



Александр Вячеславович Емельяненко

Персональные данные:

Дата рождения: 3 августа 1975, г. Бугульма, Россия

Семейное положение: женат, воспитывает дочь

Должность и место работы:

Руководитель лаборатории жидких кристаллов на физическом факультете МГУ,
профессор РАН

Председатель Российского жидкокристаллического общества «Содружество»
(с 2025 года)

https://ru.wikipedia.org/wiki/Емельяненко,_Александр_Вячеславович

WoS ResearcherID [N-1912-2017](#)

Scopus AuthorID [6603706838](#)

ORCID [0000-0002-9771-8523](#)

РИНЦ AuthorID [115199](#)

Адрес:

119991, Москва, Ленинские горы, д. 1, стр. 35, ЦКП научным оборудованием физического факультета МГУ, 1 этаж, комн. 81.

<http://polly.phys.msu.ru/~emel/>

E-mail: emel@polly.phys.msu.ru

Образование:

Закончил с отличием физический факультет МГУ им. М.В. Ломоносова в 1998 году

Научные степени:

Кандидат физ.-мат. наук, физический факультет МГУ им. М.В. Ломоносова, 2001,
«Молекулярные модели полярных и хиральных жидких кристаллов»

Доктор физ.-мат. наук, физический факультет МГУ им. М.В. Ломоносова, 2009,
«Молекулярно-статистическая теория смектических состояний»

Научные интересы:

Жидкие кристаллы, полимеры, симметрия, хиральность, поверхностные эффекты, наночастицы, капли, фазовые переходы, сегнетоэлектрики, антисегнетоэлектрики, энергосбережение, эффекты памяти, искусственные мышцы, молекулярно-статистическая теория, компьютерное моделирование.

Трудовой стаж:

Младший научный сотрудник, физический факультет МГУ, 2001- 2005
Научный сотрудник, физический факультет МГУ, 2005- 2005
Старший научный сотрудник, физический факультет МГУ, 2005- 2009
Ведущий научный сотрудник, физический факультет МГУ, 2009- 2018
Руководитель лаборатории жидких кристаллов, физический факультет МГУ, 2018-наст.вр.

2002-2003 Стажировка в Университете Стречклайда (Глазго, Великобритания).
2005 Visiting Scientist, Trinity College, Dublin, Ireland
2006, 2007 Visiting Scientist, Tokyo Denky University, Japan
2010 Visiting Scientist, Tokyo Institute of Technology, Japan

Награды:

Стипендии Дж. Сороса (1994,1999)
Стипендия фонда ИНТАС (1997)
Стипендия Правительства РФ (1998)
Стипендия Президента РФ (1999)
Премия Европейской Академии для молодых учёных по физике (2007)
Гранты РФФИ
Гранты Президента РФ для поддержки молодых учёных (2004-2005,2006-2007,2008-2009)
Член Программного комитета 1-й Всероссийской конференции по жидким кристаллам (2012)
Звание «Профессор РАН» (2016)
Заместитель председателя 14-й Европейской конференции по жидким кристаллам (2017)

Международное сотрудничество:

South China University of Technology, Guangzhou, China
National Cheng Kung University, Tainan, Taiwan
Industrial Technology Research Institute, Hsinchu, Taiwan
Tokyo Institute of Technology, Tokyo, Japan
University of Colorado, USA
Kent State University, USA
Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic

Участие в редколлегиях журналов:

- 2019 Crystals MDPI, IF=2.67
MDPI Publishing (Basel, Switzerland, Switzerland)
- 2018 Polymer Science, Series C
- 2018 Beilstein Journal of Nanotechnology

Участие в организационных и программных комитетах:

25-30 июня 2017 14-я [Европейская конференция по жидким кристаллам](#)

Заместитель председателя

Основные публикации (Scopus: 1038 цитирований, H-index 21):

82. Y.T. Lin, C.Y. Kuo, Y. Shen, A.V. Emelyanenko, C.Y. Liu, Synthesis and [Applications of Encapsulated Glycol-Stabilized Lyotropic Cholesteric Liquid Crystal Hydrogels](#). *Gels* **11**, 388 (2025). IF=5.0 **Q1** DOI: 10.3390/gels11060388
81. C.-Y. Kuo, A.V. Emelyanenko, W.-C. Chen, C.-Y. Liu, [Soft robotic actuators with asymmetrically engineered liquid crystal elastomers](#). *J. Taiwan Inst. Chem. Eng.* **164**, 105671 (2024). IF=5.5 **Q1** DOI: 10.1016/j.jtice.2024.105671
80. D.E. Larin, A.V. Shibaev, D.V. Shmeliova, A.V. Emelyanenko, [Dynamic Gel Formation in Solutions of Associating Macromolecules with Mesogenic Groups](#). *Liq. Cryst. and their Appl.* **24** (3), 52 (2024). DOI: 10.18083/LCAppl.2024.3.52
79. D.E. Larin, A.V. Shibaev, C.-Y. Liu, A.V. Emelyanenko, [The effect of dynamic cross-links and mesogenic groups on the swelling and collapse of polymer gels](#). *Giant* **20**, 100341 (2024). IF=5.4 **Q1** DOI: 10.1016/j.giant.2024.100341
78. A. V. Emelyanenko, D. V. Shmeliova, [Optimization of the domain size in stressed liquid crystals](#). *Liq. Cryst. and their Appl.* **24** (1), 60 (2024). DOI: 10.18083/LCAppl.2024.1.60
77. V.V. Vasilevskaya, M.O. Gallyamov, A.Yu. Grosberg, R.A. Gumerov, A.V. Emel'yanenko, V.A. Ivanov, E.Yu. Kramarenko, I.I. Potemkin, O.V. Rudenko, A.M. Sergeev, O.E. Philippova, D.R. Khokhlov, [Aleksei Removich Khokhlov \(on his 70th birthday\)](#). *Phys. – Usp.* **67** (2), 211 (2024). IF=3.1 **Q1** DOI: 10.3367/UFNe.2024.01.039636
76. A. V. Emelyanenko, V. Yu. Rudyak, S. A. Shvetsov, F. Araoka, H. Nishikawa, K. Ishikawa, [Transformation of polar nematic phases in the presence of an electric field](#). *Phys. Rev. E* **109**, 014701 (2024). IF= 2.609 **Q1** DOI: 10.1103/PhysRevE.109.014701
75. C.-Y. Kuo, A. V. Emelyanenko, S.-C. Hung, W.-C. Chen, C.-Y. Liu, [Improving the electro-optical properties of cholesteric liquid crystal devices via cellulose nanoparticle dopants](#). *Polym. J.* **56**, 541 (2024). IF= 3.08 DOI: 10.1038/s41428023-00879-1.
74. D.N. Chausov, A.D. Kurilov, A.I. Smirnova, D.N. Stolbov, R.N. Kucherov, A.V. Emelyanenko, S.V. Savilov, N.V. Usol'tseva, [Mesomorphism, dielectric permittivity, and ionic conductivity of cholesterol tridecylate doped with few-layer graphite fragments](#). *J. Mol. Liq.* **374**, 121139 (2023). IF= 6.633 **Q1** DOI: 10.1016/j.molliq.2022.121139
73. A.V. Emelyanenko, S.A. Shvetsov, [Discotic nematic state in a system of rod-like molecules](#). *Liq. Cryst. and their Appl.* **23**, 78 (2023). DOI: 10.18083/LCAppl.2023.1.78
72. S. A. Shvetsov, T. Orlova, A. V. Emelyanenko, A. S. Zolot'ko, and H. L. Ong, [Optical nonlinearity of a dual-frequency nematic liquid crystal via temperature-mediated mapping of dielectric anisotropy](#). *Opt. Express* **30**, 47909 (2022). IF=3.8 **Q1** 47909 (2022). DOI: 10.1364/OE.478321
71. A.V. Emelyanenko, V.Yu. Rudyak, S.A. Shvetsov, F. Araoka, H. Nishikawa, and K. Ishikawa, [Emergence of paraelectric, improper antiferroelectric, and proper ferroelectric nematic phases in a liquid crystal composed of polar molecules](#). *Phys. Rev. E* **105**, 064701 (2022). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.105.064701
70. S.A. Shvetsov, T. Orlova and A.V. Emelyanenko, [Light-induced structures and microparticle transportation in a free-surface frustrated chiral nematic film](#), *Crystals* **12**, 549 (2022). IF=2.67 DOI: 10.3390/cryst12040549
69. S.A. Shvetsov, A.S. Zolot'ko, G.A. Voronin, A.V. Emelyanenko, P.A. Statsenko and S.I. Trashkeev, [Coexistence of light-induced thermocapillary and orientational effects in thin nematic films with a free surface](#). *J. Phys. Conf. Series* **2067**, 012016 (2021). DOI: 10.1088/1742-6596/2067/1/012016

68. A.V. Emelyanenko, E.S. Filimonova, A.R. Khokhlov, [Molecular origin of the heterogeneity in the nematic and smectic liquid crystals: Elastic constants, gradients of order parameters, and visualization of small objects.](#) *Phys. Rev. E* **103**, 022709 (2021). IF=2.707 **Q1**
DOI: 10.1103/PhysRevE.103.022709
67. S.A. Shvetsov, A.S. Zolot'ko, G.A. Voronin, A.V. Emelyanenko, M.M. Avdeev, M.A. Bugakov, P.A. Statsenko, S.I. Trashkeev, [Light-induced umbilical defects due to temperature gradients in nematic liquid crystal with a free surface.](#) *Opt. Mater. Express* **11**, 1705 (2021). IF=3.074 **Q1** DOI: 10.1364/OME.425926
66. J.-H. Liu, Y.-H. Hung, S.-N. Lin, S. A. Shvetsov, V. Yu. Rudyak, A. V. Emelyanenko, C.-Y. Liu, [Recyclable liquid crystal polymeric sensor beads based on the assistance of radially aligned liquid crystals.](#) *Polym. J.* **53**, 373 (2021). IF=2.826 DOI: 10.1038/s41428-020-00428-0
65. S.A. Shvetsov, V. Yu. Rudyak, A.A. Gruzdenko, A.V. Emelyanenko, [Axisymmetric skyrmion-like structures in spherical-cap droplets of chiral nematic liquid crystal.](#) *J. Mol. Liq.* **319**, 114149 (2020). IF= 6.633 **Q1** DOI: 10.1016/j.molliq.2020.114149
64. Yu. Garbovskiy, A.V. Emelyanenko, A. Glushchenko, [Inverse “guest - host” effect: ferroelectric nanoparticles mediated switching of nematic liquid crystals.](#) *Nanoscale* **12**, 16438 (2020). IF= 8.307 **Q1** DOI: 10.1039/d0nr05301e
63. Y. Garbovskiy, A.V. Emelyanenko, A. Glushchenko, [Electro-Optics of Liquid Crystals Enabled by Ferroelectric Nanoparticles: Inverse Guest-Host Effect.](#) *OSA Technical Digest*, paper JTh3A.14 (2021). DOI: 10.1364/CLEO_AT.2021.JTh3A.14
62. A.V. Emelyanenko, [Molecular-Statistical Theory for the Description of Re-Entrant Ferroelectric Phase.](#) *Crystals* **9**, 583 (2019). IF=2.404 DOI: 10.3390/cryst9110583
61. S.A. Shvetsov, A.A. Gruzdenko, A.V. Emelyanenko, N.I. Boiko, [Photoinduced Orientational Structure Transformation in Cholesteric Microdroplets.](#) *Bull. Lebedev Phys. Inst.* **46**, 201 (2019). IF=0.477 DOI: 10.3103/S1068335619060046
60. S. Shvetsov, T. Orlova, A.V. Emelyanenko, A. Zolot'ko, [Thermo-Optical Generation of Particle-Like Structures in Frustrated Chiral Nematic Film.](#) *Crystals* **9**, 574 (2019). IF=2.404
DOI: 10.3390/cryst9110574
59. M.N. Krakhalev, V.Yu. Rudyak, O.O. Prishchepa, A.P. Gardymova, A.V. Emelyanenko, J.-H. Liu, V.Ya. Zyryanov, [Orientational structures in cholesteric droplets with homeotropic surface anchoring.](#) *Soft Matter* **15**, 5554 (2019). IF= 4.046 **Q1** DOI: 10.1039/c9sm00384c
58. S.A. Shvetsov, A.V. Emelyanenko, M.A. Bugako, N.I. Boiko, V.Ya. Zyryanov, [Photo-orientation of nematic liquid crystal without preliminary cell surface treatment.](#) *Opt. Mater. Express* **9**, 2595 (2019). IF=3.064 **Q1** DOI: 10.1364/OME.9.002595
57. I.V. Afanasyev, V.V. Voevodin, V.Yu. Rudyak, A.V. Emelyanenko, [The practice of conducting performance analysis of supercomputer applications.](#) *Numerical Methods and Programming*, **20**(3), 346 (2019). DOI: 10.26089/NumMet.v20r330
56. A.V. Emelyanenko A.V., M.A. Osipov, [Modern Problems in the Study of Liquid Crystals.](#) *Polym. Sci. Ser. C* **60**, 1 (2018). IF=0.83 DOI: 10.1134/S1811238218010101
55. A.V. Emelyanenko, E.S. Filimonova, [Molecular-statistical approach to the description of tilted smectic phases.](#) *Ph. Transit.* (2018). IF=1.004 DOI: 10.1080/01411594.2018.1506127
54. S.A. Shvetsov, A.V. Emelyanenko, M.A. Bugakov, N.I. Boiko, J.H. Liu, [Photo-orientation at the interface between thermotropic nematic liquid crystal and water caused by azobenzene polymer additives.](#) *Polym. Sci. Ser. C* **60**, 72 (2018). IF=0.83 DOI: 10.1134/S1811238218010071
53. A.R. Khokhlov and A. Emelyanenko, [Nanostructured liquid crystal systems and applications.](#) *Beilstein J. Nanotechnol.* **9**, 2644 (2018). IF=3.272 **Q1** DOI: 10.3762/bjnano.9.245
52. A. Kaznacheev, E. Pozhidaev, V. Rudyak, A.V. Emelyanenko, and A. Khokhlov, [Biaxial potential of surface-stabilized ferroelectric liquid crystals.](#) *Phys. Rev. E* **97**, 042703 (2018). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.97.042703
51. S.A. Shvetsov, V.Yu. Rudyak, A.V. Emelyanenko, N.I. Boiko, Y.-S. Zhang, J.-H. Liu, A.R. Khokhlov, [Photoinduced orientational structures of nematic liquid crystal droplets in contact with polyimide coated surface.](#) *J. Mol. Liq.* **267**, 222 (2018). IF= 6.633 **Q1**

DOI: 10.1016/j.molliq.2018.01.054

50. S.A. Shvetsov, A.V. Emelyanenko, N.I. Boiko, A.S. Zolot'ko, Y.-S. Zhang, J.-H. Liu, A.R. Khokhlov, [Optical orientation of nematic liquid crystal droplets via photoisomerization of an azodendrimer dopant](#). *Beilstein J. Nanotechnol.* **9**, 870 (2018). IF= 3.272 **Q1**

DOI: 10.3762/bjnano.9.81

49. Y.S. Zhang, C.Y. Liu, A.V. Emelyanenko, J.H. Liu, [Synthesis of Predesigned Ferroelectric Liquid Crystals and Their Applications in Field-Sequential Color Displays](#). *Adv. Funct. Mater.*, 1706994 (2018). IF=19.6 **Q1** DOI: 10.1002/adfm.201706994

48. M.N. Krakhalev, A.P. Gardymova, O.O. Prishchepa, V.Yu. Rudyak, A.V. Emelyanenko, J.-H. Liu, V.Ya. Zyryanov, [Bipolar configuration with twisted loop defect in chiral nematic droplets under homeotropic surface anchoring](#). *Sci. Rep.* **7**, 14582 (2017). IF=4.122 **Q1**

DOI:10.1038/s41598-017-15049-6

47. V.Yu. Rudyak, M.N. Krakhalev, V.S. Sutormin, O.O. Prishchepa, V.Ya. Zyryanov, J.-H. Liu, A.V. Emelyanenko, A.R. Khokhlov, [Electrically induced structure transition in nematic liquid crystal droplets with conical boundary conditions](#). *Phys. Rev. E* **96**, 052701 (2017). **IF=2.707 Q1** DOI: 10.1103/PhysRevE.96.052701

46. V.Yu. Rudyak, M.N. Krakhalev, O.O. Prishchepa, V.S. Sutormin, A.V. Emelyanenko, and V.Ya. Zyryanov, [Orientational structures of the nematic droplets with conical boundary conditions](#). *JETP Letters* **106**(6), 358 (2017). IF=1.399 DOI: 10.1134/S0021364017180102

45. E.S. Filimonova, A.V. Emelyanenko, J.-H. Liu, [A study of polarization in smectic liquid crystals via statistical-physics methods](#). *Mosc. Univ. Phys. Bull.* **72**(4), 369 (2017). IF=0.538 DOI: 10.3103/S0027134917040063

44. J.-H. Liu, A.V. Emelyanenko, Y.-S. Zhang, [Fabrication and Optical Characterization of Imprinted Broad-Band Photonic Films via Multiple Gradient UV Photopolymerization](#). *J. Polym. Sci., Part B: Polym. Phys.* **55**, 1427 (2017). IF=2.499 **Q1** DOI: 10.1002/polb.24392

43. S.A. Shvetsov, A.V. Emelyanenko, N.I. Boiko, J.-H. Liu, A.R. Khokhlov, [Communication: Orientational structure manipulation in nematic liquid crystal droplets induced by light excitation of azodendrimer dopant](#). *J. Chem. Phys.* **146**, 211104 (2017). IF=3.1 **Q1**

DOI: 10.1063/1.4984984

42. Y.S. Zhang, R. Balamurugan, J.C. Lin, S. Fitriyani, J.H. Liu and A.V. Emelyanenko, [Pd²⁺ fluorescent sensors based on amino and imino derivatives of rhodamine and improvement of water solubility by the formation of inclusion complexes with \$\beta\$ -cyclodextrin](#). *Analyst* **142**, 1536 (2017). IF= 3.978 **Q1** DOI: 10.1039/c6an02594c

41. N. V. Kalinin, A. V. Emelyanenko and J.-H. Liu, [Structure, elasticity and phase transitions in liquid crystals with deformations](#). *Ph. Transit.* **90**, 86 (2017). IF=1.004

DOI: 10.1080/01411594.2016.1201823

40. M. N. Krakhalev, A. P. Gardymova A. V. Emelyanenko, Jui-Hsiang Liu, and V. Ya. Zyryanov, [Untwisting of the Helical Structure of Cholesteric Droplets with Homeotropic Surface Anchoring](#). *JETP Letters* **105**, 51 (2017). IF=1.399 DOI: 10.1134/S002136401701012X

39. A.V. Emelyanenko, [Structural and ferroelectric phase transitions, Hucisko, Poland, 16–20 May 2016](#). *Liq. Cryst. Today* **25**, 85 (2016). DOI: 10.1080/1358314X.2016.1242251

38. Y.-S. Zhang, A.V. Emelyanenko, J.-H. Liu, [Fabrication of resonance core assisted self-assembling gelators derived from cyclohexanone](#). *J. Taiwan Inst. Chem. Eng.* **65**, 444 (2016). **IF=5.5 Q1** DOI: 10.1016/j.jtice.2016.05.009

37. A.V. Emelyanenko and E.P. Pozhidaev, [Multistability in the mixtures of smectic-C* materials with compensated twisting power](#). *Phys. Rev. E* **93**, 042705 (2016). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.93.042705

36. A.V. Emelyanenko, [Induction of new ferroelectric smectic phases in the electric field](#). *Ferroelectrics* **495**, 129 (2016). IF=0.669 DOI: 10.1080/00150193.2016.1136862

35. A.V. Emelyanenko, V.Yu. Rudyak and J.-H. Liu, [Phase transitions in ellipsoidal droplets of nematic liquid crystals](#). *Mosc. Univ. Phys. Bull.* **71**(1), 52 (2016). IF=0.538

DOI: 10.3103/S0027134916010057

34. V.Yu. Rudyak and A.V. Emelyanenko, [Orientational ordering of Janus colloids in cholesteric liquid crystals](#). *Soft Matter* **11**, 7237 (2015). IF=3.14 **Q1** DOI: 10.1039/C5SM01784J
33. A.V. Emelyanenko and A.R. Khokhlov, [Simple theory of transitions between smectic, nematic, and isotropic phases](#). *J. Chem. Phys.* **142**, 204905 (2015). IF=3.1 **Q1** DOI: 10.1063/1.4921684
32. N.V. Kalinin, A.V. Emelyanenko, [Influence of spherical nanoparticles on the ordering and phase transitions in nematic liquid crystals](#). *Liq. Cryst. and their Appl.* **13**(4), 24 (2013). ISSN: 1991–3966 (Print), 2499–9644 (Electronic).
31. M.S. Romashin and A.V. Emelyanenko, [Investigation of polar and nonpolar ordering in a smectic liquid crystal layer](#). *Mosc. Univ. Phys. Bull.* **68**(3), 249 (2013). IF=0.538 DOI: 10.3103/S0027134913030107
30. N.V. Kalinin and A.V. Emelyanenko, [The existence of two nematic phases caused by dimer recombination](#). *Mosc. Univ. Phys. Bull.* **68**(6), 455 (2013). IF=0.538 DOI: 10.3103/S0027134913060064
29. V.Yu. Rudyak, A.V. Emelyanenko, and V.A. Loiko, [Structure transitions in oblate nematic droplets](#). *Phys. Rev. E* **88**, 052501 (2013). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.88.052501
28. N.V. Kalinin, A.V. Emelyanenko, L.A. Nosikova, Z.A. Kudryashova, and J.-H. Liu, [Recombination of dimers as a mechanism for the formation of several nematic phases](#). *Phys. Rev. E* **87**, 062502 (2013). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.87.062502
27. A.V. Emelyanenko and K. Ishikawa, [Smooth transitions between biaxial intermediate smectic phases](#). *Soft Matter* **9**, 3497 (2013). IF=3.14 **Q1** DOI: 10.1039/C3SM27724K
26. K.L. Sandhya, A.D.L. Chandani, A. Fukuda, J.K. Vij, A.V. Emelyanenko, and K. Ishikawa, [Degeneracy lifting due to thermal fluctuations around the frustration point between anticlinic antiferroelectric SmCA* and synclinic ferroelectric SmC*](#). *Phys. Rev. E* **87**, 012502 (2013). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.87.012502
25. C.-C. Chien, J.-H. Liu, and A.V. Emelyanenko, [Fabrication and characterization of imprinted photonic crystalline polymer matrices via multiple UV polymerizations](#). *J. Mater. Chem.* **22**, 22446 (2012). IF=6.626 **Q1** DOI: 10.1039/C2JM35151J
24. A.V. Emelyanenko, S. Aya, Yu. Sasaki, F. Araoka, K. Ema, K. Ishikawa, and H. Takezoe, [Two transitions between isotropic and nematic phases in confined liquid crystals](#). *Phys. Rev. E* **84**, 041701 (2011). IF=2.707 **Q1**. DOI: 10.1103/PhysRevE.84.041701
23. S. Aya, Yu. Sasaki, F. Araoka, K. Ema, K. Ishikawa, A.V. Emelyanenko, and H. Takezoe, [Observation of two isotropic-nematic phase transitions near a surface](#). *Phys. Rev. Lett.* **106**, 117801 (2011). IF=8.385 **Q1** DOI: 10.1103/PhysRevLett.106.117801
22. A.V. Emelyanenko, [Theory for the evolution of ferroelectric, antiferroelectric, and ferrielectric smectic phases in the electric field](#). *Phys. Rev. E* **82**, 031710 (2010). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.82.031710
21. K.L. Sandhya, Atsuo Fukuda, J.K. Vij, and A.V. Emelyanenko, [Degeneracy lifting near the frustration points due to long-range interlayer interaction forces and the resulting varieties of polar chiral tilted smectic phases](#). *Liq. Cryst.* **36**, 1101 (2009). IF=2.908 DOI: 10.1080/02678290902815434
20. A. V. Emelyanenko, [Molecular-statistical approach to a behaviour of ferroelectric, antiferroelectric and ferrielectric smectic phases in the electric field](#). *Eur. Phys. J. E* **28**, 441 (2009). IF=2.306 **Q1** DOI: 10.1140/epje/i2008-10438-8
19. A. V. Emelyanenko, [Influence of the electric field on frustration between ferroelectricity and antiferroelectricity in smectics](#). *Mosc. Univ. Phys. Bull.* **64**, 67 (2009). IF=0.538 DOI: 10.3103/S0027134909010159
18. A. V. Emelyanenko, [Investigation of frustration between ferroelectricity and antiferroelectricity in smectics](#). *Mosc. Univ. Phys. Bull.* **63**, 396 (2008). IF=0.538 DOI: 10.3103/S0027134908060076

17. A. V. Emelyanenko, [Theory of nematic-smectic phase transition](#). *South Ural State University Bulletin, "Mathematics, Physics and Chemistry"* **11**(22), 43 (2008). ISSN: 2075-809X (Print), 2409-6547 (Electronic)
16. A. V. Emelyanenko, [Method of calculation of the elasticity constants for tilted smectic](#). *South Ural State University Bulletin, "Mathematics, Physics and Chemistry"* **11**(22), 38 (2008). ISSN: 2075-809X (Print), 2409-6547 (Electronic)
15. A. V. Emelyanenko, [Unified theory for the phase transitions in liquid crystals](#). *Dokl. Phys.* **53**, 571 (2008). IF=0.65 DOI: 10.1134/S1028335808110050
14. A. V. Emelyanenko, [Complex smectic phases: threshold phenomena and application prospects](#). *Dokl. Phys.* **53**, 559 (2008). IF=0.65 DOI: 10.1134/S1028335808110025
13. A. V. Emelyanenko, E. P. Pozhidaev, N. M. Shtykov, and V. E. Molkin, [Antiferroelectric and ferrielectric liquid crystal display: electrically controlled birefringence color switch as a new mode](#). *Journal of the Society for Information Display* **16**(8), 811 (2008). IF=1.645 DOI: 10.1889/1.2966442
12. J.-K. Song, A. D. L. Chandani, A. Fukuda, J. K. Vij, I. Kobayashi, and A. V. Emelyanenko, [Temperature-induced sign reversal of biaxiality observed by conoscopy in some ferroelectric Sm-C* liquid crystals](#). *Phys. Rev. E* **76**, 011709 (2007). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.76.011709
11. A. V. Emelyanenko, Atsuo Fukuda, and J. K. Vij, [Theory of the intermediate tilted smectic phases and their helical rotation](#). *Phys. Rev. E* **74**, 011705 (2006). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.74.011705
10. A. D. L. Chandani, N. M. Shtykov, V. P. Panov, A. V. Emelyanenko, Atsuo Fukuda, and J. K. Vij, [Discrete flexoelectric polarizations and biaxial subphases with periodicities other than three and four layers in chiral smectic liquid crystals frustrated between ferroelectricity and antiferroelectricity](#). *Phys. Rev. E* **72**, 041705 (2005). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.72.041705
9. N. M. Shtykov, A. D. L. Chandani, A. V. Emelyanenko, Atsuo Fukuda, and J. K. Vij, [Two kinds of smectic-C \$\alpha^*\$ subphases in a liquid crystal and their relative stability dependent on the enantiomeric excess as elucidated by electric-field-induced birefringence experiment](#). *Phys. Rev. E* **71**, 021711 (2005). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.71.021711
8. A. V. Emelyanenko and M. A. Osipov, [Theoretical Studies of the Structure of Intermediate Chiral Smectic Phases with Increasing Periodicity](#). *Ferroelectrics* **309**, 13 (2004). IF=0.669 DOI: 10.1080/00150190490509719
7. A. V. Emelyanenko and M. A. Osipov, [Origin of spontaneous polarization, tilt, and chiral structure of smectic liquid-crystal phases composed of bent-core molecules: A molecular model](#). *Phys. Rev. E* **70**, 021704 (2004). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.70.021704
6. A. V. Emelyanenko and M. A. Osipov, [Theoretical model for the discrete flexoelectric effect and a description for the sequence of intermediate smectic phases with increasing periodicity](#). *Phys. Rev. E* **68**, 051703 (2003). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.68.051703
5. A. V. Emelyanenko, [Analytical description for the chiral nematic state in terms of molecular parameters](#). *Phys. Rev. E* **67**, 031704 (2003). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.67.031704
4. A. V. Emelyanenko, M. A. Osipov, and D. A. Dunmur, [Molecular theory of helical sense inversions in chiral nematic liquid crystals](#). *Phys. Rev. E* **62**, 2340 (2000). IF=2.707 **Q1** DOI: 10.1103/PhysRevE.62.2340
3. A. V. Emelyanenko and M. A. Osipov, [Nematic-isotropic phase transition in polar liquid crystals. II. Role of the dispersion interaction](#). *Crystallogr. Rep.* **45**, 510 (2000). IF=0.661. DOI: 10.1134/1.171226
2. A. V. Emelyanenko and M. A. Osipov, [Nematic-isotropic phase transition in polar liquid crystals. I. Statistical theory](#). *Crystallogr. Rep.* **45**, 501 (2000). IF=0.661 DOI: 10.1134/1.171225
1. A. V. Emelyanenko and M. A. Osipov, [Influence of dimerization on the nematic-isotropic phase transition in strongly polar liquid crystals](#). *Liq. Cryst.* **26**, 187 (1999). IF=2.908 DOI: 10.1080/026782999205326