

# Marek Polasik

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6333167/publications.pdf>

Version: 2024-02-01

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	Structure of single KLO <sup>+</sup> , double KL1 <sup>+</sup> , and triple KL2 <sup>+</sup> ionization in Mg, Al, and Si targets induced by photons, and their absorption spectra. Radiation Physics and Chemistry, 2022, 194, 110048.	1.4	4
2	Reply to: Possible overestimation of isomer depletion due to contamination. Nature, 2021, 594, E3-E4.	13.7	9
3	Novel Approach to $^{93}\text{mMo}$ Isomer Depletion: Nuclear Excitation by Electron Capture in Resonant Transfer Process. Physical	2.9	14
4	Structure of $K_{\pm 1}^{\pm}$ and $K_{\pm 2}^{\pm}$ -emission x-ray spectra for Se, Y, and Zr. Physical Review A, 2020, 102, .	1.0	6
5	Theoretical Modeling of High-Resolution X-ray Spectra Emitted by Tungsten and Molybdenum Ions from Tokamak Plasmas. Journal of Fusion Energy, 2020, 39, 194-201.	0.5	1
6	Studies of Optimal Conditions for Depletion of the $^{110\text{m}}\text{Ag}$ Isomer Via Nuclear Excitation by Electron Capture in a Beam-based Scenario. Acta Physica Polonica B, 2020, 51, 393.	0.3	1
7	Precise x-ray energies of gadolinium determined by a combined experimental and theoretical approach. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 236, 106585.	1.1	5
8	Beam-based scenario for $^{242}\text{mAm}$ isomer depletion via nuclear excitation by electron capture. Physical Review C, 2019, 99, .	1.1	5
9	Designing Atomic Resonance Conditions for $^{93\text{m}}\text{Mo}$ Isomer Depletion Via Nuclear Excitation by Electron Capture in a Beam-based Scenario for Selected Targets. Acta Physica Polonica B, 2019, 50, 1359.	0.3	2
10	$^{93\text{m}}\text{Mo}$ Isomer Depletion via Nuclear Excitation by Electron Capture: Energy Released for Different Atomic Subshells as Benchmarks for a Beam-based Scenario Approach. Acta Physica Polonica B, 2019, 50, 651.	0.3	2
11	Isomer depletion as experimental evidence of nuclear excitation by electron capture. Nature, 2018, 554, 216-218.	13.7	52
12	Structure of high-resolution $K_{\pm 1}^{\pm}$ x-ray emission spectra for the elements from Ca to Ge. Physical Review A, 2018, 97, .	1.0	22
13	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. Nuclear Instruments & Methods in Physics Research B, 2017, 408, 265-270.	0.6	1
14	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
15	Unraveling the origin of the complex structure of the thorium $L_{\pm 3}^{\pm}$ x-ray lines in high-resolution spectra induced by heavy projectiles. Physical Review A, 2017, 96, .	0.6	0
16	Resonance conditions for $^{93\text{m}}\text{Mo}$ isomer depletion via nuclear excitation by electron capture in a beam-based scenario. Physical Review C, 2017, 95, .	1.1	10
17	Energy shift of the $L_{\pm 2}^{\pm}$ 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
18	linewidths, asymmetry indices, and $M_{\pm 2}^{\pm}$ probabilities in elements Ca to Ge and comparison with theory for Ca, Ti, and Ge. Physical Review A, 2016, 94, .	1.0	23

#	ARTICLE	IF	CITATIONS
19	The K x-ray line structures of the 3d-transition metals in warm dense plasma. High Energy Density Physics, 2016, 20, 29-33.	0.4	2
20	Modelling of the soft X-ray tungsten spectra expected to be registered by GEM detection system for WEST. Nukleonika, 2016, 61, 433-436.	0.3	1
21	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
22	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
23	K X-ray line energies as diagnostics of warm dense plasma. High Energy Density Physics, 2015, 14, 30-32.	0.4	4
24	The K X-ray line structures for a warm dense copper plasma. High Energy Density Physics, 2015, 15, 8-11.	0.4	3
25	Modeling of the M X-ray line structures for tungsten and L X-ray line structures for molybdenum. Journal of Physics: Conference Series, 2015, 583, 012036.	0.3	2
26	Modeling of the K and L x-ray line structures for molybdenum ions in warm dense Z-pinch plasma. High Energy Density Physics, 2015, 14, 44-46.	0.4	3
27	Energy shifts of K- and L-lines as spectroscopic diagnostic of Z-pinch plasmas. , 2014, , .		0
28	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
29	Diagnostics of plasma based on K, L and M x-ray line positions. Physica Scripta, 2014, T161, 014033.	1.2	4
30	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
31	Tungsten L transition line shapes and energy shifts resulting from ionization in warm dense matter. High Energy Density Physics, 2013, 9, 354-362.	0.4	14
32	High-resolution ( $\sim 0.05\%$ ) red shift of a $\sim 60\text{ keV } K^2$ line upon ionization. High Energy Density Physics, 2013, 9, 500-504.	0.4	8
33	Influence of multiple outer-shell electron stripping on the $K_{\pm 1}$ and $K_{\pm 2}$ x-ray energies of iridium. Physica Scripta, 2013, T156, 014083.	1.2	12
34	Satellite and hypersatellite structures of $L_{\pm 1}$ and $L_{\pm 2}$ x-ray transitions in mid-Z plasmas. Physical Review A, 2013, 88, .	1.0	10
35	Theoretical structures of the satellite and hypersatellite M-x-ray lines of uranium. Physica Scripta, 2013, T156, 014021.	1.2	1
36	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

#	ARTICLE	IF	CITATIONS
37	$f_{10}$ eV ionization shift in Ir $K_{\pm 2}$ from a near-coincident Lu K-edge. Review of Scientific Instruments, 2012, 83, 10E110.	0.6	9
38	Equilibrium degree of K-, L- and M-shell ionizations of sulfur projectiles passing through solid targets. Physica Scripta, 2011, T144, 014018.	1.2	0
39	Lifetimes of doubly K-shell ionized states. Physica Scripta, 2011, T144, 014021.	1.2	1
40	Hypersatellite Line Broadening as a Signature of Interpretation of the Si High-resolution X-ray study of the multiple ionization of Pd atoms by fast oxygen ions. European Physical Journal D, 2010, 57, 321-324.	2.9	26
41	Outer-Shell Ionization and Excitation. Physical Review Letters, 2011, 107, 073001.	0.6	12
42	High-resolution X-ray study of the multiple ionization of Pd atoms by fast oxygen ions. European Physical Journal D, 2010, 57, 321-324.	1.0	23
43	Equilibrium K-, L-, and M-shell ionizations and charge-state distribution of sulfur projectiles passing through solid targets. Physical Review A, 2010, 82, .	1.0	3
44	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
45	Influence of changes in the valence electronic configuration on the structure of L-X-ray spectra of molybdenum. Journal of Physics: Conference Series, 2009, 163, 012050.	0.3	1
46	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
47	The satellites and hypersatellites of $L_{\pm 1}$ and $L_{\pm 2}$ X-ray transitions in zirconium excited by oxygen and neon ions. Journal of Physics: Conference Series, 2009, 194, 152012.	0.3	0
48	Systematic multiconfiguration Dirac-Fock method study of the K-X-ray spectra of silicon. Journal of Physics: Conference Series, 2009, 163, 012040.	0.3	4
49	Theoretical predictions of the structure of M-X-ray lines of heavy atoms. Journal of Physics: Conference Series, 2009, 163, 012049.	0.3	3
50	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
51	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
52	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
53	Vacancy rearrangement processes in multiply ionized atoms. Journal of Physics: Conference Series, 2007, 58, 295-298.	0.3	5
54	Studies of the $K_{\pm 1}$ X-ray spectra of low-density SiO <sub>2</sub> aerogel induced by Ca projectiles for different penetration depths. High Energy Density Physics, 2007, 3, 233-236.	0.4	18

#	ARTICLE	IF	CITATIONS
55	Theoretical shapes of K x-ray spectra for lead as predicted by MCDF calculations. X-Ray Spectrometry, 2007, 36, 66-71.	0.9	4
56	Multiple ionization effects in x-ray emission induced by heavy ions. Brazilian Journal of Physics, 2006, 36, 546-549.	0.7	16
57	Structure of L-X-ray satellite and hypersatellite lines of palladium. Radiation Physics and Chemistry, 2006, 75, 1471-1476.	1.4	11
58	Structure of M-X-ray satellite and hypersatellite lines of thorium. Radiation Physics and Chemistry, 2006, 75, 1497-1502.	1.4	9
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	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
61	Dirac-Fock method study on the structure and shapes of various KL1 X-ray satellite lines of terbium and tantalum. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 235-239.	0.6	2
62	Systematic Dirac-Fock method study of the X-ray spectra accompanying the ionization in collision processes: The structure of the KL2L0M <sub>r</sub> lines. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 240-244.	0.6	0
63	Semi-classical approaches to the ion-atom scattering. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 337-341.	0.6	1
64	Sulphur ion charge states inside solids from low-resolution K X-ray spectra. Nuclear Instruments & Methods in Physics Research B, 2005, 235, 403-407.	0.6	2
65	Comparison of the structure of various KL0M1 and KL1M0 x-ray satellite lines of lead. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 2407-2425.	0.6	5
66	Structure of various KL1 x-ray satellite lines of heavy atoms. Physical Review A, 2004, 70, .	1.0	9
67	Dynamics of formation of K-hole fractions of sulfur projectiles inside a carbon foil. Physical Review A, 2004, 69, .	1.0	5
68	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
69	M-subshell ionization in near-central collisions of 20-MeV/amu carbon ions with molybdenum atoms. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 128-132.	0.6	4
70	Effect of L- and M-shell ionization on the shapes and parameters of the K X-ray spectra of sulphur. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 123-127.	0.6	11
71	Highly excited states of sulphur projectiles inside a carbon target. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 799-807.	0.6	6
72	The study of Th M-X-ray satellites and hypersatellites induced by energetic O and Ne ions. Radiation Physics and Chemistry, 2003, 68, 121-125.	1.4	14

#	ARTICLE	IF	CITATIONS
73	High-resolution study of the $K\alpha_2$ x-ray spectra of mid-Z atoms bombarded with 20-MeV/amu $^{12}C$ ions. Physical Review A, 2003, 68, .	1.0	20
74	Scattering of sulfur ions by carbon: Classical-trajectory Monte Carlo results. Physical Review A, 2003, 67, .	1.0	2
75	Energy-dependent $K\alpha$ double photoexcitation of argon. Physical Review A, 2002, 65, .	1.0	28
76	Configurations of highly ionized fast sulphur projectiles passing through a carbon foil evaluated from low-resolution K x-ray spectra. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 1941-1957.	0.6	13
77	Relative K x-ray intensity studies of the valence electronic structure of 3d transition metals. Physical Review B, 2002, 65, .	1.1	33
78	Valence electronic structure of Ti, Cr, Fe and Co in some alloys from $K\alpha_2$ -to- $K\alpha_1$ X-ray intensity ratio studies. Nuclear Instruments & Methods in Physics Research B, 2002, 195, 367-373.	0.6	52
79	Studies on the valence electronic structure of Fe and Ni in Fe x Ni alloys. Pramana - Journal of Physics, 2002, 58, 783-786.	0.9	5
80	High-Resolution Measurements of Th and U L $\alpha$ -X-rays Induced by Energetic O Ions. Physica Scripta, 2001, T92, 382-384.	1.2	3
81	Valence electronic structure of Mn in undoped and doped lanthanum manganites from relative K X-ray intensity studies. Nuclear Instruments & Methods in Physics Research B, 2001, 174, 344-350.	0.6	11
82	K and L-shell ionization of heavy targets by various 20- and 80-MeV/u projectiles. Physical Review A, 2001, 64, .	1.0	16
83	$K\alpha_2$ -to- $K\alpha_1$ x-ray intensity ratio studies of the valence electronic structure of Fe and Ni in Fe x Ni alloys. Physical Review B, 2001, 63, .	1.1	28
84	Valence electronic structure of Fe and Ni in Fe Ni alloys from relative K X-ray intensity studies. Solid State Communications, 2000, 116, 563-567.	0.9	27
85	Influence of chemical effect on the $K\alpha_2$ -to- $K\alpha_1$ x-ray intensity ratios of Cr, Mn and Co in CrSe, MnSe, MnS and CoS. Nuclear Instruments & Methods in Physics Research B, 2000, 160, 443-448.	0.6	49
86	L-shell shake processes resulting from 1s photoionization in elements 11 < Z < 17. Physical Review A, 2000, 62, .	1.0	35
87	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. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 3711-3725.	0.6	15
88	Charge transfer studies in V $_3$ Si, Cr $_3$ Si and FeSi. Solid State Communications, 1999, 110, 275-279.	0.9	31
89	He-like hole states in mid-Z atoms studied by high-resolution K X-ray spectroscopy. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 264, 186-191.	0.9	11
90	$K\alpha_2$ -to- $K\alpha_1$ X-ray intensity ratio studies on the changes of valence electronic structures of Ti, V, Cr, and Co in their disilicide compounds. Nuclear Instruments & Methods in Physics Research B, 1999, 152, 417-424.	0.6	37

#	ARTICLE	IF	CITATIONS
91	Influence of alloying effect on $K_{\alpha}^2/K_{\alpha}^1$ X-ray intensity ratios of V and Ni in $V_xNi_{1-x}$ alloys. Nuclear Instruments & Methods in Physics Research B, 1999, 155, 143-152.	0.6	43
92	Influence of chemical effect on the $K_{\alpha}^2$ -to- $K_{\alpha}^1$ X-ray intensity ratios of Ti, V, Cr and Fe in TiC, VC, CrB, CrB <sub>2</sub> and FeB. Nuclear Instruments & Methods in Physics Research B, 1998, 145, 485-491.	0.6	46
93	Study of x-ray and L-REC photon emissions from highly ionized swift and projectiles passing through a thin carbon foil. Journal of Physics B: Atomic, Molecular and Optical Physics, 1998, 31, 1225-1236.	0.6	6
94	Influence of changes in the valence electronic configuration on the $K_{\alpha}^2$ -to- $K_{\alpha}^1$ x-ray intensity ratios of the 3d transition metals. Physical Review A, 1998, 58, 1840-1845.	1.0	74
95	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
96	Influence of solid-state effects on the $K_{\alpha}^2$ -to- $K_{\alpha}^1$ x-ray intensity ratios of Ni and Cu in various silicide compounds. Physical Review B, 1998, 58, 9025-9029.	1.1	51
97	X-ray emission studies from highly ionized swift projectiles passing through thin carbon foil. Physica Scripta, 1997, T73, 230-232.	1.2	0
98	High resolution study of $K_{\alpha}^1$ hypersatellites spectrum of $[^{42}Mo]$ atoms induced by 17 MeV/u $[^{16}O]$ beam. , 1997, , .		1
99	Electron-impact-induced $K_{\alpha}^1$ 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
100	$K_{\alpha}^1$ hypersatellite lines of medium-mass atoms induced by 100-MeV $He^{2+}$ ions. Physical Review A, 1995, 51, 3650-3659.	1.0	28
101	High-resolution study of the $K_{\alpha}^2$ 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
102	Systematic multiconfiguration-Dirac-Fock study of the x-ray spectra accompanying the ionization in collision processes: The structure of the $K_{\alpha}^1$ lines. Physical Review A, 1995, 52, 227-235.	1.0	60
103	M-shell ionization resulting from near-central collisions of mid-Z atoms with 5.5-MeV/amu oxygen ions. Physical Review A, 1994, 49, 2524-2534.	1.0	39
104	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. Physical Review A, 1992, 46, 3893-3903.	1.0	49
105	Theoretical multiconfiguration Dirac-Fock method study on the x-ray spectra of multiply ionized heavy atoms: The structure of the $K_{\alpha}^1$ lines. Physical Review A, 1990, 41, 3689-3697.	1.0	36
106	Theoretical simulation of the x-ray spectra of multiply ionized heavy atoms: The $K_{\alpha}^1$ spectra of molybdenum. Physical Review A, 1989, 39, 5092-5097.	1.0	44
107	Theoretical multiconfiguration Dirac-Fock method study on the x-ray spectra of multiply ionized heavy atoms: The structure of the $K_{\alpha}^1$ lines. Physical Review A, 1989, 39, 616-627.	1.0	65
108	Theoretical multiconfiguration Dirac-Fock method study on the x-ray spectra of multiply ionized heavy atoms: The structure of the $K_{\alpha}^1$ lines. Physical Review A, 1989, 40, 4361-4368.	1.0	46



#	ARTICLE	IF	CITATIONS
109	On the calculation of $K_{II}^2/K_{II}^{\pm}$ X-ray intensity ratios. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 2369-2376.	0.6	39
110	Differential correlation effects for states of the 3d and 3d4s configurations. I. The copper and zinc atoms and their ions. Journal of Physics B: Atomic and Molecular Physics, 1985, 18, 2133-2146.	1.6	11
111	Second-order electron correlation energies for some 3d <sup>10</sup> and 3d <sup>10</sup> 4s <sup>2</sup> ions. Journal of Chemical Physics, 1985, 82, 841-847.	1.2	16
112	Differential correlation effects for states of the 3d and 3d4s 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
113	An approximate method for the evaluation of electron correlation effects on atomic energy differences. Journal of Physics B: Atomic and Molecular Physics, 1984, 17, 2393-2411.	1.6	15
114	Second-order electron correlation energies for Zn <sup>2+</sup> and Zn. Journal of Chemical Physics, 1982, 76, 448-457.	1.2	39
115	Transferability of the partial-wave increments to the second-order pair correlation energies for atoms. Journal of Physics B: Atomic and Molecular Physics, 1980, 13, 3909-3919.	1.6	18
116	Second-order correlation energies for F <sup>1+</sup> , Na <sup>1+</sup> , Mg <sup>2+</sup> , and Ar <sup>8+</sup> : Z dependence of irreducible-pair energies. Physical Review A, 1980, 22, 51-60.	1.0	48
117	Accurate second order correlation energies of He and Be. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 2965-2969.	1.6	23
118	Second-order correlation energies of Mg and Ar. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 3157-3170.	1.6	35
119	Pair correlation energies for the 3d shell. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 345-353.	1.6	30
120	Electron pair correlation energies for Zn <sup>2+</sup> . International Journal of Quantum Chemistry, 1979, 16, 65-70.	1.0	9
121	Convergence patterns of the configuration-interaction expansion for excited 21S and 31S states of the helium atom. Journal of Physics B: Atomic and Molecular Physics, 1977, 10, 1231-1239.	1.6	5