

CURRICULUM VITAE

NAME: Aram V. Papoyan

DATE AND PLACE

OF BIRTH: December 25, 1959, Yerevan, Armenia

NATIONALITY: Armenian

MARITAL STATUS: Married, 2 children

ADDRESS:

Office: Institute for Physical Research of the
National Academy of Sciences of Armenia, Ashtarak-2, 0203,
Republic of Armenia
Phone: (374)10288150; (374)23234630; *Mobile:* (374)91224246;
Fax: (374)23231172;
E-mail: papoyan@ipr.sci.am ; aram.papoyan@gmail.com
Home: 29A Avenue Tigran Mets, Apt. 73, Yerevan, 0018,
Republic of Armenia
Phone: (374)10543752

LANGUAGES: Armenian, Russian, English

EDUCATION AND DEGREES:

Student of the Yerevan State University, 1977-1982,
Diploma in Radiophysics (1982).
Post-graduate course in Armenian Academy of Sciences, 1982-1985.
Ph.D. degree (Candidate of Physical and Mathematical Sciences) (1991)
Dr.Sc. degree (Doctor of Physical and Mathematical Sciences) (2004)

EMPLOYMENT:

Junior Researcher, Institute for Physical Research, Ashtarak, Armenia (1986-1992),
Senior Researcher, Institute for Physical Research, Ashtarak, Armenia (1992-2006).
Vice-Director, Institute for Physical Research, Ashtarak, Armenia (2006);

PRESENT

POSITION:

Member of Presidium of National Academy of Sciences of Armenia (2011-)
Director, Institute for Physical Research, Ashtarak, Armenia (2006-);
Head of the Laboratory of Optics, Institute for Physical Research, Ashtarak, Armenia (2006-);
Armenian Coordinator of the CNRS French-Armenian International Associated Laboratory IRMAS (2009-)

ACADEMIC:

Corresponding Member of the National Academy of Sciences of Armenia (2010),
Professor, Russian-Armenian (Slavonic) State University (2006-),
Supervisor of 3 PhD students

WORK ABROAD:

Joint research at the Huygens Laboratory of the Leiden University, The Netherlands (1995);
Joint research at the Laboratoire de Physique des Lasers, Université Paris-Nord, France (1996) ;

Joint research at the Fachbereich Physik, Universitat Kaiserslautern, Germany (1997, 1998, 1999);
Joint research at the Laboratoire Kastler-Brossel, Ecole Normale Supérieure, Paris, France (1998, 1999, 2000, 2001, 2002, 2003).

CURRENT RESEARCH INTERESTS:

Laser Physics;
Atomic Physics and Spectroscopy, including Nanoscale Processes;
Quantum and Nonlinear Optics;
Optical Imaging.

AWARDS AND HONORS:

Diploma awarded by the President of the Academy of Sciences of Armenia (2003);
Award of the President of the Republic of Armenia in Physics (2004);
"Best Scientific Work 2009" Award of the National Academy of Sciences of Armenia, World Armenian Congress, and the Union of Armenians in Russia (2010).

RESEARCH GRANTS:

ISTC grant #A-635 "Laser-chemical separation of isotopes of alkali metals" (2002-2005);
SCOPES grant #IB7320-110684/1 "Tunable frequency locking of a diode laser to atomic resonance lines using atomic vapor nanolayers" (2005-2008);
INTAS grant Nr 06-1000017-9001 (2006-2008);
FP7 Program #295025-IPERA ("Integrating the Institute for Physical Research of the National Academy of Sciences of the Republic of Armenia into ERA" (2011-2014) (Coordinator)

CONFERENCES:

Chairman of "Laser Physics- 2008,2009,2010,2011" International Conference (Armenia); Co-Chairman of OSA "Young Optician School" (Armenia, 2007); Co-Chairman of International Advanced Research Workshop «Modern Problems in Optics & Photonics» (Armenia, 2009); Co-Chairman of International Symposium on Optics and its Applications (Armenia, 2011).

MEMBERSHIPS:

President of Armenian Territorial Committee for Optics;
Member of the European Optical Society;
Member of the Alfred Kastler Foundation of the French Academy of Sciences.

PUBLICATIONS:

153 published works, including 3 book chapters, 71 papers in refereed journals, 25 articles in conference proceeding books, 54 conference abstracts (*see attached list of publications*)

Aram V. Papoyan
List of publications 2007 - 2012

Book Chapters

1. Optical processes in micro- and nanometric thin cells containing atomic vapor. *D.Sarkisyan, A.Papoyan*, in: **New Trends in Quantum Coherence and Nonlinear Optics** (Horizons in World Physics, vol.263), Ed.: R.Drampyan, Nova Science Publishers, ISBN: 978-1-60741-025-6, Chapter 3, pp.85-124 (2009).
2. Formation of narrow optical resonances using submicron-thin atomic vapor layers. *D.Sarkisyan, A.Papoyan*, in: **Modern Optics and Photonics**. Atoms and Structured Media, Ed.: G.Kryuchkyan, G.Gurzadyan, A.Papoyan, World Scientific, ISBN: 13 978-981-4313-26-1, pp.257-288 (2010).
3. Modelling magneto-optical resonances in atomic rubidium at D_1 excitation in extremely thin cells while maintaining a self-consistent set of theoretical parameters. *L.Kalvans, M.Auzinsh, R.Ferber, F.Gahbauer, A.Jarmola, A.Papoyan, D.Sarkisyan*, in: **Modern Optics and Photonics**. Atoms and Structured Media, Ed.: G.Kryuchkyan, G.Gurzadyan, A.Papoyan, World Scientific, ISBN: 13 978-981-4313-26-1, pp.289-303 (2010).

Articles in Refereed Journals

4. Implementation of a double-scanning technique for studies of the Hanle effect in rubidium vapor. *A.Atvars, M.Auzinsh, E.A.Gazazyan, A.V.Papoyan, S.V.Shmavonyan*, **The European Physical Journal D**, v.44, No.3, pp.411-417 (2007).
5. Electromagnetically induced transparency: the thickness of the vapour column is of order of light wavelength. *Y.Pashayan-Leroy, C.Leroy, A.Sargsyan, A.Papoyan, D.Sarkisyan*, **Journal of Optical Society of America B**, v.24, No.8, pp.1829-1838 (2007).
6. Laser frequency stabilization using selective reflection from a vapor cell with a half-wavelength thickness. *E.A.Gazazyan, A.V.Papoyan, D.Sarkisyan, A.Weis*, **Laser Physics Letters**, v.4, No.11, pp.801-808 (2007).
7. Formation of narrow optical resonances using submillimeter and submicron-thin atomic vapor layer. *D.Sarkisyan, A.Sargsyan, A.Papoyan, Y.Pashayan-Leroy*, **Proceedings of SPIE**, v.6604, 660405 (14p.) (2007).
8. Saturated absorption spectroscopy: elimination of crossover resonances with the use of a nanocell. *A.Sargsyan, D.Sarkisyan, A.Papoyan, Y.Pashayan-Leroy, P.Moroshkin, A.Weis, A.Khanbekyan, E.Mariotti, L.Moi*, **Laser Physics**, v.18, No.6, pp.749-755 (2008).
9. A novel approach to quantitative spectroscopy of atoms in a magnetic field and applications based on an atomic vapor cell with $L=\lambda$. *A.Sargsyan, G.Hakhumyan, A.Papoyan, D.Sarkisyan, A.Atvars, M.Auzinsh*, **Applied Physics Letters**, v.93, No.2, 021119 (3p.) (2008).
10. Magneto-optical processes in atomic vapor cells with radiation wavelength-scale thickness. *A.Papoyan, D.Sarkisyan*, **Proceedings of SPIE**, v.7027, 70270E (15p.) (2008).
11. Исследование квадратичного эффекта Штарка на D_2 линии атома Rb. *А.Д.Саргсян, А.С.Саркисян, А.В.Папоян, Д.Г.Саркисян*, **Известия НАН Армении, Физика**, т.44, N3, сс.195-201 (2009).
12. Perspectives of laser-chemical isotope separation of a long-lived fission product: Cs-135. *V.Chaltikyan, A.Papoyan, H.Oshita, H.Shiotani, K.Ono, M.Ishikawa, M.Ozawa*, **Journal of Radioanalytical and Nuclear Chemistry**, v.280, No.2, pp.347-356 (2009); **INCS News**, Issue 24, v.6, No.4, pp.18-26 (2009)
13. Narrow and contrast resonance of increased absorption in Λ -system observed in Rb cell with buffer gas. *A.Sargsyan, A.Papoyan, A.Sarkisyan, Yu.Malakyan, G.Grigoryan, D.Sarkisyan, Y.Pashayan-Leroy, C.Leroy*, **Armenian Journal of Physics**, v.2, No.2, pp.84-94 (2009).

14. Efficient technique for measuring laser frequency stability. *A.Sargsyan, A.V.Papoyan, D.Sarkisyan, A.Weis*, **The European Physical Journal AP**, v.48, No.2, 20701 (5p.) (2009).
15. Nonlinear magneto-optical resonances at D_1 excitation of ^{85}Rb and ^{87}Rb in an extremely thin cell. *M.Auzinsh, R.Ferber, F.Gahbauer, A.Jarmola, L.Kalvans, A.Papoyan, D.Sarkisyan*, **Physical Review A**, v.81, No.3, 033408 (10p.) (2010).
16. Essential features of optical processes in neon-buffered submicron-thin Rb vapor cell. *G.Hakhumyan, A.Sargsyan, C.Leroy, Y.Pashayan-Leroy, A.Papoyan, D.Sarkisyan*, **Optics Express**, v.18, No.14, pp.14577-14585 (2010).
17. Straightforward optical transmission method for visualization of highly-absorbing and scattering objects. *K.Vardanyan, A.Khachaturova, S.Varzhapetyan, A.Badalyan, S.Shmavonyan, A.Papoyan*, **Optoelectronics and Advanced Materials- Rapid Communications**, v.4, No.8, pp.1163 - 1165 (2010).
18. Coherent transfer of population in an atomic system in the presence of buffer gas. *K.Khanbekyan, G.Bevilaqua, A.Khanbekyan, E.Mariotti, A.Papoyan, L.Moi*, **Proceedings of SPIE**, v.7998, 79980W (6p.) (2011).
19. New synchronous detection approach in optical transmission imaging. *K.Vardanyan, A.Khachaturova, S.Varzhapetyan, A.Badalyan, S.Shmavonyan, A.Papoyan*, **Proceedings of SPIE**, v.7998, 799814 (5p.) (2011).
20. Selective reflection studies of molecular cesium vapor. *M.Movsisyan, S.Shmavonyan, A.Papoyan*, **Proceedings of SPIE**, v.7998, 79980U (9p.) (2011).
21. A phenomenological model for collisional coherence transfer in an optically pumped atomic system. *K.Khanbekyan, G.Bevilaqua, A.Khanbekyan, E.Mariotti, A.Papoyan, L.Moi*, **Journal of Physics B: Atomic, Molecular and Optical Physics**, v.44, No.5, 055502 (7p.) (2011).
22. Усиление слабого светового сигнала с циркулярной поляризацией в многоуровневой атомарной среде. *Э.А.Газазян, Г.Г.Григорян, А.В.Папоян*, **Известия НАН Армении, Физика**, т.46, N 4, сс.227-233 (2011).
23. Amplification of radiation in atomic vapor induced by a linearly polarized laser radiation. *M.Movsisyan, S.Shmavonyan, A.Papoyan*, **Central European Journal of Physics**, v.9, No.4, pp.948-955 (2011).
24. High contrast D_1 line electromagnetically induced transparency in nanometric-thin rubidium vapor cell. *A.Sargsyan, Y.Pashayan-Leroy, C.Leroy, R.Mirzoyan, A.Papoyan, D.Sarkisyan*, **Applied Physics B: Lasers and Optics**, v.105, No.4, pp.767-774 (2011).
25. Hyperfine Paschen–Back regime realized in Rb nanocell. *A.Sargsyan, G.Hakhumyan, C.Leroy, Y.Pashayan-Leroy, A.Papoyan, D.Sarkisyan*, **Optics Letters**, v.37, No.8, pp.1379-1381 (2012).
26. Selective amplification of narrow resonance formed in transmission spectrum of Rb nanocell in magnetic field. *A.Sargsyan, G.Hakhumyan, R.Mirzoyan, A.Papoyan, D.Sarkisyan, C.Leroy, Y.Pashayan-Leroy*, **International Journal of Modern Physics: Conference Series**, v.15, pp.9-15 (2012).
27. Intensity-dependent features in hydrogen-buffered cesium spectra. *S.Shmavonyan, A.Papoyan*, **International Journal of Modern Physics: Conference Series**, v.15, pp.140-146 (2012).
28. N-type resonances in a buffered micrometric Rb cell: splitting in a strong magnetic field. *A.Sargsyan, R.Mirzoyan, A.Papoyan, D.Sarkisyan*, **Optics Letters**, v.37, No.23, pp.____ (2012).