

# Vladimir M Fomin

## List of Publications by Year in descending order

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48  
papers

1,254  
citations

516710

16  
h-index

361022

35  
g-index

51  
all docs

51  
docs citations

51  
times ranked

1045  
citing authors

#	ARTICLE	IF	CITATIONS
1	Oscillatory Persistent Currents in Self-Assembled Quantum Rings. Physical Review Letters, 2007, 99, 146808.	7.8	192
2	Atomic-scale structure of self-assembled In(Ga)As quantum rings in GaAs. Applied Physics Letters, 2005, 87, 131902.	3.3	126
3	Theory of electron energy spectrum and Aharonov-Bohm effect in self-assembled $\text{Ga}_x\text{In}_{1-x}\text{As}$ quantum rings in GaAs. Physical Review B, 2007, 76, .	3.2	90
4	Magnetic Microhelix Coil Structures. Physical Review Letters, 2011, 107, 097204.	7.8	82
5	Suppression of phonon heat conduction in cross-section-modulated nanowires. Physical Review B, 2012, 85, .	3.2	72
6	Spin-orbit coupling of light in asymmetric microcavities. Nature Communications, 2016, 7, 10983.	12.8	69
7	Reduction of lattice thermal conductivity in one-dimensional quantum-dot superlattices due to phonon filtering. Physical Review B, 2011, 84, .	3.2	64
8	Phonons and the Electron-Phonon Interaction in Multi-Layer Systems. Physica Status Solidi (B): Basic Research, 1985, 132, 69-82.	1.5	55
9	Three-Dimensional Superconducting Nanohelices Grown by He <sup>+</sup> -Focused-Ion-Beam Direct Writing. Nano Letters, 2019, 19, 8597-8604.	9.1	52
10	Superconducting mesoscopic square loop. Physical Review B, 1998, 58, 11703-11715.	3.2	51
11	Relation between persistent current and band structure of finite-width mesoscopic rings. Physical Review B, 1994, 50, 4642-4647.	3.2	47
12	Tunable Generation of Correlated Vortices in Open Superconductor Tubes. Nano Letters, 2012, 12, 1282-1287.	9.1	41
13	Switching Propulsion Mechanisms of Tubular Catalytic Micromotors. Small, 2021, 17, e2006449.	10.0	21
14	Critical current modulation induced by an electric field in superconducting tungsten-carbon nanowires. Scientific Reports, 2021, 11, 17698.	3.3	19
15	Excitons in Multi-Layer Systems. Physica Status Solidi (B): Basic Research, 1985, 129, 203-209.	1.5	18
16	Electron localization in inhomogeneous Möbius rings. Physical Review B, 2012, 86, .	3.2	18
17	In-Plane Thermal Conductivity of Radial and Planar Si/SiO <sub>2</sub> Hybrid Nanomembrane Superlattices. ACS Nano, 2017, 11, 8215-8222.	14.6	18
18	Phonon-engineered thermal transport in Si wires with constant and periodically modulated cross-sections: A crossover between nano- and microscale regimes. Applied Physics Letters, 2015, 107, .	3.3	15

#	ARTICLE	IF	CITATIONS
19	Excitonic Aharonov-Bohm Oscillations in Core-Shell Nanowires. <i>Advanced Materials</i> , 2019, 31, 1805645.	21.0	14
20	A Special Issue on Modern Advancements in Experimental and Theoretical Physics of Quantum Rings. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2011, 6, 1-3.	0.5	14
21	A Perspective on superconductivity in curved 3D nanoarchitectures. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	14
22	Interaction Hamiltonian between an electron and polar surface vibrations in a symmetrical three-layer structure. <i>Physical Review B</i> , 1993, 47, 16597-16600.	3.2	12
23	Bipolaron confinement in two-dimensional layers. <i>Physical Review B</i> , 1994, 49, 12748-12753.	3.2	11
24	Topological transitions in superconductor nanomembranes under a strong transport current. <i>Communications Physics</i> , 2020, 3, .	5.3	11
25	Vortex dynamics in high-T <sub>c</sub> superconducting films with arrays of antidots. <i>Proceedings of SPIE</i> , 2009, , .	0.8	10
26	Superconducting properties of nanostructured microhelices. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 395301.	1.8	10
27	Branching of the vortex nucleation period in superconductor Nb microtubes due to an inhomogeneous transport current. <i>Superconductor Science and Technology</i> , 2016, 29, 045014.	3.5	9
28	Modeling of Unidirectional-Overloaded Transition in Catalytic Tubular Microjets. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14854-14863.	3.1	9
29	Topological transitions in ac/dc-driven superconductor nanotubes. <i>Scientific Reports</i> , 2022, 12, .	3.3	9
30	Simulation of dynamics of the order parameter in superconducting nanostructured materials: Effect of the magnetic field renormalization. <i>Low Temperature Physics</i> , 2020, 46, 325-330.	0.6	8
31	Excitons in Periodic Structures with Homopolar Semiconductors and Anisotropic Dielectrics. <i>Physica Status Solidi (B): Basic Research</i> , 1985, 128, 251-257.	1.5	7
32	Phonon Spectrum Engineering in Rolled-up Micro- and Nano-Architectures. <i>Applied Sciences (Switzerland)</i> , 2015, 5, 728-746.	2.5	7
33	Voltage Induced by Superconducting Vortices in Open Nanostructured Microtubes. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019, 13, 1800251.	2.4	7
34	Dynamics of the Abrikosov Vortices on Cylindrical Microtubes. <i>Russian Physics Journal</i> , 2015, 58, 623-628.	0.4	6
35	Polaron Pairing in Multi-Layer Structures I. Bipolaron States in Multi-Layer Structures with Quantum Wells. <i>Physica Status Solidi (B): Basic Research</i> , 1992, 169, 429-441.	1.5	5
36	Polaron Pairing in Multi-Layer Structures: II. Interlayer Bipolaron States in Structures with Quantum Wells. <i>Physica Status Solidi (B): Basic Research</i> , 1992, 171, 437-445.	1.5	5

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37	Modeling of the Magnetization Behavior of Realistic Self-Organized InAs/GaAs Quantum Craters as Observed with Cross-Sectional STM. AIP Conference Proceedings, 2005, , .	0.4	5
38	Phonons and Thermal Transport in Si/SiO <sub>2</sub> Multishell Nanotubes: Atomistic Study. Applied Sciences (Switzerland), 2021, 11, 3419.	2.5	5
39	Resonant Terahertz Light Absorption by Virtue of Tunable Hybrid Interface Phonon-Plasmon Modes in Semiconductor Nanoshells. Applied Sciences (Switzerland), 2019, 9, 1442.	2.5	4
40	Topology-Driven Effects in Advanced Micro- and Nanoarchitectures. Nanoscience and Technology, 2018, , 195-220.	1.5	3
41	Topological defects in open superconducting nanotubes after gradual and abrupt switching of the transport current and magnetic field. Physical Review B, 2022, 105, .	3.2	3
42	Quantum interference in finite-size mesoscopic rings. Physical Review B, 2022, 105, .	3.2	3
43	Optical Properties of Multi-Layer Structures. IV. Non-Linear Absorption of light in Multi-Layer Structures. Physica Status Solidi (B): Basic Research, 1993, 176, 355-364.	1.5	2
44	Topology and Geometry Controlled Properties of Nanoarchitectures. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800595.	2.4	2
45	Interplay between the quantum interference and current localization phenomena in superconductor non-ideal mesoscopic rings. Superconductor Science and Technology, 2019, 32, 105008.	3.5	2
46	Spin-Dependent Phenomena in Semiconductor Micro-and Nanoparticles-From Fundamentals to Applications. Applied Sciences (Switzerland), 2020, 10, 4992.	2.5	2
47	Moore's law: new playground for quantum physics. Physica Status Solidi (B): Basic Research, 2003, 237, 426-432.	1.5	1
48	Nonadiabatic theory of excitons in wurtzite AlGa <sub>N</sub> /Ga <sub>N</sub> quantum-well heterostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 46-49.	0.8	1