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Рецензирование в журналах:

Physical Review Letters, American Physical Society
Physical Review E, American Physical Society
Reviews of Modern Physics, American Physical Society
Journal of Chemical Physics, American Institute of Physics
European Physical Journal
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- 2019 Crystals MDPI, IF=2.67
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- 2018 Beilstein Journal of Nanotechnology

Участие в организационных и программных комитетах:

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Научные интересы:

Жидкие кристаллы, полимеры, нарушение симметрии, полярность, хиральность, двуосность, поверхностные эффекты, наночастицы, капли, новые фазы, фазовые переходы, сегнето- и антисегнетоэлектрические материалы, промежуточные фазы, энергосбережение, эффекты памяти, искусственные мышцы, молекулярно-статистическая физика, компьютерное моделирование.

Основные публикации (Scopus: 955 цитирований, H-index 20):

75. A. V. Emelyanenko, D. V. Shmeliova, [Optimization of the domain size in stressed liquid crystals](#). *Liq. Cryst. and their Appl.* **24** (1), 60 (2024).
74. 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 \(on his 70th birthday\)](#). *Physics - Uspekhi* **67** (2), 211 (2024). **IF=2.7**
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72. 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](#). *Polymer Journal* (2024). **IF= 3.08**
71. 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](#), *Journal of Molecular Liquids* **374**, 121139 (2023). **IF= 6.633**
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69. 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](#), *Optics Express* **30**, 47909 (2022).
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67. 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**
66. 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](#), *Journal of Physics: Conference Series* **2067**, 012016 (2021).
65. 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](#), *Physical Review E* **103**, 022709 (2021). **IF=2.707**
64. 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](#), *Optical Materials Express* **11**, 1705 (2021). **IF= 3.074**
63. 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](#), *Polymer Journal* **53**, 373 (2021). **IF=2.826**

62. 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](#), *Journal of Molecular Liquids*, **319**, 114149 (2020). **IF= 6.633**
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39. 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**
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37. Y.-S. Zhang, A.V. Emelyanenko, J.-H. Liu, [Fabrication of resonance core assisted self-assembling gelators derived from cyclohexanone](#). *Journal of the Taiwan Institute of Chemical Engineers* **65**, 444 (2016). **IF=4.040**
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35. A.V. Emelyanenko, [Induction of new ferrielectric smectic phases in the electric field](#). *Ferroelectrics* **495**, 129 (2016). **IF=0.669**
34. A.V. Emelyanenko, V.Yu. Rudyak and J.-H. Liu, [Phase transitions in ellipsoidal droplets of nematic liquid crystals](#). *Moscow University Physics Bulletin* 71(1) (2016). **IF=0.538**
33. V.Yu. Rudyak and A.V. Emelyanenko, [Orientational ordering of Janus colloids in cholesteric liquid crystals](#). *Soft Matter* **11**, 7237 (2015). **IF=3.14**
32. A.V. Emelyanenko and A.R. Khokhlov, [Simple theory of transitions between smectic, nematic, and isotropic phases](#). *J. Chem. Phys.* **142**, 204905 (2015). **IF=2.991**
31. M.S. Romashin and A.V. Emelyanenko, [Investigation of polar and nonpolar ordering in a smectic liquid crystal layer](#). *Moscow University Physics Bulletin* 68(3), 249 (2013). **IF=0.538**
30. N.V. Kalinin and A.V. Emelyanenko, [The existence of two nematic phases caused by dimer recombination](#). *Moscow University Physics Bulletin* 68(6), 455 (2013). **IF=0.538**
29. V.Yu. Rudyak, A.V. Emelyanenko, and V.A. Loiko, [Structure transitions in oblate nematic droplets](#). *Physical Review E* **88**, 052501 (2013). **IF=2.707**
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](#). *Physical Review E* **87**, 062502 (2013). **IF=2.707**
27. A.V. Emelyanenko and K. Ishikawa, [Smooth transitions between biaxial intermediate smectic phases](#). *Soft Matter* **9**, 3497 (2013). **IF=3.14**
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 antclinic antiferroelectric SmCA* and synclinic ferroelectric SmC*](#). *Physical Review E* **87**, 012502 (2013). **IF=2.707**
25. Chih-Chieh Chien, Jui-Hsiang 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**

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](#). *Physical Review E* **84**, 041701 (2011). **IF=2.707**
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](#). *Physical Review Letters* **106**, 117801 (2011). **IF=8.385**
22. A.V. Emelyanenko, [Theory for the evolution of ferroelectric, antiferroelectric, and ferrielectric smectic phases in the electric field](#). *Physical Review E* **82**, 031710 (2010). **IF=2.707**
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](#). *Liquid Crystals* **36**, 1101 (2009). **IF=2.908**
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=1.812**
19. A. V. Emelyanenko, [Influence of the electric field on frustration between ferroelectricity and antiferroelectricity in smectics](#). *Moscow University Physics Bulletin* **64**, 67 (2009). **IF=0.538**
18. A. V. Emelyanenko, [Investigation of frustration between ferroelectricity and antiferroelectricity in smectics](#). *Moscow University Physics Bulletin* **63**, 396 (2008). **IF=0.538**
17. A. V. Emelyanenko, [Theory of nematic-smectic phase transition](#). *South Ural State University Bulletin, "Mathematics, Physics and Chemistry"* **11**(22), 43 (2008).
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).
15. A. V. Emelyanenko, [Unified theory for the phase transitions in liquid crystals](#). *Doklady Physics* **53**, 571 (2008). **IF=0.650**
14. A. V. Emelyanenko, [Complex smectic phases: threshold phenomena and application prospects](#). *Doklady Physics* **53**, 559 (2008). **IF= IF=0.650**
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**
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](#). *Physical Review E* **76**, 011709 (2007). **IF=2.707**
11. A. V. Emelyanenko, Atsuo Fukuda, and J. K. Vij, [Theory of the intermediate tilted smectic phases and their helical rotation](#). *Physical Review E* **74**, 011705 (2006). **IF=2.707**
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](#). *Physical Review E* **72**, 041705 (2005). **IF=2.707**
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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**
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](#). *Physical Review E* **70**, 021704 (2004). **IF=2.707**
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5. A. V. Emelyanenko, [Analytical description for the chiral nematic state in terms of molecular parameters](#). *Physical Review E* **67**, 031704 (2003). **IF=2.707**

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3. A. V. Emelyanenko and M. A. Osipov, [Nematic-isotropic phase transition in polar liquid crystals. II. Role of the dispersion interaction](#). *Crystallography Reports*. **45**, 510 (2000). **IF=0.661**
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