

Igor A Ivanov

List of Publications by Year in descending order

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140
papers

2,584
citations

172457

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h-index

214800

47
g-index

141
all docs

141
docs citations

141
times ranked

1325
citing authors

#	ARTICLE	IF	CITATIONS
1	Interpreting attoclock measurements of tunnelling times. Nature Physics, 2015, 11, 503-508.	16.7	256
2	Attosecond angular streaking and tunnelling time in atomic hydrogen. Nature, 2019, 568, 75-77.	27.8	190
3	Delay in Atomic Photoionization. Physical Review Letters, 2010, 105, 233002.	7.8	147
4	Angular dependence of photoemission time delay in helium. Physical Review A, 2016, 94, .	2.5	119
5	Atomic delay in helium, neon, argon and krypton. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 245003.	1.5	85
6	Direct sampling of a light wave in air. Optica, 2018, 5, 402.	9.3	77
7	Elastic Positronium-Atom Scattering Using the Stochastic Variational Method. Physical Review Letters, 2001, 87, 063201.	7.8	67
8	Semiempirical model of positron scattering and annihilation. Physical Review A, 2002, 65, .	2.5	65
9	Two-photon double ionization of helium in the region of photon energies 42–50 eV. Physical Review A, 2007, 75, .	2.5	61
10	Strong-field ionization of He by elliptically polarized light in attoclock configuration. Physical Review A, 2014, 89, .	2.5	61
11	Strong-field ionization of lithium. Physical Review A, 2011, 83, .	2.5	57
12	Laser-sub-cycle two-dimensional electron-momentum mapping using orthogonal two-color fields. Physical Review A, 2014, 90, .	2.5	55
13	Evolution of the transverse photoelectron-momentum distribution for atomic ionization driven by a laser pulse with varying ellipticity. Physical Review A, 2014, 90, .	2.5	47
14	Convergent close-coupling calculations of two-photon double ionization of helium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 1731-1742.	1.5	45
15	Positronium-positronium scattering using the stochastic variational method. Physical Review A, 2002, 65, .	2.5	44
16	Angle-dependent time delay in two-color XUV+IR photoemission of He and Ne. Physical Review A, 2017, 96, .	2.5	44
17	The Thermal Conductivity of Monocrystalline Gallium Garnets Doped with Rare-Earth Elements and Chromium in the Range 6–300 K. Crystal Research and Technology, 1992, 27, 535-543.	1.3	43
18	Coherent extreme-ultraviolet emission generated through frustrated tunnelling ionization. Nature Photonics, 2018, 12, 620-624.	31.4	42

#	ARTICLE	IF	CITATIONS
19	Positronium scattering from closed-shell atoms and ions. <i>Physical Review A</i> , 2001, 65, .	2.5	40
20	Influence of the orientation of a crystal on thermal polarization effects in high-power solid-state lasers. <i>JETP Letters</i> , 2005, 81, 90-94.	1.4	40
21	Time delay in strong-field photoionization of a hydrogen atom. <i>Physical Review A</i> , 2011, 83, .	2.5	40
22	Relativistic calculation of the electron-momentum shift in tunneling ionization. <i>Physical Review A</i> , 2015, 91, .	2.5	40
23	Time delay in atomic photoionization with circularly polarized light. <i>Physical Review A</i> , 2013, 87, .	2.5	36
24	Investigation of thermo-optical characteristics of magneto-active crystal Na _{0.37} Tb _{0.63} F _{2.26} . <i>Optics Letters</i> , 2015, 40, 4919.	3.3	32
25	Positronium-hydrogen scattering using the stochastic variational method. <i>Physical Review A</i> , 2002, 65, .	2.5	30
26	Relativistic Nondipole Effects in Strong-Field Atomic Ionization at Moderate Intensities. <i>Physical Review Letters</i> , 2019, 123, 093201.	7.8	30
27	Radius of convergence of the $1/Z$ expansion for the ground state of a two-electron atom. <i>Physical Review A</i> , 1995, 51, 1080-1084.	2.5	29
28	Supermultiplet structure of the doubly excited positronium negative ion. <i>Physical Review A</i> , 2000, 61, .	2.5	29
29	Nondipole effects in strong-field ionization. <i>Physical Review A</i> , 2016, 94, .	2.5	29
30	Complex rotation method for the Dirac Hamiltonian. <i>Physical Review A</i> , 2004, 69, .	2.5	28
31	Growth and magneto-optical properties of Na _{0.37} Tb _{0.63} F _{2.26} cubic single crystal. <i>Crystallography Reports</i> , 2014, 59, 718-723.	0.6	25
32	Exit point in the strong field ionization process. <i>Scientific Reports</i> , 2017, 7, 39919.	3.3	23
33	Attosecond time-delay spectroscopy of the hydrogen molecule. <i>Physical Review A</i> , 2012, 86, .	2.5	22
34	Displacement effect in strong-field atomic ionization by an XUV pulse. <i>Physical Review A</i> , 2014, 90, .	2.5	22
35	Perturbative calculation of two-photon double electron ionization of helium. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 095002.	1.5	21
36	Time-dependent calculations of double photoionization of the aligned H ₂ molecule. <i>Physical Review A</i> , 2012, 85, .	2.5	21

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37	Numerical calculation of the complex energy of the resonance of a two-electron atom with nuclear charge below the threshold value. Journal of Physics B: Atomic, Molecular and Optical Physics, 1998, 31, 3335-3344.	1.5	20
38	Resonant enhancement of generation of harmonics. Physical Review A, 2008, 78, .	2.5	20
39	Timing analysis of two-electron photoemission. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 101003.	1.5	17
40	Optical model theory for positron annihilation during scattering. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, L831-L837.	1.5	16
41	Instantaneous ionization rate as a functional derivative. Communications Physics, 2018, 1, .	5.3	16
42	Z dependences of the energy levels and autoionization rates for $2l3l'$ states of two-electron systems. Journal of Physics B: Atomic, Molecular and Optical Physics, 1990, 23, 4451-4467.	1.5	15
43	Analytic properties of the exact energy of the ground state of a two-electron atom as a function of $1/Z$. Physical Review A, 1995, 52, 1942-1947.	2.5	15
44	Thermo-optical properties of EuF ₂ -based crystals. Applied Physics Letters, 2019, 114, .	3.3	15
45	Transverse electron momentum distribution in tunneling and over the barrier ionization by laser pulses with varying ellipticity. Scientific Reports, 2016, 6, 19002.	3.3	13
46	Angular anisotropy parameters for sequential two-photon double ionization of helium. Physical Review A, 2009, 79, .	2.5	12
47	Two-photon double ionization of the H ₂ molecule: Cross sections and amplitude analysis. Physical Review A, 2013, 87, .	2.5	12
48	Ground-state energy of a two-electron atom as a function of $\hat{l} \gg 1/Z$: Singular points and asymptotic behavior. Physical Review A, 1996, 54, 2792-2796.	2.5	10
49	Combined effect of electric field and spin-orbit interaction on doubly excited Feshbach resonance states of helium below the $N=2$ threshold. Physical Review A, 2003, 68, .	2.5	10
50	Investigation of the variations in the crystallization front shape during growth of gadolinium gallium and terbium gallium crystals by the Czochralski method. Crystallography Reports, 2008, 53, 1181-1190.	0.6	10
51	High harmonics generation from excited states of atomic lithium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 115603.	1.5	10
52	Harmonic generation for atoms in fields of varying ellipticity: Single-active-electron model with Hartree-Fock potential. Physical Review A, 2009, 79, .	2.5	10
53	Transverse-electron-momentum distribution in pump-probe sequential double ionization. Physical Review A, 2014, 90, .	2.5	10
54	Relativistic approach to the tunneling-time problem. Physical Review A, 2015, 92, .	2.5	10

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55	Critical compilation of the inner-shell excited energy levels and spectrum of lithium-like Neon (Ne) Tj ETQq1 1 0.784314 rgBT j/Overloc	2.5	9
56	Asymptotically exact expression for the energies of the 3SeRydberg series in a two-electron system. Physical Review A, 2002, 66, .	2.5	9
57	Asymptotic description of the Rydberg states with $L > 0$ in a two-electron atom. European Physical Journal D, 2003, 27, 203-208.	1.3	9
58	On the use of the Kramers-Henneberger Hamiltonian in multi-photon ionization calculations. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 2245-2255.	1.5	9
59	Tailoring the waveforms to extend the high-order harmonic generation cutoff. Physical Review A, 2009, 80, .	2.5	9
60	Double photoionization of the hydrogen molecule from the viewpoint of the time-delay theory. Physical Review A, 2012, 86, .	2.5	9
61	Relativistic effects in time delay of atomic photoionization. Physical Review A, 2014, 89, .	2.5	9
62	Strong-field-approximation model for coherent extreme-ultraviolet emission generated through frustrated tunneling ionization. Physical Review A, 2018, 98, .	2.5	9
63	Stark effect in hydrogen: Reconstruction of the complex ground-state energy from the coefficients of an asymptotic perturbation expansion. Physical Review A, 1997, 56, 202-207.	2.5	8
64	Measuring the positron affinities of atoms: II. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, L121-L129.	1.5	8
65	dc Stark effect for doubly excited Feshbach resonance states of the positronium negative ion below the $N=2$ threshold of a positronium atom. Physical Review A, 2001, 63, .	2.5	8
66	Pick-off annihilation in positronium scattering from alkali-metal ions. Physical Review A, 2002, 65, .	2.5	8
67	Angular anisotropy parameters and recoil-ion momentum distribution in two-photon double ionization of helium. Physical Review A, 2007, 76, .	2.5	8
68	Spin-flip processes and nondipole effects in above-threshold ionization of hydrogen in ultrastrong laser fields. Physical Review A, 2017, 96, .	2.5	8
69	Controlling quantum numbers and light emission of Rydberg states via the laser pulse duration. Physical Review A, 2021, 103, .	2.5	8
70	Attosecond streaking using a rescattered electron in an intense laser field. Scientific Reports, 2020, 10, 22075.	3.3	8
71	Dispersion relation for the ground-state energy of a two-electron atom. Physical Review A, 1998, 57, 1516-1518.	2.5	7
72	The harmonic oscillator and Coulomb potentials - two exceptions from the point of view of a function theory. Journal of Physics A, 1996, 29, 3203-3207.	1.6	6

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73	Lippmann-Schwinger description of multiphoton ionization. <i>Physical Review A</i> , 2005, 71, .	2.5	6
74	Calculation of HHG spectra in complex atoms. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 145601.	1.5	6
75	Modifying the high-energy part of the above-threshold-ionization spectrum. <i>Physical Review A</i> , 2010, 82, .	2.5	6
76	Measuring laser carrier-envelope-phase effects in the noble gases with an atomic hydrogen calibration standard. <i>Physical Review A</i> , 2017, 96, .	2.5	6
77	Photoionization in the presence of circularly polarized fundamental and odd-order harmonic fields. <i>Physical Review A</i> , 2017, 95, .	2.5	6
78	Investigation of the Thermal Conductivity Terbium Gallium and Terbium Scandium Aluminum Garnet Crystals. <i>Crystallography Reports</i> , 2018, 63, 451-455.	0.6	6
79	Two-electron atoms: $\alpha(4,2)$ operator replacements and large-order perturbation theory with respect to the replaced kinetic-energy operator. <i>Physical Review A</i> , 1994, 49, 184-191.	2.5	5
80	Helium atom in presence of DC and AC electric fields. <i>European Physical Journal D</i> , 2006, 38, 471-479.	1.3	5
81	Single-photon double ionization of helium in the presence of dc electric field. <i>Physical Review A</i> , 2006, 74, .	2.5	5
82	Convergent close coupling calculations of two-photon double ionization of He. <i>Journal of Physics: Conference Series</i> , 2007, 88, 012051.	0.4	5
83	Terbium gallium garnet for high average power Faraday isolators: modern aspects of growing and characterization. , 2009, , .		5
84	Single-photon double ionization of H away from equilibrium: A showcase of two-center electron interference. <i>Physical Review A</i> , 2012, 86, .	2.5	5
85	WKB quantization of the Morse Hamiltonian and periodic meromorphic functions. <i>Journal of Physics A</i> , 1997, 30, 3977-3982.	1.6	4
86	Helium atom in the monochromatic electromagnetic field. <i>European Physical Journal D</i> , 2006, 38, 249-255.	1.3	4
87	Complete characterization of double photoionization processes. <i>Physical Review A</i> , 2011, 83, .	2.5	4
88	Extraction of the attosecond time delay in atomic photoionization using the soft-photon approximation. <i>Physical Review A</i> , 2013, 87, .	2.5	4
89	Origin of the cusp in the transverse momentum distribution for the process of strong-field ionization. <i>Physical Review A</i> , 2015, 92, .	2.5	4
90	Time correlation inside a laser pulse. <i>Physical Review A</i> , 2020, 101, .	2.5	4

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91	Electric-field influence on doubly excited Feshbach resonance states of the positronium negative ion below the $N=3$ threshold of the positronium atom. <i>Physical Review A</i> , 2000, 61, .	2.5	3
92	Use of scanning Hartmann sensor for measurement of thermal lensing in TGG crystal. , 2003, , .		3
93	$Nd^{3+}:GGG$ and $Cr^{4+}:GGG$ epitaxial films for neodymium lasers. <i>Physics of Wave Phenomena</i> , 2009, 17, 77-91.	1.1	3
94	On the account of final state correlation in double ionization processes. <i>European Physical Journal D</i> , 2011, 61, 563-569.	1.3	3
95	Locating the origin of photoelectrons in atomic photoionization. <i>Physical Review A</i> , 2012, 85, .	2.5	3
96	Strong-field approximation and its modifications as evolution equations. <i>Physical Review A</i> , 2019, 99, .	2.5	3
97	Atomic ionization driven by the quantized electromagnetic field in a Fock state. <i>Physical Review A</i> , 2020, 102, .	2.5	3
98	Ionization yield measurement using metal electrodes with a static electric field in ambient air. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 174003.	1.5	3
99	Simple man model in the Heisenberg picture. <i>Communications Physics</i> , 2020, 3, .	5.3	3
100	Effect of the finite speed of light in ionization of extended molecular systems. <i>Scientific Reports</i> , 2021, 11, 21457.	3.3	3
101	Strong-field ionization of argon: Electron momentum spectra and nondipole effects. <i>Physical Review A</i> , 2022, 105, .	2.5	3
102	Analysis of correlations in strong field ionization. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2022, 55, 055001.	1.5	3
103	Reconstruction of phase shifts as functions of energy using bound-state energies and low-energy scattering data. <i>Physical Review A</i> , 2003, 67, .	2.5	2
104	Preparation and study of epitaxial $Cr^{4+}:GGG$ films for passive Q-switches in neodymium lasers. <i>Quantum Electronics</i> , 2006, 36, 620-623.	1.0	2
105	Single-photon double ionization of negative hydrogen ions in the presence of a dc electric field. <i>Physical Review A</i> , 2007, 75, .	2.5	2
106	Above-threshold-ionization structures in photoelectron momentum distributions for single ionization of He by a strong electromagnetic field. <i>Physical Review A</i> , 2009, 80, .	2.5	2
107	Endpoint contribution to the instantaneous ionization rate for tunneling ionization. <i>Physical Review A</i> , 2015, 91, .	2.5	2
108	Time evolution of the lateral-velocity distribution for a strong-field-ionization process. <i>Physical Review A</i> , 2016, 93, .	2.5	2

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109	Quantum chaos in strong field ionization of hydrogen. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 225002.	1.5	2
110	Entropy-based view of the strong field ionization process. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 085601.	1.5	2
111	Classical backpropagation for probing the backward rescattering time of a tunnel-ionized electron in an intense laser field. Physical Review A, 2021, 104, .	2.5	2
112	Z-dependences of atomic parameters of autoionization states of two-electron systems. Soviet Physics Journal (English Translation of Izvestiia Vysshikh Uchebnykh Zavedenii, Fizika), 1990, 33, 670-684.	0.0	1
113	Energy levels of configurations 3l3l' for He-like ions with Z=2-26. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, 4695-4701.	1.5	1
114	Quantum-radiative cooling for solar cells with textured surface. , 2004, 5520, 154.		1
115	Transverse electron momentum distribution in tunneling and over the barrier ionization by strong-field laser pulses. Journal of Physics: Conference Series, 2015, 635, 092073.	0.4	1
116	Low-energy structures in strong-field ionization. Physical Review A, 2016, 93, .	2.5	1
117	Distribution of absorbed photons in the tunneling ionization process. Scientific Reports, 2021, 11, 3956.	3.3	1
118	Two-pulse interference and correlation in an attoclock. Physical Review A, 2021, 104, .	2.5	1
119	Coherent Control of Extreme Ultraviolet Emission Generated through Frustrated Tunneling Ionization. New Journal of Physics, 0, , .	2.9	1
120	Autoionization states 1s2141?-energy and autoionization rates. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1991, 21, S151-S152.	1.0	0
121	Sum rule for the spectra of potentials. Journal of Physics A, 1997, 30, 4337-4339.	1.6	0
122	SVD as a method of the construction of the antisymmetrized basis functions for a multi-electron atom. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 2519-2527.	1.5	0
123	<title>Simultaneous fitting of several x-ray rocking curves from different crystallographic planes of multilayer heterostructures</title>. , 2006, , .		0
124	Angular anisotropy parameters for sequential two-photon double ionization of helium. Journal of Physics: Conference Series, 2009, 194, 022032.	0.4	0
125	Multi-photon ionization of lithium. Journal of Physics: Conference Series, 2009, 194, 032031.	0.4	0
126	Atomic systems with one and two active electrons in electromagnetic fields: Ionization and high harmonics generation. Journal of Physics: Conference Series, 2010, 212, 012022.	0.4	0

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127	Complete characterization of the process of single-photon two-electron ionization of helium. Journal of Physics: Conference Series, 2012, 388, 022002.	0.4	0
128	Atomic photoionization: When does it actually begin?. Journal of Physics: Conference Series, 2012, 388, 032009.	0.4	0
129	Atoms with one and two active electrons in strong laser fields. , 0, , 98-115.		0
130	Just-function approach to quantum defect theory. Physical Review A, 2013, 88, .	2.5	0
131	Time delay in atomic photoionization with circularly polarized light. Journal of Physics: Conference Series, 2014, 488, 032003.	0.4	0
132	Pulse-shape effects in strong-field atomic ionization by an XUV pulse. Journal of Physics: Conference Series, 2015, 635, 092021.	0.4	0
133	Transverse electron momentum distribution in strong field ionization: transition from tunneling to over the barrier ionization regimes. Journal of Physics: Conference Series, 2015, 635, 092077.	0.4	0
134	Transverse electron momentum distribution of spin orbit wave packets. Journal of Physics: Conference Series, 2015, 635, 092006.	0.4	0
135	Relativistic calculation of the electron momentum shift in tunneling ionization. Journal of Physics: Conference Series, 2015, 635, 092007.	0.4	0
136	Attoclock using Atomic Hydrogen. Journal of Physics: Conference Series, 2017, 875, 022039.	0.4	0
137	Intensity-dependent shift in transverse electron momentum distribution for strong field ionization. Journal of Physics: Conference Series, 2017, 875, 022020.	0.4	0
138	Generation and characterization of a single-cycle laser pulse. , 2017, , .		0
139	Attoclock Measurements of Strong-Field Ionization Times. , 2014, , .		0
140	Attosecond Spatial Control of Electron Wave Packet Emission Dynamics. Springer Proceedings in Physics, 2015, , 113-117.	0.2	0