{10+} , Na^{1+} , Mg^{2+} , and Ar^{8+} : Z dependence of irreducible-pair energies. <i>Physical Review A</i> , 1980, 22, 51-60.	1.0	48
10	Theoretical multiconfiguration Dirac-Fock method study on the x-ray spectra of multiply ionized heavy atoms: The structure of the K_{L1} lines. <i>Physical Review A</i> , 1989, 40, 4361-4368.	1.0	46
11	Influence of chemical effect on the K_{L2} -to- K_{L1} X-ray intensity ratios of Ti, V, Cr and Fe in TiC, VC, CrB, CrB ₂ and FeB. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1998, 145, 485-491.	0.6	46
12	Theoretical simulation of the x-ray spectra of multiply ionized heavy atoms: The K_{L1} spectra of molybdenum. <i>Physical Review A</i> , 1989, 39, 5092-5097.	1.0	44
13	Influence of alloying effect on K_{L2}/K_{L1} X-ray intensity ratios of V and Ni in V_xNi_{1-x} alloys. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1999, 155, 143-152.	0.6	43
14	Second-order electron correlation energies for Zn^{2+} and Zn. <i>Journal of Chemical Physics</i> , 1982, 76, 448-457.	1.2	39
15	On the calculation of K_{L2}/K_{L1} X-ray intensity ratios. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989, 22, 2369-2376.	0.6	39
16	M-shell ionization resulting from near-central collisions of mid-Z atoms with 5.5-MeV/amu oxygen ions. <i>Physical Review A</i> , 1994, 49, 2524-2534.	1.0	39
17	K_{L2} -to- K_{L1} X-ray intensity ratio studies on the changes of valence electronic structures of Ti, V, Cr, and Co in their disilicide compounds. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1999, 152, 417-424.	0.6	37
18	Theoretical multiconfiguration Dirac-Fock method study on the x-ray spectra of multiply ionized heavy atoms: The structure of the K_{L1} satellite lines. <i>Physical Review A</i> , 1990, 41, 3689-3697.	1.0	36

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19	Second-order correlation energies of Mg and Ar. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 3157-3170.	1.6	35
20	L-shell shake processes resulting from 1s photoionization in elements 11 Z \leq 17. Physical Review A, 2000, 62, .	1.0	35
21	Relative K α -ray intensity studies of the valence electronic structure of 3d transition metals. Physical Review B, 2002, 65, .	1.1	33
22	Charge transfer studies in V 3 Si, Cr 3 Si and FeSi. Solid State Communications, 1999, 110, 275-279.	0.9	31
23	Pair correlation energies for the 3d shell. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 345-353.	1.6	30
24	Probabilities for M-shell ionization in intermediate-velocity collisions of medium-mass atoms with 4He ²⁺ ions. Physical Review A, 1998, 57, 235-245.	1.0	29
25	K β hypersatellite lines of medium-mass atoms induced by 100-MeV He ²⁺ ions. Physical Review A, 1995, 51, 3650-3659.	1.0	28
26	K β hypersatellite x-ray intensity ratio studies of the valence electronic structure of Fe and Ni in FeNi alloys. Physical Review B, 2001, 63, .	1.1	28
27	Energy-dependent K α double photoexcitation of argon. Physical Review A, 2002, 65, .	1.0	28
28	Valence electronic structure of Fe and Ni in FeNi alloys from relative K X-ray intensity studies. Solid State Communications, 2000, 116, 563-567.	0.9	27
29	Hypersatellite Line Broadening as a Signature of K α Shell Double Photoionization Followed by Outer-Shell Ionization and Excitation. Physical Review Letters, 2011, 107, 073001.	2.9	26
30	High-resolution study of the K β x-ray spectra induced by proton and photon impact on Zr, Mo, and Pd targets. Physical Review A, 1995, 52, 2791-2803.	1.0	24
31	Accurate second order correlation energies of He and Be. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 2965-2969.	1.6	23
32	Interpretation of the Si K α x-ray spectra accompanying the stopping of swift Ca ions in low-density SiO ₂ aerogel. Physical Review A, 2016, 94, .	1.0	23
33	Line widths, asymmetry indices, and K α probabilities in elements Ca to Ge and comparison with theory for Ca, Ti, and Ge. Physical Review A, 2016, 94, .	1.0	23
34	Observation of L-X-ray satellites and hypersatellites in collisions of O and Ne ions with Mo and Pd. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 133-138.	0.6	22
35	Structure of high-resolution K α x-ray emission spectra for the elements from Ca to Ge. Physical Review A, 2018, 97, .	1.0	22
36	Electron-impact-induced K α shell ionization in solid targets of medium-Z elements studied by means of high-resolution x-ray spectroscopy. Physical Review A, 1996, 54, 232-240.	1.0	21

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37	High-resolution study of the K_{L2} x-ray spectra of mid-Z atoms bombarded with 20-MeV/amu ^{12}C ions. <i>Physical Review A</i> , 2003, 68, .	1.0	20
38	Transferability of the partial-wave increments to the second-order pair correlation energies for atoms. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1980, 13, 3909-3919.	1.6	18
39	Studies of the K_{L2} X-ray spectra of low-density SiO_2 aerogel induced by Ca projectiles for different penetration depths. <i>High Energy Density Physics</i> , 2007, 3, 233-236.	0.4	18
40	Second-order electron correlation energies for some $3d^{10}$ and $3d^{10}4s^2$ ions. <i>Journal of Chemical Physics</i> , 1985, 82, 841-847.	1.2	16
41	K and L-shell ionization of heavy targets by various 20- and 80-MeV/u projectiles. <i>Physical Review A</i> , 2001, 64, .	1.0	16
42	Multiple ionization effects in x-ray emission induced by heavy ions. <i>Brazilian Journal of Physics</i> , 2006, 36, 546-549.	0.7	16
43	An approximate method for the evaluation of electron correlation effects on atomic energy differences. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1984, 17, 2393-2411.	1.6	15
44	Simultaneous L- and M-shell ionization of a ^{80}Se target deduced from the analysis of energy shifts and relative intensities of K x-ray lines induced by various projectiles. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1999, 32, 3711-3725.	0.6	15
45	The study of Th M-X-ray satellites and hypersatellites induced by energetic O and Ne ions. <i>Radiation Physics and Chemistry</i> , 2003, 68, 121-125.	1.4	14
46	Tungsten L transition line shapes and energy shifts resulting from ionization in warm dense matter. <i>High Energy Density Physics</i> , 2013, 9, 354-362.	0.4	14
47	Novel Approach to $\langle \mathbf{r}^{-1} \rangle$ for Mo Isomer Depletion: Nuclear Excitation by Electron Capture in Resonant Transfer Process. <i>Physical Review Letters</i> , 2021, 127, 042501.	2.9	14
48	Configurations of highly ionized fast sulphur projectiles passing through a carbon foil evaluated from low-resolution K x-ray spectra. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2002, 35, 1941-1957.	0.6	13
49	High-resolution X-ray study of the multiple ionization of Pd atoms by fast oxygen ions. <i>European Physical Journal D</i> , 2010, 57, 321-324.	0.6	12
50	Influence of multiple outer-shell electron stripping on the K_{L2} and K_{L2}^2 x-ray energies of iridium. <i>Physica Scripta</i> , 2013, T156, 014083.	1.2	12
51	Differential correlation effects for states of the $3d^n$ and $3d^n 4s^m$ configurations. I. The copper and zinc atoms and their ions. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1985, 18, 2133-2146.	1.6	11
52	He-like hole states in mid-Z atoms studied by high-resolution K X-ray spectroscopy. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 264, 186-191.	0.9	11
53	Valence electronic structure of Mn in undoped and doped lanthanum manganites from relative K X-ray intensity studies. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 174, 344-350.	0.6	11
54	Effect of L- and M-shell ionization on the shapes and parameters of the K X-ray spectra of sulphur. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 205, 123-127.	0.6	11

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55	Natural widths of hypersatellite K-X-ray lines and lifetimes of double K-hole states in mid-Z atoms. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 110-115.	0.6	11
56	Structure of L-X-ray satellite and hypersatellite lines of palladium. Radiation Physics and Chemistry, 2006, 75, 1471-1476.	1.4	11
57	Modeling of the L and M x-ray line structures for tungsten in high-temperature tokamak plasmas. Physica Scripta, 2014, T161, 014015.	1.2	11
58	On the interpretation of high-resolution x-ray spectra from JET with an ITER-like wall. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144028.	0.6	11
59	Possibility of extraction of various KL0M1 and KL1M0 satellite lines in the x-ray spectra of medium-Z and heavy atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 1169-1186.	0.6	10
60	Satellite and hypersatellite structures of $L_{\pm 1}$ transitions in mid-Z atoms. Physical Review A, 2013, 88, .	1.0	10
61	Resonance conditions for Mo93m isomer depletion via nuclear excitation by electron capture in a beam-based scenario. Physical Review C, 2017, 95, .	1.1	10
62	Electron pair correlation energies for ZN ²⁺ . International Journal of Quantum Chemistry, 1979, 16, 65-70.	1.0	9
63	Differential correlation effects for states of the 3d and 3d ⁴ s configurations. II. A complete study of the energy splittings for the nickel atom. Journal of Physics B: Atomic and Molecular Physics, 1985, 18, 4383-4391.	1.6	9
64	Structure of various KL ₁ x-ray satellite lines of heavy atoms. Physical Review A, 2004, 70, .	1.0	9
65	Structure of M-X-ray satellite and hypersatellite lines of thorium. Radiation Physics and Chemistry, 2006, 75, 1497-1502.	1.4	9
66	Observation of internal structure of the L-shell x-ray hypersatellites for palladium atoms multiply ionized by fast oxygen ions. Physical Review A, 2010, 81, .	1.0	9
67	Near-coincident K-line and K-edge energies as ionization diagnostics for some high atomic number plasmas. Physics of Plasmas, 2012, 19, .	0.7	9
68	A 10 eV ionization shift in Ir K _{1,2} from a near-coincident Lu K-edge. Review of Scientific Instruments, 2012, 83, 10E110.	0.6	9
69	Reply to: Possible overestimation of isomer depletion due to contamination. Nature, 2021, 594, E3-E4.	13.7	9
70	Theoretical multiconfiguration Dirac-Fock method study on the structure of L-X-ray satellite and hypersatellite lines of zirconium. Journal of Physics: Conference Series, 2007, 58, 263-266.	0.3	8
71	High-resolution (Δλ/λ ≈ 0.05%) red shift of a 60 keV K _{1,2} line upon ionization. High Energy Density Physics, 2013, 9, 500-504.	0.4	8
72	Ionization energy shift of characteristic K x-ray lines from high-Z materials for plasma diagnostics. Physics of Plasmas, 2014, 21, 031216.	0.7	8

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73	Study of x-ray and L-REC photon emissions from highly ionized swift and projectiles passing through a thin carbon foil. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1998, 31, 1225-1236.	0.6	6
74	Highly excited states of sulphur projectiles inside a carbon target. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 205, 799-807.	0.6	6
75	Structure of $K_{\pm 1}$ and $K_{\pm 2}$ emission x-ray spectra for Se, Y, and Zr. <i>Physical Review A</i> , 2020, 102, .	1.0	6
76	Convergence patterns of the configuration-interaction expansion for excited 21S and 31S states of the helium atom. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1977, 10, 1231-1239.	1.6	5
77	Studies on the valence electronic structure of Fe and Ni in Fe x Ni ^x alloys. <i>Pramana - Journal of Physics</i> , 2002, 58, 783-786.	0.9	5
78	Dynamics of formation of K-hole fractions of sulfur projectiles inside a carbon foil. <i>Physical Review A</i> , 2004, 69, .	1.0	5
79	Comparison of the structure of various KL0M1 and KL1M0 x-ray satellite lines of lead. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, 2407-2425.	0.6	5
80	Vacancy rearrangement processes in multiply ionized atoms. <i>Journal of Physics: Conference Series</i> , 2007, 58, 295-298.	0.3	5
81	Precise x-ray energies of gadolinium determined by a combined experimental and theoretical approach. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 236, 106585.	1.1	5
82	Beam-based scenario for ^{242}mAm isomer depletion via nuclear excitation by electron capture. <i>Physical Review C</i> , 2019, 99, .	1.1	5
83	M-subshell ionization in near-central collisions of 20-MeV/amu carbon ions with molybdenum atoms. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 205, 128-132.	0.6	4
84	Theoretical shapes of K x-ray spectra for lead as predicted by MCDF calculations. <i>X-Ray Spectrometry</i> , 2007, 36, 66-71.	0.9	4
85	Systematic multiconfiguration Dirac-Fock method study of the K-X-ray spectra of silicon. <i>Journal of Physics: Conference Series</i> , 2009, 163, 012040.	0.3	4
86	Diagnostics of plasma based on K, L and M x-ray line positions. <i>Physica Scripta</i> , 2014, T161, 014033.	1.2	4
87	K X-ray line energies as diagnostics of warm dense plasma. <i>High Energy Density Physics</i> , 2015, 14, 30-32.	0.4	4
88	Structure of single KL0 ⁺ , double KL1 ⁺ , and triple KL2 ⁺ ionization in Mg, Al, and Si targets induced by photons, and their absorption spectra. <i>Radiation Physics and Chemistry</i> , 2022, 194, 110048.	1.4	4
89	High-Resolution Measurements of Th and U L ₂ -X-rays Induced by Energetic O Ions. <i>Physica Scripta</i> , 2001, T92, 382-384.	1.2	3
90	Theoretical predictions of the structure of M-X-ray lines of heavy atoms. <i>Journal of Physics: Conference Series</i> , 2009, 163, 012049.	0.3	3

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91	Equilibrium K-, L-, and M-shell ionizations and charge-state distribution of sulfur projectiles passing through solid targets. <i>Physical Review A</i> , 2010, 82, .	1.0	3
92	The K X-ray line structures for a warm dense copper plasma. <i>High Energy Density Physics</i> , 2015, 15, 8-11.	0.4	3
93	Modeling of the K and L x-ray line structures for molybdenum ions in warm dense Z-pinch plasma. <i>High Energy Density Physics</i> , 2015, 14, 44-46.	0.4	3
94	Scattering of sulfur ions by carbon: Classical-trajectory Monte Carlo results. <i>Physical Review A</i> , 2003, 67, .	1.0	2
95	Dirac-Fock method study on the structure and shapes of various KL1 X-ray satellite lines of terbium and tantalum. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005, 235, 235-239.	0.6	2
96	Sulphur ion charge states inside solids from low-resolution K X-ray spectra. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005, 235, 403-407.	0.6	2
97	Modeling of the M X-ray line structures for tungsten and L X-ray line structures for molybdenum. <i>Journal of Physics: Conference Series</i> , 2015, 583, 012036.	0.3	2
98	The K x-ray line structures of the 3d-transition metals in warm dense plasma. <i>High Energy Density Physics</i> , 2016, 20, 29-33.	0.4	2
99	Designing Atomic Resonance Conditions for ^{93m}Mo Isomer Depletion Via Nuclear Excitation by Electron Capture in a Beam-based Scenario for Selected Targets. <i>Acta Physica Polonica B</i> , 2019, 50, 1359.	0.3	2
100	^{93m}Mo Isomer Depletion via Nuclear Excitation by Electron Capture: Energy Released for Different Atomic Subshells as Benchmarks for a Beam-based Scenario Approach. <i>Acta Physica Polonica B</i> , 2019, 50, 651.	0.3	2
101	High resolution study of $K\tilde{L}$ hypersatellites spectrum of ^{16}O atoms induced by 17 MeV/u ^{42}Ar beam. , 1997, .		1
102	Semi-classical approaches to the ion-atom scattering. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005, 235, 337-341.	0.6	1
103	Influence of changes in the valence electronic configuration on the structure of L-X-ray spectra of molybdenum. <i>Journal of Physics: Conference Series</i> , 2009, 163, 012050.	0.3	1
104	Lifetimes of doubly K-shell ionized states. <i>Physica Scripta</i> , 2011, T144, 014021.	1.2	1
105	Theoretical structures of the satellite and hypersatellite M-x-ray lines of uranium. <i>Physica Scripta</i> , 2013, T156, 014021.	1.2	1
106	Modelling of the soft X-ray tungsten spectra expected to be registered by GEM detection system for WEST. <i>Nukleonika</i> , 2016, 61, 433-436.	0.3	1
107	Individual contributions of M X-ray line from Cu- and Co-like tungsten ions and L X-ray line from Ne-like molybdenum ions – Benchmarks for new approach to determine the high-temperature tokamak plasma parameters. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017, 408, 265-270.	0.6	1
108	Theoretical Modeling of High-Resolution X-ray Spectra Emitted by Tungsten and Molybdenum Ions from Tokamak Plasmas. <i>Journal of Fusion Energy</i> , 2020, 39, 194-201.	0.5	1

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109	Diagnostics of the plasma parameters based on the K X-ray line positions for various 4d and 4f metals. Nukleonika, 2016, 61, 437-441.	0.3	1
110	Studies of Optimal Conditions for Depletion of the ^{110m}Ag Isomer Via Nuclear Excitation by Electron Capture in a Beam-based Scenario. Acta Physica Polonica B, 2020, 51, 393.	0.3	1
111	X-ray emission studies from highly ionized swift projectiles passing through thin carbon foil. Physica Scripta, 1997, T73, 230-232.	1.2	0
112	Systematic Dirac-Fock method study of the X-ray spectra accompanying the ionization in collision processes: The structure of the $K\alpha_1$ lines. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 240-244.	0.6	0
113	Theoretical predictions of the shapes and parameters of satellite and hypersatellite M-X-ray lines of heavy atoms. Journal of Physics: Conference Series, 2009, 194, 152015.	0.3	0
114	The satellites and hypersatellites of $L_{2,3}$ x-ray transitions in zirconium excited by oxygen and neon ions. Journal of Physics: Conference Series, 2009, 194, 152012.	0.3	0
115	Influence of changes in the valence electronic configurations on the structure of K-X-ray spectra of 3d and 4d transition metals. Journal of Physics: Conference Series, 2009, 194, 022020.	0.3	0
116	Influence of changes in the valence electronic configuration on the structure of L-X-ray lines of 4d transition-metals. Journal of Physics: Conference Series, 2009, 194, 152014.	0.3	0
117	Equilibrium degree of K-, L- and M-shell ionizations of sulfur projectiles passing through solid targets. Physica Scripta, 2011, T144, 014018.	1.2	0
118	Energy shifts of K- and L-lines as spectroscopic diagnostic of Z-pinch plasmas. , 2014, , .		0
119	Modeling of soft N, M and L X-ray lines from tungsten relevant to plasma parameters in the WEST tokamak. Nuclear Instruments & Methods in Physics Research B, 2017, 408, 257-264.	0.6	0
120	Unraveling the origin of the complex structure of the thorium $L_{2,3}$ x-ray lines in high-resolution spectra induced by heavy projectiles. Physical Review A, 2017, 96, .		
121	Energy shift of the $L_{2,3}$ line as an ionization diagnostic for the dense plasma in the PFRP. Nuclear Instruments & Methods in Physics Research B, 2017, 408, 248-252.	0.6	0