Denis D Sheka

List of Publications by Year
in descending order

82	2,731	147726	189801
papers	citations	31 h-index	50 g-index

85	85	85	1592
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fundamentals of Curvilinear Ferromagnetism: Statics and Dynamics of Geometrically Curved Wires and Narrow Ribbons. Small, 2022, 18, e2105219.	5.2	19
2	Nanoscale mechanics of antiferromagnetic domain walls. Nature Physics, 2021, 17, 574-577.	6.5	49
3	Domain-Wall Damping in Ultrathin Nanostripes with Dzyaloshinskii-Moriya Interaction. Physical Review Applied, 2021, 15, .	1.5	5
4	Boundary conditions for the NÃ©el order parameter in a chiral antiferromagnetic slab. Physical Review B, 2021, 103, .	1.1	4
5	Curvature-driven homogeneous Dzyaloshinskiiâ€“Moriya interaction and emergent weak ferromagnetism in anisotropic antiferromagnetic spin chains. Applied Physics Letters, 2021, 118, .	1.5	15
6	A perspective on curvilinear magnetism. Applied Physics Letters, 2021, 118, .	1.5	46
7	Nematic shells: new insights in topology- and curvature-induced effects. Soft Matter, 2021, 17, 10322-10333.	1.2	7
8	Curvilinear One-Dimensional Antiferromagnets. Nano Letters, 2020, 20, 8157-8162.	4.5	33
9	Unidirectional tilt of domain walls in equilibrium in biaxial stripes with Dzyaloshinskiiâ€“Moriya interaction. Journal Physics D: Applied Physics, 2020, 53, 395003.	1.3	5
10	Effect of curvature on the eigenstates of magnetic skyrmions. Physical Review B, 2020, 102, .	1.1	22
11	Nonlocal chiral symmetry breaking in curvilinear magnetic shells. Communications Physics, 2020, 3, .	2.0	49
12	Domain wall diode based on functionally graded Dzyaloshinskiiâ€“Moriya interaction. Applied Physics Letters, 2020, 116, 222406.	1.5	5
13	The 2020 magnetism roadmap. Journal Physics D: Applied Physics, 2020, 53, 453001.	1.3	162
14	Curvature effects on phase transitions in chiral magnets. SciPost Physics, 2020, 9, .	1.5	17
15	Spontaneous deformation of flexible ferromagnetic ribbons induced by Dzyaloshinskii-Moriya interaction. Physical Review B, 2019, 100, .	1.1	14
16	Spin eigenexcitations of an antiferromagnetic skyrmion. Physical Review B, 2019, 99, .	1.1	28
17	Magnetization-induced shape transformations in flexible ferromagnetic rings. Physical Review B, 2019, 99, .	1.1	14
18	Curvature induced magnonic crystal in nanowires. SciPost Physics, 2019, 7, .	1.5	12

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19	Spin eigenmodes of magnetic skyrmions and the problem of the effective skyrmion mass. Physical Review B, 2018, 97, .	1.1	67
20	Multiplet of Skyrmion States on a Curvilinear Defect: Reconfigurable Skyrmion Lattices. Physical Review Letters, 2018, 120, 067201.	2.9	64
21	Mesoscale Dzyaloshinskii-Moriya interaction: geometrical tailoring of the magnetochirality. Scientific Reports, 2018, 8, 866.	1.6	43
22	Chiral Skyrmion and Skyrmionium States Engineered by the Gradient of Curvature. Physical Review Applied, 2018, 10, .	1.5	26
23	Localization of magnon modes in a curved magnetic nanowire. Low Temperature Physics, 2018, 44, 634-643.	0.2	17
24	Geometry-induced motion of magnetic domain walls in curved nanostripes. Physical Review B, 2018, 98, .	1.1	41
25	Magnetization in narrow ribbons: curvature effects. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 385401.	0.7	40
26	Geometry induced phase transitions in magnetic spherical shell. Journal of Magnetism and Magnetic Materials, 2017, 443, 404-412.	1.0	26
27	Magnetism in curved geometries. Journal Physics D: Applied Physics, 2016, 49, 363001.	1.3	263
28	Rashba Torque Driven Domain Wall Motion in Magnetic Helices. Scientific Reports, 2016, 6, 23316.	1.6	39
29	Topologically stable magnetization states on a spherical shell: Curvature-stabilized skyrmions. Physical Review B, 2016, 94, .	1.1	81
30	Curvature and torsion effects in spin-current driven domain wall motion. Physical Review B, 2016, 93, .	1.1	49
31	Torsion-induced effects in magnetic nanowires. Physical Review B, 2015, 92, .	1.1	37
32	Curvature-induced domain wall pinning. Physical Review B, 2015, 92, .	1.1	64
33	Vortex polarity switching in magnets with surface anisotropy. Low Temperature Physics, 2015, 41, 361-374.	0.2	3
34	Resonantly excited precession motion of three-dimensional vortex core in magnetic nanospheres. Scientific Reports, 2015, 5, 11370.	1.6	18
35	Coupling of Chiralities in Spin and Physical Spaces: The MÃ¶bius Ring as a Case Study. Physical Review Letters, 2015, 114, 197204.	2.9	73
36	Ground states of magnetic spherical shells. , 2015, , .		0

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37	Curvature effects in statics and dynamics of low dimensional magnets. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 125202.	0.7	94
38	Effects of a spin-polarized current assisted Ã˜rsted field in magnetization patterning. Journal of Applied Physics, 2015, 117, 213910.	1.1	0
39	Controllable vortex chirality switching on spherical shells. Journal of Applied Physics, 2015, 117, 083908.	1.1	14
40	Domain wall dynamics at the local wire bend. , 2015, , .		0
41	Torsion effects in a helix nanowire with easy-tangential anisotropy. , 2015, , .		0
42	Curvature induced chirality symmetry breaking in vortex core switching phenomena. Applied Physics Letters, 2014, 104, .	1.5	25
43	Effects of surface anisotropy on magnetic vortex core. Journal of Magnetism and Magnetic Materials, 2014, 361, 201-205.	1.0	10
44	Curvature Effects in Thin Magnetic Shells. Physical Review Letters, 2014, 112, 257203.	2.9	160
45	Regular and chaotic vortex core reversal by a resonant perpendicular magnetic field. Physical Review B, 2013, 88, .	1.1	19
46	Periodic magnetization structures generated by transverse spin current in magnetic nanowires. Physical Review B, 2013, 87, .	1.1	9
47	Periodic magnetic structures generated by spinâ€“polarized currents in nanostripes. Applied Physics Letters, 2013, 103, 222401.	1.5	8
48	EQUILIBRIUM STATES OF SOFT MAGNETIC HEMISPHERICAL SHELL. Spin, 2013, 03, 1340003.	0.6	14
49	Bloch point structure in a magnetic nanosphere. Physical Review B, 2012, 85, .	1.1	29
50	Magnetically Capped Rolled-up Nanomembranes. Nano Letters, 2012, 12, 3961-3966.	4.5	50
51	Magnetic vortex-antivortex crystals generated by spin-polarized current. Physical Review B, 2012, 86, .	1.1	13
52	Equilibrium magnetic states in individual hemispherical permalloy caps. Applied Physics Letters, 2012, 101, .	1.5	72
53	Out-of-surface vortices in spherical shells. Physical Review B, 2012, 85, .	1.1	59
54	Spin-transfer torque and current-induced vortex superlattices in nanomagnets. Physical Review B, 2011, 84, .	1.1	11

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55	Off-centred immobile magnetic vortex under influence of spin-transfer torque. Journal Physics D: Applied Physics, 2011, 44, 285001.	1.3	6
56	Magnetic vortex dynamics induced by an electrical current. International Journal of Quantum Chemistry, 2010, 110, 83-97.	1.0	62
57	Multiple vortex-antivortex pair generation in magnetic nanodots. Physical Review B, 2010, 81, .	1.1	18
58	Nucleation of a vortex-antivortex pair in the presence of an immobile magnetic vortex. Physical Review B, 2009, 80, .	1.1	29
59	Controllable switching of vortex chirality in magnetic nanodisks by a field pulse. Applied Physics Letters, 2008, 92, 012503.	1.5	53
60	Switching phenomena in magnetic vortex dynamics. Low Temperature Physics, 2008, 34, 528-534.	0.2	15
61	Controlled vortex core switching in a magnetic nanodisk by a rotating field. Journal of Applied Physics, 2007, 102, .	1.1	62
62	Comment on â€œMagnon wave forms in the presence of a soliton in two-dimensional antiferromagnets with a staggered fieldâ€• Physical Review B, 2007, 75, .	1.1	2
63	Current induced switching of vortex polarity in magnetic nanodisks. Applied Physics Letters, 2007, 91, 082509.	1.5	57
64	Effective anisotropy of thin nanomagnets: Beyond the surface-anisotropy approach. Physical Review B, 2007, 76, .	1.1	15
65	Quantum effects for the two-dimensional soliton in isotropic ferromagnets. Physical Review B, 2007, 75, .	1.1	13
66	Vortex Polarity Switching by a Spin-Polarized Current. Physical Review Letters, 2007, 98, 056604.	2.9	77
67	Equilibrium magnetisation structures in ferromagnetic nanorings. Journal of Magnetism and Magnetic Materials, 2007, 310, 116-125.	1.0	40
68	Thin ferromagnetic nanodisk in transverse magnetic field. Physics of the Solid State, 2007, 49, 1923-1931.	0.2	19
69	Fine structure of the spectra of magnetic particles in the vortex state and their ordered arrays. Bulletin of the Russian Academy of Sciences: Physics, 2007, 71, 1494-1496.	0.1	1
70	Levinson theorem for Aharonov-Bohm scattering in two dimensions. Physical Review A, 2006, 74, .	1.0	3
71	Dynamics of topological solitons in two-dimensional ferromagnets. European Physical Journal B, 2006, 50, 393-402.	0.6	9
72	Field momentum and gyroscopic dynamics of classical systems with topological defects. Journal of Physics A, 2006, 39, 15477-15489.	1.6	6

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73	Local magnon modes and the dynamics of a small-radius two-dimensional magnetic soliton in an easy-axis ferromagnet. JETP Letters, 2005, 82, 436-440.	0.4	19
74	Vortex motion in a finite-size easy-plane ferromagnet and application to a nanodot. Physical Review B, 2005, 71, .	1.1	12
75	Amplitudes for magnon scattering by vortices in two-dimensional weakly easy-plane ferromagnets. Physical Review B, 2004, 69, .	1.1	35
76	Importance of the Internal Shape Mode in Magnetic Vortex Dynamics. Physical Review Letters, 2004, 93, 167201.	2.9	13
77	Generalized Levinson theorem for singular potentials in two dimensions. Physical Review A, 2003, 68, .	1.0	6
78	Internal modes and magnon scattering on topological solitons in two-dimensional easy-axis ferromagnets. Physical Review B, 2001, 64, .	1.1	45
79	Soliton-magnon scattering in a two-dimensional isotropic magnetic material. Journal of Experimental and Theoretical Physics, 1999, 89, 583-595.	0.2	17
80	Two-dimensional magnetic solitons and thermodynamics of quasi-two-dimensional magnets. Chaos, Solitons and Fractals, 1995, 5, 2605-2622.	2.5	3
81	Dynamics of vortices and their contribution to the response functions of classical quasi-two-dimensional easy-plane antiferromagnet. Physical Review Letters, 1994, 72, 404-407.	2.9	47
82	Dynamics of Vortex Ensemble in 2D Easy-Plane Antiferromagnet. NATO ASI Series Series B: Physics, 1994, , 187-190.	0.2	0