

# Victor V Moshchalkov

## List of Publications by Year in descending order

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100  
papers

2,058  
citations

236925

25  
h-index

289244

40  
g-index

103  
all docs

103  
docs citations

103  
times ranked

2304  
citing authors

#	ARTICLE	IF	CITATIONS
1	Probing higher order optical modes in all-dielectric nanodisk, -square, and -triangle by aperture type scanning near-field optical microscopy. <i>Nanophotonics</i> , 2022, 11, 543-557.	6.0	3
2	Vortex ice pattern evolution in a kagome nanostructured superconductor. <i>Physical Review B</i> , 2020, 102, .	3.2	1
3	Giant fractional Shapiro steps in anisotropic Josephson junction arrays. <i>Communications Physics</i> , 2020, 3, .	5.3	9
4	Variation of local fields of pinned vortices with temperature. <i>Applied Physics Letters</i> , 2020, 116, 102601.	3.3	0
5	Intense infrared upconversion luminescence of NaGdF <sub>4</sub> :Yb/Tm with controlled intensity. <i>Journal of Applied Physics</i> , 2017, 121, 163103.	2.5	12
6	Magnetic properties of multiferroics Bi <sub>1-x</sub> Sm <sub>x</sub> FeO <sub>3</sub> synthesized under high pressure. <i>Physics of the Solid State</i> , 2017, 59, 1536-1542.	0.6	7
7	Mapping degenerate vortex states in a kagome lattice of elongated antidots via scanning Hall probe microscopy. <i>Physical Review B</i> , 2017, 96, .	3.2	13
8	Exciton confinement in strain-engineered metamorphic InAs/ $I_n \times G_a$	3.2	1
9	Flux penetration in a superconducting film partially capped with a conducting layer. <i>Physical Review B</i> , 2017, 95, .	3.2	20
10	Probing the low-frequency vortex dynamics in a nanostructured superconducting strip. <i>Physical Review B</i> , 2016, 94, .	3.2	4
11	Magnetization of Mn <sub>1-x</sub> Fe <sub>x</sub> Si in high magnetic fields up to 50 T: Possible evidence of a field-induced Griffiths phase. <i>JETP Letters</i> , 2016, 104, 116-123.	1.4	11
12	Onset, evolution, and magnetic braking of vortex lattice instabilities in nanostructured superconducting films. <i>Physical Review B</i> , 2015, 92, .	3.2	23
13	Two-Photon Luminescence of Gold Nanorods Mediated by Higher Order Plasmon Modes. <i>ACS Photonics</i> , 2015, 2, 410-416.	6.6	26
14	Revisiting the Surface Sensitivity of Nanoplasmonic Biosensors. <i>ACS Photonics</i> , 2015, 2, 425-431.	6.6	83
15	Disrupting the wall accumulation of human sperm cells by artificial corrugation. <i>Biomicrofluidics</i> , 2015, 9, 024122.	2.4	21
16	Biosensing Using Diffractively Coupled Plasmonic Crystals: the Figure of Merit Revisited. <i>Advanced Optical Materials</i> , 2015, 3, 176-181.	7.3	52
17	Study of far field characteristics of nano dipoles above a realistic substrate. , 2014, , .		0
18	An N-port network model for nanoantennas. , 2014, , .		0

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19	Determination of the magnetic penetration depth in a superconducting Pb film. Journal of Applied Physics, 2014, 115, .	2.5	10
20	Dependence of the flux-creep activation energy on current density and magnetic field for a $\text{Ca}_{10}(\text{Pt}_3\text{As}_8)[(\text{Fe}_{1-x}\text{Pt}_x)_2\text{As}_2]_5$ single crystal. Applied Physics Letters, 2014, 104, .	3.3	8
21	Closer look at the low-frequency dynamics of vortex matter using scanning susceptibility microscopy. Physical Review B, 2014, 90, .	3.2	10
22	Weak ferromagnetism and spin density distributions in thin films of $\text{Gd}_x\text{Bi}_{1-x}\text{FeO}_3$ solid solutions. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 690-693.	0.6	0
23	Lead silicate glass $\text{SiO}_2\text{-PbF}_2$ doped with luminescent Ag nanoclusters of a fixed site. RSC Advances, 2014, 4, 20699.	3.6	21
24	Controllable morphology of flux avalanches in microstructured superconductors. Physical Review B, 2014, 89, .	3.2	41
25	On the use of a hierarchical multi-level building block basis function scheme in periodic plasmonic structures. Applied Physics A: Materials Science and Processing, 2014, 115, 415-419.	2.3	1
26	Geometrical guidance and trapping transition of human sperm cells. Physical Review E, 2014, 89, 032720.	2.1	78
27	Morphology of Flux Avalanches in Patterned Superconducting Films. Journal of Superconductivity and Novel Magnetism, 2013, 26, 2285-2288.	1.8	4
28	Separation of the contributions to the magnetization of $\text{Tm}_{1-x}\text{Yb}_x\text{B}_{12}$ solid solutions in steady and pulsed magnetic fields. Journal of Experimental and Theoretical Physics, 2013, 116, 838-842.	0.9	6
29	Temperature dependence of lower critical field $H_{c1}$ of nodeless superconductivity in FeSe. Physical Review B, 2013, 88, .	3.2	91
30	The Renewed KU Leuven Pulsed Field Facility. Journal of Low Temperature Physics, 2013, 170, 553-561.	1.4	5
31	Enhanced pinning in superconducting thin films with graded pinning landscapes. Applied Physics Letters, 2013, 102, .	3.3	53
32	Ultraviolet-driven white light generation from oxyfluoride glass co-doped with $\text{Tm}^{3+}\text{-Tb}^{3+}\text{-Eu}^{3+}$ . Applied Physics Letters, 2013, 102, .	3.3	32
33	Avalanche-like vortex penetration driven by pulsed microwave fields in an epitaxial $\text{LaSrCuO}$ thin film. Journal of Applied Physics, 2013, 114, 233902.	2.5	2
34	Observation of single flux quantum vortices in the intermediate state of a type-I superconducting film. Physical Review B, 2013, 88, .	3.2	14
35	Peak effect in optimally doped $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$ single-crystal. Applied Physics Letters, 2013, 102, .	3.2	14
36	First vortex entry into a perpendicularly magnetized superconducting thin film. Physical Review B, 2013, 88, .	3.2	15

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37	Critical current density and flux pinning in Zr <sub>0.96</sub> V <sub>0.04</sub> B <sub>2</sub> superconductor with AlB <sub>2</sub> structure. Journal of Applied Physics, 2013, 114, .	2.5	9
38	Local mapping of dissipative vortex motion. Physical Review B, 2012, 86, .	3.2	21
39	Magnetoresistance oscillations in superconducting strips: A Ginzburg-Landau study. Physical Review B, 2012, 86, .	3.2	36
40	Volumetric integral equation techniques for plasmonic applications. , 2012, , .		0
41	Dynamic response of exchange bias in graphene nanoribbons. Applied Physics Letters, 2012, 101, 142402.	3.3	4
42	Scanning Hall probe microscopy of unconventional vortex patterns in the two-gap MgB <sub>2</sub> superconductor. Physical Review B, 2012, 85, .	3.2	57
43	Weak ferromagnetism in La-doped BiFeO <sub>3</sub> multiferroic thin films. Journal of Applied Physics, 2012, 111, .	2.5	38
44	Magnetocaloric effect and nature of magnetic transition in nanoscale Pr <sub>0.5</sub> Ca <sub>0.5</sub> MnO <sub>3</sub> . Journal of Applied Physics, 2012, 112, .	2.5	10
45	Luminescence of oxyfluoride glasses co-doped with Ag nanoclusters and Yb <sup>3+</sup> ions. RSC Advances, 2012, 2, 1496-1501.	3.6	52
46	Integral equation techniques: From microwaves, over mm waves, to IR and optical frequencies. , 2011, , Low-field vortex patterns in the multiband BaFe <sub>2</sub> As <sub>2</sub>		0
47	Low-field vortex patterns in the multiband BaFe <sub>2</sub> As <sub>2</sub>	3.2	20
48	On the use of the method of moments in plasmonic applications. Radio Science, 2011, 46, .	1.6	39
49	Visualizing the ac magnetic susceptibility of superconducting films via magneto-optical imaging. Physical Review B, 2011, 84, .	3.2	27
50	Crossover between different regimes of inhomogeneous superconductivity in planar superconductor-ferromagnet hybrids. Physical Review B, 2011, 84, .	3.2	10
51	Domain-wall and reverse-domain superconducting states of a Pb thin-film bridge on a ferromagnetic BaFe <sub>2</sub> As <sub>2</sub> single crystal. Physical Review B, 2011, 84, .	3.2	19
52	Role of grain size in superconducting boron-doped nanocrystalline diamond thin films grown by CVD. Physical Review B, 2011, 84, .	3.2	36
53	Effects of disorder and isotopic substitution in the specific heat and Raman scattering in LuB <sub>12</sub> . Journal of Experimental and Theoretical Physics, 2011, 113, 468-482.	0.9	59
54	Superconducting properties of perforated NbN films using ordered arrays of ferromagnetic nanowires. Physical Review B, 2011, 84, .	3.2	4

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55	Giant vortices, rings of vortices, and reentrant behavior in type-1.5 superconductors. Physical Review B, 2011, 83, .	3.2	37
56	Mesoscopic cross-film cryotrons: Vortex trapping and dc-Josephson-like oscillations of the critical current. Physical Review B, 2011, 83, .	3.2	5
57	Second Harmonic Generation Indicates a Better Si/Ge Interface Quality for Higher Temperature and With $\text{N}_2$ Rather Than With $\text{H}_2$ as the Carrier Gas. IEEE Electron Device Letters, 2011, 32, 12-14.	3.9	9
58	Room-temperature nonsaturating magnetoresistance of intrinsic bulk silicon in high pulsed magnetic fields. Applied Physics Letters, 2011, 98, .	3.3	23
59	Disorder Tuned Superconductor Insulator Transition in $\text{La}_{2-x}(\text{Sr/Ce})_x\text{CuO}_4$ & NbN Superconducting Thin Films. Journal of Superconductivity and Novel Magnetism, 2010, 23, 807-810.	1.8	0
60	Sol-gel preparation and white up-conversion luminescence in rare-earth doped $\text{PbF}_2$ nanocrystals dissolved in silica glass. Journal of Sol-Gel Science and Technology, 2010, 53, 509-514.	2.4	23
61	Guided nucleation of superconductivity on a graded magnetic substrate. Applied Physics Letters, 2010, 96, .	3.3	14
62	Ultralow blocking temperature and breakdown of the giant spin model in $\text{Er}$ nanoparticles. Physical Review B, 2010, 82, .	3.2	13
63	Reverse-domain superconductivity in superconductor-ferromagnet hybrids: Effect of a vortex-free channel on the symmetry of I-V characteristics. Applied Physics Letters, 2010, 97, .	3.3	16
64	Magnetic field-driven superconductor-insulator transition in boron-doped nanocrystalline chemical vapor deposition diamond. Journal of Applied Physics, 2010, 108, .	2.5	9
65	High-frequency vortex ratchet effect in a superconducting film with a nanoengineered array of asymmetric pinning sites. Physical Review B, 2010, 81, .	3.2	26
66	Intrinsic granularity in nanocrystalline boron-doped diamond films measured by scanning tunneling microscopy. Physical Review B, 2009, 80, .	3.2	17
67	Planar superconductor/ferromagnet hybrids: Anisotropy of resistivity induced by magnetic templates. Applied Physics Letters, 2009, 94, .	3.3	23
68	Negative magnetoresistance in boron-doped nanocrystalline diamond films. Journal of Applied Physics, 2009, 106, 033711.	2.5	11
69	Extraordinary magnetic field induced suppression of luminescence in $\text{Er}^{3+}$ -doped nano-glass-ceramics. Journal of Applied Physics, 2009, 106, 053502.	2.5	24
70	Localized superconductivity in superconductor-ferromagnet hybrid structures. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 3-7.	0.6	1
71	Magnetically controlled superconducting weak links. Applied Physics Letters, 2009, 95, 032501.	3.3	8
72	Extended excitons and compact heliumlike biexcitons in type-II quantum dots. Physical Review B, 2009, 80, .	3.2	30

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73	High magnetic field matching effects in NbN films induced by template grown dense ferromagnetic nanowires arrays. Applied Physics Letters, 2009, 95, 252503.	3.3	11
74	Temperature and magnetic field dependence of the voltage in GaAs films with superconducting Ga grains. European Physical Journal B, 2008, 66, 25-28.	1.5	0
75	Zeeman splitting and confinement effects in Er <sup>3+</sup> -doped nano-glass-ceramics in magnetic fields up to 50T. Applied Physics Letters, 2008, 92, 171101.	3.3	23
76	Excitonic Mott transition in type-II quantum dots. Physical Review B, 2008, 77, .	3.2	20
77	Scanning Hall probe microscopy of vortex patterns in a superconducting microsquare. Physical Review B, 2008, 77, .	3.2	29
78	Different regimes of nucleation of superconductivity in mesoscopic superconductor/ferromagnet hybrids. Physical Review B, 2008, 77, .	3.2	5
79	Tunable anisotropic nonlinearity in superconductors with asymmetric antidot array. Applied Physics Letters, 2008, 93, 082501.	3.3	5
80	Photoluminescence from localized states in disordered indium nitride. Applied Physics Letters, 2008, 93, 021113.	3.3	13
81	ANSWERS AND QUESTIONS ON PATH INTEGRALS FOR SUPERCONDUCTIVITY IN A WEDGE. , 2008, , .		0
82	Influence of magnet size on magnetically engineered field-induced superconductivity. Physical Review B, 2007, 76, .	3.2	22
83	Asymmetry reversal of thermomagnetic avalanches in Pb films with a ratchet pinning potential. Physical Review B, 2007, 76, .	3.2	10
84	Phase diagram of a mesoscopic superconducting Pb square: Ballistic Hall magnetometry. Physical Review B, 2007, 76, .	3.2	5
85	Optimization of superconducting critical parameters by tuning the size and magnetization of arrays of magnetic dots. Physical Review B, 2007, 76, .	3.2	28
86	Paraconductivity of underdoped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ thin-film	3.2	30
87	Superconducting microrings as magnetic pinning centers. Applied Physics Letters, 2007, 91, .	3.3	7
88	Localized superconductivity and Little-Parks effect in superconductor/ferromagnet hybrids. Physical Review B, 2007, 75, .	3.2	21
89	Exciton confinement in $\text{InAs}_x\text{P}_{1-x}$ quantum wires and quantum wells in the presence of a magnetic field. Physical Review B, 2007, 76, .	3.2	19
90	Magnetic field-dependent photoluminescence linewidths as a probe of disorder length scales in quantum wells. Applied Physics Letters, 2007, 91, 251108.	3.3	13

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91	Electrical transport in Mn-doped GaAs pn-diodes. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 791-804.	1.8	14
92	MBE growth of MgGeAs <sub>2</sub> Mn on GaAs substrate. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 152-158.	1.8	5
93	Magnetotransport of holes through an AlAs/GaAs/AlAs resonant tunnelling quantum well with a ferromagnetic Ga <sub>1-x</sub> Mn <sub>x</sub> As emitter. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 3463-3477.	1.8	0
94	An investigation of structural and electrical properties of boron doped and undoped nanocrystalline diamond films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 3021-3027.	1.8	10
95	Thin-film superconductor-ferromagnet hybrids: Competition between nucleation of superconductivity at domain walls and domains' centers. <i>Physical Review B</i> , 2006, 74, .	3.2	42
96	Vortex ratchet effects in films with a periodic array of antidots. <i>Physical Review B</i> , 2006, 73, .	3.2	54
97	Rectification effects in superconducting triangles. <i>Applied Physics Letters</i> , 2006, 89, 112512.	3.3	9
98	Increase of charge-carrier redistribution efficiency in a laterally organized superlattice of coupled quantum dots. <i>Physical Review B</i> , 2006, 74, .	3.2	20
99	Disturbed Array Formation of Electrochemically Grown Self-Organised Nanostructures. <i>Materials Research Society Symposia Proceedings</i> , 1998, 517, 331.	0.1	0
100	Magnetization of multiple-quanta vortex lattices. <i>Physical Review B</i> , 1996, 54, 7385-7393.	3.2	196