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Affiliation

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Education

M.Sc. /Sofia University "St.Kliment Ohridski", Faculty of Physics, Quantum Electronics, 1972/
PhD /St. Petersburg University, 1977/

Main research area

Physics, atomic physics, high resolution spectroscopy, coherent population trapping, magneto-optic effects

Specializations and international collaborations

Sankt-Petersburg University
TU-Graz.

Scientific awards and membership in scientific societies

Award "Acad. Emil Djakov", 2003
Bulgarian Physical Union.

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Selected scientific publications

1. E. Taskova, E. Alipieva and G. Todorov "Peculiarities of the coherent population trapping resonance in the fluorescence obtained in a coated ^{87}Rb cell in the presence of transverse magnetic field: Theory and experiment", *J. Phys. B: At. Mol. Opt. Phys.* 51 (3), 035005, (2018).
2. E. Taskova, E. Alipieva and G. Todorov, "Contribution of the polarization moments of different rank to the integral CPT signal", Proceedings of SPIE, 10226, Pages 102260O-102260O-5, (2017).
3. E. Mariotti, V. Biancalana, R. Cecchi, Y. Dancheva, Alen Khanbekyan, C. Marinelli, L. Moi, L. Stiaccini, S. Cartaleva, C. Andreeva, E. Alipieva; S. Gateva; A. Krasteva; D. Slavov; E. T. Taskova; M. Taslakov; P. Todorov; S. Tsvetkov; A. Wilson Gordon; L. Margalit; W. Gawlik, S. Pustelnik, A. Stabrawa, J. Sudyka, A. Wojciechowski, F. Renzoni, C. Deans, S. Hussain; L. Marmugi; D. Rassi; O. Ozun; D. Sarkisyan; H. Azizbekyan; R. Drampyan, Alek. Khanbekyan; R. Mirzoyan ; A. Papoyan; A. Sargsyan; S. Shmavonyan; A. Tonoyan; P. N. Ghosh; S. Dey; S. Mitra, B. Ray, K. A. Nasirov; P.

- Chapovsky; V. Entin; N. Nikolov; N. Petrov ; D. Budker, B. Patton, A. Wickenbrock, L. Zhivun, S. Gozzini, "Forty years after the first dark resonance experiment: an overview of the COSMA project results", Proceedings of SPIE, 10226, Pages 102260K-102260K-9, (2017).
- 4. Taskova, E., Alipieva, E., Todorov, G., "Stray magnetic field influence on the CPT resonance in a coated Rb vacuum cell", Journal of Physics: Conference Series Vol. 700 (1), 012015, (2016).
 - 5. Taskova, E.T., Alipieva, E.A., Todorov, G.Tz., "Magneto-optical resonance of the polarized fluorescence in a paraffin-coated ^{87}Rb vacuum cell", Proceedings of SPIE, 9447, 94470A, (2015).
 - 6. Gateva, S., Alipieva, E., Taskova, E., Todorov, G., "Coherent population trapping resonance structure in paraffin-coated Rb vacuum cells", Proceedings of SPIE - The International Society for Optical Engineering, 7747, 77470G, (2011).
 - 7. Gateva, S., Gurdev, L., Alipieva, E., Taskova, E., Todorov, G., "Narrow structure in the coherent population trapping resonances in rubidium and Rayleigh scattering", Journal of Physics B: Atomic, Molecular and Optical Physics, 44 (3), 035401, (2011).
 - 8. V.Polischuk, [V.Domelunksen¹], E. Alipieva, G. Todorov, "Modelling of nonlinear interaction of Rb^{87} atoms with polarized radiation", Bulg. J. Phys. 39 pp.150-164, (2012).
 - 9. S. Gateva, E. Alipieva, L. Petrov, E. Taskova, G. Todorov, "Single frequency coherent-population-trapping resonances for magnetic field measurement", *J. Optoelectron. Adv. Mater.* 10 (1), 98-103, (2008).
 - 10. Gateva, S., Petrov, L., Alipieva, E., Todorov, G., Domelunksen, V., Polischuk, V., "Shape of the coherent-population-trapping resonances and high-rank polarization moments", *Physical Review A - Atomic, Molecular, and Optical Physics*, 76 (2), art. no. 025401 (2007).
 - 11. Alipieva E., Gateva S., Taskova E., Cartaleva S., "Narrow structure in the CPT resonance in Rb", *Opt. Lett.* 28(19), pp. 1817-1819, (2003).
 - 12. A. Huss, R. Lammegger, L. Windholz, E. Alipieva, S. Gateva, L. Petrov, E. Taskova and G. Todorov, "Polarization-dependent sensitivity of level-crossing, coherent-population-trapping resonances to stray magnetic fields", *JOSA B* 23 (9), pp. 1729-1736, (2006).
 - 13. Alipieva E., Gateva S., Taskova E., "Potential of the single-frequency resonances for magnetic field measurement", *IEEE Trans. Instrum. Meas.*, 54(2), pp. 738-741, (2005).
 - 14. S. Gateva, E. Alipieva, and E. Taskova, "Power dependence of the coherent-population-trapping resonances registered in fluorescence and transmission: Resonance-width narrowing effects", *Phys. Rev. A* 72(2), 025805, (2005).