

Peter Domokos's list of publications

Articles in peer reviewed journals

1. J. M. Fink, A. Dombi, A. Vukics, A. Wallraff, P. Domokos
Observation of the Photon-Blockade Breakdown Phase Transition
Physical Review X 7, 011012 (2017)
2. P. Federsel, C. Rogulj, T. Menold, Z. Darázs, P. Domokos, A. Günther, J. Fortágh
Noise spectroscopy with a quantum gas
Physical Review A 95, 043603 (2017)
3. D. Nagy and P. Domokos
Critical exponent of quantum phase transitions driven by colored noise
Physical Review A 94, 063862 (2016)
4. T. Griesser, A. Vukics, P. Domokos
Depolarization shift of the superradiant phase transition
Physical Review A 94, 033815 (2016)
5. O. Kálmán, Z. Darázs, F. Brennecke, P. Domokos
Magnetic-noise-spectrum measurement by an atom laser in gravity
Physical Review A 94, 033626 (2016)
6. D. Nagy, P. Domokos
Nonequilibrium Quantum Criticality and Non-Markovian Environment: Critical Exponent of a Quantum Phase Transition
Physical Review Letters 115, 043601 (2015)
7. A. Vukics, T. Grießer, P. Domokos
Fundamental limitation of ultrastrong coupling between light and atoms
Physical Review A 92, 043835 (2015)
8. A. Dombi, A. Vukics, P. Domokos
Bistability effect in the extreme strong coupling regime of the Jaynes-Cummings model
European Physical Journal D 69, 60 (2015)
9. G. Kónya, G. Szirmai, D. Nagy, and P. Domokos
Damping of quasiparticles in a Bose-Einstein condensate coupled to an optical cavity
Physical Review A 90, 013623 (2014)
10. G. Kónya, G. Szirmai, D. Nagy, and P. Domokos
Photonic tuning of Beliaev damping in a superfluid
Physical Review A 89, 051601(R) (2014)
11. Z. Darázs, Z. Kurucz, O. Kálmán, T. Kiss, J. Fortágh, and P. Domokos
Parametric Amplification of the Mechanical Vibrations of a Suspended Nanowire by Magnetic Coupling to a Bose-Einstein Condensate
Physical Review Letters 112, 133603 (2014)
12. A. Vukics, T. Grießer, P. Domokos
Elimination of the A-Square Problem from Cavity QED
Physical Review Letters 112, 073601 (2014)
13. A. Dombi, A. Vukics, P. Domokos
Optical bistability in strong-coupling cavity QED with a few atoms
Journal of Physics B: At. Mol. Opt. Phys. 46 224010 (2013)

14. D. Nagy, G. Szirmai, P. Domokos
Cavity optomechanics with a trapped, interacting Bose-Einstein condensate
European Physical Journal D 67, 124 (2013)
15. H. Ritsch, P. Domokos, F. Brennecke, T. Esslinger
Cold atoms in cavity generated dynamical optical potentials
Reviews of Modern Physics 85, 553–601 (2013)
16. A. Dombi, P. Domokos
Scattering model description of cascaded cavity configurations
Physica Scripta T153, 014018 (2013)
17. A. Vukics, P. Domokos
Adequacy of the Dicke model in cavity QED: A counter-no-go statement
Physical Review A 86, 053807 (2012)
18. A. Xuereb, P. Domokos
Dynamical scattering models in optomechanics: Going beyond the 'coupled cavities' model
New Journal of Physics 14, 095027 (2012)
19. G. Kónya, D. Nagy, G. Szirmai, and P. Domokos
Finite-size scaling in the quantum phase transition of the open-system Dicke model
Physical Review A 86, Art. no. 013641 (2012)
20. O. Kálmán, T. Kiss, J. Fortágh, and P. Domokos
Quantum Galvanometer by Interfacing a Vibrating Nanowire and Cold Atoms
Nano Letters 12, 435–439 (2012)
21. G. Kónya, G. Szirmai, and P. Domokos
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European Physical Journal D 65, 33–42 (2011)
22. D. Nagy, G. Szirmai, and P. Domokos
Critical exponent of a quantum-noise-driven phase transition: The open-system Dicke model
Physical Review A 84, Art. no. 043637 (2011)
23. A. Xuereb, P. Domokos, P. Horak, and T. Freearde
Cavity cooling of atoms: within and without a cavity
European Physical Journal D 65, 273–278 (2011)
24. A. Xuereb, T. Freearde, P. Horak, and **P. Domokos**
Optomechanical Cooling with Generalized Interferometers
Physical Review Letters 105, 013602 (2010)
25. D. Nagy, G. Kónya, G. Szirmai, and **P. Domokos**
Dicke-Model Phase Transition in the Quantum Motion of a Bose-Einstein Condensate in an Optical Cavity
Physical Review Letters 104, 130401 (2010)
26. G. Szirmai, D. Nagy, and **P. Domokos**
Quantum noise of a Bose-Einstein condensate in an optical cavity, correlations, and entanglement
Physical Review A 81, 043639 (2010)
27. A. Xuereb, **P. Domokos**, P. Horak, and T. Freearde
Scattering theory of multi-level atoms interacting with arbitrary radiation fields
Physica Scripta T 140 (2010) 014010
28. D. Nagy, **P. Domokos**, A. Vukics, and H. Ritsch
Nonlinear quantum dynamics of two BEC modes dispersively coupled by an optical cavity
European Physical Journal D 55, 659–668 (2009)

29. A. Xuereb, **P. Domokos**, J. K. Asbóth, P. Horak, T. Freearde
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30. G. Szirmai, D. Nagy, **P. Domokos**
Excess Noise Depletion of a Bose-Einstein Condensate in an Optical Cavity
Physical Review Letters 102, 080401 (2009)
31. D. Nagy, G. Szirmai, **P. Domokos**
Self-organization of a Bose-Einstein condensate in an optical cavity
European Physical Journal D 48 (1), 127-137 (2008)
32. J. K. Asbóth, H. Ritsch, **P. Domokos**
Optomechanical coupling in a one-dimensional optical lattice
Physical Review A 77, 063424 (2008)
33. B. L. Lev, A. Vukics, E. R. Hudson, B. C. Sawyer, **P. Domokos**, H. Ritsch, J. Ye
Prospects for the cavity-assisted laser cooling of molecules
Physical Review A 77, 023402 (2008)
34. G. Szirmai, **P. Domokos**
Geometric resonance cooling of polarizable particles in an optical waveguide
Physical Review Letters 99, 213602-1-4 (2007)
35. J. K. Asbóth, **P. Domokos**
Comment on "Coupled dynamics of atoms and radiation-pressure-driven interferometers"
Physical Review A 76, 057801-1-4, (2007)
36. J. K. Asbóth, H. Ritsch, **P. Domokos**
Collective excitations and instability of an optical lattice due to unbalanced pumping
Physical Review Letters 98, 203008 (2007)
37. D. Nagy, **P. Domokos**
Dipole-dipole instability of atom clouds in a far-detuned optical dipole trap
Physical Review A 75, 053416 (2007)
38. C. Maschler, H. Ritsch, A. Vukics, **P. Domokos**:
Entanglement assisted fast reordering of atoms in an optical lattice within a cavity at $T=0$
Optics Communications 273, 446-450 (2007)
39. D. Nagy, J. K. Asbóth, **P. Domokos**:
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Acta Physica Hungarica B 26/1-2 141-148 (2006)
40. D. Nagy, J. K. Asbóth, **P. Domokos**, H. Ritsch:
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41. J. K. Asbóth, **P. Domokos**, H. Ritsch, and A. Vukics:
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42. A. Vukics and **P. Domokos**:
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43. T. Salzburger, **P. Domokos**, and H. Ritsch:
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44. A. Vukics, J. Janszky, and **P. Domokos**:
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45. C. Henkel, M. Nest, **P. Domokos**, and R. Folman:
Optical discrimination between spatial decoherence and thermalization of a massive object
Physical Review A 70 023810–1-10 (2004)
46. J. Asbóth, **P. Domokos**, and H. Ritsch:
Correlated motion of two atoms trapped in a single-mode cavity field
Physical Review A 70, 013414–1-11 (2004)
47. **P. Domokos**, A. Vukics, and H. Ritsch:
Anomalous Doppler effect and polariton-mediated cooling of two-level atoms
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48. A. Vukics, **P. Domokos**, and H. Ritsch:
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49. **P. Domokos** and H. Ritsch:
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50. P. Horak, B. G. Klappauf, A. Haase, R. Folman, J. Schmiedmayer, **P. Domokos**, E. A. Hinds:
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51. P. Horak, **P. Domokos** and H. Ritsch:
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52. **P. Domokos** and H. Ritsch:
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53. T. Salzburger, **P. Domokos** and H. Ritsch:
Enhanced atom capturing in a high-Q cavity by help of several transverse modes
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54. **P. Domokos**, T. Salzburger and H. Ritsch:
Dissipative motion of an atom with transverse coherent driving in a cavity with many degenerate modes
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55. **P. Domokos**, P. Horak and H. Ritsch:
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56. **P. Domokos**, P. Horak and H. Ritsch:
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58. **P. Domokos**, T. Kiss, and J. Janszky:
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65. S. Szabo, **P. Domokos**, P. Adam, J. Janszky:
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66. **P. Domokos**, M. Brune, J. M. Raimond, and S. Haroche:
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72. P. Bardroff, E. Mayr, W. P. Schleich, **P. Domokos**, J. M. Raimond, M. Brune, S. Haroche:
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76. **P. Domokos**, P. Adam, J. Janszky:
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2. Marco Wilzbach, **Peter Domokos**, Thomas Fernholz, Ron Folman, Sönke Groth, Albrecht Haase, Christian Hock, Peter Horak, Bruce Klappauf, Michael Schwarz, and Jörg Schmiedmayer:
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3. T. Kiss, P. Domokos, J. Janszky:
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4. Helmut Ritsch, **Peter Domokos**, Peter Horak, Markus Gangl:
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5. M. Gangl, P. Horak, **P. Domokos**, and H. Ritsch:
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8. J. Janszky, P. Adam, I. Földesi, **P. Domokos**:
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11. J. Janszky, P. Adam, I. Földesi, **P. Domokos**:
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1. Domokos Péter:
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Magyar Tudomány 174, 2013/6, 713–718
2. Domokos Péter:
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3. P. Domokos:
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4. Janszky József, Domokos Péter:
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Magyar Tudomány, 2005/12, 1550-1557
5. Domokos Péter:
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6. P. Domokos:
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"Fény–anyag kölcsönhatás, kvantumoptika", eds. J. Bakos, Zs. Sörlei, S. Varró, Lecture notes of the 5th Spring School on Quantum Electronics (Pécs), p. 160–180 (1999).

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7. A. Vukics, P. Domokos:
Anomalous Doppler effect and polariton cooling (in Hungarian) "Kvantumelektronika 2003", V. Symposium on Quantumelectronics Researches in Hungary, ed. S. Varró, P-43 (2003).

8. **P. Domokos**, I. Protsenko, J. M. Raimond, S. Haroche:
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