

Klemen Bucar

List of Publications by Year in descending order

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93
papers

1,472
citations

331670

21
h-index

361022

35
g-index

95
all docs

95
docs citations

95
times ranked

1593
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of Electrochemical Processes in Metal-Organic Batteries by X-ray Raman Spectroscopy. Journal of Physical Chemistry C, 2022, 126, 5435-5442.	3.1	4
2	Molecular imaging of human hair with MeV-SIMS: A case study of cocaine detection and distribution in the hair of a cocaine user. PLoS ONE, 2022, 17, e0263338.	2.5	2
3	Coupling of autoionizing states by a chirped laser pulse. Journal of Physics: Conference Series, 2020, 1412, 082008.	0.4	0
4	Magnetic bottle electron spectrometer driven by electron pulses. Review of Scientific Instruments, 2020, 91, 073108.	1.3	0
5	Auger decay of Rubidium atom after 3d-shell ionization. Journal of Physics: Conference Series, 2020, 1412, 152037.	0.4	0
6	Statistics of a Sharp GP2Y Low-Cost Aerosol PM Sensor Output Signals. Sensors, 2020, 20, 6707.	3.8	2
7	Core-hole spectator Auger decay. Physical Review A, 2020, 101, .	2.5	2
8	Self-induced splitting of x-ray emission lines. Physical Review A, 2020, 102, .	2.5	1
9	Fingerprinting Mean Composition of Lithium Polysulfide Standard Solutions by Applying High-Energy Resolution Fluorescence Detected X-ray Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2020, 11, 5446-5450.	4.6	8
10	Multi-electron/ion coincidence spectroscopy in Xe triple ionization. Journal of Physics: Conference Series, 2020, 1412, 152038.	0.4	0
11	Single photon simultaneous K-shell ionization/excitation in C_{6H_6} : experiment and theory. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 244010.	1.5	5
12	Auger decay of the 2p vacancy in chlorine. Physical Review A, 2019, 100, .	2.5	2
13	Amplification of fluorescence from the $3p^2$ doubly excited state in helium. Physical Review A, 2019, 99, .	2.5	2
14	Observation of short-lived laser-dressed quantum states in the frequency plane. Physical Review A, 2019, 99, .	2.5	3
15	Double-core ionization photoelectron spectroscopy of C_6H_6 : Breakdown of the "intuitive" ortho-meta-para binding energy ordering of $1K^+1K^+$ states. Journal of Chemical Physics, 2019, 151, 214303.	3.0	11
16	Beer-Lambert law in the time domain. Physical Review A, 2018, 97, .	2.5	5
17	Effect of Ag Doping on Electronic Structure of Cluster Compounds $Ag_xMo_9Se_{11}$ ($x = 3.4, 3.9$). ACS Applied Energy Materials, 2018, 1, 4032-4039.	5.1	8
18	Collective effects in the radiative decay of the $2p^2$ state in helium. Physical Review A, 2018, 98, .	2.5	7

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19	Role of ultrafast dissociation in the fragmentation of chlorinated methanes. Journal of Chemical Physics, 2018, 148, 174301.	3.0	12
20	Multi-electron coincidence spectroscopy: Triple Auger decay of Ar 2p and 2s holes. Journal of Electron Spectroscopy and Related Phenomena, 2017, 220, 125-132.	1.7	13
21	Molecular imaging of alkaloids in khat (<i>Catha edulis</i>) leaves with MeV-SIMS. Nuclear Instruments & Methods in Physics Research B, 2017, 404, 140-145.	1.4	5
22	Potential Energy Surface Reconstruction and Lifetime Determination of Molecular Double-Core-Hole States in the Hard X-Ray Regime. Physical Review Letters, 2017, 119, 133001.	7.8	17
23	Mechanistic Study of Magnesium Sulfur Batteries. Chemistry of Materials, 2017, 29, 9555-9564.	6.7	101
24	Anticrossing spectrometry with synchrotron light. Physical Review A, 2017, 96, .	2.5	0
25	4d -inner-shell ionization of Xe ⁺ ions and subsequent Auger decay. Physical Review A, 2017, 96, .	2.5	11
26	Exercise-induced effects on a gym atmosphere. Indoor Air, 2016, 26, 468-477.	4.3	27
27	Sulphur K ¹² emission spectra reveal protonation states of aqueous sulfuric acid. Scientific Reports, 2016, 6, 21012.	3.3	15
28	Structural and dynamical properties of chlorinated hydrocarbons studied with resonant inelastic x-ray scattering. Journal of Chemical Physics, 2016, 144, 134309.	3.0	9
29	Operando Resonant Inelastic X-ray Scattering: An Appropriate Tool to Characterize Sulfur in Sulfur Batteries. Journal of Physical Chemistry C, 2016, 120, 24568-24576.	3.1	35
30	Formation of stable resonant Auger decay in HCl ₃ . Physical Review A, 2016, 94, .	2.5	7
31	Two-to-one Auger decay of a double vacancy in L ₃ . Physical Review A, 2016, 93, .	2.5	30
32	Electronic Structure of Third-Row Elements in Different Local Symmetries Studied by Valence-to-Core X-ray Emission Spectroscopy. Inorganic Chemistry, 2016, 55, 5328-5336.	4.0	15
33	Molecular imaging of cannabis leaf tissue with MeV-SIMS method. Nuclear Instruments & Methods in Physics Research B, 2016, 371, 205-210.	1.4	20
34	Electron Dynamics in the Core-Excited CS ₂ Revealed through Resonant Inelastic X-Ray Scattering Spectroscopy. Physical Review X, 2015, 5, .	3.0	15
35	Single photon core ionization with core excitation: a new spectroscopic tool. Journal of Physics: Conference Series, 2015, 635, 112093.	0.4	1
36	Resonant X-ray Scattering of carbonyl sulfide at the sulfur K edge. Journal of Physics: Conference Series, 2015, 635, 112109.	0.4	0

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37	Electron dynamics in the core-excited CS ₂ molecule revealed through resonant inelastic x-ray scattering spectroscopy. Journal of Physics: Conference Series, 2015, 635, 112012.	0.4	2
38	Resonant Inelastic X-ray Scattering of Molybdenum Oxides and Sulfides. Journal of Physical Chemistry C, 2015, 119, 2419-2426.	3.1	18
39	Chemical State Analysis of Phosphorus Performed by X-ray Emission Spectroscopy. Analytical Chemistry, 2015, 87, 5632-5639.	6.5	22
40	Double core hole spectroscopy with synchrotron radiation. Journal of Electron Spectroscopy and Related Phenomena, 2015, 204, 303-312.	1.7	24
41	Single photon simultaneous K-shell ionization and K-shell excitation. II. Specificities of hollow nitrogen molecular ions. Journal of Chemical Physics, 2015, 142, 014308.	3.0	26
42	Single photon simultaneous K-shell ionization and K-shell excitation. I. Theoretical model applied to the interpretation of experimental results on H ₂ O. Journal of Chemical Physics, 2015, 142, 014307.	3.0	37
43	Resonant inelastic X-ray spectroscopy of atoms and simple molecules: Satellite features and dependence on energy detuning and photon polarization. Journal of Electron Spectroscopy and Related Phenomena, 2015, 204, 356-364.	1.7	8
44	Quenching of the doubly excited states of helium by a dc electric field. Physical Review A, 2014, 90, .	2.5	1
45	Avoided-crossing spectroscopy technique based on detection of atoms in metastable states. Physical Review A, 2014, 89, .	2.5	3
46	Dissociation dynamics of simple chlorine containing molecules upon resonant Cl K- $\tilde{\nu}f^*$ excitation. Journal of Chemical Physics, 2014, 140, 164304.	3.0	10
47	Resonant inelastic x-ray scattering on iso-C ₂ H ₂ Cl ₂ around the chlorine K-edge: Structural and dynamical aspects. Journal of Chemical Physics, 2014, 141, 144301.	3.0	5
48	High Resolution Multiphoton Spectroscopy by a Tunable Free-Electron-Laser Light. Physical Review Letters, 2014, 113, 193201.	7.8	31
49	New results in high-resolution X-ray fluorescence spectroscopy. Journal of Physics: Conference Series, 2014, 488, 012014.	0.4	7
50	Development of mass spectrometry by high energy focused heavy ion beam: MeV SIMS with 8 MeV Cl ⁷⁺ beam. Nuclear Instruments & Methods in Physics Research B, 2014, 332, 22-27.	1.4	31
51	Resonant inelastic X-ray scattering on atoms and simple molecules in the tender X-ray region. Journal of Electron Spectroscopy and Related Phenomena, 2013, 188, 47-52.	1.7	4
52	Inter- and intrachannel exchange interference in photoinduced Auger decay: The KrM _{4,5} and XeN _{4,5} cases. Physical Review A, 2013, 87, .	2.5	3
53	A local chemical environment effect in site-specific Auger spectra of ethyl trifluoroacetate. Journal of Chemical Physics, 2013, 138, 024306.	3.0	16
54	Dissociation of chloromethanes upon resonant $\tilde{\nu}f^*$ excitation studied by x-ray scattering. Journal of Chemical Physics, 2013, 139, 134302.	3.0	19

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55	Hard x-ray absorption spectroscopy for pulsed sources. <i>Physical Review B</i> , 2013, 87, .	3.2	21
56	Design and performance of a versatile curved-crystal spectrometer for high-resolution spectroscopy in the tender x-ray range. <i>Review of Scientific Instruments</i> , 2012, 83, 033113.	1.3	63
57	High resolution resonant x-ray scattering on diluted targets – structure data and relaxation dynamics. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022046.	0.4	0
58	Single-Photon Core Double Ionization in Molecules. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022027.	0.4	0
59	Interference of electron pairs in photoinduced $N_{4,5}^{2+}$ $O_{1,2,3}$ Auger decay in xenon. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022094.	0.4	0
60	Coherence of $L_{2,3}$ $M_{2,3}$ Auger decay paths by energy selected photoionization of argon. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022095.	0.4	0
61	The effects of $\hat{\gamma}$ -radiation on model vitreous wasteforms intended for the disposal of intermediate and high level radioactive wastes in the United Kingdom. <i>Journal of Nuclear Materials</i> , 2012, 429, 353-367.	2.7	34
62	Temperature dependence of the electrical resistivity and electronic structure of amorphous $Fe_{100-x}Zr_x$ films and multilayers. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 495402.	1.8	3
63	Influence of the thorium decay series on the background of high-resolution gamma-ray spectrometers. <i>Applied Radiation and Isotopes</i> , 2012, 70, 1005-1009.	1.5	9
64	Application of wavelength dispersive X-ray spectroscopy to improve detection limits in X-ray analysis. <i>X-Ray Spectrometry</i> , 2011, 40, 2-6.	1.4	12
65	Properties of Hollow Molecules Probed by Single-Photon Double Ionization. <i>Physical Review Letters</i> , 2011, 106, 063003.	7.8	97
66	High-resolution KMM radiative Auger x-ray emission spectra of calcium induced by synchrotron radiation. <i>Physical Review A</i> , 2011, 83, .	2.5	4
67	Resonant inelastic x-ray scattering at the limit of subfemtosecond natural lifetime. <i>Journal of Chemical Physics</i> , 2011, 134, 144308.	3.0	30
68	Multichannel Digital Acquisition FPGA-based System for Photon Detectors Equipped with Resistive and Reset Preamplifiers. , 2010, , .		0
69	Experimental confirmation of photon-induced spin-flip transitions in helium via triplet metastable yield spectra. <i>Physical Review A</i> , 2010, 81, .	2.5	7
70	Time-resolved measurements of aerosol elemental concentrations in indoor working environments. <i>Atmospheric Environment</i> , 2010, 44, 4954-4963.	4.1	11
71	Synchrotron-radiation-based determination of Xe L-subshell Coster-Kronig yields: A reexamination via high-resolution x-ray spectroscopy. <i>Physical Review A</i> , 2010, 81, .	2.5	8
72	Electronic State Interferences in Resonant X-Ray Emission after K-Shell Excitation in HCl. <i>Physical Review Letters</i> , 2010, 105, 113004.	7.8	41

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73	3D-reconstruction of an object by means of a confocal micro-PIXE. <i>Journal of Analytical Atomic Spectrometry</i> , 2010, 25, 28-33.	3.0	7
74	Sulfur-Metal Orbital Hybridization in Sulfur-Bearing Compounds Studied by X-ray Emission Spectroscopy. <i>Inorganic Chemistry</i> , 2010, 49, 6468-6473.	4.0	56
75	Separation of Two-Electron Photoexcited Atomic Processes near the Inner-Shell Threshold. <i>Physical Review Letters</i> , 2009, 102, 143001.	7.8	32
76	X-ray resonant Raman scattering from noble gas atoms and beyond. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009, 267, 221-225.	1.4	8
77	Element-selective three-dimensional imaging of microparticles with a confocal micro-PIXE arrangement. <i>X-Ray Spectrometry</i> , 2009, 38, 526-539.	1.4	7
78	Event by event pile-up compensation in digital timestamped calorimetry. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 607, 581-586.	1.6	21
79	Resonant Auger decay of 2p hole in argon induced by electron impact. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009, 267, 260-262.	1.4	6
80	Electronic Structure of Sulfur Studied by X-ray Absorption and Emission Spectroscopy. <i>Analytical Chemistry</i> , 2009, 81, 6516-6525.	6.5	93
81	L-subshell Coster-Kronig yields of palladium determined via synchrotron-radiation-based high-resolution x-ray spectroscopy. <i>Physical Review A</i> , 2009, 80, .	2.5	7
82	Time resolved fluorescence of Stark mixed He doubly excited states below $He^{(n=2)}$. <i>Journal of Physics: Conference Series</i> , 2009, 194, 022014.	0.4	0
83	Inelastic x-ray scattering in the vicinity of xenon L ₃ edge. <i>Physical Review A</i> , 2007, 76, .	2.5	20
84	Auger electron-ion coincidence spectrometry after electronic excitation of L-shell in argon. <i>Radiation Physics and Chemistry</i> , 2007, 76, 487-491.	2.8	4
85	Effect of electric fields on the decay branching ratio of Pe ₁ doubly excited states in helium measured by time-resolved fluorescence. <i>Physical Review A</i> , 2006, 74, .	2.5	8
86	Partial photoionization of helium into the 2s ₂ S and 2p ₂ P ion states in the 3lnl ² doubly-excited states region. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, L153-L160.	1.5	7
87	Branching ratios in the radiative decay of helium doubly excited states. <i>Physical Review A</i> , 2005, 72, .	2.5	17
88	Experimental Determination of the Lifetime for the 2p ₃ d(P ₀₁) Helium Doubly Excited State. <i>Physical Review Letters</i> , 2003, 90, 153004.	7.8	28
89	Fluorescence of Helium Doubly Excited States. <i>AIP Conference Proceedings</i> , 2003, , .	0.4	1
90	Detailed observations of photo-accessible triplet doubly excited states in helium. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2003, 36, 4339-4350.	1.5	20

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91	Angular distribution of the fluorescence of helium doubly photo-excited states converging on the He+(N= 2) ionization threshold. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 4351-4359.	1.5	13
92	Fluorescence of low-lying doubly photoexcited states in helium. Physical Review A, 2002, 65, .	2.5	43
93	Observation of Triplet Doubly Excited States in Single Photon Excitation from Ground State Helium. Physical Review Letters, 2001, 86, 2758-2761.	7.8	67