

# Mikhail I Vasilevskiy

## List of Publications by Year in descending order

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122  
papers

2,603  
citations

201674

27  
h-index

214800

47  
g-index

125  
all docs

125  
docs citations

125  
times ranked

2627  
citing authors

#	ARTICLE	IF	CITATIONS
1	Variational calculation of the lowest exciton states in phosphorene and transition metal dichalcogenides. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 045702.	1.8	6
2	Use and misuse of the Kubelka-Munk function to obtain the band gap energy from diffuse reflectance measurements. <i>Solid State Communications</i> , 2022, 341, 114573.	1.9	177
3	Modeling of a Plasmonic Biosensor Based on a Graphene Nanoribbon Superlattice. <i>Physica Status Solidi (B): Basic Research</i> , 2022, 259, .	1.5	3
4	Quantum simulation of the ground-state Stark effect in small molecules: a case study using IBM Q. <i>Soft Computing</i> , 2021, 25, 6807-6830.	3.6	8
5	Exciton-Photon Interactions in Semiconductor Nanocrystals: Radiative Transitions, Non-Radiative Processes and Environment Effects. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 497.	2.5	7
6	Gas Sensors Based on Localized Surface Plasmon Resonances: Synthesis of Oxide Films with Embedded Metal Nanoparticles, Theory and Simulation, and Sensitivity Enhancement Strategies. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 5388.	2.5	29
7	Localized polariton states in a photonic crystal intercalated by a transition metal dichalcogenide monolayer. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021, 38, C225.	2.1	1
8	Simulation of Nonradiative Energy Transfer in Photosynthetic Systems Using a Quantum Computer. <i>Complexity</i> , 2020, 2020, 1-12.	1.6	4
9	Surface-Plasmon-Polariton-Assisted Diffraction of THz Waves on a Graphene-Covered Slit. , 2020, , .		0
10	NANOPTICS: In-depth analysis of NANomaterials for OPTICal localized surface plasmon resonance Sensing. <i>SoftwareX</i> , 2020, 12, 100522.	2.6	13
11	Excitation of localized graphene plasmons by a metallic slit. <i>Physical Review B</i> , 2020, 101, .	3.2	7
12	Topological photonic Tamm states and the Su-Schrieffer-Heeger model. <i>Physical Review A</i> , 2020, 101, .	2.5	29
13	Excitonâ€“polaritons of a 2D semiconductor layer in a cylindrical microcavity. <i>Journal of Applied Physics</i> , 2020, 127, 133101.	2.5	8
14	Compositional, Optical and Electrical Characteristics of SiOx Thin Films Deposited by Reactive Pulsed DC Magnetron Sputtering. <i>Coatings</i> , 2019, 9, 468.	2.6	16
15	Hybrid plasmon-magnon polaritons in graphene-antiferromagnet heterostructures. <i>2D Materials</i> , 2019, 6, 045003.	4.4	13
16	Surface Plasmon Resonance in a Metallic Nanoparticle Embedded in a Semiconductor Matrix: Excitonâ€“Plasmon Coupling. <i>ACS Photonics</i> , 2019, 6, 204-210.	6.6	16
17	Far-infrared Tamm polaritons in a microcavity with incorporated graphene sheet. <i>Optical Materials Express</i> , 2019, 9, 244.	3.0	9
18	Magnetic field assisted transmission of THz waves through a graphene layer combined with a periodically perforated metallic film. <i>Physical Review B</i> , 2018, 97, .	3.2	5

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19	Tamm Polaritons and Cavity Modes in the FIR Range. , 2018, , .		1
20	Structural and vibrational properties of Sn <sub>x</sub> Ge <sub>1-x</sub> : Modeling and experiments. Journal of Applied Physics, 2018, 124, .	2.5	11
21	Raman and IR-ATR spectroscopy studies of heteroepitaxial structures with a GaN:C top layer. Journal Physics D: Applied Physics, 2017, 50, 365103.	2.8	9
22	Impact of Graphene on the Polarizability of a Neighbour Nanoparticle: A Dyadic Green's Function Study. Applied Sciences (Switzerland), 2017, 7, 1158.	2.5	12
23	Electromagnetic properties of a monolayer of polarisable particles deposited on graphene. , 2017, , .		0
24	Ag fractals formed on top of a porous TiO <sub>2</sub> thin film. Physica Status Solidi - Rapid Research Letters, 2016, 10, 530-534.	2.4	13
25	Broadband Optical Absorption Caused by the Plasmonic Response of Coalesced Au Nanoparticles Embedded in a TiO <sub>2</sub> Matrix. Journal of Physical Chemistry C, 2016, 120, 16931-16945.	3.1	31
26	Back Cover: Ag fractals formed on top of a porous TiO <sub>2</sub> thin film (Phys. Status Solidi RRL) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.4	0
27	Scattering of surface plasmon polaritons in a graphene multilayer photonic crystal with inhomogeneous doping. Physical Review B, 2016, 93, .	3.2	10
28	Graphene and polarisable nanoparticles: Looking good together?. , 2016, , .		0
29	Graphene Plasmons in Triangular Wedges and Grooves. ACS Photonics, 2016, 3, 2176-2183.	6.6	26
30	Impact of D <sub>2</sub> O/H <sub>2</sub> O Solvent Exchange on the Emission of HgTe and CdTe Quantum Dots: Polaron and Energy Transfer Effects. ACS Nano, 2016, 10, 4301-4311.	14.6	43
31	Exciton polaritons in two-dimensional dichalcogenide layers placed in a planar microcavity: Tunable interaction between two Bose-Einstein condensates. Physical Review B, 2015, 92, .	3.2	36
32	Raman study of insulating and conductive ZnO:(Al, Mn) thin films. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2345-2354.	1.8	16
33	Fabrication of GeSn-multiple quantum wells by overgrowth of Sn on Ge by using molecular beam epitaxy. Applied Physics Letters, 2015, 107, .	3.3	12
34	Multi-stacks of epitaxial GeSn self-assembled dots in Si: Structural analysis. Journal of Applied Physics, 2015, 117, 125706.	2.5	8
35	Discrete solitons in graphene metamaterials. Physical Review B, 2015, 91, .	3.2	32
36	Terahertz response of patterned epitaxial graphene. New Journal of Physics, 2015, 17, 053045.	2.9	11

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37	Graphene-based nanostructures: Plasmonics in the THz range. , 2015, , .		0
38	Optical conductivity of ABA stacked graphene trilayer: mid-IR resonance due to band nesting. Journal of Physics Condensed Matter, 2014, 26, 395301.	1.8	11
39	Renormalization of nanoparticle polarizability in the vicinity of a graphene-covered interface. Physical Review B, 2014, 90, .	3.2	12
40	Excited states of exciton-polariton condensates in 2D and 1D harmonic traps. Physical Review B, 2014, 89, .	3.2	6
41	Effect of clustering on the surface plasmon band in thin films of metallic nanoparticles. Journal of Nanophotonics, 2014, 9, 093796.	1.0	9
42	A versatile fluorescence lifetime imaging system for scanning large areas with high time and spatial resolution. Proceedings of SPIE, 2014, , .	0.8	2
43	Optical response of fractal aggregates of polarizable particles. , 2014, , .		0
44	Effects of alloy disorder and confinement on phonon modes and Raman scattering in SixGe1-xnanocrystals: A microscopic modeling. Journal of Applied Physics, 2014, 115, 143505.	2.5	6
45	Nonlinear TE-polarized surface polaritons on graphene. Physical Review B, 2014, 89, .	3.2	68
46	Optical bistability of graphene in the terahertz range. Physical Review B, 2014, 90, .	3.2	133
47	Energy Transfer via Exciton Transport in Quantum Dot Based Self-Assembled Fractal Structures. Journal of Physical Chemistry C, 2014, 118, 4982-4990.	3.1	15
48	Near-field resonant energy transfer between spherical quantum dots. , 2014, , .		1
49	Unusual reflection of electromagnetic radiation from a stack of graphene layers at oblique incidence. Journal of Optics (United Kingdom), 2013, 15, 114004.	2.2	79
50	Resonance energy transfer in self-organized organic/inorganic dendrite structures. Nanoscale, 2013, 5, 9317.	5.6	12
51	Exact solution for square-wave grating covered with graphene: surface plasmon-polaritons in the terahertz range. Journal of Physics Condensed Matter, 2013, 25, 125303.	1.8	33
52	A PRIMER ON SURFACE PLASMON-POLARITONS IN GRAPHENE. International Journal of Modern Physics B, 2013, 27, 1341001.	2.0	325
53	Phonon modes and Raman scattering in Si<sub>x</sub>Ge<sub>1-x</sub> nanocrystals: microscopic modelling. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 701-704.	0.8	3
54	Condensed exciton polaritons in a two-dimensional trap: Elementary excitations and shaping by a Gaussian pump beam. Physical Review B, 2013, 87, .	3.2	9

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55	Probing spatial correlations in a system of polarizable nanoparticles via measuring its optical extinction spectrum. <i>Europhysics Letters</i> , 2013, 102, 67001.	2.0	7
56	Optical Properties of Bulk and Nanocrystalline Cadmium Telluride. , 2013, , 1-22.		0
57	Light emission and spin-polarised hole injection in InAs/GaAs quantum dot heterostructures with Schottky contact. <i>Europhysics Letters</i> , 2012, 98, 27012.	2.0	2
58	Enhanced optical dichroism of graphene nanoribbons. <i>Physical Review B</i> , 2012, 86, .	3.2	18
59	Resonant Excitation of Confined Excitons in Nanocrystal Quantum Dots Using Surface Plasmon-Polaritons. <i>Journal of Physical Chemistry C</i> , 2012, 116, 13738-13744.	3.1	11
60	Light scattering by a medium with a spatially modulated optical conductivity: the case of graphene. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 245303.	1.8	20
61	Tunable graphene-based polarizer. <i>Journal of Applied Physics</i> , 2012, 112, 084320.	2.5	81
62	Graphene-based polaritonic crystal. <i>Physical Review B</i> , 2012, 85, .	3.2	61
63	Tuning of the surface plasmon resonance in TiO <sub>2</sub> /Au thin films grown by magnetron sputtering: The effect of thermal annealing. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	74
64	Resonant Raman scattering in ZnO:Mn and ZnO:Mn:Al thin films grown by RF sputtering. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 334205.	1.8	26
65	Study of the piezoresistivity of doped nanocrystalline silicon thin films. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	14
66	Is it possible to assess spatial correlations in a system of polarizable particles by measuring its optical response?. <i>Proceedings of SPIE</i> , 2011, , .	0.8	0
67	Faraday effect in ZnO:Mn thin films. <i>AIP Conference Proceedings</i> , 2011, , .	0.4	0
68	Resonant Raman scattering in CdS<sub>x</sub>Se<sub>1-x</sub> nanocrystals: effects of phonon confinement, composition, and elastic strain. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 1660-1669.	2.5	37
69	Polaron Relaxation In A Quantum Dot Due To Anharmonic Coupling Within A Mean-Field Approach. , 2010, , .		0
70	Resonant Raman scattering in spherical quantum dots: IIâ€“V<sub>I</sub> versus</sub> IIIâ€“V semiconductor nanocrystals. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1488-1491.	1.5	13
71	Cascade upconversion of photoluminescence in ensembles of IIâ€“V semiconductor nanocrystals. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 1517-1519.	0.8	2
72	Ab-initio modeling of a-Si and a-Si:H. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 1432-1435.	0.8	4

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73	Raman study of doped ZnO thin films grown by rf sputtering. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 2290-2293.	0.8	13
74	Electroluminescence And Spin-Polarized Hole Injection In InAs/GaAs Quantum Dot Heterostructures. , 2010, , .		1
75	Modelling of the composition segregation effect during epitaxial growth of InGaAs quantum well heterostructures. <i>Semiconductor Science and Technology</i> , 2010, 25, 085008.	2.0	7
76	Mechanism for graphene-based optoelectronic switches by tuning surface plasmon-polaritons in monolayer graphene. <i>Europhysics Letters</i> , 2010, 92, 68001.	2.0	109
77	10.1007/s11451-008-1011-6. , 2010, 50, 52.		0
78	Anti-Stokes cooling in semiconductor nanocrystal quantum dots: A feasibility study. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 2497-2509.	1.8	28
79	Polaron relaxation in a quantum dot due to anharmonic coupling within a mean-field approach. <i>Physical Review B</i> , 2009, 79, .	3.2	11
80	Dielectric function of hydrogenated amorphous silicon near the optical absorption edge. <i>Journal of Applied Physics</i> , 2009, 106, 073110.	2.5	16
81	Cascade upconversion of photoluminescence in quantum dot ensembles. <i>Physical Review B</i> , 2008, 78, .	3.2	30
82	Anomalous first-order Raman scattering in III-V quantum dots: Optical deformation potential interaction. <i>Physical Review B</i> , 2008, 78, .	3.2	21
83	Exciton-phonon interaction in semiconductor nanocrystals. , 2008, , 217-255.		3
84	Further insight into the temperature quenching of photoluminescence from InAs/GaAs self-assembled quantum dots. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	22
85	Calculation of the Huang-Rhys parameter in spherical quantum dots: the optical deformation potential effect. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 346215.	1.8	16
86	Resonant Raman scattering on optical phonons confined in spherical semiconductor nanocrystals: ODP interaction and polaron effects. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	0
87	Raman spectroscopy of optical phonons confined in semiconductor quantum dots and nanocrystals. <i>Journal of Raman Spectroscopy</i> , 2007, 38, 618-633.	2.5	95
88	Electron confinement in nanocrystals embedded in random media: Anderson localization effects. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	1
89	Electrical spin injection in light emitting Schottky diodes based on InGaAs /GaAs QW heterostructures. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	0
90	Influence of matrix defects on the photoluminescence of InAs self-assembled quantum dots. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 1348-1352.	1.8	6

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91	Nonperturbative approach to the calculation of multiphonon Raman scattering in semiconductor quantum dots: Polaron effect. <i>Physical Review B</i> , 2006, 74, .	3.2	30
92	Electrical spin injection in forward biased Schottky diodes based on InGaAs/GaAs quantum well heterostructures. <i>Applied Physics Letters</i> , 2006, 89, 181118.	3.3	19
93	Size Dependence Of The Optical Gap In Silicon Nanocrystals Embedded Into a-Si:H Matrix. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0
94	Is polaron effect important for resonant Raman scattering in self-assembled quantum dots?. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 862-866.	0.8	3
95	Polaron Effect In Semiconductor Quantum Dots: Impact On The Optical Absorption, Up-converted Photoluminescence And Raman Scattering. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0
96	Resonant Raman Scattering In Spherical InP QDs: The Role Of The Optical Deformation Potential Interaction. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0
97	Localization of phonon polaritons in disordered polar media. <i>Physical Review E</i> , 2005, 72, 066618.	2.1	1
98	Suppression of the photoluminescence quenching effect in self-assembled InAs/GaAs quantum dots. <i>Applied Physics Letters</i> , 2005, 87, 053109.	3.3	10
99	1.3-1.5 $\mu\text{m}$ electroluminescence from Schottky diodes made on Au-InAs/GaAs quantum-size heterostructures. <i>Semiconductor Science and Technology</i> , 2004, 19, S469-S471.	2.0	12
100	Polaron effect on Raman scattering in semiconductor quantum dots. <i>Semiconductor Science and Technology</i> , 2004, 19, S312-S315.	2.0	7
101	Mixed optical phonon modes in semiconductor nanocrystals synthesized in porous Al <sub>2</sub> O <sub>3</sub> matrix. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004, 1, 2638-2641.	0.8	1
102	Electron-phonon interaction effects in semiconductor quantum dots: A nonperturbative approach. <i>Physical Review B</i> , 2004, 70, .	3.2	84
103	Influence of cluster formation on localization of optical phonons in two-dimensional pseudobinary substitutional solid solutions. <i>Physics of the Solid State</i> , 2003, 45, 1154-1161.	0.6	2
104	Competition between ferroelectric and semiconductor properties in Pb(Zr <sub>0.65</sub> Ti <sub>0.35</sub> )O <sub>3</sub> thin films deposited by sol-gel. <i>Journal of Applied Physics</i> , 2003, 93, 4776-4783.	2.5	100
105	Dipolar vibrational modes in spherical semiconductor quantum dots. <i>Physical Review B</i> , 2002, 66, .	3.2	47
106	Optical Properties of PZT 65/35 Thin Films Deposited by Sol-Gel. <i>Ferroelectrics</i> , 2002, 268, 187-192.	0.6	14
107	Probing the Exciton Density of States in Semiconductor Nanocrystals Using Integrated Photoluminescence Spectroscopy. <i>Monatshefte für Chemie</i> , 2002, 133, 909-918.	1.8	10
108	Dipole-active vibrations confined in InP quantum dots. <i>Physica B: Condensed Matter</i> , 2002, 316-317, 452-454.	2.7	5

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109	FIR Absorption in CdSe Quantum Dot Ensembles. <i>Physica Status Solidi (B): Basic Research</i> , 2001, 224, 599-604.	1.5	37
110	Impact of disorder on optical phonons confined in CdS nano-crystallites embedded in a SiO <sub>2</sub> matrix. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 3491-3509.	1.8	45
111	The effect of vibrational degrees of freedom on the phase transition in a 2D Ising model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1999, 274, 367-373.	2.6	0
112	The effects of short-range order and natural microinhomogeneities on the FIR optical properties of Cd <sub>x</sub> Hg <sub>1-x</sub> Te. <i>Journal of Electronic Materials</i> , 1999, 28, 654-661.	2.2	3
113	Optical Phonons in CdS Nanocrystals: Effects of Size, Shape and Packing Density. <i>Materials Research Society Symposia Proceedings</i> , 1999, 571, 217.	0.1	4
114	A source of terahertz coherent phonons. <i>Journal of Physics Condensed Matter</i> , 1998, 10, 5905-5921.	1.8	22
115	Double-barrier coherent sound generator: a new device. <i>Superlattices and Microstructures</i> , 1997, 22, 427-430.	3.1	4
116	Effective dielectric response of semiconductor composites. <i>Physical Review B</i> , 1996, 54, 5844-5851.	3.2	32
117	Determination of the far infrared optical constants of $\lambda$ -doped bulk Cd <sub>x</sub> Hg <sub>1-x</sub> Te (CMT) by dispersive fourier transform spectroscopy. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1995, 16, 763-773.	0.6	5
118	Diffusion instability of homogeneous distribution of mercury in cadmium mercury telluride. <i>Semiconductor Science and Technology</i> , 1995, 10, 157-162.	2.0	5
119	Confined LO phonons in superlattices with interfacial broadening. <i>Journal of Physics Condensed Matter</i> , 1992, 4, 4509-4518.	1.8	1
120	Complex model for plasma-enhanced heteroepitaxial deposition of A <sub>2</sub> B <sub>6</sub> semiconductor compounds using MOC. <i>Semiconductor Science and Technology</i> , 1992, 7, 245-254.	2.0	2
121	Phonons in a medium with correlated substitutional disorder: a one-dimensional study. <i>Journal of Physics Condensed Matter</i> , 1992, 4, 9299-9308.	1.8	2
122	Short-range order in a 1D substitutional solid solution. <i>Journal of Physics Condensed Matter</i> , 1991, 3, 7133-7138.	1.8	1