

Publication list of Dr. Natalia Korolkova prior to 2003

1. T. Opatrny, N. Korolkova, G. Leuchs: Mode structure and photon number correlations in squeezed quantum pulses, *Phys. Rev. A* **66**, 053813 (2002).
2. N. Korolkova, F. König, S. Lorenz, M. Meißner, Ch. Silberhorn, G. Leuchs: Quantum properties of solitons in optical fibers for optical communication, *The Physics of Communication*, 427 (2003) (Proceedings of the XXII Solvay Conference on Physics, Delphi Lamia, Greece, 24–29 November 2001).
3. Ch. Silberhorn, N. Korolkova and G. Leuchs: Quantum key distribution with bright entangled beams, *Phys. Rev. Lett.* **88**, 167902 (2002).
4. N. Korolkova, G. Leuchs, R. Loudon, T. C. Ralph, and Ch. Silberhorn: Polarisation Squeezing and Continuous Variable Polarization Entanglement. *Phys. Rev. A* **65**, 052306 (2002).
5. G. Leuchs and N. Korolkova: Entangling fiber solitons: Quantum noise engineering for interferometry and communication, *Optics & Photonic New*, February 2002, p. 64-69.
6. N. Korolkova, Ch. Silberhorn, O. Glöckl, S. Lorenz, Ch. Marquardt, G. Leuchs: Direct experimental test of non-separability and other quantum techniques using continuous variables of light, *Eur. Phys. D* **18**, 229 (2002).
7. S. Lorenz, Ch. Silberhorn, N. Korolkova, R.S. Windeler, and G. Leuchs: Squeezed Light from Microstructured Fibres: towards Free Space Quantum Cryptography, *Appl.Phys.B*, **73**, 855-859 (2001).
8. Ch. Silberhorn, P. K. Lam, O. Weiß, F. König, N. Korolkova, and G. Leuchs: Generation of continuous variable Einstein-Podolsky-Rosen entanglement via the Kerr nonlinearity in an optical fibre. *Phys. Rev. Lett.* **86**, 4267-4270 (2001).
9. N. Korolkova and G. Leuchs: Multimode Quantum Correlations, in *"Coherence and Statistics of Photons and Atoms"*, J. Peřina (ed.), John Wiley & Sons, Inc., 2001, pp. 111-158.
10. N. Korolkova, Ch. Silberhorn, O. Weiß, and G. Leuchs: Quantum communication with continuous variables using multi-photon states of light, in *"Cybernetics and Systems 2000"*, R. Trappl (ed.), Austrian Society for Cybernetics Studies, 2000, **V. 2**, p. 153.
11. N. Korolkova, R. Loudon, G. Gardavsky, M. Hamilton, and G. Leuchs: Time evolution of a quantum soliton in a Kerr medium. *J. Mod. Opt.*, **48**, 1339-1355 (2001).
12. N. Korolkova, G. Leuchs, S. Schmitt, C. Silberhorn, A. Sizmann, M. Stratmann, O. Weiss, and H. A. Bachor: Controlling the quantum properties of optical solitons in fibres. *Nonlinear Optics*, **24**, 223-228 (2000).
13. G. Leuchs, T. C. Ralph, C. Silberhorn, and N. Korolkova: Scheme for the generation of entangled solitons for quantum communication. *J. Mod. Opt.* **46**, 1927-1939 (1999).
14. S. Spälter, N. Korolkova, F. König, A. Sizmann, and G. Leuchs: Observation of multimode quantum correlations in fiber optical solitons. *Phys. Rev. Lett.* **81**, 786-789 (1998).
15. N. V. Korolkova and A. S. Chirkin: Phase - photon number uncertainty relation for the field of optical pulses. *Quantum Electron.* **28**, 285-287 (1998).
16. N. Korolkova and J. Peřina: Kerr nonlinear coupler with varying linear coupling coefficient. *J. Mod. Opt.* **44**, 1525-1534 (1997).
17. D. Mogilevtsev, N. Korolkova, and J. Peřina: Band - gap quantum coupler. *J. Mod. Opt.* **44**, 1293-1307 (1997).
18. N. Korolkova and J. Peřina: Quantum statistics of symmetrical optical parametric nonlinear coupler. *Opt. Commun.* **137**, 263-275 (1997).
19. N. Korolkova and J. Peřina: Quantum statistics and dynamics of Kerr nonlinear couplers. *Opt. Commun.* **136**, 135-149 (1997). Cited 40.
20. D. Mogilevtsev, N. Korolkova, and J. Peřina: Entangled superpositions of distinguishable states via nonlinear wave mixing. *Quantum Semiclass. Opt.* **8**, 1169-1178 (1996).

21. N. V. Korolkova and A. S. Chirkin: Formation and conversion of polarization - squeezed light. *J. Mod. Opt.* **43**, 869-878 (1996).
22. N. V. Korolkova and A. S. Chirkin: Frequency doubling of polarization - squeezed light. *Sov. J. Optika i spektr.* **80**, 308-312 (1996).
23. N. V. Korolkova and A. S. Chirkin: Source of intensive radiation with nonclassical properties. *Quantum electron.* **24**, 805-806 (1994).
24. A. S. Chirkin and N. V. Korolkova: The influence of anisotropy of nonlinear optical media on quantum states of the second and third optical harmonics. *Laser Physics* **4**, 727-733 (1994).
25. N. V. Korolkova and A. S. Chirkin: Frequency doubling of the coherent radiation in media with quadratic and cubic nonlinearities: fixed photon number approximation. *Sov. J. Optika i spektrosk.* **74**, 908-911 (1993) (in Russian).
26. N. V. Korolkova and A. S. Chirkin: Quantum states of second optical harmonic in presence of self-action. *Bull. of R.Ac.Sci., Physics* **56**, 15-18 (1992) (in Russian).