

# Volodymyr P Kravchuk

## List of Publications by Year in descending order

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62  
papers

2,070  
citations

236833

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233338

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g-index

63  
all docs

63  
docs citations

63  
times ranked

1214  
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetism in curved geometries. Journal Physics D: Applied Physics, 2016, 49, 363001.	1.3	263
2	Curvature Effects in Thin Magnetic Shells. Physical Review Letters, 2014, 112, 257203.	2.9	160
3	Curvature effects in statics and dynamics of low dimensional magnets. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 125202.	0.7	94
4	Topologically stable magnetization states on a spherical shell: Curvature-stabilized skyrmions. Physical Review B, 2016, 94, .	1.1	81
5	Coupling of Chiralities in Spin and Physical Spaces: The Möbius Ring as a Case Study. Physical Review Letters, 2015, 114, 197204.	2.9	73
6	Equilibrium magnetic states in individual hemispherical permalloy caps. Applied Physics Letters, 2012, 101, .	1.5	72
7	Spin eigenmodes of magnetic skyrmions and the problem of the effective skyrmion mass. Physical Review B, 2018, 97, .	1.1	67
8	Curvature-induced domain wall pinning. Physical Review B, 2015, 92, .	1.1	64
9	Multiplet of Skyrmion States on a Curvilinear Defect: Reconfigurable Skyrmion Lattices. Physical Review Letters, 2018, 120, 067201.	2.9	64
10	Controlled vortex core switching in a magnetic nanodisk by a rotating field. Journal of Applied Physics, 2007, 102, .	1.1	62
11	Magnetic vortex dynamics induced by an electrical current. International Journal of Quantum Chemistry, 2010, 110, 83-97.	1.0	62
12	Out-of-surface vortices in spherical shells. Physical Review B, 2012, 85, .	1.1	59
13	Magnetic vortices on closely packed spherically curved surfaces. Physical Review B, 2012, 85, .	1.1	52
14	Magnetically Capped Rolled-up Nanomembranes. Nano Letters, 2012, 12, 3961-3966.	4.5	50
15	Curvature and torsion effects in spin-current driven domain wall motion. Physical Review B, 2016, 93, .	1.1	49
16	Mesoscale Dzyaloshinskii-Moriya interaction: geometrical tailoring of the magnetochirality. Scientific Reports, 2018, 8, 866.	1.6	43
17	Geometry-induced motion of magnetic domain walls in curved nanostripes. Physical Review B, 2018, 98, .	1.1	41
18	Equilibrium magnetisation structures in ferromagnetic nanorings. Journal of Magnetism and Magnetic Materials, 2007, 310, 116-125.	1.0	40

#	ARTICLE	IF	CITATIONS
19	Magnetization in narrow ribbons: curvature effects. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 385401.	0.7	40
20	Rashba Torque Driven Domain Wall Motion in Magnetic Helices. <i>Scientific Reports</i> , 2016, 6, 23316.	1.6	39
21	Torsion-induced effects in magnetic nanowires. <i>Physical Review B</i> , 2015, 92, .	1.1	37
22	Influence of Dzyaloshinskii–Moriya interaction on static and dynamic properties of a transverse domain wall. <i>Journal of Magnetism and Magnetic Materials</i> , 2014, 367, 9-14.	1.0	31
23	Nucleation of a vortex-antivortex pair in the presence of an immobile magnetic vortex. <i>Physical Review B</i> , 2009, 80, .	1.1	29
24	Spin eigenexcitations of an antiferromagnetic skyrmion. <i>Physical Review B</i> , 2019, 99, .	1.1	28
25	Microwave resonances of magnetic skyrmions in thin film multilayers. <i>Nature Communications</i> , 2021, 12, 1909.	5.8	27
26	Geometry induced phase transitions in magnetic spherical shell. <i>Journal of Magnetism and Magnetic Materials</i> , 2017, 443, 404-412.	1.0	26
27	Chiral Skyrmion and Skyrmionium States Engineered by the Gradient of Curvature. <i>Physical Review Applied</i> , 2018, 10, .	1.5	26
28	Curvature induced chirality symmetry breaking in vortex core switching phenomena. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	25
29	Effect of curvature on the eigenstates of magnetic skyrmions. <i>Physical Review B</i> , 2020, 102, .	1.1	22
30	Thin ferromagnetic nanodisk in transverse magnetic field. <i>Physics of the Solid State</i> , 2007, 49, 1923-1931.	0.2	19
31	Regular and chaotic vortex core reversal by a resonant perpendicular magnetic field. <i>Physical Review B</i> , 2013, 88, .	1.1	19
32	Fundamentals of Curvilinear Ferromagnetism: Statics and Dynamics of Geometrically Curved Wires and Narrow Ribbons. <i>Small</i> , 2022, 18, e2105219.	5.2	19
33	Multiple vortex-antivortex pair generation in magnetic nanodots. <i>Physical Review B</i> , 2010, 81, .	1.1	18
34	Resonantly excited precession motion of three-dimensional vortex core in magnetic nanospheres. <i>Scientific Reports</i> , 2015, 5, 11370.	1.6	18
35	Localization of magnon modes in a curved magnetic nanowire. <i>Low Temperature Physics</i> , 2018, 44, 634-643.	0.2	17
36	Curvature effects on phase transitions in chiral magnets. <i>SciPost Physics</i> , 2020, 9, .	1.5	17

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37	Effective anisotropy of thin nanomagnets: Beyond the surface-anisotropy approach. <i>Physical Review B</i> , 2007, 76, .	1.1	15
38	Switching phenomena in magnetic vortex dynamics. <i>Low Temperature Physics</i> , 2008, 34, 528-534.	0.2	15
39	EQUILIBRIUM STATES OF SOFT MAGNETIC HEMISPHERICAL SHELL. <i>Spin</i> , 2013, 03, 1340003.	0.6	14
40	Controllable vortex chirality switching on spherical shells. <i>Journal of Applied Physics</i> , 2015, 117, 083908.	1.1	14
41	Spontaneous deformation of flexible ferromagnetic ribbons induced by Dzyaloshinskii-Moriya interaction. <i>Physical Review B</i> , 2019, 100, .	1.1	14
42	Magnetization-induced shape transformations in flexible ferromagnetic rings. <i>Physical Review B</i> , 2019, 99, .	1.1	14
43	Magnetic vortex-antivortex crystals generated by spin-polarized current. <i>Physical Review B</i> , 2012, 86, .	1.1	13
44	Solitary wave excitations of skyrmion strings in chiral magnets. <i>Physical Review B</i> , 2020, 102, .	1.1	12
45	Curvature induced magnonic crystal in nanowires. <i>SciPost Physics</i> , 2019, 7, .	1.5	12
46	Spin-transfer torque and current-induced vortex superlattices in nanomagnets. <i>Physical Review B</i> , 2011, 84, .	1.1	11
47	Effects of surface anisotropy on magnetic vortex core. <i>Journal of Magnetism and Magnetic Materials</i> , 2014, 361, 201-205.	1.0	10
48	Curvature-induced drift and deformation of magnetic skyrmions: Comparison of the ferromagnetic and antiferromagnetic cases. <i>Physical Review B</i> , 2022, 105, .	1.1	10
49	Periodic magnetization structures generated by transverse spin current in magnetic nanowires. <i>Physical Review B</i> , 2013, 87, .	1.1	9
50	Periodic magnetic structures generated by spin-polarized currents in nanostripes. <i>Applied Physics Letters</i> , 2013, 103, 222401.	1.5	8
51	Fluctuation-induced Néel and Bloch skyrmions at topological insulator surfaces. <i>Physical Review B</i> , 2018, 98, .	1.1	8
52	Screw Dislocations in Chiral Magnets. <i>Physical Review Letters</i> , 2022, 128, 157204.	2.9	8
53	Off-centred immobile magnetic vortex under influence of spin-transfer torque. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 285001.	1.3	6
54	Chaotic antiferromagnetic nano-oscillator driven by spin torque. <i>Physical Review B</i> , 2021, 104, .	1.1	6

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55	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
56	Domain wall diode based on functionally graded Dzyaloshinskiiâ€Moriya interaction. Applied Physics Letters, 2020, 116, 222406.	1.5	5
57	Stability of Magnetic Nanowires Against Spin-Polarized Current. Ukrainian Journal of Physics, 2014, 59, 1001-1006.	0.1	5
58	Vortex polarity switching in magnets with surface anisotropy. Low Temperature Physics, 2015, 41, 361-374.	0.2	3
59	Effects of a spin-polarized current assisted Årsted field in magnetization patterning. Journal of Applied Physics, 2015, 117, 213910.	1.1	0
60	Domain wall dynamics at the local wire bend. , 2015, , .		0
61	Torsion effects in a helix nanowire with easy-tangential anisotropy. , 2015, , .		0
62	Saturation of Magnetic Films with Spin-Polarized Current in the Presence of a Magnetic Field. Ukrainian Journal of Physics, 2013, 58, 666-672.	0.1	0