

Mikhail Fedorov

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132
papers

2,049
citations

26
h-index

41
g-index

141
ext. papers

2,197
ext. citations

2.2
avg, IF

4.69
L-index

#	Paper	IF	Citations
132	Field-induced effects of narrowing of photoelectron spectra and stabilisation of Rydberg atoms. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1988 , 21, L155-L158	1.3	148
131	Interference suppression of photoionization of Rydberg atoms in a strong electromagnetic field. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989 , 6, 928	1.7	106
130	Packet narrowing and quantum entanglement in photoionization and photodissociation. <i>Physical Review A</i> , 2004 , 69,	2.6	87
129	INTERACTION OF INTENSE OPTICAL RADIATION WITH FREE ELECTRONS (NONRELATIVISTIC CASE). <i>Uspekhi Fizicheskikh Nauk</i> , 1973 , 15, 416-435		83
128	Anisotropically and high entanglement of biphoton states generated in spontaneous parametric down-conversion. <i>Physical Review Letters</i> , 2007 , 99, 063901	7.4	75
127	Biphoton wave packets in parametric down-conversion: Spectral and temporal structure and degree of entanglement. <i>Physical Review A</i> , 2008 , 78,	2.6	69
126	Short-pulse or strong-field breakup processes: a route to study entangled wave packets. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006 , 39, S467-S483	1.3	58
125	Spontaneous emission of a photon: Wave-packet structures and atom-photon entanglement. <i>Physical Review A</i> , 2005 , 72,	2.6	54
124	Spontaneous parametric down-conversion: Anisotropical and anomalously strong narrowing of biphoton momentum correlation distributions. <i>Physical Review A</i> , 2008 , 77,	2.6	50
123	Observation of nonspreading wave packets in an imaginary potential. <i>Physical Review Letters</i> , 2005 , 95, 110405	7.4	48
122	Packet spreading, stabilization, and localization in superstrong fields. <i>Physical Review Letters</i> , 1992 , 68, 2592-2595	7.4	48
121	Isolated attosecond pulses from laser-driven synchrotron radiation. <i>Physical Review Letters</i> , 2012 , 109, 245005	7.4	47
120	Atomic and Free Electrons in a Strong Light Field 1998 ,		46
119	Intensity-dependent phase-matching effects in harmonic generation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1995 , 12, 863	1.7	45
118	Spectrum of light scattered coherently or incoherently by a collection of atoms. <i>Physical Review A</i> , 1992 , 45, 4706-4712	2.6	42
117	Gaussian modelling and Schmidt modes of SPDC biphoton states. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009 , 42, 175503	1.3	40
116	Coherence and interference in a Rydberg atom in a strong laser field: excitation, ionization, and emission of light. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1990 , 7, 569	1.7	39

115	Strong-field photoionisation of an initially excited hydrogen atom: Formation of Rydberg wavepacket, its structure and trapping of population at Rydberg levels. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990 , 23, 2245S-2257S	1.3	36
114	Characterization of spectral entanglement of spontaneous parametric-down conversion biphotons in femtosecond pulsed regime. <i>Europhysics Letters</i> , 2009 , 87, 64003	1.6	35
113	Spectrum of light scattered by a strongly driven atom. <i>Physical Review A</i> , 1993 , 47, 1327-1335	2.6	34
112	e-e scattering in the presence of an external field. <i>Journal of Physics A</i> , 1981 , 14, 2305-2315		34
111	New effects in the multiphoton ionization of atoms. <i>Uspekhi Fizicheskikh Nauk</i> , 1989 , 32, 500-520		33
110	Free-electron laser based on the effect of channeling in an intense standing light wave. <i>Applied Physics Letters</i> , 1988 , 53, 353-354	3.4	32
109	Wavepacket spreading and electron localization in strong-field ionization. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1993 , 26, 1181-1195	1.3	29
108	Resonance interaction of autoionising states with an intense electromagnetic field. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1982 , 15, 2851-2858		28
107	Interference stabilization of Rydberg atoms: numerical calculations and physical models. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1996 , 29, 2907-2924	1.3	27
106	Semiclassical matrix elements, essential-states models and perturbation theory of above-threshold ionisation. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989 , 22, 1193-1205	1.3	25
105	Interference Stabilization Revisited. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012 , 18, 42-53	3.8	23
104	Ponderomotive Forces and stimulated Compton scattering of free electrons in a laser field. <i>Physical Review E</i> , 1997 , 55, 1015-1027	2.4	22
103	Strong-field photoionization and emission of light in the wave-packet-spreading regime. <i>Physical Review A</i> , 1995 , 52, 504-513	2.6	22
102	Ac Stark effect and trapping of population on Rydberg levels in a strong ionizing field. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989 , 6, 1504	1.7	22
101	Wave packets, probabilities of transitions, and multiphoton excitation of atoms. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1988 , 5, 850	1.7	22
100	Entanglement of biphoton states: qutrits and ququarts. <i>New Journal of Physics</i> , 2011 , 13, 083004	2.9	21
99	Photodetachment of an electron from a negative ion in the near-threshold region. I. Suddenly switching-on interaction. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1983 , 16, 3641-3652		21
98	Photodetachment of an electron from a negative ion in the near-threshold region. II. Pulses of radiation with smooth time envelopes. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1983 , 16, 3653-3666		20

97	Resonant ionisation of atoms and switching-on of the interaction. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1977 , 10, 2573-2582		20
96	Strong-field short-pulse photoionization of Rydberg atoms: Interference stabilization and distribution of the photoelectron density in space and time. <i>Physical Review A</i> , 1998 , 58, 1322-1334	2.6	17
95	Interference stabilization of Rydberg atoms: Quasiclassical analytical theory and exact three-dimensional numerical simulations. <i>Physical Review A</i> , 1999 , 60, R749-R752	2.6	17
94	Comparison of quasiclassical and exact dipole moments for bound-free transitions in hydrogen. <i>Physical Review A</i> , 1995 , 52, 125-129	2.6	15
93	Stimulated bremsstrahlung in the presence of an intense electromagnetic wave. <i>Journal of Physics A</i> , 1976 , 9, L103-L106		15
92	Influence of a strong electromagnetic wave on stimulated bremsstrahlung of electrons. <i>Soviet Journal of Quantum Electronics</i> , 1977 , 7, 1260-1266		15
91	An electron in a quantized plane wave and in a constant magnetic field. <i>Zeitschrift für Physik A</i> , 1973 , 261, 191-202		15
90	Three-photon generation by means of third-order spontaneous parametric down-conversion in bulk crystals. <i>Laser Physics Letters</i> , 2015 , 12, 115404	1.5	14
89	Relativistic ponderomotive forces. <i>Journal of Experimental and Theoretical Physics</i> , 1999 , 89, 640-646	1	14
88	Two-color interference stabilization of atoms. <i>Physical Review A</i> , 2004 , 69,	2.6	13
87	Azimuthal entanglement and multichannel Schmidt-type decomposition of noncollinear biphotons. <i>Physical Review A</i> , 2016 , 93,	2.6	12
86	Free-electron laser without inversion: gain optimization and implementation scheme. <i>Physical Review Letters</i> , 2000 , 85, 4510-3	7.4	12
85	Quasiclassical atomic electron in a strong light field. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1994 , 27, 4145-4167	1.3	12
84	Wavepacket theory of the Kapitza-Dirac effect. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000 , 33, 4535-4550	1.3	11
83	Semiclassical dynamics of strongly driven systems. <i>Physical Review A</i> , 1998 , 58, R793-R796	2.6	11
82	The Schmidt modes of biphoton qutrits: Poincaré sphere representation. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013 , 46, 095502	1.3	10
81	Phase control of the degree of ionization of Rydberg atoms by a strong laser field. <i>Journal of Experimental and Theoretical Physics</i> , 2000 , 90, 794-804	1	10
80	Interaction of atoms with supershort laser pulses and the generation of the supercontinuum. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990 , 23, 2505-2520	1.3	10

79	Suppression of interference in e-e scattering by the field of a strong electromagnetic wave. <i>Journal of Physics A</i> , 1984 , 17, 3143-3149		10
78	Classical and quantum versions of the Kapitza-Dirac effect. <i>Journal of Experimental and Theoretical Physics</i> , 1999 , 89, 460-467	1	9
77	L. V. Keldysh Ionization in the Field of a Strong Electromagnetic Wave and modern physics of atomic interaction with a strong laser field. <i>Journal of Experimental and Theoretical Physics</i> , 2016 , 122, 449-455	1	8
76	Single biphoton ququarts as either pure or mixed states. <i>Physical Review A</i> , 2011 , 84,	2.6	7
75	Dynamics of spontaneous radiation of atoms scattered by a resonance standing light wave. <i>Journal of Experimental and Theoretical Physics</i> , 2003 , 97, 522-538	1	7
74	Rotational quasienergy states and alignment of molecules in a strong laser field. <i>Journal of Experimental and Theoretical Physics</i> , 1999 , 89, 837-844	1	7
73	Interaction of electrons with the electromagnetic field in free electron lasers. <i>Uspekhi Fizicheskikh Nauk</i> , 1981 , 24, 801-814		7
72	Spectral Entanglement in Parametric Down-Conversion with Nondegenerate Frequencies. <i>Advanced Science Letters</i> , 2009 , 2, 511-516	0.1	7
71	Schmidt decomposition for non-collinear biphoton angular wave functions. <i>Physica Scripta</i> , 2015 , 90, 074048	2.6	6
70	Luminescence in germania-silica fibers in a 1-2 THz region. <i>Optics Letters</i> , 2017 , 42, 2874-2877	3	6
69	Three-photon polarization ququarts: polarization, entanglement and Schmidt decompositions. <i>Laser Physics</i> , 2015 , 25, 035204	1.2	6
68	Qutrits and ququarts in spontaneous parametric down-conversion, correlations and entanglement. <i>Journal of Experimental and Theoretical Physics</i> , 2012 , 115, 15-35	1	6
67	Spatial amplification of a laser wave and the transverse spread of electrons in an undulator with a noncollinear configuration. <i>Laser Physics</i> , 2007 , 17, 1213-1216	1.2	6
66	Calculations of photodissociation in intense laser fields: Validity of the adiabatic elimination of the continuum. <i>International Journal of Quantum Chemistry</i> , 2004 , 99, 452-459	2.1	6
65	Stabilization and Structure of wave packets in Rydberg atoms ionized by a strong light field. <i>Optics Express</i> , 1998 , 3, 271-9	3.3	6
64	Grobe and Fedorov reply. <i>Physical Review Letters</i> , 1993 , 70, 1562	7.4	6
63	Near threshold photodetachment of electrons from negative ions and its dependence on the shape of the laser pulse envelope. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1984 , 17, 3469-3480		6
62	Diverging light pulses in vacuum: Lorentz-invariant mass and mean propagation speed. <i>Laser Physics</i> , 2017 , 27, 036202	1.2	5

61	Interference stabilization of molecules with respect to photodissociation by a strong laser field. <i>Physical Review A</i> , 2002 , 65,	2.6	5
60	Potential scattering of electron wave packets by large-size targets. <i>Physical Review A</i> , 2002 , 65,	2.6	5
59	Coherent control of strong-field two-pulse ionization of Rydberg atoms. <i>Optics Express</i> , 2000 , 6, 117-23	3.3	5
58	Competition between L- and V-type transitions in interference stabilization of Rydberg atoms. <i>Optics Express</i> , 1998 , 2, 51-7	3.3	5
57	Free-electron laser exploiting a superlattice-like medium. <i>Optics Express</i> , 1998 , 3, 162-70	3.3	5
56	Packet Spreading, Stabilization, and Localization in Superstrong Fields. <i>Physical Review Letters</i> , 1992 , 69, 3591-3591	7.4	5
55	HongDumandel effect in terms of the temporal biphoton wave function with two arrival-time variables. <i>Laser Physics Letters</i> , 2018 , 15, 035206	1.5	4
54	Interference stabilization of molecules with respect to photodissociation by a strong laser field. <i>Journal of Modern Optics</i> , 2003 , 50, 513-527	1.1	4
53	Nonstationary theory of wave-packet potential scattering. <i>Physical Review A</i> , 1998 , 58, 1195-1203	2.6	4
52	Laser temporal and spatial effects on ionization suppression. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1992 , 9, 1234	1.7	4
51	Laser-induced collective binding in two-electron systems. <i>Physical Review A</i> , 1984 , 30, 658-660	2.6	4
50	Diffraction as a reason for slowing down light pulses in vacuum. <i>Europhysics Letters</i> , 2017 , 117, 64001	1.6	3
49	Entanglement of multiphoton two-mode polarization Fock states and of their superpositions. <i>Laser Physics Letters</i> , 2020 , 17, 035209	1.5	3
48	Experimental observation of double-peak structure of coincidence spectra in ultrafast spontaneous parametric down-conversion. <i>Physical Review A</i> , 2013 , 87,	2.6	3
47	Non-stationary scattering of wave-packets. <i>Optics Express</i> , 1998 , 2, 404-10	3.3	3
46	Light amplification and electron acceleration by a noncollinear Compton process. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1987 , 4, 1109	1.7	3
45	Comments on "Multiphoton processes in homopolar diatomic molecules," "Perturbation theory in closed form for heteronuclear diatomic molecules," and "Multiphoton processes in heteropolar diatomic molecules". <i>Physical Review A</i> , 1975 , 11, 1763-1764	2.6	3
44	Schmidt-mode analysis of quadrature entanglement in superpositions of two-mode multiphoton states. <i>Physica Scripta</i> , 2020 , 95, 064001	2.6	2

43	High resource of azimuthal entanglement in terms of Cartesian variables of noncollinear biphotons. <i>Physical Review A</i> , 2018 , 97,	2.6	2
42	Temporal interference effects in noncollinear and frequency-nondegenerate spontaneous parametric down-conversion. <i>Physical Review A</i> , 2018 , 98,	2.6	2
41	Entanglement of multiphoton states in polarization and quadrature variables. <i>Laser Physics</i> , 2019 , 29, 124006	1.2	2
40	Invariant Mass and Propagation Speed of Light Pulses in Vacuum. <i>Journal of Physics: Conference Series</i> , 2017 , 826, 012025	0.3	2
39	On a possible definition of the concept of mass density for a classical electromagnetic field in vacuum. <i>Laser Physics Letters</i> , 2015 , 12, 096201	1.5	2
38	Features of three-photon polarization states: Entanglement and polarization. <i>International Journal of Quantum Information</i> , 2014 , 12, 1560009	0.8	2
37	Biphoton ququarts as either pure or mixed states, features and reconstruction from coincidence measurements. <i>European Physical Journal D</i> , 2013 , 67, 1	1.3	2
36	The threshold conditions for an FELWI. <i>Physica Scripta</i> , 2010 , T140, 014058	2.6	2
35	Stabilization of a Rydberg atom and competition between the Π and V transition channels. <i>Journal of Experimental and Theoretical Physics</i> , 1998 , 87, 445-453	1	2
34	Modulation and correlation of the radial and angular motions of a Rydberg electron in a resonance microwave field. <i>Quantum Electronics</i> , 2006 , 36, 713-719	1.8	2
33	Strong-field interference stabilization of Rydberg atoms and the pulse-propagation problem. <i>Laser Physics</i> , 2006 , 16, 948-956	1.2	2
32	Einstein localization in entangled light scattering. <i>Journal of Modern Optics</i> , 2004 , 51, 1779-1786	1.1	2
31	Interference stabilisation of Rydberg atoms in a strong laser field. <i>Quantum Electronics</i> , 1999 , 29, 578-590	2	
30	Polarization of photoelectrons in the ionization of unpolarized atoms. <i>Uspekhi Fizicheskikh Nauk</i> , 1979 , 22, 252-269		2
29	Lorentz-invariant mass and entanglement of biphoton states. <i>Laser Physics Letters</i> , 2019 , 16, 065203	1.5	1
28	State entanglement of biphoton qutrits and ququarts. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2012 , 76, 233-236	0.4	1
27	Peak doubling in spontaneous parametric down-conversion coincidence spectra with a short-pulse pump*. <i>Physica Scripta</i> , 2012 , 85, 058105	2.6	1
26	Resonant diffusive radiation in random multilayered systems. <i>Laser Physics</i> , 2007 , 17, 1080-1084	1.2	1

25	Coherent array of non-spreading atomic wave packets in absorptive optical potentials. <i>Laser Physics Letters</i> , 2006 , 3, 31-36	1.5	1
24	Cross-phase-modulation-induced instability and efficient parametric frequency conversion of ultrashort light pulses. <i>Journal of Experimental and Theoretical Physics</i> , 2006 , 102, 707-711	1	1
23	The influence of the surface electron layer on the energy spectrum of photoelectrons. <i>Journal of Experimental and Theoretical Physics</i> , 2002 , 95, 705-709	1	1
22	On amplification of electromagnetic radiation in a free-electron beam passing through an atomic gas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990 , 23, 4181-4184	1.3	1
21	Inverse noncollinear Compton laser as a device for acceleration of electrons. <i>Applied Physics Letters</i> , 1986 , 49, 1668-1669	3.4	1
20	Resonant interaction between intense electromagnetic waves during ionization of an atom. <i>Soviet Physics Journal (English Translation of Izvestiia Vysshikh Uchebnykh Zavedenii, Fizika)</i> , 1978 , 21, 49-55		1
19	Entanglement Degree Characterization of Spontaneous Parametric-Down Conversion Biphotons in Frequency Domain. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2010 , 46-55	0.2	1
18	Interference Stabilization 1996 , 11-21		1
17	Einstein localization in entangled light scattering		1
16	Strong-Field Interference Stabilization in Atoms and Molecules. <i>NATO ASI Series Series B: Physics</i> , 1993 , 245-259		1
15	Photon echo formed by exciting pulses with smooth envelopes. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989 , 6, 1314	1.7	0
14	Azimuthal entanglement and multimode schmidt decompositions for noncollinear biphotons. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2016 , 80, 755-759	0.4	
13	Formation of two-dimensional nonspreading atomic wave packets in the field of two standing light waves. <i>Quantum Electronics</i> , 2005 , 35, 675-678	1.8	
12	Delay-dependent amplification of a probe pulse via stimulated Rayleigh scattering. <i>Physical Review Letters</i> , 2002 , 88, 213001	7.4	
11	STRONG-FIELD REGIMES OF PHOTOIONIZATION. <i>Journal of Nonlinear Optical Physics and Materials</i> , 1995 , 04, 757-773	0.8	
10	Interference stabilization of Rydberg atoms induced by a strong laser field 1996 , 2796, 2		
9	Wave-front distortion of high-order harmonic beams caused by intensity-dependent emission phases. <i>Journal of X-Ray Science and Technology</i> , 1995 , 5, 312-22	2.1	
8	Charge symmetry of wave functions for an electron in a quantized electromagnetic wave field. <i>Soviet Physics Journal (English Translation of Izvestiia Vysshikh Uchebnykh Zavedenii, Fizika)</i> , 1975 , 18, 773-776		

- 7 Splitting of atomic levels in a strong magnetic field in the presence of an intense resonance wave. *Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika)*, **1976**, 19, 1624-1628
- 6 Strong field coherency effects in the processes of photoionization from rydberg levels **1989**, 177-193
- 5 Interference Stabilization: Λ and V-Schemes, Dynamics of Ionization, Initial Coherent Population of Rydberg Levels and Quantum Phase Control of The Ionization Yield **2001**, 277-284
- 4 Stabilization of Atoms in a Strong Laser Field. *Springer Series in Chemical Physics*, **2006**, 1-18 0.3
- 3 Coherence and Interference in Photoionization of a Rydberg Atom **1989**, 287-293
- 2 Photoionization and Stabilization of Rydberg Atoms with High Values of Orbital Momentum **1996**, 45-53
- 1 Biphoton and Triphoton States, Entanglement, and Schmidt Decompositions. *Springer Series in Chemical Physics*, **2017**, 85-93 0.3