Curriculum Vitae

YEVGENI Sh. MAMASAKHLISOV

Chair of Molecular Physics
Faculty of Physics
Yerevan State University
A. Manoogian St., 1, Yerevan, 0025, Armenia

APPOINTMENTS

2016 - present Prof. of Chair of General Physics and Quantum Nanostructures, Russian-Armenian University

2006 - present Associate Prof. of Department of Molecular Physics, Faculty of Physics, Yerevan State University

2006 - 2007 Head of Dept. of Grants, Yerevan State University

1996 - 2006 Associate Prof. of Department of Molecular Physics,
Faculty of Physics, Yerevan State University

1992 - 1996 Research Fellow, Laboratory of the Physics of Macromolecules
Department of Molecular Physics, Yerevan State University

1990 - 1992 Junior Research Fellow, Laboratory of the Physics of Macromolecules
Department of Molecular Physics, Yerevan State University

EDUCATION AND DEGREES

2011 Dr.Sci., defended in the Yerevan State University, Yerevan, Armenia
Thesis:“Spatial and temporal scales in conformational transitions in biopolymers”

1989 Ph.D., defended in the E. Andronikashvili Institute of Physics, Tbilisi, Georgia
Thesis:“The helix-coil transition in polypeptides. Microscopic approach”
Adviser: V. F. Morozov

1987 - 1989 postgraduate student, Yerevan State University, Faculty of Physics

1986 MSc, Yerevan State University

1985 BSc, Yerevan State University

1981 - 1986 student, Yerevan State University, Faculty of Physics, Yerevan.

RESEARCH INTERESTS

- Material science
- Nucleic acids – carbon nanotubes complexes
- DNA sensors
- Disordered systems and neural networks algorithms

TEACHING

- ”Physics of the Condensed State of Macromolecules” for 4th year bachelor students, Yerevan State University
- ”Physical Fundamentals of Molecular Electronics” for the 1st year master students, Russian-Armenian University, Yerevan
- ”Introduction to Non-Equilibrium Thermodynamics” for 1st year master students, Yerevan State University
- ”Folding of proteins” for 1st year master students, Yerevan State University
- ”Computational Modelling of Biological Macromolecules” for 2nd year master students, Yerevan State University

PhD students

- Gor Hayrapetyan (2011 - 2013) Thesis: ”Loop factor in Conformational transitions of nuclec acids”, Ph.D., 2013
- Hayk Tsaturyan (2015 - 2017) Thesis: ”Nucleotide sequence heterogeneity at the conformational transitions in nucleic acids”, Ph.D., 2017
- Hakobyan Artur (2016-2018) Thesis: ”Strengthening of electrostatic signal of semi–conductor biosensor by intercalating ligands”, Ph.D., 2018
- Andriasyan Aram (2016-2018) Thesis: ”Conformational transitions in heterogeneous biopolymers”, Ph.D., 2018

HONORS / AWARDS

- President Prize in Natural Sciences for 2013 (26.05.2014)

CONFERENCE ORGANIZER

- May 27-29, 2013
  An International Conference on ”Physical Concepts of Nucleic-Acid Structure and Behaviour”
  Yerevan, Armenia; Meeting Co-Chairs: Roland Netz and Yevgeni Mamasakhlisov

FUNDING

- 2021 - 2023
  Project ”Search and investigation for novel two-dimensional materials for biochemical sensing applications” (20RF-185) from the Ministry of Education and Science RA, Head of Project

- 2020 - 2023
  Project ”Computational search for novel solid state electrolytes” (20TTSG-2F010) from the Ministry of Education and Science RA, Researcher

- 2018
  Project ”The Prediction of the Structures Ensemble of Intrinsically Disordered Proteins with Recurrent Neural Networks Algorithms” from IBM Innovative Solutions and Technologies Center, Head of Project

- 2014 - 2017
  Project ”Development of Biosensors using Carbon Nanotubes” (SFP 984537) from NATO, Science for Peace Program, Head of Armenian team

- 2015 - 2017
  Project ”Solvent induced order–disorder transitions in heterogeneous biopolymers” (15T-1F332) from the Ministry of Education and Science RA, Head of Project

- 2013 - 2015
  Project ”Kinetics and thermodynamics of translocation of nucleic acids during the sequencing in protein nano channel” (13-1F063) from the Ministry of Education and Science RA, Head of Project

- 2013 - 2014
  Project ”Dynamics of the self-assembly of DNA-coated carbon nanotubes in polymer matrix” from German Federal Ministry of Education and Research and Ministry of Education and Science RA, Head of Project

- 2012 - 2014
  Project ”Equilibrium and non–equilibrium behavior of single– and double–stranded biological molecules” (85 927) from Volkswagenstiftung, Head of Armenian team

- 2011
  condmatth-2567 from ANSEF

- 2010
  Research Stays for University Academics and Scientists, A/10/02367 from DAAD

- 2006
  05-ns-molbio-815-503 from ANSEF

- 2002 - 2007
  A 301.2 from ISTC

- 1994
  RYX000 from International Science Foundation

INVITED TALKS

a) Conferences, Workshops

- CECAM Workshop on *New Challenges in Electrostatics of Soft and Disordered Matter*, May 07-10, 2012, Toulouse, France

- An International Symposium on *Solvation and Ionic Effects in Biomolecules: Theory to Experiment*, March 17-21, 2010, Tsakhkadzor, Armenia

- BioComplex-Taiwan-2009, 2009 Taiwan International Workshop on *Biophysics and Complex Systems*, December 10-15, 2009, Taipei, Taiwan

- Statphys-Taiwan-2008, The 9th Taiwan International Symposium on *Statistical Physics*, July 8-12, 2008, Taipei, Taiwan

- BioComplex-Taiwan-2007, 2007 Taiwan International Workshop on *Biological Physics and Complex Systems*, August 6-11, 2007, Taipei, Taiwan
- StatPhys-Taiwan-2006, The 8th Taiwan International Symposium on *Statistical Physics*, June 21-26, 2007, Taipei, Taiwan

b) Seminars

- Free University of Berlin, Germany, 2012
- INFN-Laboratori Nazionali di Frascati, Italy, 2012
- Humboldt University, Berlin, Germany, 2012
- INFN-Laboratori Nazionali di Frascati, Italy, 2010
- Technical University of Munich, Germany, 2010
- National Institute of Child Health and Human Development, National Institute of Health, USA, 2005
- University of Florence, Italy, 1996

(A) List of Selected Publications (totally: 63)

1. Statistical mechanics of DNA-nanotube adsorption
   Sh. Tonoyan, D. Khechoyan, and Y. Mamasakhlisov, A. Badasyan
   Phys. Rev. E 101, 062422(5) (2020)
   DOI: 10.1103/PhysRevE.101.062422
2. Cold denaturation of RNA secondary structures with loop entropy and quenched disorder
   F. Iannelli, Y. Mamasakhlisov, R.R. Netz
   Phys. Rev. E 101, 012502(14) (2020)
   DOI: 10.1103/PhysRevE.101.012502
3. An Integrated Web-Based Interactive Data Platform for Molecular Dynamics Simulations
   H. Astsatryan, W. Narsisian, E. Gyulgyulyan, V. Baghdasaryan, A. Poghosyan, Y. Mamasakhlisov, and P. Wittenburg
   Scalable Computing: Practice and Experience 19, 79-86 (2018)
   DOI: 10.12694/scpe.v19i2.1337.
4. The double stranded DNA stability in presence of a flexible polymer
   Y. Mamasakhlisov, H. Sngryan, Sh. Tonoyan, A. Hakobyan and P. Vardevanyan
   Journal of Biomolecular Structure and Dynamics, DOI: 10.1080/07391102.2018.1459320 (2018).
5. On the Performance and Energy Consumption of Molecular Dynamics Applications for Heterogeneous CPU-GPU Platforms Based on Gromacs
   A. Poghosyan, H. Astsatryan, W. Narsisian, Y. Mamasakhlisov
   Cybernetics and Information Technologies 17, 68-80 (2017)
6. Effect of ligands binding on the isotherm of hybridization of the DNA-chip
   H. L. Tsaturyan, Sh. A. Tonoyan, V. F. Morozov, Y. Sh. Mamasakhlisov
   J. Contemp. Physics 52, 180-188 (2017)
7. Theoretical treatment of helix–coil transition of complexes DNA with two different ligands having different binding parameters
   A. T. Karapetian, Z. A. Grigoryan, Y. Sh. Mamasakhlisov, M. V. Minasyants and P. O. Vardevanyan
   J. Biomol. Struct. Dyn. 34, 201-205 (2016)
   DOI: 10.1080/07391102.2015.1010584.

8. Collapse and hybridization of RNA: view from replica technique approach
   Y. Sh. Mamasakhlisov, S. Bellucci, Sh. Hayryan, H. Caturyan, Z. Grigoryan, and C.-K. Hu
   Europhys. J. E 38, 100(1-9) (2015)
   DOI 10.1140/epje/i2015-15100-x.

9. Solvent effects in the helix-coil transition model can explain the unusual biophysics of intrinsically disordered proteins
   A. Badasyan, Y. Sh. Mamasakhlisov, R. Podgornik, and V. A. Parsegian
   J. Chem. Phys. 143, 014102(1-7) (2015).

10. Cold melting of RNA with quenched sequence randomness
    G. N. Hayrapetyan, F. Iannelli, J. Lekscha, V.F. Morozov, R.R. Netz, and Y.Sh. Mamasakhlisov
    Phys. Rev. Lett. 113, 068101(1-5) (2014).

11. Kinetics of the long ssRNA: Steady state
    Y. Mamasakhlisov, Sh. Hayryan, V. Morozov, and C.-K. Hu
    Europhys. Lett. 106, 48007(1-6) (2014).

12. Unified description of solvent effects in the helix-coil transition
    A. Badasyan, Sh. A. Tonoyan, A. Giacometti, R. Podgornik, V. A. Parsegian, Y. Sh. Mamasakhlisov, and V. F. Morozov
    Phys. Rev. E 89, 022723(1-10) (2014).

13. Helix-coil transition in terms of Potts-like spins
    A. Badasyan, A. Giacometti, R. Podgornik, Y. Mamasakhlisov, and V. Morozov
    Eur. Phys. J. E 36, 46, DOI 10.1140/epje/i2013-13046-7 (2013).

14. Two-dimensional random walk and critical behavior of double-strand DNA
    G. N. Hayrapetyan, Y. Sh. Mamasakhlisov, V. F. Morozov, V. V. Papoyan, and V. B. Priezzhev
    J. Phys. A: Math. Theor. 46, 035001(1-9) (2013).

15. Long charged macromolecule in an entropic trap with rough surfaces
    Y. Sh. Mamasakhlisov, Sh. Hayryan, and C.-K. Hu
    Phys. Rev. E 86, 051904(1-5) (2012).

16. Osmotic pressure induced coupling between cooperativity and stability of a helix-coil transition
    A. V.Badasyan, S. A. Tonoyan, A. Giacometti, R. Podgornik, V. A. Parsegian, Y. Sh. Mamasakhlisov, V. F. Morozov
    Phys. Rev. Lett. 109, 068101 (1-5) (2012).

17. Competition for hydrogen-bond formation in the helix-coil transition and protein folding
    A. V. Badasyan, Sh. A. Tonoyan, Y. Sh. Mamasakhlisov, A. Giacometti, A. S. Benight, and V. F. Morozov
    Phys. Rev. E 83, 051903(1-9) (2011).

18. Differential Geometry in DNA molecules
    S. Bellucci, Y. Mamasakhlisov and A. Nersessian
    Nanoscience and Nanotech. Lett. 3, 922-926 (2011).

19. External field influence on semiflexible macromolecules: geometric coupling
    S. Bellucci, Y. Mamasakhlisov, A. Nersessian
    Mod. Phys. Lett. B 25, 1809-1819 (2011).

20. Microscopic formulation of the Zimm-Bragg model for the helix-coil transition
    A. V. Badasyan, A. Giacometti, Y. Sh. Mamasakhlisov, V. F. Morozov, and A. S. Benight
    Phys. Rev. E 81, 021921(1-4) (2010).

21. DNA stretching and Multivalent-Cation-Induced Condensation
    Y. Sh. Mamasakhlisov, B.A. Todd, A.V. Badasyan, A.V. Mkrtchyan, V.F. Morozov, and V. A. Parsegian
    Phys. Rev. E 80, 031915(1-9) (2009).

22. Intersegment interactions and helix-coil transition within the Generalized Model of Polypeptide Chains (GMPC) approach
A.V. Badasyan, G.N. Hayrapetyan, Sh.A. Tonoyan, Y.Sh.Mamasakhlisov, A.S. Benight, and V.F. Morozov
J. Chem. Phys. 131, 115104(1-8) (2009).

23. Partially Annealed Disorder and Collapse of Like-Charged Macroions
Y. Sh. Mamasakhlisov, A. Naji, and R. Podgornik
J. Stat. Phys. 133, 659-681 (2008).

24. Two Scale Generalized Model of Polypeptide Chain
A. V. Badasyan, Sh.A. Tonoyan, A.V. Tsarukyan, Y. Sh. Mamasakhlisov, A.S. Benight, and V.F. Morozov
J. Chem. Phys. 128, 195101(1-7) (2008).

25. Helix-coil transition in the case of interaction between two chains
A. V. Tsarukyan, Sh. A. Tonoyan, G. N. Hayrapetyan, I. V. Baghdyan, Y. Sh. Mamasakhlisov and V. F. Morozov
J. Contemp. Phys. 43, 254-260 (2008).

26. Hybridization kinetics of DNA short fragments
V.B. Arakelyan, E.Sh. Mamasakhlisov. V.F. Morozov, Z.E. Navoyan, and A.V. Arakelyan
Electronic Journal of Natural Sciences. 2, 3 (2008).

27. Stochastic model of adsorption of particles on macromolecules at an arbitrary filling
V. B. Arakelyan, E. Sh. Mamasakhlisov, V. F. Morozov, Z. E. Navoyan and A. V. Arakelyan
J. Contemp. Phys. 43, 48 (2008).

28. Random Sequences with Power-law Correlations Exhibit Protein-like Behavior
Y. Sh. Mamasakhlisov, Sh.A. Hayryan, and C.-K. Hu
J. Chem. Phys. 126, 145103(1-10) (2007).

29. RNA Folding in the Presence of Counterions
Y. Sh. Mamasakhlisov, Sh.A. Hayryan, V. F. Morozov, and C.-K. Hu
Phys. Rev. E 75, 061907(1-10) (2007).

30. Generalized Model of Polypeptide Chain with two-scale interactions
Sh. A. Tonoyan, T. Yu. Buryakina, A. V. Tsarukyan, Y. Sh. Mamasakhlisov and V. F. Morozov
J. Contemp. Phys. 42, 309-315 (2007).

31. Stacking heterogeneity: A model for the sequence dependent melting cooperativity of duplex DNA
A.V. Grigoryan, E.Sh. Mamasakhlisov, T.Yu. Buryakina, A.V. Tsarukyan , A.S. Benight , and V. F. Morozov
J. Chem. Phys. 126, 165101(1-9) (2007).

32. The helix-coil transition in heterogeneous double stranded DNA: Microcanonical method
A.V. Badasyan, A.V. Grigoryan, E.Sh. Mamasakhlisov, A.S. Benight, and V.F. Morozov
J. Chem. Phys. 123, 194701(1-6) (2005).

33. Stacking Decreases the Cooperativity of Melting of Homopolymeric DNA
V. F. Morozov, A. V. Badasyan, A. V. Grigoryan, M. A. Sahakyan, E. Sh. Mamasakhlisov
Mod. Phys. Lett. B 19, 79-83 (2005).

34. Helix-Coil Transition in Closed Circular DNA
V.F. Morozov, A.V. Badasyan, A.V. Grigoryan, E.Sh. Mamasahlisov, Sh.A. Hayryan, C.-K. Hu
Physica A 348C, 327-338 (2005).

35. Order-disorder transition in one-dimensional system with disorder in composition
A.V. Badasyan, A.V.Grigoryan, E.Sh.Mamasakhlisov, V.F.Morozov
Physics of Atomic Nuclei 11, 1984 (2005).

36. The invariance of order parameter and temperature redefinition in helix-coil transition of circular closed DNA
A.V. Grigoryan, A.V. Badasyan, V.F. Morozov, E. Sh.Mamasakhlisov
Physics of Atomic Nuclei 10, 1748 (2005).

37. The helix-coil transition and definition of the order parameter in the scope of the generalized model of polypeptide chains
A. Tsarukyan, Sh. Tonoyan, A. Badasyan, A. Grigoryan, E. Mamasakhlisov, V. Morozov
NAS RA, Electronic Journal of Natural Sciences 2, 8 (2005).

38. Influence of Competing and Non-Competing Solvents on the Helix-Coil Transition in Biopolymers
A.V. Badasyan, A.V. Grigoryan, A.V., E.Sh. Mamasakhlisov, A. V. Tsarukyan, V.F. Morozov
Proceed. Nat. Acad. Sci. Armenia, Physics 40, 148 (in Russian) (2005).

39. Stacking and hydrogen bonding: DNA cooperativity at melting
V.F. Morozov, A.V. Badasyan, A.V. Grigoryan, M.A. Sahakyan, Y.Sh Mamasakhlisov
Biopolymers 75, 434 (2004).

40. Analysis of helix-coil transition of circular closed DNA on the basis of statistical model
A.V. Grigoryan, A.V. Badasyan, V.F. Morozov, E.Sh. Mamasakhlisov,
Proceed. Nat. Acad. Sci. Armenia, Physics 39, 265 (in Russian) (2004).

41. Helix-coil transition in circular closed DNA in the presence of competing solvent
A.V. Badasyan, A.V. Grigoryan, A.Y. Chuhadjan, E.Sh. Mamasakhlisov, V.F. Morozov
Proceed. Nat. Acad. Sci. Armenia, Physics 37, 59 (in Russian) (2002).

42. Helix-coil transition in heteropolymer circular closed DNA
A.V. Grigoryan, A.V. Badasyan, A.Y. Chuhadjan, E.Sh. Mamasakhlisov, V.F. Morozov
Proceed. Nat. Acad. Sci. Armenia, Physics 37, 250 (in Russian) (2002).

43. Hamiltonian and characteristic equation for the generalized model of the helix-coil transition with stacking
A.V. Badasyan, A.V. Grigoryan, A.Y. Chuhadjan, E.Sh. Mamasakhlisov, V.F. Morozov
Proceed. Nat. Acad. Sci. Armenia, Physics 37, 320 (in Russian) (2002).

44. Helix-Coil Transition in Circular Closed DNA In Presence of Competing Solvent
A.V.Badasyan, A.V.Grigoryan, A.Y.Chuhadjan, E.Sh. Mamasakhlisov, V.F.Morozov
J. Contemp. Phys. 37, 59 (2002).

45. Microscopical Approach to the Helix- Coil Transition in DNA
E.Sh. Mamasakhlisov, V.F. Morozov, Sh.A. Hayryan, C.-K. Hu
Physica A 281, 51-59 (2000).

46. Determination of Displacement Polarization Parameters of Polymer Molecules
V.P. Petrosyan, E.Sh.Mamasakhlisov, S.S.Felekyan, V.I.Vardanyan
J. Contemp. Phys. 35, 19 (2000).

47. Influence of cis- and trans-diamminedichloroplatinum(II) binding on the helix-coil transition of DNAs with different GC-content
S.G. Haroutiunian, Y.B. Dalyan, V.F. Morozov, E.Sh. Mamasachlissov, M.S. Shahinian, A.A. Akhrem, D.Yu. Lando, L. Messori, and P. Orioli
Inorg. Chim. Acta 275-276, 510-514 (1998).

48. The Lack of Long - Range Correlations is a Necessary Conditions of the Biologically Functional Protein
E.Sh. Mamasakhlisov, V.F. Morozov, M.S. Shahinyan
J. Phys. A 30, 7765-7772 (1997).

49. Modification of the Spatial Structure of DNA in a Complexes with cis-Platinum
S.G.Haroutiunian, E.Sh.Mamasakhlisov et al.
Biophysics 42, 372 (1997).

50. Helix-coil transition in polypeptides. A Microscopic approach II.
Sh.A.Hairyan, V.F. Morozov, E.Sh.Mamasahlisov
Biopolymers 35, 75-84 (1995).

51. Helix-coil transition in polypeptides. Microscopic approach
Sh.A.Hairyan, N.S.Ananikyan, E.Sh.Mamasahlisov, V.F. Morozov
Biopolymers 30, 357-367 (1990).

52. Random surface model, describing the helix-coil transition in polypeptides
N.S.Ananikyan, V.F. Morozov, E.Sh.Mamasahlisov
Z.Phys. Chem. Leipzig 271, 603-610 (1990).

53. The influence of solvent, competing for the hydrogen bonds formation with peptide groups on the helix-coil transition
N.S.Ananikyan, Sh.A.Hayryan, E.Sh.Mamasakhlisov, V.F. Morozov
Biofizika 34, 384 (in Russian) (1989).

54. Non-perturbed dimensions of polypeptide chain in the region of helix-coil transition
V.M. Aslanyan, V.F. Morozov, E.Sh. Mamasakhlisov
Vysokomol. Soedin. B 30, 577 (in Russian) (1988).

(B) Book Chapters

1. Short-Range Disorder and Electrostatic Interactions in Macromolecules
Y. Sh. Mamasakhlisov, A. V. Badasyan, and V.F.Morozov in
Electrostatics of Soft and Disordered Matter, D. Dean, J. Dobnikar, A. Naji, and R. Podgornik (eds.), p.381, Pan Stanford Publishing (2014).

(C) Contributions to Conference Proceedings

1. Zimm-Bragg model of DNA stretched against Multivalent Cation Induced Condensation
Y. Sh. Mamasakhlisov
Conference: From DNA-Inspired Physics to Physics-Inspired Biology, 1 June 2009 - 5 June 2009, Trieste, Italy, Book of Abstracts, 77

2. Partially Annealed Disorder and Interaction between Like-Charged Macroions
Y. Sh. Mamasakhlisov
BioComplex-Taiwan-2009, 2009 Taiwan International Workshop on Biophysics and Complex Systems, Book of abstracts, 27 (Taipei, Taiwan, 2009)

3. Double-Stranded DNA Stretched against Multivalent Cation Induced Condensation: Influence of Heterogeneity
Y. Sh. Mamasakhlisov
Statphys-Taiwan-2008, The 9th Taiwan International Symposium on Statistical Physics, Book of abstracts, p. 24 (Taipei, Taiwan, 2008)

4. Structural Investigations of Ordering in Biopolymers
V.F. Morozov, Y.Sh. Mamasakhlisov, A.V. Mkrtchyan, A.V. Tsarukyan, T.Yu. Buryakina, S. Tonoyan, S.V. Mkrtchyan
Proceedings of the NATO Advanced Research Workshop on Brilliant Light Facilities and Research in Life and Material Sciences, Yerevan, Armenia, 17-21 July 2006,V. Tsakanov, H. Wiedemann (Eds.) 2007, Springer, 165-174

5. RNA Folding: Theory and Experiment
Y. Sh. Mamasakhlisov
BioComplex-Taiwan-2007, 2007 Taiwan International Workshop on Biological Physics and Complex Systems, Book of abstracts, 19 (Taipei, Taiwan, 2007)

6. Thermodynamics of the RNA Folding
   Y. Sh. Mamasakhlisov
   StatPhys-Taiwan-2006, The 8th Taiwan International Symposium on Statistical Physics, Book of abstracts, p. 15 (Taipei, Taiwan, 2006)

7. An Outlook for biopolymer and ligands study on Candle
   S.G. Haroutiunian, E.Sh. Mamasakhlisov, Ye.B. Dalyan, V.F. Morozov
   in *Electron-Photon Interaction in Dense Media*, H. Weidemann (ed.), Kluwer Academic Publishers, 383 (2001).

8. Some dynamic properties of random heteropolymers with correlation in sequence
   E.Sh. Mamasakhlisov, V.F. Morozov, Y.B. Dalyan
   in *Modern Problems of Cellular and Molecular Biophysics*, Noyan Tapan, Yerevan, 209-219 (2001).

9. The microscopic theory of helix-coil transition in one-and double-strand biopolymers
   E.Sh. Mamasakhlisov, N.S. Ananikyan, Sh.A. Hayryan
   in *Modern Problems of Cellular and Molecular Biophysics*, Noyan Tapan, Yerevan, 219-229 (2001).

10. Structural transfers and stability of DNA and Polynucleotides at the presence of low molecular ligands (metal ions, amino acids, anti-tumor preparations)
    S.G Haroutiunian, E.Sh. Mamasakhlisov,Y.B. Dalyan, D.Yu.Lando
    in *Modern Problems of Cellular and Molecular Biophysics*, Noyan Tapan, Yerevan, 291-309 (2001).

(D) Preprints

1. The generalized model of polypeptide chain describing the helix-coil transition in biopolymers
   E. Sh. Mamasakhlisov, A. V. Badasyan, A. V. Tsarukyan, A. V. Grigoryan and V. F. Morozov
   Preprint of International Centre for Theoretical Physics, IC/2005/037 (Available at: http://www.ictp.it/ *pub$_o$ff*)

2. Helix-coil transitions in polypeptides. Microscopic approach
   N.S.Ananikyan, Sh.A.Hayryan, E.Sh.Mamasakhlisov, V.F. Morozov
   Preprint YePhI 1026(76)-87.