

Publication list of Denis D. Sheka

Google Scholar: Denis Sheka (<http://scholar.google.com/citations?user=1BqhX5EAAAAJ>)

Number of citations: > 3800

h-index: 36

i10-index: 68

Books & book chapters

- [1] D. D. Sheka, “Curvilinear magnetism”, in *Encyclopedia of materials: electronics* (Elsevier, 2023), pp. 760–776.
- [2] D. Makarov and D. Sheka, eds., *Curvilinear micromagnetism: from fundamentals to applications*, Vol. 146, Topics in Applied Physics (Springer Nature Switzerland, 2022).
- [3] D. D. Sheka, V. P. Kravchuk, D. Peddis, G. Varvaro, M. Krupiński, M. Albrecht, D. Erb, S. Facsko, and D. Makarov, “Curvilinear magnetic shells”, in *Curvilinear micromagnetism, From fundamentals to applications*, Vol. 146, edited by D. Makarov and D. Sheka (Springer Nature Switzerland, 2022).
- [4] D. D. Sheka, Y. Gaididei, and F. G. Mertens, “Current induced vortex dynamics in magnetic nanodisc”, in *Electromagnetic, magnetostatic, and exchange-interaction vortices in confined magnetic structures*, edited by E. Kamenetskii (Transworld Research Network, 2008), pp. 59–75.
- [5] B. A. Ivanov and D. D. Sheka, “Dynamics of vortex ensemble in 2d easy-plane antiferromagnet”, in *Nonlinear coherent structures in physics and biology*, edited by K. H. Spatchek and F. G. Mertens (Springer US, 1994), pp. 187–190.

Review and Perspective Journals Articles

- [1] D. D. Sheka, O. V. Pylypovskyi, O. M. Volkov, K. V. Yershov, V. P. Kravchuk, and D. Makarov, “Fundamentals of curvilinear ferromagnetism: statics and dynamics of geometrically curved wires and narrow ribbons”, *Small* **18**, 2105219 (2022).
- [2] D. D. Sheka, “A perspective on curvilinear magnetism”, *Applied Physics Letters* **118**, 230502 (2021).
- [3] E. Y. Vedmedenko, R. K. Kawakami, D. Sheka, P. Gambardella, A. Kirilyuk, A. Hirohata, C. Binek, O. A. Chubykalo-Fesenko, S. Sanvito, B. Kirby, J. Grollier, K. Everschor-Sitte, T. Kampfrath, C.-Y. You, and A. Berger, “The 2020 magnetism roadmap”, *Journal of Physics D: Applied Physics* **53**, 453001 (2020).
- [4] R. Streubel, P. Fischer, F. Kronast, V. P. Kravchuk, D. D. Sheka, Y. Gaididei, O. G. Schmidt, and D. Makarov, “Magnetism in curved geometries (Topical Review)”, *Journal of Physics D: Applied Physics* **49**, 363001 (2016).

Research Journals Articles & Patents

- [1] O. V. Pylypovskyi, N. Hedrich, A. V. Tomilo, T. Kosub, K. Wagner, R. Hübner, B. Shields, D. D. Sheka, J. Fassbender, P. Maletinsky, and D. Makarov, “Interaction of domain walls with grain boundaries in uniaxial insulating antiferromagnets”, *Phys. Rev. Appl.* **20**, 014020 (2023).
- [2] O. M. Volkov, D. Wolf, O. V. Pylypovskyi, A. Kákay, D. D. Sheka, B. Büchner, J. Fassbender, A. Lubk, and D. Makarov, “Chirality coupling in topological magnetic textures with multiple magnetochiral parameters”, *Nature Communications* **14**, 1491 (2023).
- [3] K. V. Yershov and D. D. Sheka, “Control of magnetic response in curved stripes by tailoring the cross section”, *Physical Review B* **107**, L100415 (2023).
- [4] O. Zaiets, V. P. Kravchuk, O. V. Pylypovskyi, D. Makarov, and D. Sheka, “Circular stripe domains and cone state vortices in disk-shaped exchange coupled magnetic heterostructures”, *Journal of Physics D: Applied Physics* **55**, 445003 (2022).
- [5] M. I. Sloika, Y. Gaididei, V. P. Kravchuk, O. V. Pylypovskyi, D. Makarov, and D. D. Sheka, “Impact of curvature-induced dzyaloshinskii–moriya interaction on magnetic vortex texture in spherical caps”, *Fizyka Nyzkykh Temperatur* **48**, 1083–1089 (2022).
- [6] Y. A. Borysenko, D. D. Sheka, J. Fassbender, J. van den Brink, D. Makarov, and O. V. Pylypovskyi, “Field-induced spin reorientation transitions in antiferromagnetic ring-shaped spin chains”, *Phys. Rev. B* **106**, 174426 (2022).
- [7] M. I. Sloika, Y. Gaididei, V. P. Kravchuk, O. V. Pylypovskyi, D. Makarov, and D. D. Sheka, “Impact of curvature-induced dzyaloshinskii–moriya interaction on magnetic vortex texture in spherical caps”, *Low Temperature Physics* **48**, 956–961 (2022).
- [8] N. Hedrich, K. Wagner, B. J. Shields, P. Maletinsky, O. V. Pylypovskyi, T. Kosub, D. Makarov, and D. D. Sheka, “Antiferromagnetic memory device”, pat. EP3971896A1; WO2022058479A1 (H. Z. D. Univ Basel, Mar. 23, 2022).
- [9] N. Hedrich, K. Wagner, O. V. Pylypovskyi, B. J. Shields, T. Kosub, D. D. Sheka, D. Makarov, and P. Maletinsky, “Nanoscale mechanics of antiferromagnetic domain walls”, *Nature Physics* **17**, 574–577 (2021).
- [10] O. M. Volkov, F. Kronast, C. Abert, E. S. O. Mata, T. Kosub, P. Makushko, D. Erb, O. V. Pylypovskyi, M.-A. Mawass, D. Sheka, S. Zhou, J. Fassbender, and D. Makarov, “Domain-wall damping in ultrathin nanostripes with Dzyaloshinskii-Moriya interaction”, *Physical Review Applied* **15**, 034038 (2021).
- [11] O. V. Pylypovskyi, A. V. Tomilo, D. D. Sheka, J. Fassbender, and D. Makarov, “Boundary conditions for the Néel order parameter in a chiral antiferromagnetic slab”, *Physical Review B* **103**, 134413 (2021).
- [12] O. V. Pylypovskyi, Y. A. Borysenko, J. Fassbender, D. D. Sheka, and D. Makarov, “Curvature-driven homogeneous Dzyaloshinskii–Moriya interaction and emergent weak ferromagnetism in anisotropic antiferromagnetic spin chains”, *Applied Physics Letters* **118**, 182405 (2021).
- [13] G. Napoli, O. V. Pylypovskyi, D. D. Sheka, and L. Vergori, “Nematic shells: new insights in topology- and curvature-induced effects”, *Soft Matter* **17**, 10322–10333 (2021).
- [14] N. Hedrich, K. Wagner, O. V. Pylypovskyi, B. J. Shields, T. Kosub, D. D. Sheka, D. Makarov, and P. Maletinsky, “Publisher correction: nanoscale mechanics of antiferromagnetic domain walls”, *Nature Physics* **17**, 659–659 (2021).

-
- [15] O. V. Pylypovskyi, D. Y. Kononenko, K. V. Yershov, U. K. Röbller, A. V. Tomilo, J. Fassbender, J. van den Brink, D. Makarov, and D. D. Sheka, “Curvilinear one-dimensional antiferromagnets”, *Nano Letters* **20**, 8157–8162 (2020).
- [16] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, J. van den Brink, and A. Saxena, “Domain wall diode based on functionally graded Dzyaloshinskii–Moriya interaction”, *Applied Physics Letters* **116**, 222406 (2020).
- [17] O. V. Pylypovskyi, V. P. Kravchuk, O. M. Volkov, J. Fassbender, D. Sheka, and D. Makarov, “Unidirectional tilt of domain walls in equilibrium in biaxial stripes with dzyaloshinskii-moriya interaction”, *Journal of Physics D: Applied Physics* **53**, 395003 (2020).
- [18] D. D. Sheka, O. V. Pylypovskyi, P. Landeros, Y. Gaididei, A. Kákay, and D. Makarov, “Nonlocal chiral symmetry breaking in curvilinear magnetic shells”, *Communications Physics* **3**, 128 (2020).
- [19] A. Korniienko, A. Kákay, D. D. Sheka, and V. P. Kravchuk, “Effect of curvature on the eigenstates of magnetic skyrmions”, *Physical Review B* **102**, 014432 (2020).
- [20] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, and U. K. Röbller, “Curvature effects on phase transitions in chiral magnets”, *SciPost Physics* **9**, 43 (2020).
- [21] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, J. van den Brink, and Y. Gaididei, “Spontaneous deformation of flexible ferromagnetic ribbons induced by Dzyaloshinskii-Moriya interaction”, *Physical Review B* **100**, 140407(R) (2019).
- [22] Y. Gaididei, K. V. Yershov, D. D. Sheka, V. P. Kravchuk, and A. Saxena, “Magnetization-induced shape transformations in flexible ferromagnetic rings”, *Physical Review B* **99**, 014404 (2019).
- [23] V. P. Kravchuk, O. Gomonay, D. D. Sheka, D. R. Rodrigues, K. Everschor-Sitte, J. Sinova, J. van den Brink, and Y. Gaididei, “Spin eigenexcitations of an antiferromagnetic skyrmion”, *Physical Review B* **99**, 184429 (2019).
- [24] A. Korniienko, V. Kravchuk, O. Pylypovskyi, D. Sheka, J. van den Brink, and Y. Gaididei, “Curvature induced magnonic crystal in nanowires”, *SciPost Physics* **7**, 35 (2019).
- [25] Y. Gaididei, V. P. Kravchuk, F. G. Mertens, O. V. Pylypovskyi, A. Saxena, D. D. Sheka, and O. M. Volkov, “Localization of magnon modes in a curved magnetic nanowire”, *Low Temperature Physics* **44**, 634–643 (2018).
- [26] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, O. V. Pylypovskyi, D. Makarov, and Y. Gaididei, “Geometry-induced motion of magnetic domain walls in curved nanostripes”, *Physical Review B* **98**, 060409(R) (2018).
- [27] O. M. Volkov, D. D. Sheka, Y. Gaididei, V. P. Kravchuk, U. K. Röbller, J. Fassbender, and D. Makarov, “Mesoscale Dzyaloshinskii-Moriya interaction: geometrical tailoring of the magnetochirality”, *Scientific Reports* **8**, 866 (2018).
- [28] V. P. Kravchuk, D. D. Sheka, U. K. Röbller, J. van den Brink, and Y. Gaididei, “Spin eigenmodes of magnetic skyrmions and the problem of the effective skyrmion mass”, *Physical Review B* **97**, 064403 (2018).
- [29] V. P. Kravchuk, D. D. Sheka, A. Kákay, O. M. Volkov, U. K. Röbller, J. van den Brink, D. Makarov, and Y. Gaididei, “Multiplet of skyrmion states on a curvilinear defect: reconfigurable skyrmion lattices”, *Physical Review Letters* **120**, 067201 (2018).
- [30] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, O. V. Pylypovskyi, and Y. Gaididei, “Geometry induced phase transitions in magnetic spherical shell”, *Journal of Magnetism and Magnetic Materials* **443**, 404–412 (2017).
-

-
- [31] Y. Gaididei, A. Goussev, V. P. Kravchuk, O. V. Pylypovskyi, J. M. Robbins, D. Sheka, V. Slastikov, and S. Vasylykevych, “Magnetization in narrow ribbons: curvature effects”, *Journal of Physics A: Mathematical and Theoretical* **50**, 385401 (2017).
- [32] V. P. Kravchuk, U. K. Röbler, O. M. Volkov, D. D. Sheka, J. van den Brink, D. Makarov, H. Fuchs, H. Fangohr, and Y. Gaididei, “Topologically stable magnetization states on a spherical shell: curvature-stabilized skyrmions”, *Physical Review B* **94**, 144402 (2016).
- [33] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, K. V. Yershov, D. Makarov, and Y. Gaididei, “Rashba torque driven domain wall motion in magnetic helices”, *Scientific Reports* **6**, 23316 (2016).
- [34] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Curvature and torsion effects in spin-current driven domain wall motion”, *Physical Review B* **93**, 094418 (2016).
- [35] S.-K. Kim, M.-W. Yoo, J. Lee, H.-Y. Lee, J.-H. Lee, Y. Gaididei, V. P. Kravchuk, and D. D. Sheka, “Resonantly excited precession motion of three-dimensional vortex core in magnetic nanospheres”, *Scientific Reports* **5**, 11370 (2015).
- [36] O. V. Pylypovskyi, V. P. Kravchuk, D. D. Sheka, D. Makarov, O. G. Schmidt, and Y. Gaididei, “Coupling of chiralities in spin and physical spaces: The Möbius ring as a case study”, *Physical Review Letters* **114**, 197204 (2015).
- [37] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Vortex polarity switching in magnets with surface anisotropy”, *Low Temperature Physics* **41**, 361–374 (2015).
- [38] D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Curvature effects in statics and dynamics of low dimensional magnets”, *Journal of Physics A: Mathematical and Theoretical* **48**, 125202 (2015).
- [39] D. D. Sheka, V. P. Kravchuk, K. V. Yershov, and Y. Gaididei, “Torsion-induced effects in magnetic nanowires”, *Physical Review B* **92**, 054417 (2015).
- [40] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, Y. Gaididei, and F. G. Mertens, “Effects of a spin-polarized current assisted Ørsted field in magnetization patterning”, *Journal of Applied Physics* **117**, 213910, 213910 (2015).
- [41] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Controllable vortex chirality switching on spherical shells”, *Journal of Applied Physics* **117**, 083908 (2015).
- [42] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Curvature-induced domain wall pinning”, *Physical Review B* **92**, 104412 (2015).
- [43] Y. Gaididei, V. P. Kravchuk, and D. D. Sheka, “Curvature effects in thin magnetic shells”, *Physical Review Letters* **112**, 257203 (2014).
- [44] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Effects of surface anisotropy on magnetic vortex core”, *Journal of Magnetism and Magnetic Materials* **361**, 201–205 (2014).
- [45] M. I. Sloika, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Curvature induced chirality symmetry breaking in vortex core switching phenomena”, *Applied Physics Letters* **104**, 252403, 252403 (2014).
- [46] V. P. Kravchuk, O. M. Volkov, D. D. Sheka, and Y. Gaididei, “Periodic magnetization structures generated by transverse spin current in magnetic nanowires”, *Physical Review B* **87**, 224402 (2013).
- [47] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, Y. Gaididei, and F. G. Mertens, “Mechanism of fast axially-symmetric reversal of magnetic vortex core”, *Ukr. J. Phys.* **58**, 596–603 (2013).
- [48] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, F. G. Mertens, and Y. Gaididei, “Regular and chaotic vortex core reversal by a resonant perpendicular magnetic field”, *Physical Review B* **88**, 014432 (2013).
-

-
- [49] D. D. Sheka, V. P. Kravchuk, M. I. Sloika, and Y. Gaididei, “Equilibrium states of soft magnetic hemispherical shell”, *SPIN* **3**, 1340003 (2013).
- [50] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, F. G. Mertens, and Y. Gaididei, “Periodic magnetic structures generated by spin-polarized currents in nanostripes”, *Applied Physics Letters* **103**, 222401 (2013).
- [51] Y. Gaididei, O. M. Volkov, V. P. Kravchuk, and D. D. Sheka, “Magnetic vortex-antivortex crystals generated by spin-polarized current”, *Physical Review B* **86**, 144401 (2012).
- [52] V. P. Kravchuk, D. D. Sheka, R. Streubel, D. Makarov, O. G. Schmidt, and Y. Gaididei, “Out-of-surface vortices in spherical shells”, *Physical Review B* **85**, 144433 (2012).
- [53] O. V. Pylypovskiy, D. D. Sheka, and Y. Gaididei, “Bloch point structure in a magnetic nanosphere”, *Physical Review B* **85**, 224401 (2012).
- [54] R. Streubel, V. P. Kravchuk, D. D. Sheka, D. Makarov, F. Kronast, O. G. Schmidt, and Y. Gaididei, “Equilibrium magnetic states in individual hemispherical permalloy caps”, *Applied Physics Letters* **101**, 132419, 132419 (2012).
- [55] R. Streubel, D. J. Thurmer, D. Makarov, F. Kronast, T. Kosub, V. Kravchuk, D. D. Sheka, Y. Gaididei, R. Schäfer, and O. G. Schmidt, “Magnetically capped rolled-up nanomembranes”, *Nano Letters* **12**, 3961–3966 (2012).
- [56] V. P. Kravchuk, D. D. Sheka, F. G. Mertens, and Y. Gaididei, “Off-centred immobile magnetic vortex under influence of spin-transfer torque”, *Journal of Physics D: Applied Physics* **44**, 285001 (2011).
- [57] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Spin-transfer torque and current-induced vortex superlattices in nanomagnets”, *Physical Review B* **84**, 052404 (2011).
- [58] Y. Gaididei, V. P. Kravchuk, and D. D. Sheka, “Magnetic vortex dynamics induced by an electrical current”, *International Journal of Quantum Chemistry* **110**, 83–97 (2010).
- [59] Y. Gaididei, V. P. Kravchuk, D. D. Sheka, and F. G. Mertens, “Multiple vortex-antivortex pair generation in magnetic nanodots”, *Physical Review B* **81**, 094431 (2010).
- [60] V. P. Kravchuk, Y. Gaididei, and D. D. Sheka, “Nucleation of a vortex-antivortex pair in the presence of an immobile magnetic vortex”, *Physical Review B* **80**, 100405, 100405 (2009).
- [61] Y. Gaididei, V. P. Kravchuk, D. D. Sheka, and F. G. Mertens, “Switching phenomena in magnetic vortex dynamics”, *Fizika Nizkikh Temperatur* **34**, 669–676 (2008).
- [62] Y. Gaididei, D. D. Sheka, and F. G. Mertens, “Controllable switching of vortex chirality in magnetic nanodisks by a field pulse”, *Applied Physics Letters* **92**, 012503, 012503 (2008).
- [63] Y. B. Gaididei, V. P. Kravchuk, D. D. Sheka, and F. G. Mertens, “Switching phenomena in magnetic vortex dynamics”, *Low Temperature Physics* **34**, 528–534 (2008).
- [64] V. P. Kravchuk and D. D. Sheka, “Effective magnetic dipolar anisotropy in nanomagnets: equilibrium magnetization states”, *Ukr. J. Phys.* **53**, 802–809 (2008).
- [65] J. G. Caputo, Y. Gaididei, V. P. Kravchuk, F. G. Mertens, and D. D. Sheka, “Effective anisotropy of thin nanomagnets: beyond the surface-anisotropy approach”, *Physical Review B* **76**, 174428, 174428 (2007).
- [66] J. G. Caputo, Y. Gaididei, F. G. Mertens, and D. D. Sheka, “Vortex polarity switching by a spin-polarized current”, *Physical Review Letters* **98**, 056604, 056604 (2007).
- [67] B. A. Ivanov, D. D. Sheka, V. V. Kryvonos, and F. G. Mertens, “Quantum effects for the two-dimensional soliton in isotropic ferromagnets”, *Physical Review B* **75**, 132401, 132401 (2007).
-

-
- [68] B. Ivanov, P. Bondarenko, A. Galkin, C. Zaspel, and D. Sheka, “Fine structure of the spectra of magnetic particles in the vortex state and their ordered arrays”, *Bulletin of the Russian Academy of Sciences: Physics* **71**, 1494–1496 (2007).
- [69] V. Kravchuk and D. Sheka, “Thin ferromagnetic nanodisk in transverse magnetic field”, *Physics of the Solid State* **49**, 1923–1931 (2007).
- [70] V. P. Kravchuk, D. D. Sheka, Y. Gaididei, and F. G. Mertens, “Controlled vortex core switching in a magnetic nanodisk by a rotating field”, *Journal of Applied Physics* **102**, 043908, 043908 (2007).
- [71] V. P. Kravchuk, D. D. Sheka, and Y. B. Gaididei, “Equilibrium magnetisation structures in ferromagnetic nanorings”, *Journal of Magnetism and Magnetic Materials* **310**, 116–125 (2007).
- [72] D. D. Sheka, “Comment on “Magnon wave forms in the presence of a soliton in two-dimensional antiferromagnets with a staggered field””, *Physical Review B* **75**, 107401, 107401 (2007).
- [73] D. D. Sheka, Y. Gaididei, and F. G. Mertens, “Current induced switching of vortex polarity in magnetic nanodisks”, *Applied Physics Letters* **91**, 082509 (2007).
- [74] D. D. Sheka, “Field momentum and gyroscopic dynamics of classical systems with topological defects”, *Journal of Physics A: Mathematical and General* **39**, 15477–15489 (2006).
- [75] D. D. Sheka and F. G. Mertens, “Levinson theorem for Aharonov–Bohm scattering in two dimensions”, *Physical Review A* **74**, 052703, 052703 (2006).
- [76] D. D. Sheka, C. Schuster, B. A. Ivanov, and F. G. Mertens, “Dynamics of topological solitons in two-dimensional ferromagnets”, *The European Physical Journal B - Condensed Matter* **50**, 393–402 (2006).
- [77] E. G. Galkina, B. A. Ivanov, V. M. Muravyov, and D. D. Sheka, “Effective equations of motion of particle-like excitations in two-dimensional magnets”, *Ukr. J. Phys.* **50**, A65–A71 (2005).
- [78] B. A. Ivanov and D. D. Sheka, “Local magnon modes and the dynamics of a small-radius two-dimensional magnetic soliton in an easy-axis ferromagnet”, *JETP Letters* **82**, 436–440 (2005).
- [79] D. D. Sheka, Y. Gaididei, J. G. Caputo, J. P. Zagorodny, and F. G. Mertens, “A limit cycle in the dynamics of a magnetic vortex in a two-dimensional nanodot”, *Ukr. J. Phys.* **50**, 1278–1287 (2005).
- [80] D. D. Sheka, J. P. Zagorodny, J. G. Caputo, Y. Gaididei, and F. G. Mertens, “Vortex motion in a finite-size easy-plane ferromagnet and application to a nanodot”, *Physical Review B* **71**, 134420, 134420 (2005).
- [81] E. G. Galkina, B. A. Ivanov, V. M. Murav’ev, D. V. Filin, and D. D. Sheka, “On dynamics of magnetization of a vortex in a magnetic point of two-lattice magnet”, *Russian, Metallophysics and New Technologies* **26**, 1423–1430 (2004).
- [82] D. D. Sheka, I. A. Yastremsky, B. A. Ivanov, G. M. Wysin, and F. G. Mertens, “Amplitudes for magnon scattering by vortices in two-dimensional weakly easy-plane ferromagnets”, *Physical Review B* **69**, 054429, 054429 (2004).
- [83] J. P. Zagorodny, Y. Gaididei, D. D. Sheka, J. G. Caputo, and F. G. Mertens, “Importance of the internal shape mode in magnetic vortex dynamics”, *Physical Review Letters* **93**, 167201, 167201 (2004).
- [84] E. G. Galkina, B. A. Ivanov, V. M. Murav’ev, and D. D. Sheka, “Soliton–magnon scattering and effective equation of soliton motion in isotropic magnets”, *The Physics of Metals and Metallography* **95**, Suppl. 1, S68–S79 (2003).
- [85] D. Sheka, B. Ivanov, and F. G. Mertens, “Generalized Levinson theorem for singular potentials in two dimensions”, *Physical Review A* **68**, 012707, 012707 (2003).
-

-
- [86] D. D. Sheka, B. A. Ivanov, and F. G. Mertens, “Internal modes and magnon scattering on topological solitons in two-dimensional easy-axis ferromagnets”, *Physical Review B* **64**, 024432 (2001).
- [87] B. A. Ivanov, V. M. Murav’ev, and D. D. Sheka, “Soliton–magnon scattering in a two-dimensional isotropic magnetic material”, *JETP* **89**, 583–595 (1999).
- [88] B. A. Ivanov, V. M. Muravyov, and D. D. Sheka, “Magnon modes and their scattering on the soliton in a 2D isotropic antiferromagnet”, *Ukrainian, Ukr. J. Phys.* **44**, 1404 (1999).
- [89] B. A. Ivanov and D. D. Sheka, “Dynamics of vortex ensemble in high-anisotropy planar ferromagnets with spin $s=1$ ”, *Low Temperature Physics* **21**, 337–344 (1995).
- [90] B. A. Ivanov and D. D. Sheka, “Vortices in the cone phase of a classical quasi-two-dimensional ferromagnet”, *Low Temperature Physics* **21**, 881–887 (1995).
- [91] B. A. Ivanov and D. D. Sheka, “Soliton (vortex) thermodynamics of a quasi-2D easy-plane antiferromagnet”, *JETP* **80** (5), 907–914 (1995).
- [92] B. A. Ivanov and D. D. Sheka, “Two-dimensional magnetic solitons and thermodynamics of quasi-two-dimensional magnets”, *Chaos, Solitons & Fractals* **5**, 2605–2622 (1995).
- [93] B. A. Ivanov, A. K. Kolezhuk, and D. D. Sheka, *Two-dimensional magnetic soliton gas dynamics and its contribution to the response functions of layered magnets*, Preprint of Bogolubov Institute for Theoretical Physics, **ITP–93–61E**, Kiev, 1994, p. 404.
- [94] B. A. Ivanov and D. D. Sheka, “Dynamics of vortices and their contribution to the response functions of classical quasi-two-dimensional easy-plane antiferromagnet”, *Physical Review Letters* **72**, 404–407 (1994).
- [95] B. A. Ivanov, A. N. Kichizhiev, and D. D. Sheka, “Magnetic vortices in a highly anisotropic ferromagnet with unit spin”, *Soviet Journal of Low Temperature Physics* **18**, 648–650 (1992).
- [96] S. N. Lyakhimets and D. D. Sheka, “Inhibition of quickly-moving domain boundary in magnetics with rare-earth ions”, *Ukrainian, Ukr. J. Phys.* **36**, 1404 (1991).

Published contributions to conferences

- [1] D. D. Sheka, “Geometry-governed effects in curvilinear magnetism”, in *Abstract book of the workshop “Nanomagnetism in 3D” 30th April – 2nd May 2024, WASEM Monastery, Ingelheim, Germany* (2024).
- [2] D. Karakuts, K. V. Yershov, and D. D. Sheka, “Influence of the variable cross section on the domain wall dynamics in curved ferromagnetic nanostripes”, in *Abstracts of XIV Conference of Young Scientists “Problems in Theoretical Physics”, 16–18 January 2024, Kyiv, Ukraine* (Feb. 12, 2024), pp. 40–41.
- [3] O. V. Pylypovskiy, N. Hedrich, A. Tomilo, T. Kosub, K. Wagner, R. Hübner, B. Shields, D. D. Sheka, J. Fassbender, P. Maletinsky, and D. Makarov, “Characterization of the inter-grain coupling in uniaxial antiferromagnets via domain wall patterns”, in *APS March Meeting 2024, Minneapolis & Virtual (March 4-8)* (2024), AA03.00005.
- [4] P. Lehmann, K. Wagner, O. Pylypovskiy, S. Weber, N. Hedrich, P. Makushko, B. J. Shields, T. Kosub, I. Veremchuk, D. D. Sheka, N. Spaldin, D. Makarov, and P. Maletinsky, “Surface magnetization of Cr_2O_3 (104) quantified via scanning nv magnetometry”, in *Book of abstract of 776 we-heraeus-seminar “re-thinking spintronics: from unconventional materials to novel technologies”, bad honnef (germany), 2023, 04-06 January*, (2023), p. 58.

-
- [5] D. Karakuts, K. V. Yershov, and D. D. Sheka, “Peculiarities of domain wall dynamics in curved ferromagnetic nanostripes of variable cross section”, in Proceedings of the xxiii international young scientists’ conference on applied physics, may, 16–20, 2023 , kyiv, ukraine (2023), pp. 40–41.
- [6] V. Rozhenko, K. V. Yershov, and D. D. Sheka, “Dynamics of domain walls in antiferromagnetic stripes with functionally graded dzialoshinskii-moriya interaction”, in Proceedings of the xxiii international young scientists’ conference on applied physics, may, 16–20, 2023 , kyiv, ukraine (2023), pp. 42–43.
- [7] O. V. Pylypovskyi, Y. Borysenko, A. Tomilo, D. Kononenko, K. Yershov, U. Roessler, J. Fassbender, J. van den Brink, D. D. Sheka, and D. Makarov, “Effects of geometry on antiferromagnetic textures: boundaries and geometric curvature”, in Aps march meeting 2023, las vegas, nevada (march 5-10), virtual (march 20-22) (2023), SS01.00016.
- [8] O. M. Volkov, D. Wolf, O. V. Pylypovskyi, A. Kákay, D. D. Sheka, B. Büchner, J. Fassbender, A. Lubk, and D. Makarov, “Chirality coupling in curvilinear nanoarchitectures”, in Dpg spring meeting 2023, 26–31 march, 2023, dresden, germany (2023), SKM 2023 –MA 38.
- [9] O. M. Volkov, I. A. Yastremsky, O. V. Pylypovskyi, F. Kronast, C. Abert, E. S. O. Mata, P. Makushko, M.-A. Mawass, V. P. Kravchuk, D. D. Sheka, B. A. Ivanov, J. Fassbender, and D. Makarov, “Micro-magnetic parameters and longitudinal relaxation in ultrathin asymmetrically sandwiched magnetic films”, in Dpg spring meeting 2023, 26–31 march, 2023, dresden, germany (2023), SKM 2023 –MA 17.
- [10] O. V. Pylypovskyi, A. V. Tomilo, N. Hedrich, K. Wagner, B. J. Shields, T. Kosub, R. Hübner, J. Fassbender, D. D. Sheka, P. Maletinsky, and D. Makarov, “Interaction of antiferromagnetic domain walls with crystal defects”, in Dpg spring meeting 2023, 26–31 march, 2023, dresden, germany (2023), SKM 2023 –MA 11.
- [11] Y. A. Borysenko, D. D. Sheka, K. V. Yershov, J. Fassbender, J. van den Brink, D. Makarov, and O. V. Pylypovskyi, “Antiferromagnetic spin chains: ground states and phase transitions in static magnetic field of arbitrary direction”, in 4th ieee international conference on advances in magnetics, ieee aim 2023. book of abstracts. 15-18 january 2023, moena, italy (2023), p. 140.
- [12] O. M. Volkov, D. Wolf, O. V. Pylypovskyi, A. Kákay, D. D. Sheka, B. Büchner, J. Fassbender, A. Lubk, and D. Makarov, “Non-local chirality breaking in curvilinear nanoarchitectures”, in 4th ieee international conference on advances in magnetics, ieee aim 2023. book of abstracts. 15-18 january 2023, moena, italy (2023), p. 137.
- [13] O. V. Pylypovskyi, Y. A. Borysenko, D. Y. Kononenko, K. V. Yershov, U. K. Roessler, A. V. Tomilo, J. van den Brink, J. Fassbender, D. D. Sheka, and D. Makarov, “Anisotropic effects in antiferromagnetic curvilinear spin chains”, in Dpg meeting of the condensed matter section: magnetism division (book of abstracts) (2023), p. 407.
- [14] D. D. Sheka, “Curvilinear magnetism: fundamentals and perspectives”, in Abstract book of the 8th international conference on superconductivity and magnetism “icsm2023” 4th -11th may 2023, fethiye, türkiye (2023), p. 76.
- [15] K. Yershov and D. D. Sheka, “Curvature-induced effects in domain wall dynamics in stripes with spatially varying cross section”, in Aps march meeting 2023, las vegas, nevada (march 5-10), virtual (march 20-22) (2023), B56.00010.
- [16] K. Yershov and D. D. Sheka, “Geometry-induced effects in domain wall dynamics in stripes with spatially varying cross section”, in Dpg meeting of the condensed matter section: magnetism division (book of abstracts) (2023), MA 50.2.
-

-
- [17] K. Yershov and D. D. Sheka, “Curvature-induced effects in dynamics of domain walls in chiral biaxial nanotubes”, in *Dpg meeting of the condensed matter section: magnetism division (book of abstracts) (2023)*, MA 40.2.
- [18] Y. A. Borysenko, D. D. Sheka, K. V. Yershov, J. Fassbender, J. van den Brink, D. Makarov, and O. V. Pylypovskyi, “Curvilinear antiferromagnetic spin chains: interplay between geometry and external magnetic field”, in *Abstracts of the 13th international conference “nanomaterials: applications & properties”*, bratislava, slovakia, sep. 10-15, 2023 (Sept. 10, 2023), p. 140.
- [19] D. D. Sheka, “Curvilinear magnetism: fundamentals and perspectives”, in *Abstracts of the nato advanced research workshop “functional spintronic nanomaterials for radiation detection and energy harvesting” (spinnano-2023)*, 25-27 september 2023, kyiv, ukraine (2023), pp. 1–2.
- [20] D. D. Sheka, “Nanomagnetism work of yuri gaididei”, in “yuri gaididei memorial workshop”, 2-3 february 2022, national academy of sciences of ukraine, bogolyubov institute for theoretical physics, kyiv, ukraine (Feb. 2, 2022), p. 17.
- [21] O. V. Pylypovskyi, N. Hedrich, K. Wagner, A. V. Tomilo, B. J. Shields, T. Kosub, D. D. Sheka, J. Fassbender, P. Maletinsky, and D. Makarov, “Noncollinear antiferromagnetic textures in confined geometries”, in *Mmm intermag 2022 abstract book (2022)*, pp. 59–60.
- [22] D. D. Sheka, “Curvilinear magnetism”, in *Book of Abstract of 757. WE-Heraeus-Seminar “Non-Linear Magnetism”*, Bad Honnef (Germany), 05-07 January (2022), p. 32.
- [23] O. V. Pylypovskyi, D. Kononenko, Y. Borysenko, K. Tomilo Artem Yershov, U. K. Roessler, J. Fassbender, J. van den Brink, D. D. Sheka, and D. Makarov, “Chiral effects in curvilinear 1d antiferromagnets”, in *Abstracts of the 12th international conference “nanomaterials: applications & properties”*, kraków, poland, sep. 11–16, 2022 (2022), p. ID 0178.
- [24] O. Volkov, O. Pylypovskyi, F. Kronast, C. Abert, E. S. O. Mata, P. Makushko, M.-A. Mawass, V. Kravchuk, D. Sheka, J. Fassbender, and D. Makarov, “Dzyaloshinskii-moriya interaction and domain wall damping in ultrathin nanostripes”, in *Abstracts of the 12th international conference “nanomaterials: applications & properties”*, kraków, poland, sep. 11–16, 2022 (2022), p. ID 0207.
- [25] O. V. Pylypovskyi, O. Volkov, D. D. Sheka, A. Kakay, V. Kravchuk, P. Landeros, F. Kronast, I. Moench, M.-A. Mawass, A. Saxena, J. Fassbender, and D. Makarov, “Curvature-induced local & nonlocal chiral effects in curvilinear ferromagnetic shells and wires”, in *Abstracts of the 12th international conference “nanomaterials: applications & properties”*, kraków, poland, sep. 11–16, 2022 (2022), p. ID 0180.
- [26] O. Volkov, O. Pylypovskyi, A. Kakay, V. P. Kravchuk, D. Sheka, J. Fassbender, and D. Makarov, “Local and nonlocal curvature-induced chiral effects in nanomagnetism”, in *2022 mmm conference october 31 – november 11, 2022. program schedule and abstract book (2022)*, BF-09 (MOA-14).
- [27] K. Wagner, P. Lehmann, O. Pylypovskyi, N. Hedrich, P. Makushko, B. Shields, T. Kosub, D. D. Sheka, D. Makarov, and P. Maletinsky, “Nanoscale studies of antiferromagnetic spin-textures”, in *2022 mmm conference october 31 – november 11, 2022. program schedule and abstract book (2022)*, CA-04 (SC-05).
- [28] O. M. Volkov, I. A. Yastremsky, O. Pylypovskyi, F. Kronast, C. Abert, E. Oliveros Mata, P. Makushko, M. Mawass, D. . Kravchuk V. P. amnd Sheka, B. A. Ivanov, J. Fassbender, and D. Makarov, “Quantification of micromagnetic parameters in ultrathin asymmetrically sandwiched magnetic thin films”, in *2022 mmm conference october 31 – november 11, 2022. program schedule and abstract book (2022)*, EG-06 (LOB-11).
-

-
- [29] Y. A. Borysenko, D. D. Sheka, J. Fassbender, J. van den Brink, D. Makarov, and O. V. Pylypovskiy, “Effects of static magnetic fields in antiferromagnetic ring-shaped spin chains,” in *Dpg meeting of the condensed matter section: magnetism division (book of abstracts)*, (2022), p. 12.
- [30] Y. A. Borysenko, D. D. Sheka, J. Fassbender, J. van den Brink, D. Makarov, and O. V. Pylypovskiy, “Antiferromagnetic ring-shaped spin chains exposed by static magnetic field”, in *Ukrapro workshop: condensed matter science assisted by machine learning (2022)* (2022).
- [31] O. Zaiets, V. Kravchuk, D. Makarov, and D. Sheka, “Circular stripe domains in magnetic heterostructures of cylindrical geometry”, in *Ukrapro workshop: condensed matter science assisted by machine learning (2022)*.
- [32] Y. A. Borysenko, D. D. Sheka, J. Fassbender, J. van den Brink, D. Makarov, and O. V. Pylypovskiy, “Antiferromagnetic ring-shaped spin chains: magnetic field-induced textures and phase transitions”, in *Proceedings of the XVIII International Conference on Electronics and Applied Physics*, October 18–22, 2022, Kyiv, Ukraine (2022), p. 50.
- [33] D. D. Sheka, “Curvilinear nanomagnetism”, in *Siam conference on mathematical aspects of materials science - ms 21* (2021), p. 23.
- [34] O. V. Pylypovskiy, D. Y. Kononenko, K. V. Yershov, U. K. Röbber, A. V. Tomilo, J. Fassbender, J. van den Brink, D. Makarov, and D. D. Sheka, “Geometrically driven chiral effects in curvilinear antiferromagnetic spin chains”, in *Magnetism at the nanoscale: imaging - fabrication - physics. 736. we-heraeus-seminar. 06 - 08 january 2021 online* (2021), p. 68.
- [35] O. V. Pylypovskiy, D. Y. Kononenko, K. V. Yershov, U. K. Röbber, J. Fassbender, J. van den Brink, D. Makarov, and D. D. Sheka, “Effects of geometry on curvilinear antiferromagnetic spin chains”, in *APS March Meeting 2021* (2021), E40.00008.
- [36] O. V. Pylypovskiy, N. Hedrich, K. Wagner, A. V. Tomilo, B. J. Shields, T. Kosub, D. D. Sheka, D. Makarov, and P. Maletinsky, “Domain walls in antiferromagnetic samples with non-trivial surface topography”, in *IEEE International Magnetic Virtual Conference INTERMAG21 (26–30 April 2021)* (2021), p. 653.
- [37] D. D. Sheka, O. V. Pylypovskiy, P. Landeros, A. Kakay, and D. Makarov, “Micromagnetic description of symmetry-breaking effects in curvilinear ferromagnetic shells”, in *IEEE International Magnetic Virtual Conference INTERMAG21 (26–30 April 2021)* (2021), p. 632.
- [38] O. M. Volkov, O. V. Pylypovskiy, F. Kronast, C. Abert, E. O. Mata, P. Makushko, M. Mawass, V. Kravchuk, D. D. Sheka, J. Fassbender, and D. Makarov, “Domain wall damping in ultrathin nanostripes with dzyaloshinskii-moriya interaction”, in *IEEE International Magnetic Virtual Conference INTERMAG21 (26–30 April 2021)* (2021), p. 954.
- [39] D. D. Sheka, “Curvilinear magnetism (invited)”, in *IEEE International Magnetic Virtual Conference INTERMAG21 (26–30 April 2021)* (2021), p. 631.
- [40] Y. A. Borysenko, O. V. Pylypovskiy, J. Fassbender, D. D. Sheka, and D. Makarov, “Ground states of the antiferromagnetic spin rings in strong magnetic fields”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 42.
- [41] G. Napoli, O. V. Pylypovskiy, D. D. Sheka, and L. Vergoli, “Nematic versus ferromagnetic shells: new insights in curvature-induced effects”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 30.
- [42] N. Hedrich, K. Wagner, P. Lehmann, O. V. Pylypovskiy, B. J. Shields, T. Kosub, D. D. Sheka, D. Makarov, and P. Maletinsky, “Nanoscale mechanics of antiferromagnetic domain walls in Cr_2O_3 ”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 60.
-

-
- [43] A. Tomilo, O. Pylypovskyi, K. Yershov, and D. Sheka, “Parallel computation of 3d magnetic structures”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 58.
- [44] O. V. Pylypovskyi, D. Y. Kononenko, K. V. Yershov, U. K. Röbller, A. V. Tomilo, J. Fassbender, J. van den Brink, D. Makarov, and D. D. Sheka, “Effects of torsion and curvature in antiferromagnetic spin chains”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 55.
- [45] A. Korniienko, A. Kákay, D. D. Sheka, and V. P. Kravchuk, “The effect of curvature on eigenexcitations of magnetic skyrmion”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 25.
- [46] A. F. Franco, D. D. Sheka, D. D. Makarov, and P. Landeros, “Trajectories of charged particles moving through magnetized tubes”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 45.
- [47] O. Volkov, A. Kákay, F. Kronast, M.-A. Mawass, U. K. Röbller, J. van den Brink, V. P. Kravchuk, D. D. Sheka, J. Fassbender, and D. Makarov, “Experimental confirmation of curvature-induced effects in magnetic nanosystems”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 59.
- [48] O. Zaiets, V. P. Kravchuk, D. D. Sheka, and D. Makarov, “Circular stripe domains in magnetic heterostructures of cylindrical geometry”, in *Curvilinear condensed matter: fundamentals and applications. 717. we-heraeus-seminar. 24 - 26 june 2021 online* (2021), p. 63.
- [49] D. Sheka, “Curvilinear magnetism (invited)”, in *2021 ieee 11th international conference on ”nanomaterials: applications & properties” (nap-2021), odesa, ukraine, september 5-11, 2021* (2021), NMM-A–13.
- [50] O. V. Pylypovskyi, A. Tomilo, Y. A. Borysenko, J. Fassbender, D. D. Sheka, and D. Makarov, “Influence of boundaries and geometrical curvatures on antiferromagnetic textures”, in *2021 mrs fall meeting november 29–december 8, 2021* (2021), pp. 757–758.
- [51] O. V. Pylypovskyi, V. P. Kravchuk, O. M. Volkov, J. Faßbender, D. D. Sheka, and D. Makarov, “Unidirectionally tilted domain walls in chiral biaxial stripes”, in *Dpg spring meeting of the condensed matter section: magnetism division* (2020), MA 55.8.
- [52] D. Y. Kononenko, O. V. Pylypovskyi, U. K. Röbller, K. V. Yershov, A. V. Tomilo, J. van den Brink, Y. Gaididei, D. Makarov, and D. D. Sheka, “Geometry-induced effects in antiferromagnetic spin chains”, in *Dpg spring meeting of the condensed matter section: magnetism division* (2020), MA 55.4.
- [53] D. D. Sheka, O. V. Pylypovskyi, P. Landeros, Y. Gaididei, A. Kákay, and D. Makarov, “Non-local symmetry breaking effects, induced by magne-tostatics in curvilinear ferromagnetic shells”, in *Dpg spring meeting of the condensed matter section: magnetism division* (2020), MA 23.8.
- [54] O. Pylypovskyi, D. Makarov, V. Kravchuk, A. Saxena, and D. Sheka, “Stabilization of skyrmion states by a gradient of curvature in ferromagnetic shells”, in *2020 virtual mrs fall meeting* (2020), F.NM04.03.06.
- [55] A. Tomilo, O. V. Pylypovskyi, K. V. Yershov, and D. D. Sheka, “Parallel computing of elastic magnetic systems at the nanoscale”, in *Proceedings of the sixth international conference on high performance computing (hpc-ua 2020), november 6 – november 7* (2020), E39.00011.
- [56] D. Y. Kononenko, O. V. Pylypovskyi, K. V. Yershov, U. K. Röbller, A. V. Tomilo, J. Fassbender, J. van den Brink, D. Makarov, and D. D. Sheka, “Effects of geometry on curvilinear spin chains”, in *Mmm 2020 virtual conference. abstracts* (2020), p. 294.
-

-
- [57] D. D. Sheka, O. V. Pylypovskiy, P. Landeros, A. Kakay, and D. Makarov, “Magnetostatics-induced symmetry breaking effects in curvilinear shells”, in *Mmm 2020 virtual conference. abstracts (2020)*, p. 4.
- [58] O. V. Pylypovskiy, V. P. Kravchuk, O. M. Volkov, J. Fassbender, D. D. Sheka, and D. Makarov, “Domain wall tilt and enhancement of the walker limit in stripes with dzyaloshinskii-moriya interaction and perpendicular anisotropy”, in *Mmm 2020 virtual conference. abstracts (2020)*, p. 541.
- [59] Y. A. Borysenko, O. V. Pylypovskiy, D. D. Sheka, and D. Makarov, “Magnetic field-induced phase transitions in antiferromagnetic rings”, in *Abstracts of xi conference of young scientists “problems in theoretical physics”, 21–23 december 2020 (online meeting) (2020)*, pp. 60–61.
- [60] O. Zaiets, D. Sheka, V. Kravchuk, and D. Makarov, “Circular stripe domains in a vertically stacked magnetic heterostructures”, in *Xi conference of young scientists “problems in theoretical physics”, 21–23 december 2020, online meeting (2020)*, pp. 58–59.
- [61] O. Zaiets, D. Sheka, V. Kravchuk, and D. Makarov, “Circular stripe domains imprinted into the out-of-plane magnetised material”, in *Ieee international conference on ”nanomaterials: applications & properties” (nap-2020), sumy, ukraine, november 9-13, 2020, online meeting (2020)*, 03NMM12–1.
- [62] K. V. Yershov, D. D. Sheka, V. P. Kravchuk, A. Saxena, and Y. Gaididei, “Magnetically controlled geometry of flexible ferromagnetic rings”, in *Abstracts of aps march meeting 2019, bulletin of the american physical society (APS, Mar. 5, 2019)*, E39.00011.
- [63] A. Kákay, J. A. Otálora, O. Pylypovskiy, D. Sheka, D. Makarov, and H. Schultheiss, “Curvature induced asymmetric dispersion in nanotubes: handy spin waves in handy tubes”, in *International workshop curvilinear micromagnetism. may 22-25, 2019, kyiv, ukraine (book of abstracts) (2019)*, p. 34.
- [64] B. Khromets, O. V. Pylypovskiy, and D. D. Sheka, “Domain wall motion in ferromagnets with nonuniform Dzyaloshinskii-Moriya interaction”, in *Proceedings of the xix international young scientists’ conference on applied physics, may, 21–25, 2019, kyiv, ukraine (May 24, 2019)*, pp. 32–33.
- [65] D. Y. Kononenko, O. V. Pylypovskiy, Y. Gaididei, and D. D. Sheka, “Shape influence on statics and linear dynamics of antiferromagnetic textures in curvilinear quasi-one-dimensional spin chains”, in *International workshop curvilinear micromagnetism. may 22-25, 2019, kyiv, ukraine (book of abstracts) (2019)*, p. 58.
- [66] A. Korniienko, V. Kravchuk, O. V. Pylypovskiy, D. D. Sheka, and Y. Gaididei, “Band structure of the spectrum of the curvature-induced one-dimensional magnonic crystal”, in *International workshop curvilinear micromagnetism. may 22-25, 2019, kyiv, ukraine (book of abstracts) (2019)*, pp. 56–57.
- [67] V. P. Kravchuk, O. Gomonay, D. D. Sheka, K. Everschor-Sitte, D. R. Rodrigues, J. van den Brink, and Y. Gaididei, “Spin eigen-excitations of the antiferromagnetic skyrmion”, in *Dpg spring meeting of the condensed matter section: magnetism division (book of abstracts) (Mar. 2019)*, MA 34.8.
- [68] O. Volkov, D. Sheka, Y. Gaididei, V. Kravchuk, U. Röbber, J. Fassbender, and D. Makarov, “Mesoscale Dzyaloshinskii-Moriya interaction: geometrical tailoring of the magnetochirality”, in *Dpg spring meeting of the condensed matter section: magnetism division (book of abstracts) (Mar. 2019)*, MA 3.8.
- [69] D. D. Sheka, “Curvature-induced effects in nanomagnets”, in *Dpg spring meeting of the condensed matter section: symposium geometry, topology, and condensed matter (book of abstracts) (Mar. 2019)*, SYGT 1.2.
- [70] Y. Gaididei, V. Kravchuk, and D. Sheka, “Effects of curvature in low-dimensional ferromagnets”, in *International workshop curvilinear micromagnetism. may 22-25, 2019, kyiv, ukraine (book of abstracts) (2019)*, pp. 48–49.
-

-
- [71] K. V. Yershov, V. P. Kravchuk, D. D. Sheka, A. Saxena, and Y. Gaididei, “Shape transformations of elastic ferromagnetic systems”, in [International workshop curvilinear micromagnetism. may 22-25, 2019, kyiv, ukraine \(book of abstracts\) \(2019\)](#), pp. 12–13.
- [72] A. Tomilo, O. V. Pylypovskyi, K. V. Yershov, and D. D. Sheka, “Simulation of 3d spin chains with geometry-driven anisotropy”, in [Proceedings of the xviii international young scientists conference on applied physics, may 22-26, 2018, kyiv, ukraine \(June 25, 2018\)](#), pp. 122–123.
- [73] V. P. Kravchuk, D. D. Sheka, A. Kákay, O. M. Volkov, U. K. Rößler, J. van den Brink, D. Makarov, and Y. Gaididei, “Magnetic skyrmions in curvilinear films”, in [Dpg meeting: book of abstracts \(Mar. 2018\)](#), MA 35.12.
- [74] D. Y. Kononenko, O. V. Pylypovskyi, Y. Gaididei, and D. D. Sheka, “Equilibrium states of antiferromagnetic ring-shaped and helix-shaped spin chains with hard tangential anisotropy”, in [Abstracts of ix conference of young scientists “problems of theoretical physics”, december 4-5, 2018, kyiv, ukraine \(2018\)](#), p. 14.
- [75] D. D. Sheka, “Curvature-induced effects in nanomagnets”, in [Proceedings of the 3rd international advanced school on magnonics 2018, kyiv, ukraine, 17–21 september 2018 \(2018\)](#), p. 52.
- [76] A. Korniienko, O. V. Pylypovskyi, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Excitations in curvature-induced one-dimensional magnonic crystal”, in [Proceedings of the 3rd international advanced school on magnonics 2018, kyiv, ukraine, 17–21 september 2018 \(2018\)](#), p. 118.
- [77] A. Tomilo, O. Pylypovskyi, K. Yershov, and D. Sheka, “Spin-lattice simulation of magnetic nanowires with geometry-driven parameters”, in [Proceedings of fifth international conference high performance computing, october 22-23, 2018, kyiv, ukraine \(Nov. 12, 2018\)](#), pp. 158–161.
- [78] D. Y. Kononenko, O. V. Pylypovskyi, Y. Gaididei, and D. D. Sheka, “Curvature effects in antiferromagnetic nanowires”, in [Proceedings of the xvii international young scientists’ conference on applied physics, may, 23–27, 2017, kyiv, ukraine \(May 24, 2017\)](#), pp. 50–51.
- [79] K. V. Yershov, D. D. Sheka, V. P. Kravchuk, Y. Gaididei, and A. Saxena, “Current-driven domain wall ratchet in a nanomagnet with functionally graded dzyaloshinskii-moriya interaction”, in [Abstracts of aps march meeting 2017, bulletin of the american physical society, Vol. 62 \(APS, Mar. 16, 2017\)](#), R47.00005.
- [80] A. Korniienko, O. V. Pylypovskyi, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Magnonic crystals in nanowires with periodically modulated curvature”, in [Proceedings of the xvii international young scientists conference on applied physics, may 23-27, 2017, kyiv, ukraine \(May 24, 2017\)](#), pp. 52–53.
- [81] A. Korniienko, O. V. Pylypovskyi, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Artificial magnetic materials: curvature induced one-dimensional magnonic crystals”, in [Proceedings of the viii international conference for professionals and young scientists “low temperature physics”, may 29- june 27, 2017, kharkiv, ukraine \(May 29, 2017\)](#), p. 77.
- [82] D. Y. Kononenko, O. V. Pylypovskyi, Y. Gaididei, and D. D. Sheka, “Spin waves propagation in antiferromagnetic helix”, in [Abstracts book of the viii international conference for professionals and young scientists ”low temperature physics” \(2017\)](#), p. 76.
- [83] D. Y. Kononenko, O. V. Pylypovskyi, Y. Gaididei, and D. D. Sheka, “Spin waves propagation in antiferromagnetic nanowires: ring as a case of study”, in [Proceedings of the xviii international conference ”electronics and applied physics”, october, 24–27, 2017, kyiv, ukraine \(2017\)](#), pp. 49–50.
- [84] D. Y. Kononenko, O. V. Pylypovskyi, Y. Gaididei, and D. D. Sheka, “Spin waves propagation in antiferromagnetic ring”, in [Vii young scientists conference ”problems of theoretical physics”, october, 12–14, 2017, kyiv, ukraine \(2017\)](#), p. 39.
-

-
- [85] O. Pylypovskyi, D. Sheka, V. Kravchuk, K. V. Yershov, D. Makarov, and Y. Gaididei, “Domain wall motion in magnetic helices under action of rashba torque”, in VII International Conference for Young Scientists “Low Temperature Physics”, June 6-10, 2016, Kharkiv, Ukraine (June 2016), p. 75.
- [86] O. Pylypovskyi, D. Sheka, V. Kravchuk, K. V. Yershov, D. Makarov, and Y. Gaididei, “Structure and dynamics of domain walls in magnetic helices under the action of the rashba torque”, in Bogolyubov Conference “Problems of Theoretical Physics”, May 24-26, 2016, Kyiv, Ukraine (May 2016), p. 30.
- [87] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, K. V. Yershov, D. Makarov, and Y. Gaididei, “Action of rashba torque on domain wall in magnetic helix”, in [Topological patterns and dynamics in magnetic elements and in condensed matter](#) (MPI PKS, 2016).
- [88] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Reorientation phase transition in permalloy spherical shell”, in VII International Conference for Young Scientists “Low Temperature Physics”, June 06-10, 2016, Kharkiv, Ukraine, Book of Abstracts (2016), p. 76.
- [89] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, O. V. Pylypovskyi, and Y. Gaididei, “Second order phase transitions in permalloy spherical shell”, in [Proceedings of the vii young scientists conference “problems of theoretical physics”, december 13-15, 2016, kyiv, ukraine](#) (2016), p. 18.
- [90] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, O. V. Pylypovskyi, and Y. Gaididei, “Equilibrium magnetization configurations in permalloy spherical shells”, in Bogolyubov Conference “Problems of Theoretical Physics”, May 24-26, 2016, Kyiv, Ukraine, Book of Abstracts (2016), p. 59.
- [91] D. D. Sheka, “Curvature-induced effects in ferromagnet nanosystems”, in [Abstracts of the international seminar and workshop “topological patterns and dynamics in magnetic elements and in condensed matter”, 27 june - 8 july 2016, dresden, germany](#) (MPI PKS, 2016).
- [92] A. Korniienko, O. V. Pylypovskyi, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Curvature induced one-dimensional magnonic crystals”, in [Proceedings of the vii young scientists conference, december 13-15, 2016, kyiv, ukraine](#) (Dec. 13, 2016), p. 19.
- [93] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, K. V. Yershov, D. Makarov, and Y. Gaididei, “Effects of geometry on the domain wall dynamics in magnetic helices”, in [International school & conference on nanoscience and quantum transport 8–14 october 2016, kyiv, ukraine](#) (2016).
- [94] O. Pylypovskyi, D. Sheka, V. Kravchuk, D. Makarov, O. Schmidt, and Y. Gaididei, “Domain wall on a magnetic helix with easy-tangential anisotropy”, in [International Conference on Magnetism, July 5–10, 2015, Barcelona, Spain. Book of Abstracts \(July 2015\), Fr.E.3–O1.](#)
- [95] O. Pylypovskyi, D. Sheka, V. Kravchuk, D. Makarov, O. Schmidt, and Y. Gaididei, “Geometry-induced effects on domain walls on curved surfaces”, in [International Conference on Magnetism, July 5–10, 2015, Barcelona, Spain. Book of Abstracts \(July 2015\), TU.F–P83.](#)
- [96] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Equilibrium states of permalloy spherical nanoshell”, in [Proceedings of the XI International Conference “Electronics and Applied Physics”, October 21–24, 2015, Kyiv, Ukraine \(2015\), pp. 184–185.](#)
- [97] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Ground states of magnetic spherical shells”, in [Applied physics \(ysf\), 2015 international young scientists forum on](#) (Sept. 2015), MMM–6 (2 pages).
- [98] O. M. Volkov, D. Sheka, Y. Gaididei, V. Kravchuk, and F. Mertens, “Spin-current induced magnetization patterns in nanomagnets”, in [International Conference on Magnetism, July 5–10, 2015, Barcelona, Spain. Book of Abstracts \(July 2015\), TH.J–P07.](#)
- [99] O. M. Volkov, D. D. Sheka, V. P. Kravchuk, and Y. B. Gaididei, “Spin current induced magnetization structures in nanomagnets”, in [Recent trends in nanomagnetism, spintronics and their application, june 29 - july 3, 2015, ordizia, spain, book of abstracts](#) (June 2015), p. 125.
-

-
- [100] V. P. Kravchuk, Y. B. Gaididei, and D. D. Sheka, “Curvature effects in thin magnetic shells”, in *Book of Abstracts, Humboldt Kolleg “The Education and Science and their Role in Social and Industrial Progress of Society”*, Kyiv, Ukraine, June 12–14, 2014 (2014), p. 29.
- [101] O. V. Pylypovskyi, V. P. Kravchuk, D. D. Sheka, D. Makarov, O. G. Schmidt, and Y. Gaididei, “Coupling of magnetical and geometrical chiralities in a möbius ring”, in *Proceedings of the VI Young Scientists Conference “Problems of Theoretical Physics”*, Kyiv, Ukraine, November 25-27, 2014 (2014), p. 36.
- [102] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, D. Makarov, O. G. Schmidt, and Y. Gaididei, “Ground magnetization states in a möbius strip”, in *Proceedings of the V International Conference for Young Scientists “Low Temperature Physics”* (Kharkiv, Ukraine, June 2-6, 2014) (2014), p. 74.
- [103] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, D. Makarov, O. G. Schmidt, and Y. Gaididei, “Möbius-strip shaped nanomagnet with easy-axis anisotropy”, in *Book of Abstracts, Humboldt Kolleg “The Education and Science and their Role in Social and Industrial Progress of Society”*, Kyiv, Ukraine, June 12–14, 2014 (2014), p. 44.
- [104] D. D. Sheka, “Vortices in nanomagnetism”, in *Book of Abstracts, Humboldt Kolleg “The Education and Science and their Role in Social and Industrial Progress of Society”*, Kyiv, Ukraine, June 12–14, 2014 (2014), p. 52.
- [105] M. I. Sloika, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Chiral symmetry breaking in the vortex core reversal process in magnetic nanocaps”, in *Proceeding of XIV International Young Scientists Conference on Applied Physics*, June 11-14, 2014, Kyiv, Ukraine (2014), pp. 236–237.
- [106] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Oersted field effects in spin-current induced structures in ferromagnetic nanostripes”, in *Proceedings of the V International Conference for Young Scientists “Low Temperature Physics”* (Kharkiv, Ukraine, June 2-6, 2014) (2014), p. 75.
- [107] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Ørsted field influence on current induced periodical structures in ferromagnetic nanostripes”, in *Book of Abstracts, Humboldt Kolleg “The Education and Science and their Role in Social and Industrial Progress of Society”* (Kyiv, Ukraine, June 12–14, 2014) (2014), pp. 62–63.
- [108] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, Y. Gaididei, and F. G. Mertens, “Magnetisation patterning by means of electrical spin-polarised current”, in *Proceedings of the VI Young Scientists Conference “Problems of Theoretical Physics”* (Kyiv, Ukraine, November 25-27, 2014) (2014), p. 37.
- [109] Y. Gaididei, V. P. Kravchuk, D. D. Sheka, R. Streubel, D. Makarov, and O. G. Schmidt, “Some magnetic properties of cylindrical surfaces”, in *Book of Abstract of 526. WE-Heraeus-Seminar “Functional Magnetic Nanomembrains”*, Bad Honnef (Germany), 04-06 March (2013), p. 19.
- [110] Y. Gaididei, V. P. Kravchuk, D. D. Sheka, R. Streubel, D. Makarov, and O. G. Schmidt, “Magnetic vortices on spherical surfaces”, in *Book of Abstract of 526. WE-Heraeus-Seminar “Functional Magnetic Nanomembrains”*, Bad Honnef (Germany), 04-06 March (2013), p. 37.
- [111] O. V. Pylypovskyi and D. D. Sheka, “Slasi: a spin-lattice simulation tool”, in *Book of abstract of 11th europt workshop on advances in continuous optimization, florence, italy, june 26-28, 2013* (2013), p. 11.
- [112] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “The breaking of the vortex polarity switching symmetry by the surface anisotropy”, in *Proceedings of the 4th international conference of young scientists “low temperature physics”*, kharkiv, ukraine, june 3-7, 2013 (2013), p. 49.
- [113] O. V. Pylypovskyi, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Bloch point mediated vortex polarity switching in presence of surface anisotropy”, in *Proceeding of the xiii international young scientists’ conference on applied physics, june 12-15, 2013, kyiv, ukraine* (2013), pp. 83–84.
-

-
- [114] O. V. Pylypovskiy, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Magnetic vortex core reversal in heisenberg magnets with surface anisotropy”, in Proceedings of the V Young Scientists Conference “Problems of Theoretical Physics”, Kyiv, Ukraine, December 24-27, 2013 (2013), p. 93.
- [115] D. Sheka, “Dynamics of magnetic vortices in nanoparticles”, in Abstracts of the international workshop “domain microstructure and dynamics in magnetic elements”, heraklion, crete, april 8—11, 2013 (2013), pp. 13–14.
- [116] R. Streubel, L. Lan, D. Makarov, F. Kronast, V. Kravchuk, D. D. Sheka, Y. Gaididei, R. Schäfer, and O. G. Schmidt, “Magnetic domain patterns in rolled-up architectures”, in Book of Abstract of 526. WE-Heraeus-Seminar “Functional Magnetic Nanomembrains”, Bad Honnef (Germany), 04-06 March (2013), p. 22.
- [117] R. Streubel, D. Makarov, F. Kronast, V. P. Kravchuk, D. D. Sheka, Y. Gaididei, R. Schäfer, and O. G. Schmidt, “Magnetic vortices in capped architectures”, in Book of Abstract of 526. WE-Heraeus-Seminar “Functional Magnetic Nanomembrains”, Bad Honnef (Germany), 04-06 March (2013), p. 38.
- [118] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Spin-current induced periodical structures in ferromagnetic nanowires”, in Proceedings of the 4th International Conference of Young Scientists “Low Temperature Physics” (Kharkiv, Ukraine, June 3-7, 2013) (2013), p. 48.
- [119] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, F. G. Mertens, and Y. Gaididei, “Spin-current induced periodical structures in ferromagnetic nanostripes”, in Proceedings of the International Conference “Problems of Theoretical Physics” (Kyiv, Ukraine, December 24-27, 2013) (2013), p. 96.
- [120] Y. Gaididei, O. M. Volkov, V. P. Kravchuk, and D. D. Sheka, “The regular pattern formation in ferromagnetic films under influence of spin-polarized current”, in Proceedings of the International Conference “Problems of Theoretical Physics” (Kyiv, Ukraine, October 8-10, 2012) (2012), p. 91.
- [121] V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Out-of-surface vortices in spherical shells”, in Abstracts of the young scientists’ conference “low temperature physics”, may 14-18, 2012, kharkiv, ukraine (2012), p. 166.
- [122] O. Pylypovskiy, D. D. Sheka, and Y. Gaididei, “Influence of magnetic and stray field on a Bloch point structure”, in Proceeding of XII International Young Scientists’ Conference on Applied Physics, May 23-26, 2012, Kiev, Ukraine (2012), pp. 77–78.
- [123] O. V. Pylypovskiy, D. D. Sheka, and Y. Gaididei, “Radial-dependent Bloch point in magnetic nanosphere”, in Abstracts of the Young Scientists’ Conference “Low Temperature Physics”, May 14-18, 2012, Kharkiv, Ukraine (2012), p. 85.
- [124] O. V. Pylypovskiy, D. D. Sheka, V. P. Kravchuk, Y. Gaididei, and F. G. Mertens, “Deterministic and chaotic vortex dynamics in magnetic nanodots”, in Proceedings of the International Conference “Problems of Theoretical Physics”, October 8-11, 2012, Kiev, Ukraine (2012), p. 102.
- [125] O. V. Pylypovskiy, D. D. Sheka, V. P. Kravchuk, Y. Gaididei, and F. G. Mertens, “Axial-symmetric vortex polarity switching in ferromagnetic particles”, in Proceedings of the VIII International Conference “Electronics and Applied physics” (Kyiv, Ukraine, October 24-27, 2012) (2012), pp. 61–62.
- [126] O. V. Pylypovskiy, D. D. Sheka, V. P. Kravchuk, Y. Gaididei, and F. G. Mertens, “Vortex polarity reversal in magnetic nanodisk under ac magnetic field pumping”, in Proceedings of the IV Young Scientists Conference “Modern Problems of Theoretical Physics” October 23-26, 2012, Kiev, Ukraine (2012), p. 60.
- [127] D. D. Sheka, “Magnetic vortices in nano-objects”, in Abstracts of the Workshop “Amasing”, June 4-9, 2012, Dresden, Germany (2012), p. 31.
- [128] D. D. Sheka, “Magnetic vortices in nanoparticles”, in Proceedings of the VIII International Conference “Electronics and Applied physics”, Kyiv, Ukraine, October 24-27, 2012 (2012), p. 8.
-

-
- [129] M. I. Sloika, V. P. Kravchuk, and D. D. Sheka, “Vortex motion on hemispherical permalloy caps.”, in *Proceedings of the IV Young Scientists Conference “Modern Problems of Theoretical Physics”* (2012), p. 62.
- [130] M. I. Sloika, V. P. Kravchuk, and D. D. Sheka, “Gyroscopic dynamics of vortices on spherical surface”, in *Proceeding of X International Interdisciplinary Scientific Conference of Students and Young Scientists “Shevchenkivska vesna–2012”*, March, 19–23, 2012, Kiev, Ukraine (2012), pp. 109–112.
- [131] M. I. Sloika, V. P. Kravchuk, and D. D. Sheka, “Gyroscopic dynamics of vortices on spherical caps”, in *Proceeding of XII International Young Scientists’ Conference on Applied Physics*, May 23-26, 2012, Kiev, Ukraine (2012), pp. 87–88.
- [132] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Origin of spin–current induced regular vortex-antivortex structures in nanomagnets”, in *Abstracts of the Young Scientists’ Conference “Low Temperature Physics”* (Kharkiv, Ukraine, May 14-18, 2012) (2012), p. 86.
- [133] F. G. Mertens, D. D. Sheka, V. P. Kravchuk, and Y. Gaididei, “Switching of the polarity of vortices in magnetic nanodots by a spin-polarized electric current”, in *Abstracts of Progress In Electromagnetics Research Symposium (PIERS-2011)*, Marrakesh, Morocco, Mar. 20-23, 2011 (2011), p. 409.
- [134] O. Pylypovskyi and D. D. Sheka, “Vortex polarity switching in magnetic nanodisk mediated by the bloch point injection”, in *Proceeding of XI International Young Scientists’ Conference on Applied Physics*, June 15-18, 2011, Kiev, Ukraine (2011), pp. 79–80.
- [135] O. V. Pylypovskyi, D. D. Sheka, and Y. B. Gaididei, “Structure of the bloch point in spherical nanoparticle”, in *Abstracts of the Young Scientists Conference “Modern Problems of Theoretical Physics”*, December 21-23, 2011, Kiev, Ukraine (2011), p. 55.
- [136] D. D. Sheka, V. P. Kravchuk, and Y. B. Gaididei, “Mechanism of the vortex polarity switching in nanomagnets”, in *Abstracts of International Conference “Functional Materials” ICFM’2011*, October 3-8, 2011 (2011), p. 278.
- [137] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Current induced vortex lattices in nanomagnets”, in *Abstracts of the Young Scientists’ Conference “Low Temperature Physics”*, Kharkiv, Ukraine, June 6-10, 2011 (2011), p. 137.
- [138] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Current induced vortex superlattices in nanomagnets”, in *Proceeding of XI International Young Scientists’ Conference on Applied Physics*, Kyiv, Ukraine, June 15-18, 2011 (2011), pp. 48–49.
- [139] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Origin of the vortex-antivortex superlattices in nanomagnets”, in *Abstracts of the Young Scientists Conference “Modern Problems of Theoretical Physics”*, Kyiv, Ukraine, December 21-23, 2011 (2011), p. 54.
- [140] O. M. Volkov, V. P. Kravchuk, D. D. Sheka, and Y. Gaididei, “Origin of the vortex superlattices in nanomagnets under strong spin-current influence”, in *Proceedings of the VII International Conference “Electronics and applied physics”*, Kyiv, Ukraine, October 19-22, 2011 (2011), pp. 53–54.
- [141] Y. Gaididei, V. P. Kravchuk, and D. D. Sheka, “Mechanism of polarity switching of magnetic vortex”, in *Abstracts of the Conference “Bogolyubov Readings 2010”*, December 13-15, 2010, Kyiv, Ukraine (2010), pp. 20–21.
- [142] O. Pylypovskyi and D. D. Sheka, “Bloch point dynamics in vortex polarity switching process”, in *Proceeding of X International Young Scientists’ Conference on Applied Physics*, June 16-19, 2010, Kiev, Ukraine (2010), pp. 34–35.
- [143] O. Pylypovskyi and D. D. Sheka, “Dynamics of point singularities in magnetic nanodots under the field influence”, in *Abstracts of the Young Scientists Conference “Modern Problems of Theoretical Physics”*, December 22-24, 2010, Kiev, Ukraine (2010), p. 86.
-

-
- [144] D. D. Sheka and A. O. Vidil, “Equilibrium magnetization structures in permalloy hemispherical nanoparticles”, in *Proceeding of X International Young Scientists’ Conference on Applied Physics*, June 16-19, 2010, Kiev, Ukraine (2010), pp. 72–73.
- [145] Y. B. Gaididei, V. P. Kravchuk, and D. D. Sheka, “Engineered nonlinear excitations in magnetic nanostructures”, in *Abstracts of the Bogolyubov Kyiv Conference “Modern Problems of Theoretical and Mathematical Physics”*, September 15-18, 2009, Kyiv, Ukraine (2009), p. 112.
- [146] V. P. Kravchuk, Y. B. Gaididei, and D. D. Sheka, “Generation of a vortex-antivortex pair in the vortex state nanodisk by magnetic fields”, in *Abstracts of the Young Scientists’ Conference “Low Temperature Physics”*, June 1-5, 2009, Kharkiv, Ukraine (2009), p. 26.
- [147] O. Pylypovskiy and D. D. Sheka, “Dynamics of the vortex switching process in a magnetic nanodisk under the influence of transversal magnetic field”, in *Abstracts of the Young Scientists’ Conference “Modern Problems of Theoretical Physics”*, December 24-26, 2009, Kiev, Ukraine (2009).
- [148] D. D. Sheka, V. P. Kravchuk, and Y. B. Gaididei, “Controlled magnetic vortex dynamics in nanomagnets”, in *Abstracts of the International Conference of Humboldt-Kolleg Series in Kiev, Ukraine “Humboldt Cosmos: Science and Society” (HCS2–Kiev2009)*, 19-22 November 2009 (2009), p. 13.
- [149] F. G. Mertens, D. D. Sheka, Y. B. Gaididei, and V. P. Kravchuk, “Vortex polarity switching in magnetic nanodots by a rotating magnetic field or a spin-polarized current”, in *Proceeding of the Eight international young scientists’ conference on applied physics*, Kyiv, Ukraine, June 13-15, 2008 (2008), p. 7.
- [150] V. P. Kravchuk, D. D. Sheka, and Y. B. Gaididei, “Magnetostatics as an effective anisotropy: applications for angular shaped nanodots”, in *Proceedings of the III International Conference “Electronics and applied physics”*, Kyiv, Ukraine, October 25-27, 2007 (2007), pp. 44–45.
- [151] V. P. Kravchuk, D. D. Sheka, Y. B. Gaididei, and F. Mertens, “The ultrafast control of the switching process in the vortex state magnetic nanodots”, in *Proceeding of the Seventh international young scientists’ conference on applied physics*, Kyiv, Ukraine, June 13-15, 2007 (2007), pp. 59–60.
- [152] V. P. Kravchuk, D. D. Sheka, Y. B. Gaididei, and F. Mertens, “Ultrafast control of a vortex core dynamics in magnetic nanodisks”, in *Abstracts of the International Conference “Functional Materials”*, Partenit, Ukraine, October 1-6, 2007 (2007), p. 400.
- [153] V. P. Kravchuk, D. D. Sheka, and F. Mertens, “The ultrafast control of the switching process in the vortex state magnetic nanodots”, in *Abstracts of the International Conference on Nanoscale Magnetism, ICNM-2007*, Istanbul, Turkey, June 25-29, 2007 (2007), p. 69.
- [154] F. Mertens, D. D. Gaididei Y. Sheka, and J. G. Caputo, “Vortex polarity switching in magnetic nanodots due to a magnetic field or a spin-polarized current”, in *Abstracts of the International Conference on Nanoscale Magnetism, ICNM-2007*, Istanbul, Turkey, June 25-29, 2007 (2007), p. 68.
- [155] D. D. Sheka, Y. B. Gaididei, and F. Mertens, “Current induced dynamics of magnetic vortex in nanoparticles”, in *Abstracts of the International Conference “Functional Materials” (Partenit, Ukraine, October 1-6, 2007)* (2007), p. 319.
- [156] V. P. Kravchuk and D. D. Sheka, “Magnetization reversal of cylinder shaped nanodots”, in *Proceeding of the Sixth international young scientists’ conference on applied physics*, Kyiv, Ukraine, June 14-16, 2006 (2006), pp. 82–83.
- [157] D. Sheka, V. Krivonos, and F. Ivanov B.and Mertens, “Casimir energy and the problem of quantum stabilisation of 2d solitons in isotropic magnets”, in *Abstracts of the International Workshop “Nonlinear Physics and Mathematics” NLPM–2006*, Kiev, Ukraine, May 25-27, 2006 (2006).
-

-
- [158] V. P. Kravchuk, D. D. Sheka, Y. B. Gaididei, and F. Mertens, “Magnetic phase transitions in ferromagnetic nanorings”, in Proceedings of the I International Conference “Electronics and applied physics”, Kyiv, Ukraine, November 24-27, 2005 (2005), pp. 32–33.
- [159] D. D. Sheka, “Vortex motion in a finite size ferromagnet”, in Abstracts of the International Conference: “FPU+50: Nonlinear waves 50 years after Fermi-Pasta-Ulam”, Rouen, France, June 21-25, 2005 (2005), pp. 17–18.
- [160] E. G. Galkina, B. A. Ivanov, V. M. Murav’ev, and D. D. Sheka, “Dynamics of the vortex magnetization in ferrimagnet nanodot”, in Abstracts of the conference “Nanosystems: electronic, atomic properties”, NANSYS–2004, Kiev, Ukraine, October 12–14, 2004 (2004), p. 175.
- [161] D. D. Sheka, B. A. Ivanov, V. M. Muravyov, and I. A. Yastremsky, “Magnon scattering on a vortex core in a thin magnetic dot”, in Abstracts of the International conference “Functional Materials” Partenit, Ukraine, September 2001 (2001), p. 194.
- [162] D. D. Sheka, V. M. Muravyov, I. A. Yastremsky, and B. A. Ivanov, “Soliton–magnon scattering and spin wave modes for a small magnetic particle in the vortex state”, in European magnetic materials and applications: proceedings, Vol. 373–376, Materials Science Forum (2001), pp. 803–806.
- [163] D. D. Sheka, V. M. Muravyov, I. A. Yastremsky, and B. A. Ivanov, “Soliton-magnon scattering and normal modes for a magnetic particles in circular geometry”, in Abstracts of 8th European Magnetic Materials and Applications Conference, Kiev, Ukraine, June 7–10, 2000 (2000), p. 320.
- [164] B. A. Ivanov and D. D. Sheka, “Dynamics of vortices and their contribution to the response functions of quasi–two–dimensional easy–plane antiferromagnet”, in Abstracts of “14th General Conference. Condensed Matter Division” (GCCMD – 14), Madrid, Spain, March 28-31, 1994 (1994).
- [165] B. A. Ivanov and D. D. Sheka, “Dynamics and relaxation of magnetic vortices, and their contribution to the response functions of quasi–two–dimensional magnets”, in Programme and Abstracts of International Conference on Magnetism (22–26 August 1994, Warsaw, Poland). Osrodek Wydawnictw Naukowych, Poznan, 1994 (1994), p. 816.
- [166] D. D. Sheka and B. A. Ivanov, “Magnetic vortex gas dynamics in two–dimensional easy–plane magnets”, in Proceedings of the 1st International Autumn School–Conference “Solid State Physics: Fundamentals and Applications” (SSPFA’94), Uzhgorod, Ukraine, September 26–October 4, 1994 (1994), pp. 61–62.