

Sergey P Polyutov

List of Publications by Year in descending order

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62
papers

999
citations

516215

16
h-index

454577

30
g-index

63
all docs

63
docs citations

63
times ranked

997
citing authors

#	ARTICLE	IF	CITATIONS
1	Exciton-vibrational coupling in the dynamics and spectroscopy of Frenkel excitons in molecular aggregates. <i>Physics Reports</i> , 2015, 567, 1-78.	10.3	203
2	Refractive index sensing with optical bound states in the continuum. <i>Optics Express</i> , 2020, 28, 38907.	1.7	90
3	Exciton-vibrational coupling in molecular aggregates: Electronic versus vibronic dimer. <i>Chemical Physics</i> , 2012, 394, 21-28.	0.9	75
4	Dynamics of resonant x-ray and Auger scattering. <i>Reviews of Modern Physics</i> , 2021, 93, .	16.4	48
5	Titanium nitride as light trapping plasmonic material in silicon solar cell. <i>Optical Materials</i> , 2017, 72, 397-402.	1.7	38
6	Many-Photon Dynamics of Photobleaching. <i>Journal of Physical Chemistry A</i> , 2007, 111, 11961-11975.	1.1	37
7	Refractory titanium nitride two-dimensional structures with extremely narrow surface lattice resonances at telecommunication wavelengths. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	37
8	Nonadiabatic Effects in Resonant Inelastic X-Ray Scattering. <i>Physical Review Letters</i> , 2005, 95, 163002.	2.9	36
9	Interplay of One- and Two-Step Channels in Electrovibrational Two-Photon Absorption. <i>Journal of Physical Chemistry A</i> , 2005, 109, 9507-9513.	1.1	27
10	Nuclear dynamics in resonant inelastic X-ray scattering and X-ray absorption of methanol. <i>Journal of Chemical Physics</i> , 2019, 150, 234301.	1.2	26
11	Dynamic interpretation of resonant x-ray Raman scattering: Ethylene and benzene. <i>Physical Review A</i> , 2007, 76, .	1.0	24
12	Engineering mode hybridization in regular arrays of plasmonic nanoparticles embedded in 1D photonic crystal. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 224, 303-308.	1.1	22
13	Suppression of surface plasmon resonance in Au nanoparticles upon transition to the liquid state. <i>Optics Express</i> , 2016, 24, 26851.	1.7	18
14	New ideally absorbing Au plasmonic nanostructures for biomedical applications. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 187, 54-61.	1.1	18
15	Engineering novel tunable optical high-Q nanoparticle array filters for a wide range of wavelengths. <i>Optics Express</i> , 2020, 28, 1426.	1.7	18
16	Enhanced sensitivity of an all-dielectric refractive index sensor with an optical bound state in the continuum. <i>Physical Review A</i> , 2022, 105, .	1.0	17
17	Thermal effects in systems of colloidal plasmonic nanoparticles in high-intensity pulsed laser fields [Invited]. <i>Optical Materials Express</i> , 2017, 7, 555.	1.6	16
18	Plasmonic lattice Kerker effect in ultraviolet-visible spectral range. <i>Physical Review B</i> , 2021, 103, .	1.1	16

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19	Gradual collapse of nuclear wave functions regulated by frequency tuned X-ray scattering. Scientific Reports, 2017, 7, 43891.	1.6	15
20	Dynamics of cavityless lasing generated by ultrafast multiphoton excitation. Physical Review A, 2006, 74, .	1.0	14
21	Infrared-pumpâ€x-ray-probe spectroscopy of vibrationally excited molecules. Physical Review A, 2017, 95, .	1.0	14
22	One-dimensional cuts through multidimensional potential-energy surfaces by tunable x rays. Physical Review A, 2018, 97, .	1.0	13
23	Charge-transfer plasmons with narrow conductive molecular bridges: A quantum-classical theory. Journal of Chemical Physics, 2019, 151, 244125.	1.2	11
24	Resonant inelastic x-ray scattering at the F1s photoabsorption edge in LiF:â€fInterplay of excitonic and conduction states, and Stokesâ€™ doubling. Physical Review B, 2004, 70, .	1.1	10
25	Mode coupling in arrays of Al nanoparticles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 248, 106961.	1.1	10
26	Multipolar Lattice Resonances in Plasmonic Finite-Size Metasurfaces. Photonics, 2021, 8, 109.	0.9	10
27	Molecular hydrogen sorption capacity of P216-schwarzite: PM6-D3, MP2 and QTAIM approaches. Computational Materials Science, 2022, 209, 111410.	1.4	10
28	Titanium nitride nanoparticles as an alternative platform for plasmonic waveguides in the visible and telecommunication wavelength ranges. Photonics and Nanostructures - Fundamentals and Applications, 2018, 30, 50-56.	1.0	9
29	State-of-art plasmonic photonic crystals based on self-assembled nanostructures. Journal of Materials Chemistry C, 2021, 9, 3368-3383.	2.7	9
30	Bidirectional description of amplified spontaneous emission induced by three-photon absorption. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 385.	0.9	8
31	Biphasic aggregation of a perylene bisimide dye identified by exciton-vibrational spectra. Physical Chemistry Chemical Physics, 2016, 18, 25110-25119.	1.3	8
32	Recoil-induced dissociation in hard-x-ray photoionization. Physical Review A, 2019, 100, .	1.0	8
33	Optimization of photothermal methods for laser hyperthermia of malignant cells using bioconjugates of gold nanoparticles. Colloid Journal, 2016, 78, 435-442.	0.5	7
34	Vibrational resonant inelastic X-ray scattering in liquid acetic acid: a ruler for molecular chain lengths. Scientific Reports, 2021, 11, 4098.	1.6	7
35	Thermoelectric and Plasmonic Properties of Metal Nanoparticles Linked by Conductive Molecular Bridges. Physica Status Solidi (B): Basic Research, 2020, 257, 2000249.	0.7	6
36	Plasmonic Enhancement of Local Fields in Ultrafine Metal Nanoparticles. Journal of Physical Chemistry C, 2021, 125, 13900-13908.	1.5	6

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37	Thermal degradation of optical resonances in plasmonic nanoparticles. <i>Nanoscale</i> , 2022, 14, 433-447.	2.8	6
38	Thermal limiting effects in optical plasmonic waveguides. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 191, 1-6.	1.1	5
39	Anomalous polarization dependence in vibrationally resolved resonant inelastic x-ray scattering of H_2O . <i>Physical Review A</i> , 2018, 98, .	1.0	5
40	Substrate-mediated lattice Kerker effect in Al metasurfaces. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021, 38, C78.	0.9	5
41	Dynamical phase shift in x-ray absorption and ionization spectra by two delayed x-ray laser fields. <i>Physical Review A</i> , 2021, 104, .	1.0	5
42	Photodissociation of water induced by a long UV pulse and probed by high-energy-resolution x-ray-absorption spectroscopy. <i>Physical Review A</i> , 2021, 104, .	1.0	5
43	Far-Zone Resonant Energy Transfer in X-ray Photoemission as a Structure Determination Tool. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2730-2734.	2.1	4
44	Resonant x-ray second-harmonic generation in atomic gases. <i>Physical Review A</i> , 2019, 100, .	1.0	3
45	Charge transfer plasmons in the arrays of nanoparticles connected by conductive linkers. <i>Journal of Chemical Physics</i> , 2021, 154, 084123.	1.2	3
46	Restructuring of plasmonic nanoparticle aggregates with arbitrary particle size distribution in pulsed laser fields. <i>Chinese Physics B</i> , 2016, 25, 117806.	0.7	2
47	Comparative Analysis of Methods for Enhancement of the Photostability of CdTe@TGA QD Colloid Solutions. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5876-5881.	1.2	2
48	Thermal effects in systems of colloidal plasmonic nanoparticles in high-intensity pulsed laser fields [Invited]: publisher's note. <i>Optical Materials Express</i> , 2017, 7, 799.	1.6	2
49	Hydrogen bond effects in multimode nuclear dynamics of acetic acid observed via resonant x-ray scattering. <i>Journal of Chemical Physics</i> , 2021, 154, 214304.	1.2	2
50	Part I. Nanobubbles in pulsed laser fields for anticancer therapy: in search of adequate models and simulation approaches. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 175401.	1.3	2
51	Part II. Nanobubbles around plasmonic nanoparticles in terms of modern simulation modeling: what makes them kill the malignant cells?. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 175402.	1.3	2
52	Resonance laser actions as an efficient method for control of the gas and plasma states. <i>Russian Physics Journal</i> , 1999, 42, 744-751.	0.2	1
53	Confinement of atoms with nondegenerate ground states in a three-dimensional dissipative optical superlattice. <i>JETP Letters</i> , 2002, 76, 270-274.	0.4	1
54	Spectral profiles of two-photon absorption: Coherent versus two-step two-photon absorption. <i>Materials Research Society Symposia Proceedings</i> , 2004, 846, DD1.2.1.	0.1	1

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55	Self-sustained pulsation of amplified spontaneous emission of molecules in solution. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 215-227.	0.6	1
56	Non-Linear Pulse Propagation in Many-Photon Active Isotropic Media. Challenges and Advances in Computational Chemistry and Physics, 2006, , 211-249.	0.6	1
57	Three-dimensional interference effects in the mechanical action of weak biharmonic fields upon particles with the $J=0 \rightarrow J=1$ quantum transition. Journal of Experimental and Theoretical Physics, 2001, 93, 985-997.	0.2	0
58	Specific Features of the Kinetics of Atoms in a Three-Dimensional Bichromatic Standing Wave. Russian Physics Journal, 2004, 47, 461-467.	0.2	0
59	Size-dependent blinking of molecular aggregate total emission. Journal of Physics: Conference Series, 2017, 917, 062051.	0.3	0
60	Collective resonances in hybrid photonic-plasmonic nanostructures. Journal of Physics: Conference Series, 2020, 1461, 012046.	0.3	0
61	Performance Improvement of Quantum Well Infrared Photodetectors Through Dark Current Reduction Factor. IETE Journal of Research, 0, , 1-8.	1.8	0
62	Ultra-narrow surface lattice resonances in periodic structures of refractory titanium nitride nanodiscs. , 2018, , .		0