

ASSOC. PROF. CHRISTINA ANDREEVA, PhD

Affiliation

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Education

Sofia University "St.Kliment Ohridski", Faculty of Physics, department QELT, specialty "Laser physics"

Main research area

Coherent atomic spectroscopy, optical magnetometry, frequency standards, metrology, tunable and frequency stabilized diode lasers

Specializations and international collaborations

Italy – 2001-2003 (a total of 6 months), University of Siena
Switzerland – 2002-2003 (a total of 5 months), Cantonal Observatory of Neuchatel
Latvia – 2007-2009 (a total of 15 months), Faculty of Physics and Mathematics, University of Latvia
Latvia – 2012-2015 (a total of 24 months), Atomic Physics and Spectroscopy Institute, University of Latvia
Russia – 2012-2016 (a total of 5 months), institute of semiconductor Physics, Russian Academy of Sciences (Siberian Branch), Novosibirsk.

Scientific awards

The award of BAS „Marin Drinov“ for 2003.

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Selected scientific publications

1. Y.Dancheva, G.Alzetta, S.Cartaleva, M.Taslakov, Ch.Andreeva, "Coherent effects on the Zeeman sublevels of hyperfine states in optical pumping of Rb by monomode diode laser", *Opt. Commun.* **178**, p.103-110(2000).
2. G.Alzetta, S.Cartaleva, Y.Dancheva, Ch.Andreeva, S.Gozzini, L.Botti, A.Rossi, "Coherent effects on the Zeeman sublevels of hyperfine states at the D₁ and D₂ lines of Rb", *J.Opt.B: Quantum Semiclass. Opt.* **3**, p.181-188 (2001).
3. C.Andreeva, S.Cartaleva, Y.Dancheva, V.Biancalana, A.Burchianti, C.Marinelli, E.Mariotti, L.Moi, K.Nasyrov, "Coherent Spectroscopy of Degenerate Two-Level Systems in Cs", *Phys.Rev.* **A66**, 012502 (2002).

4. C. Andreeva, G. Bevilaqua, V. Biancalana, S. Cartaleva, Y. Dancheva, T. Karaulanov, C. Marinelli, E. Mariotti, L. Moi, "Two-color coherent population trapping in a single Cs hyperfine transition, with application in magnetometry", *Appl. Phys.* **B76**, p.667-675(2003).
5. C. Affolderbach, C. Andreeva, S. Cartaleva, T. Karaulanov, G. Milet, D. Slavov, "Light shift suppression in laser optically pumped vapour-cell atomic frequency standards", *Appl. Phys. B: Lasers and Optics*, **v.80** (7), p.841-848(2005).
6. G. Bevilacqua, V. Biancalana, E. Breschi, Y. Dancheva, L. Moi, C. Andreeva, S. Cartaleva, T. Karaulanov, "Coherent Population Trapping Spectra in Presence of ac Magnetic fields", *Phys. Rev. Lett.* **95**, 123601 (2005).
7. C. Andreeva, A. Atvars, M. Auzinsh, K. Blush, S. Cartaleva, L. Petrov, and D. Slavov, „Ground-state magneto-optical resonances in cesium vapor confined in an extremely thin cell“, *Phys. Rev.* **A76**, 063804 (2007).
8. C. Andreeva, S. Cartaleva, L. Petrov, S. M. Saltiel, D. Sarkisyan, T. Varzhapetyan, D. Bloch, and M. Ducloy, „Saturation effects in the sub-Doppler spectroscopy of cesium vapor confined in an extremely thin cell“, *Phys. Rev.* **A76**, 013837 (2007).
9. D. B. Tretyakov, V. M. Entin, E. A. Yakshina, I. I. Beterov, C. Andreeva, and I. I. Ryabtsev, „Controlling the interactions of a few cold Rb Rydberg atoms by radio-frequency-assisted Förster resonances“, *Phys. Rev.* **A90**, 041403(R) (2014).
10. Д.В.Бражников, К.Андреева, В.М.Энтин, С.М.Игнатович, М.Ю.Басалаев, А.С.Новокрещенов, И.И.Рябцев, А.В.Тайченачев, В.И.Юдин, "Магнитооптический ключ на основе высококонтрастного резонанса электромагнитно-индукционной абсорбции", Труды IX Международной конференции молодых ученых и специалистов "Оптика-2015", 12-16 октября 2015 г., Санкт-Петербург, Россия, с.52.
11. D. Brazhnikov, M. Basalaev, A. Novokreshchenov, A. Taichenachev, V. Yudin, Ch. Andreeva, V. Entin, I. Ryabtsev, "High-contrast bright-type magneto-optical resonances in buffer-gas or antirelaxation-coated vapour cells", Programme Booklet of the 30th European Frequency and Time Forum (EFTF-2016), 4 - 7 April 2016, York, United Kingdom. Page 44.