Vasili Perebeinos

List of Publications by Year
in descending order

78 papers	9,141 citations	71102 41 h-index	69250 77 g-index
79 all docs	79 docs citations	79 times ranked	11138 citing authors

#	Article	IF	Citations
1	Carbon-nanotube photonics and optoelectronics. Nature Photonics, 2008, 2, 341-350.	31.4	1,033
2	The origins and limits of metalâ€"graphene junction resistance. Nature Nanotechnology, 2011, 6, 179-184.	31.5	730
3	Scaling of Excitons in Carbon Nanotubes. Physical Review Letters, 2004, 92, 257402.	7.8	597
4	Photocurrent Imaging and Efficient Photon Detection in a Graphene Transistor. Nano Letters, 2009, 9, 1039-1044.	9.1	543
5	Structure and Electronic Transport in Graphene Wrinkles. Nano Letters, 2012, 12, 3431-3436.	9.1	540
6	Chemical Doping and Electronâ^'Hole Conduction Asymmetry in Graphene Devices. Nano Letters, 2009, 9, 388-392.	9.1	458
7	Carrier scattering, mobilities, and electrostatic potential in monolayer, bilayer, and trilayer graphene. Physical Review B, 2009, 80, .	3.2	397
8	Energy Dissipation in Graphene Field-Effect Transistors. Nano Letters, 2009, 9, 1883-1888.	9.1	339
9	Bright Infrared Emission from Electrically Induced Excitons in Carbon Nanotubes. Science, 2005, 310, 1171-1174.	12.6	320
10	Electron-Phonon Interaction and Transport in Semiconducting Carbon Nanotubes. Physical Review Letters, 2005, 94, 086802.	7.8	299
11	Inelastic scattering and current saturation in graphene. Physical Review B, 2010, 81, .	3.2	264
12	Radiative Lifetime of Excitons in Carbon Nanotubes. Nano Letters, 2005, 5, 2495-2499.	9.1	249
13	Thermal infrared emission from biased graphene. Nature Nanotechnology, 2010, 5, 497-501.	31.5	245
14	Efficient narrow-band light emission from a single carbon nanotube pâ€"n diode. Nature Nanotechnology, 2010, 5, 27-31.	31.5	181
15	Doping and phonon renormalization in carbon nanotubes. Nature Nanotechnology, 2007, 2, 725-730.	31.5	178
16	Hot Carrier Electroluminescence from a Single Carbon Nanotube. Nano Letters, 2004, 4, 1063-1066.	9.1	162
17	Controllable p-n Junction Formation in Monolayer Graphene Using Electrostatic Substrate Engineering. Nano Letters, 2010, 10, 4634-4639.	9.1	148
18	Photoconductivity Spectra of Single-Carbon Nanotubes:â€‰ Implications on the Nature of Their Excited States. Nano Letters, 2005, 5, 749-752.	9.1	143

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19	Silicon Nitride Gate Dielectrics and Band Gap Engineering in Graphene Layers. Nano Letters, 2010, 10, 3572-3576.	9.1	136
20	Exciton Ionization, Franzâˆ'Keldysh, and Stark Effects in Carbon Nanotubes. Nano Letters, 2007, 7, 609-613.	9.1	121
21	Magnetic Brightening of Carbon Nanotube Photoluminescence through Symmetry Breaking. Nano Letters, 2007, 7, 1851-1855.	9.1	120
22	â€˜Madelung modelâ€™ prediction for dependence of lattice parameter on nanocrystal size. Solid State Communications, 2002, 123, 295-297.	1.9	115
23	Phonon populations and electrical power dissipation in carbon nanotube transistors. Nature Nanotechnology, 2009, 4, 320-324.	31.5	111
24	An Essential Mechanism of Heat Dissipation in Carbon Nanotube Electronics. Nano Letters, 2009, 9, 1850-1855.	9.1	110
25	Cooling of photoexcited carriers in graphene by internal and substrate phonons. Physical Review B, 2012, 86, .	3.2	100
26	Self-Trapped Exciton and Franck-Condon Spectra Predicted inLaMnO3. Physical Review Letters, 1999, 83, 4828-4831.	7.8	91
27	The Effects of Substrate Phonon Mode Scattering on Transport in Carbon Nanotubes. Nano Letters, 2009, 9, 312-316.	9.1	88
28	Terahertz Nanoimaging of Graphene. ACS Photonics, 2018, 5, 2645-2651.	6.6	78
29	Quantum Behavior of Graphene Transistors near the Scaling Limit. Nano Letters, 2012, 12, 1417-1423.	9.1	77
30	Optical Properties ofc-Axis Oriented SuperconductingMgB2Films. Physical Review Letters, 2001, 87, 277001.	7.8	75
31	Impact excitation by hot carriers in carbon nanotubes. Physical Review B, 2006, 74, .	3.2	73
32	Phonon-Mediated Interlayer Conductance in Twisted Graphene Bilayers. Physical Review Letters, 2012, 109, 236604.	7.8	57
33	Valence force model for phonons in graphene and carbon nanotubes. Physical Review B, 2009, 79, .	3.2	56
34	Gate-Variable Light Absorption and Emission in a Semiconducting Carbon Nanotube. Nano Letters, 2009, 9, 3477-3481.	9.1	55
35	Mobility in Semiconducting Carbon Nanotubes at Finite Carrier Density. Nano Letters, 2006, 6, 205-208.	9.1	49
36	How does the substrate affect the Raman and excited state spectra of a carbon nanotube?. Applied Physics A: Materials Science and Processing, 2009, 96, 271-282.	2.3	49

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37	Franck-Condonâ€“Broadened Angle-Resolved Photoemission Spectra Predicted inLaMnO3. Physical Review Letters, 2000, 85, 5178-5181.	7.8	48
38	Carbon nanotube optoelectronics. Physica Status Solidi (B): Basic Research, 2006, 243, 3197-3203.	1.5	48
39	Excitonic Stark effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></m Physical Review B, 2016, 94, .	3.2	48
40	Thermal Light Emission from Monolayer MoS₂. Advanced Materials, 2017, 29, 1701304.	21.0	45
41	Carbon Nanotube Photo- and Electroluminescence in Longitudinal Electric Fields. ACS Nano, 2009, 3, 3744-3748.	14.6	44
42	Intersubband Decay of 1-D Exciton Resonances in Carbon Nanotubes. Nano Letters, 2008, 8, 87-91.	9.1	41
43	Quantum Efficiency and Capture Cross Section of First and Second Excitonic Transitions of Single-Walled Carbon Nanotubes Measured through Photoconductivity. Nano Letters, 2013, 13, 3531-3538.	9.1	36
44	Anti-Jahn-Teller polaron inLaMnO3. Physical Review B, 1999, 60, 10747-10753.	3.2	32
45	Phonon-limited carrier mobility in monolayer black phosphorus. Physical Review B, 2017, 95, .	3.2	30
46	Electronic structure of Sâ€“C6H5 self-assembled monolayers on Cu(111) and Au(111) substrates. Chemical Physics, 2005, 319, 159-166.	1.9	28
47	Trion induced photoluminescence of a doped MoS2 monolayer. Journal of Chemical Physics, 2020, 153, 044132.	3.0	25
48	Prominent room temperature valley polarization in WS2/graphene heterostructures grown by chemical vapor deposition. Applied Physics Letters, 2020, 116, .	3.3	25
49	Photo-induced terahertz near-field dynamics of graphene/InAs heterostructures. Optics Express, 2019, 27, 13611.	3.4	25
50	Multilayer Graphene Terahertz Plasmonic Structures for Enhanced Frequency Tuning Range. ACS Photonics, 2019, 6, 3180-3185.	6.6	24
51	Carbon Nanotube Deformation and Collapse under Metal Contacts. Nano Letters, 2014, 14, 4376-4380.	9.1	23
52	Two dimensions and one photon. Nature Nanotechnology, 2015, 10, 485-486.	31.5	21
53	Two-Dimensional Cold Electron Transport for Steep-Slope Transistors. ACS Nano, 2021, 15, 5762-5772.	14.6	20
54	Band Structure and Contact Resistance of Carbon Nanotubes Deformed by a Metal Contact. Physical Review Letters, 2017, 119, 207701.	7.8	19

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55	Plasmonâ€"Plasmon Interactions and Radiative Damping of Graphene Plasmons. ACS Photonics, 2018, 5, 3459-3465.	6.6	17
56	Low Bias Electron Scattering in Structure-Identified Single Wall Carbon Nanotubes: Role of Substrate Polar Phonons. Physical Review Letters, 2011, 107, 146601.	7.8	16
57	Three-particle states and brightening of intervalley excitons in a doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></m monolayer. Physical Review B, 2020, 101, .	3.2	15
58	Temperature in a Peierls-Boltzmann treatment of nonlocal phonon heat transport. Physical Review B, 2018, 98, .	3.2	14
59	Schottky-to-Ohmic Crossover in Carbon Nanotube Transistor Contacts. Physical Review Letters, 2013, 111, 236802.	7.8	13
60	Negative Differential Resistance in Carbon-Based Nanostructures. Physical Review Applied, 2021, 15, .	3.8	12
61	First-principles calculations of the self-trapped exciton in crystalline NaCl. Physical Review B, 2000, 62, 12589-12592.	3.2	10
62	Extremely Efficient Photocurrent Generation in Carbon Nanotube Photodiodes Enabled by a Strong Axial Electric Field. Nano Letters, 2020, 20, 433-440.	9.1	10
63	Toward a Theory of Orbiton Dispersion in LaMnO3. Physica Status Solidi (B): Basic Research, 1999, 215, 607-615.	1.5	9
64	Computational Study of Exciton Generation in Suspended Carbon Nanotube Transistors. Nano Letters, 2008, 8, 1596-1601.	9.1	8
65	Small Polarons in Two-Dimensional Pnictogens: A First-Principles Study. Journal of Physical Chemistry Letters, 2021, 12, 4674-4680.	4.6	7
66	Microscopic theory of exciton and trion polaritons in doped monolayers of transition metal dichalcogenides. Npj Computational Materials, 2022, 8, .	8.7	7
67	Dielectric Engineering Boosts the Efficiency of Carbon Nanotube Photodiodes. ACS Nano, 2021, 15, 10472-10479.	14.6	5
68	Band structure dependent electronic localization in macroscopic films of single-chirality single-wall carbon nanotubes. Carbon, 2021, 183, 774-779.	10.3	5
69	Phonon-Limited Mobility in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>h</mml:mi></mml:mrow></mml:math> -BN Encapsulated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>A</mml:mi><mml:mi>B</mml:mi></mml:mrow></mml:math> -Stacked Bilayer Graphene. Physical Review Letters, 2022, 128, .	7.8	5
70	Scattering of Quasistatic Plasmons From One-Dimensional Junctions of Graphene: Transfer Matrices, Fresnel Relations, and Nonlocality. Physical Review Applied, 2020, 14, .	3.8	4
71	Nonlinear spectroscopy of excitonic states in transition metal dichalcogenides. Physical Review B, 2022, 105, .	3.2	4
72	Entanglement generation in a quantum network with finite quantum memory lifetime. AVS Quantum Science, 2022, 4, .	4.9	3

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73	Exact, numerical, and mean field behavior of a dimerizing lattice in one dimension. Solid State Communications, 2001, 118, 215-219.	1.9	2
74	Magneto-optical spectroscopy of excitons in carbon nanotubes. Physica Status Solidi (B): Basic Research, 2006, 243, 3192-3196.	1.5	2
75	Tunable graphene plasmons in nanoribbon arrays: the role of interactions. Optical Materials Express, 2021, 11, 1390.	3.0	2
76	Polaronic signatures in pristine phosphorene. Physical Review Materials, 2021, 5, .	2.4	1
77	Simulation of Scanning Near-Field Optical Microscopy Spectra of 1D Plasmonic Graphene Junctions. Optics Express, 2022, 30, 9000-9007.	3.4	1
78	Nonlocal thermal transport modeling using the thermal distributor. Physical Review B, 2022, 105, .	3.2	0