

Alexandre Dodonov

List of Publications by Year in descending order

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Version: 2024-02-01

61
papers

945
citations

393982

19
h-index

476904

29
g-index

61
all docs

61
docs citations

61
times ranked

368
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Rabi model beyond the rotating-wave approximation: Generation of photons from vacuum through decoherence. <i>Physical Review A</i> , 2008, 78, . | 1.0 | 92 |
| 2 | The nonstationary Casimir effect in a cavity with periodical time-dependent conductivity of a semiconductor mirror. <i>Journal of Physics A</i> , 2006, 39, 6271-6281. | 1.6 | 58 |
| 3 | Quantum Harmonic Oscillator and Nonstationary Casimir Effect. <i>Journal of Russian Laser Research</i> , 2005, 26, 445-483. | 0.3 | 55 |
| 4 | Separability dynamics of two-mode Gaussian states in parametric conversion and amplification. <i>Journal of Physics A</i> , 2005, 38, 683-696. | 1.6 | 48 |
| 5 | Photon generation from vacuum in nondegenerate cavities with regular and random periodic displacements of boundaries. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003, 317, 378-388. | 0.9 | 40 |
| 6 | Nonstationary Casimir effect in cavities with two resonantly coupled modes. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2001, 289, 291-300. | 0.9 | 35 |
| 7 | QED effects in a cavity with a time-dependent thin semiconductor slab excited by laser pulses. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, S749-S766. | 0.6 | 33 |
| 8 | Analytical and numerical analysis of the atom-field dynamics in non-stationary cavity QED. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 225502. | 0.6 | 31 |
| 9 | Approximate analytical results on the cavity dynamical Casimir effect in the presence of a two-level atom. <i>Physical Review A</i> , 2012, 85, . | 1.0 | 30 |
| 10 | Dynamical Casimir effect in two-atom cavity QED. <i>Physical Review A</i> , 2012, 85, . | 1.0 | 30 |
| 11 | Energy-time and frequency-time uncertainty relations: exact inequalities. <i>Physica Scripta</i> , 2015, 90, 074049. | 1.2 | 28 |
| 12 | Dynamical Casimir effect in a cavity with an N-level detector or N two-level atoms. <i>Physical Review A</i> , 2012, 86, . | 1.0 | 26 |
| 13 | Photon creation from vacuum and interactions engineering in nonstationary circuit QED. <i>Journal of Physics: Conference Series</i> , 2009, 161, 012029. | 0.3 | 25 |
| 14 | Strong modifications of the field statistics in the cavity dynamical Casimir effect due to the interaction with two-level atoms and detectors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2011, 375, 4261-4267. | 0.9 | 25 |
| 15 | Microscopic toy model for the cavity dynamical Casimir effect. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2015, 48, 245302. | 0.7 | 24 |
| 16 | Prospects for observing dynamical and anti-dynamical Casimir effects in circuit QED due to fast modulation of qubit parameters. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 165503. | 0.6 | 24 |
| 17 | Resonance generation of photons from vacuum in cavities due to strong periodical changes of conductivity in a thin semiconductor boundary layer. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005, 7, S47-S58. | 1.4 | 23 |
| 18 | Effective Landau-Zener transitions in the circuit dynamical Casimir effect with time-varying modulation frequency. <i>Physical Review A</i> , 2016, 93, . | 1.0 | 23 |

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|----|--|-----|-----------|
| 19 | Dynamical Casimir effect in a cavity in the presence of a three-level atom. <i>Physical Review A</i> , 2012, 85, . | 1.0 | 21 |
| 20 | Transmission of Correlated Gaussian Packets Through a Delta-Potential. <i>Journal of Russian Laser Research</i> , 2014, 35, 39-46. | 0.3 | 21 |
| 21 | Quantum photodetection distributions with $\hat{\epsilon}^{\text{nonlinear}}$ quantum jump superoperators. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005, 7, 99-108. | 1.4 | 14 |
| 22 | Engineering quantum jump superoperators for single-photon detectors. <i>Physical Review A</i> , 2006, 74, . | 1.0 | 14 |
| 23 | Tunneling of slow quantum packets through the high Coulomb barrier. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014, 378, 1071-1073. | 0.9 | 14 |
| 24 | Analytical description of nonstationary circuit QED in the dressed-states basis. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 285303. | 0.7 | 14 |
| 25 | Microscopic models of quantum-jump superoperators. <i>Physical Review A</i> , 2005, 72, . | 1.0 | 13 |
| 26 | Anti-dynamical Casimir effect with an ensemble of qubits. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 1542-1546. | 0.9 | 11 |
| 27 | Theory of the dynamical Casimir effect in nonideal cavities with time-dependent parameters. <i>Journal of Physics: Conference Series</i> , 2008, 99, 012006. | 0.3 | 10 |
| 28 | Smooth quantum-classical transition in photon subtraction and addition processes. <i>Physical Review A</i> , 2009, 79, . | 1.0 | 10 |
| 29 | Continuous intracavity monitoring of the dynamical Casimir effect. <i>Physica Scripta</i> , 2013, 87, 038103. | 1.2 | 10 |
| 30 | Entanglement of Resonantly Coupled Field Modes in Cavities with Vibrating Boundaries. <i>Journal of Russian Laser Research</i> , 2002, 23, 531-564. | 0.3 | 9 |
| 31 | Resonance frequency shift in a cavity with a thin conducting film near a conducting wall. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 363, 33-37. | 0.9 | 9 |
| 32 | Analytical comparison of the first- and second-order resonances for implementation of the dynamical Casimir effect in nonstationary circuit QED. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 495304. | 0.7 | 9 |
| 33 | Quantum power boost in a nonstationary cavity-QED quantum heat engine. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 365302. | 0.7 | 9 |
| 34 | Emulation of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle n \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -photon Jaynes-Cummings and anti-Jaynes-Cummings models via parametric modulation of a cyclic qutrit. <i>Physical Review A</i> , 2019, 99, . | 1.0 | 9 |
| 35 | Inclusion of nonidealities in the continuous photodetection model. <i>Physical Review A</i> , 2007, 75, . | 1.0 | 8 |
| 36 | Photon statistics in the dynamical Casimir effect modified by a harmonic oscillator detector. <i>Physica Scripta</i> , 2013, T153, 014017. | 1.2 | 8 |

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|----|--|-----|-----------|
| 37 | Quantum master equations from classical Lagrangians with two stochastic forces. <i>Physical Review E</i> , 2007, 75, 011132. | 0.8 | 7 |
| 38 | Mean excitation numbers due to the anti-rotating term in cavity QED under Lindbladian dephasing. <i>Physica Scripta</i> , 2012, 86, 025405. | 1.2 | 7 |
| 39 | Dynamical Casimir effect in a cavity with a weakly non-equidistant spectrum. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012, 376, 1903-1906. | 0.9 | 7 |
| 40 | Antidynamical Casimir effect as a resource for work extraction. <i>Physical Review A</i> , 2017, 96, . | 1.0 | 7 |
| 41 | The Heisenberg-Langevin model of a quantum damped harmonic oscillator with time-dependent frequency and damping coefficients. <i>Journal of Russian Laser Research</i> , 2006, 27, 379-388. | 0.3 | 6 |
| 42 | How can a Markovian dissipative cavity QED system be?. <i>Physica Scripta</i> , 2010, 82, 038102. | 1.2 | 6 |
| 43 | Speeding up the antidynamical Casimir effect with nonstationary qutrits. <i>Physical Review A</i> , 2017, 96, . | 1.0 | 6 |
| 44 | One- and three-photon dynamical Casimir effects using a nonstationary cyclic qutrit. <i>Physical Review A</i> , 2018, 98, . | 1.0 | 6 |
| 45 | Dynamical Casimir effect via four- and five-photon transitions using a strongly detuned atom. <i>Physical Review A</i> , 2019, 100, . | 1.0 | 5 |
| 46 | Magnetic-moment probability distribution of a quantum charged particle in thermodynamic equilibrium. <i>Physical Review A</i> , 2020, 102, . | 1.0 | 5 |
| 47 | Asymptotic mean excitation numbers due to anti-rotating term (AMENDART) in Markovian circuit QED. <i>Journal of Physics: Conference Series</i> , 2011, 274, 012137. | 0.3 | 4 |
| 48 | Excitation of the Classical Electromagnetic Field in a Cavity Containing a Thin Slab with a Time-Dependent Conductivity. <i>Journal of Russian Laser Research</i> , 2016, 37, 107-122. | 0.3 | 4 |
| 49 | Dynamical Casimir effect via modulated Kerr or higher-order nonlinearities. <i>Physical Review A</i> , 2022, 105, . | 1.0 | 3 |
| 50 | Generation of Photons from Vacuum in a Cavity with Time-Dependent Eigenfrequency and Dumping Coefficients. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 2006, 26, 29-36. | 0.4 | 2 |
| 51 | Dynamical Casimir effect in cavities with two modes resonantly coupled through a qubit. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020, 384, 126837. | 0.9 | 2 |
| 52 | Novel scheme for anti-dynamical Casimir effect using nonperiodic ultrastrong modulation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020, 384, 126685. | 0.9 | 2 |
| 53 | Errors in zero-excitation state preparation due to anti-rotating terms in two-atom Markovian cavity QED. <i>Physica Scripta</i> , 2010, 82, 055401. | 1.2 | 1 |
| 54 | Analytical description of the mode hybridization in a restricted two-dimensional model for an electromagnetic cavity containing a thin magnetized slab. <i>Physical Review B</i> , 2017, 96, . | 1.1 | 1 |

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|----|--|-----|-----------|
| 55 | Magnetic moment invariant Gaussian states of a charged particle in a homogeneous magnetic field. European Physical Journal Plus, 2022, 137, 1. | 1.2 | 1 |
| 56 | Continuous photodetection model: quantum jumps engineering and hints for experimental verification. Journal of Physics: Conference Series, 2007, 84, 012005. | 0.3 | 0 |
| 57 | Quantum model for continuous photodetection. AIP Conference Proceedings, 2008, , . | 0.3 | 0 |
| 58 | Comparison between different models for quantum jump superoperators in cavity QED experiments. Journal of Russian Laser Research, 2009, 30, 485-492. | 0.3 | 0 |
| 59 | Influence of laser-pulse shape and surface recombination on the photon generation rate in experiments on the dynamical casimir effect. Journal of Russian Laser Research, 2010, 31, 563-573. | 0.3 | 0 |
| 60 | Two-photon exchange interaction from the Dicke Hamiltonian under parametric modulation. Physical Review A, 2018, 97, . | 1.0 | 0 |
| 61 | Giant diamagnetism of a quantum charged particle after inversion of the magnetic field. Physical Review A, 2022, 105, . | 1.0 | 0 |