

Rustem N Shakhmurov

List of Publications by Year in descending order

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papers

660
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687363

13
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all docs

72
docs citations

72
times ranked

276
citing authors

#	ARTICLE	IF	CITATIONS
1	Coherent control of the waveforms of recoilless $\hat{\Gamma}^3$ -ray photons. Nature, 2014, 508, 80-83.	27.8	107
2	Slow light with persistent hole burning. Physical Review A, 2005, 71, .	2.5	54
3	Non-Bloch Transients in Solids: Free Induction Decay and Transient Nutations. Physical Review Letters, 1997, 79, 2963-2966.	7.8	30
4	Transformation of a single-photon field into bunches of pulses. Physical Review A, 2015, 92, .	2.5	27
5	Radiation burst from a single $\hat{\Gamma}^3$ -photon field. Physical Review A, 2011, 84, .	2.5	25
6	Single gamma-photon revival from sandwich absorbers. Physical Review A, 2013, 87, .	2.5	23
7	Transient nutations decay: The effect of field-modified dipolar interaction. Physical Review A, 1999, 59, 4087-4090.	2.5	22
8	Slow $\hat{\Gamma}^3$ -photon with a doublet structure: Time delay via a transition from destructive to constructive interference of collectively scattered radiation with the incoming photon. Physical Review A, 2009, 80, .	2.5	22
9	Pulse transformation and time-frequency filtering with electromagnetically induced transparency. Physical Review A, 2005, 71, .	2.5	19
10	Nuclear Quantum Memory and Time Sequencing of a Single $\hat{\Gamma}^3$ Photon. Physical Review Letters, 2019, 123, 250504.	7.8	18
11	Gain without inversion for gamma radiation. Optics Communications, 2000, 179, 525-536.	2.1	16
12	Slow light with persistent spectral hole burning in waveguides. Journal of Luminescence, 2007, 127, 22-27.	3.1	16
13	Quantum-mechanical theory of enhanced resolution in Mössbauer spectroscopy using a resonant detector. Physical Review B, 2000, 62, 6148-6157.	3.2	15
14	Induced Transparency for Gamma Radiation via Nuclear Level Mixing. Hyperfine Interactions, 2002, 143, 97-110.	0.5	14
15	Two types of adiabats in electromagnetically induced transparency. Physical Review A, 2006, 74, .	2.5	12
16	Towards more relaxed conditions for a gamma-ray laser: Methods to realize induced transparency for nuclear resonant gamma radiation. Laser and Photonics Reviews, 2010, 4, 1-20.	8.7	12
17	Level mixing induced transparency for gamma radiation. Applied Physics B: Lasers and Optics, 2005, 81, 883-888.	2.2	11
18	Slow light with a doublet structure: Underlying physical processes and basic limitations. Physical Review A, 2008, 77, .	2.5	11

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19	Application of the Mössbauer effect to the study of subnanometer harmonic displacements in thin solids. <i>Physical Review B</i> , 2017, 95, .	3.2	11
20	Reversible absorption of weak fields revealed in coherent transients. <i>Physical Review A</i> , 2012, 85, .	2.5	10
21	Inversionless amplification and propagation in an electronuclear level-mixing scheme. <i>Physical Review A</i> , 2001, 64, .	2.5	9
22	Off-resonance slow light. <i>Physical Review A</i> , 2008, 78, .	2.5	9
23	Electromagnetically Induced Transparency for Gamma-Quanta Using an RF Field. <i>Hyperfine Interactions</i> , 2001, 135, 215-221.	0.5	8
24	Electromagnetically Induced Transparency via Adiabatic Following of the Nonabsorbing State. <i>Physical Review Letters</i> , 2001, 87, 153601.	7.8	8
25	Time-domain violation of the optical Bloch equations for solids. <i>Physical Review B</i> , 1993, 48, 6903-6907.	3.2	7
26	Optical stimulated nutation echo. <i>Physical Review A</i> , 1997, 55, 1423-1429.	2.5	7
27	Title is missing!. <i>Hyperfine Interactions</i> , 2002, 139/140, 685-690.	0.5	7
28	Aspects of EIT with gamma radiation. <i>Journal of Modern Optics</i> , 2004, 51, 2589-2598.	1.3	7
29	Instantaneous processing of "slow light". Amplitude-duration control, storage, and splitting. <i>Physical Review A</i> , 2007, 76, .	2.5	7
30	Conversion of recoilless γ radiation into a periodic sequence of short intense pulses in a set of several sequentially placed resonant absorbers. <i>Physical Review A</i> , 2015, 92, .	2.5	7
31	Application of the low-finesse γ -ray frequency comb for high-resolution spectroscopy. <i>Physical Review A</i> , 2016, 94, .	2.5	7
32	Nuclear magnetic dephasing in solids. <i>Journal of Physics Condensed Matter</i> , 1991, 3, 8683-8694.	1.8	6
33	Phase-noise influence on coherent transients and hole burning. <i>Physical Review A</i> , 1998, 58, 3099-3113.	2.5	6
34	Adiabatic-following criterion, estimation of the nonadiabatic excitation fraction, and quantum jumps. <i>Physical Review A</i> , 2003, 68, .	2.5	6
35	Suppression of γ -photon absorption via quantum interference. <i>Journal of Modern Optics</i> , 2007, 54, 2595-2605.	1.3	6
36	The energy storage in the formation of slow light. <i>Journal of Modern Optics</i> , 2010, 57, 1355-1365.	1.3	6

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37	Dark state in ruby: Analysis of the feasibility. <i>Physical Review A</i> , 2000, 62, .	2.5	5
38	Slowing Down of Gamma Photons. <i>Hyperfine Interactions</i> , 2003, 151/152, 93-104.	0.5	5
39	Transformation of the frequency-modulated continuous-wave field into a train of short pulses by resonant filters. <i>Physical Review A</i> , 2017, 95, .	2.5	5
40	Pulse shaping by a frequency filtering of a sawtooth phase-modulated cw laser. <i>Physical Review A</i> , 2019, 100, .	2.5	5
41	Transient nutation signal locking. <i>Physical Review A</i> , 1999, 59, 3788-3796.	2.5	4
42	Single photon emitted by a single particle in free-space vacuum modes and its resonant interaction with two- and three-level absorbers. <i>Physical Review A</i> , 2007, 75, .	2.5	4
43	Principles of controlling a single-photon radiation state using optically thick resonant media. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2012, 76, 248-251.	0.6	4
44	Increasing efficiency of quantum memory based on atomic frequency combs. <i>Laser Physics</i> , 2020, 30, 095205.	1.2	4
45	Stimulated nutation echo: application to the driven decoherence study. <i>Journal of Physics Condensed Matter</i> , 2003, 15, 4215-4228.	1.8	3
46	Where is the energy of slow light stored?. <i>Laser Physics</i> , 2007, 17, 652-655.	1.2	3
47	Group velocity in a nuclear EIT-like $\hat{\rho}$ scheme and comparison with optical EIT. <i>Laser Physics</i> , 2007, 17, 1234-1239.	1.2	3
48	Transformation of subradiant states to superradiant states in a thick resonant medium. <i>Physical Review A</i> , 2014, 90, .	2.5	3
49	Application of the Mössbauer effect to the study of optoacoustic phenomena. <i>Physica Status Solidi (B): Basic Research</i> , 2015, 252, 469-475.	1.5	3
50	Mössbauer Method for Measuring Subangstrom Displacements of Thin Films. <i>JETP Letters</i> , 2018, 108, 772-776.	1.4	3
51	<title>New look at non-Bloch decay of transient nutation and free induction in $S=1/2$ systems</title>. , 1997, 3239, 206.		2
52	<title>Non-Markovian dephasing influence on two-wave interaction in a resonant medium</title>. , 1997, 3239, 357.		2
53	Level mixing induced transparency II. Different transition probabilities of the crossing lines. <i>Applied Physics B: Lasers and Optics</i> , 2006, 83, 635-641.	2.2	2
54	Formation of regular pulses with high peak intensity from a random flow of gamma quanta. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2014, 78, 199-202.	0.6	2

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55	Time-delayed coincidence technique for subnatural-width spectroscopy as an interference phenomenon. <i>Physical Review A</i> , 2019, 99, .	2.5	2
56	Generation of Pulses From Periodically Sawtooth Phase-Modulated CW Laser Field Using the Temporal Fractional Talbot Effect. <i>Journal of Lightwave Technology</i> , 2022, 40, 1895-1901.	4.6	2
57	Role of quasienergy levels in the processes of amplification of light by stimulated emission of radiation. <i>Soviet Journal of Quantum Electronics</i> , 1986, 16, 182-188.	0.1	1
58	<title>Example of spatial coherence in nuclear radiation: nuclear emission holography</title>. , 2000, , .		1
59	Increase of the fractional delay of the pulse in an electromagnetically-induced-transparency medium. <i>Physical Review A</i> , 2008, 78, .	2.5	1
60	Coherent methods for controlling MÃ¶ssbauer photons. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2015, 79, 951-954.	0.6	1
61	Application of harmonic and anharmonic frequency crystals for manipulation with quantum states. <i>Physical Review A</i> , 2018, 98, .	2.5	1
62	MÃ¶ssbauer Method for Studying Vibrations in a Granular Medium Excited by Ultrasound. <i>JETP Letters</i> , 2020, 111, 167-171.	1.4	1
63	Nuclear Emission Holography. <i>Hyperfine Interactions</i> , 2002, 139/140, 691-698.	0.5	0
64	Optical filter with electromagnetically induced transparency. , 0, , .		0
65	Level mixing induced transparency. <i>Laser Physics</i> , 2007, 17, 716-719.	1.2	0
66	Coherent forward scattering of a single photon wave packet in a resonant medium. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2010, 74, 954-958.	0.6	0
67	New applications of the MÃ¶ssbauer effect. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2017, 81, 779-783.	0.6	0
68	Methods of Coherent Control of Spectral and Temporal Properties of Gamma Photons and Their Potential Applications. <i>Crystallography Reports</i> , 2020, 65, 409-411.	0.6	0
69	Resonant-Detector MÃ¶ssbauer Spectroscopic Studies of Sn Doped SiO2 Analysed Using Quantum Mechanical Theory. , 2002, , 685-690.		0
70	Slow Light with Persistent Spectral Hole Burning. , 2006, , .		0
71	Influence of Giant Nuclear-spin Polarisation on Resonant Gamma-ray Absorption and Emission. <i>Australian Journal of Physics</i> , 1998, 51, 339.	0.6	0