

# Sergey E Kubatkin

## List of Publications by Citations

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109  
papers

3,577  
citations

30  
h-index

57  
g-index

119  
ext. papers

4,014  
ext. citations

6.3  
avg, IF

4.82  
L-index

#	Paper	IF	Citations
109	Single-electron transistor of a single organic molecule with access to several redox states. <i>Nature</i> , <b>2003</b> , 425, 698-701	50.4	736
108	Towards a quantum resistance standard based on epitaxial graphene. <i>Nature Nanotechnology</i> , <b>2010</b> , 5, 186-9	28.7	338
107	Electronic transport in single molecule junctions: control of the molecule-electrode coupling through intramolecular tunneling barriers. <i>Nano Letters</i> , <b>2008</b> , 8, 1-5	11.5	145
106	Charge transfer between epitaxial graphene and silicon carbide. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 112109	9.4	125
105	Dynamic Hall effect driven by circularly polarized light in a graphene layer. <i>Physical Review Letters</i> , <b>2010</b> , 105, 227402	7.4	124
104	Non-volatile photochemical gating of an epitaxial graphene/polymer heterostructure. <i>Advanced Materials</i> , <b>2011</b> , 23, 878-82	24	106
103	Terahertz radiation driven chiral edge currents in graphene. <i>Physical Review Letters</i> , <b>2011</b> , 107, 276601	7.4	94
102	Magnetic quantum ratchet effect in graphene. <i>Nature Nanotechnology</i> , <b>2013</b> , 8, 104-7	28.7	87
101	Anomalously strong pinning of the filling factor $\nu_2$ in epitaxial graphene. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	86
100	Disordered Fermi liquid in epitaxial graphene from quantum transport measurements. <i>Physical Review Letters</i> , <b>2011</b> , 107, 166602	7.4	69
99	Helicity-dependent photocurrents in graphene layers excited by midinfrared radiation of a CO <sub>2</sub> laser. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	65
98	Quantum resistance metrology using graphene. <i>Reports on Progress in Physics</i> , <b>2013</b> , 76, 104501	14.4	57
97	Precision comparison of the quantum Hall effect in graphene and gallium arsenide. <i>Metrologia</i> , <b>2012</b> , 49, 294-306	2.1	53
96	An ultrasensitive radio-frequency single-electron transistor working up to 4.2 K. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 114321	2.5	52
95	Light-Triggered Conductance Switching in Single-Molecule Dihydroazulene/Vinylheptafulvene Junctions. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 18372-18377	3.8	51
94	Graphene, universality of the quantum Hall effect and redefinition of the SI system. <i>New Journal of Physics</i> , <b>2011</b> , 13, 093026	2.9	51
93	Dihydroazulene Photoswitch Operating in Sequential Tunneling Regime: Synthesis and Single-Molecule Junction Studies. <i>Advanced Functional Materials</i> , <b>2012</b> , 22, 4249-4258	15.6	48

92	Weak localization scattering lengths in epitaxial, and CVD graphene. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	47
91	Operation of graphene quantum Hall resistance standard in a cryogen-free table-top system. <i>2D Materials</i> , <b>2015</b> , 2, 035015	5.9	44
90	Express optical analysis of epitaxial graphene on SiC: impact of morphology on quantum transport. <i>Nano Letters</i> , <b>2013</b> , 13, 4217-23	11.5	44
89	Fully gapped superconductivity in a nanometre-size YBa <sub>2</sub> Cu <sub>3</sub> O(7- $\delta$ ) island enhanced by a magnetic field. <i>Nature Nanotechnology</i> , <b>2013</b> , 8, 25-30	28.7	42
88	Small epitaxial graphene devices for magnetosensing applications. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 07E509	2.5	42
87	Energy loss rates of hot Dirac fermions in epitaxial, exfoliated, and CVD graphene. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	38
86	Magnetic field resilient superconducting fractal resonators for coupling to free spins. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 123905	2.5	38
85	Suppression of low-frequency charge noise in superconducting resonators by surface spin desorption. <i>Nature Communications</i> , <b>2018</b> , 9, 1143	17.4	37
84	Mixed valence radical cations and intermolecular complexes derived from indenofluorene-extended tetrathiafulvalenes. <i>Journal of Materials Chemistry C</i> , <b>2014</b> , 2, 10428-10438	7.1	36
83	Direct Identification of Dilute Surface Spins on Al <sub>2</sub> O <sub>3</sub> : Origin of Flux Noise in Quantum Circuits. <i>Physical Review Letters</i> , <b>2017</b> , 118, 057703	7.4	35
82	Uniform doping of graphene close to the Dirac point by polymer-assisted assembly of molecular dopants. <i>Nature Communications</i> , <b>2018</b> , 9, 3956	17.4	34
81	Electron transfer dynamics of bistable single-molecule junctions. <i>Nano Letters</i> , <b>2006</b> , 6, 2184-90	11.5	33
80	Phase space for the breakdown of the quantum Hall effect in epitaxial graphene. <i>Physical Review Letters</i> , <b>2013</b> , 111, 096601	7.4	32
79	Tunneling through a multigrain system: Deducing sample topology from nonlinear conductance. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	30
78	Quantum Hall effect and quantum point contact in bilayer-patched epitaxial graphene. <i>Nano Letters</i> , <b>2014</b> , 14, 3369-73	11.5	27
77	Wafer-scale homogeneity of transport properties in epitaxial graphene on SiC. <i>Carbon</i> , <b>2015</b> , 87, 409-414	10.4	26
76	Nanoelectromechanical switch operating by tunneling of an entire C <sub>60</sub> molecule. <i>Nano Letters</i> , <b>2008</b> , 8, 2393-8	11.5	26
75	Giant quantum Hall plateaus generated by charge transfer in epitaxial graphene. <i>Scientific Reports</i> , <b>2016</b> , 6, 30296	4.9	24

74	Graphene nanogap for gate-tunable quantum-coherent single-molecule electronics. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	24
73	Charge qubit coupled to an intense microwave electromagnetic field in a superconducting Nb device: evidence for photon-assisted quasiparticle tunneling. <i>Physical Review Letters</i> , <b>2013</b> , 111, 137002	7.4	23
72	Tuning carrier density across Dirac point in epitaxial graphene on SiC by corona discharge. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 063106	3.4	22
71	Coulomb blockade effects at room temperature in thin-film nanoconstrictions fabricated by a novel technique. <i>Applied Physics Letters</i> , <b>1998</b> , 73, 3604-3606	3.4	22
70	A near-field scanning microwave microscope based on a superconducting resonator for low power measurements. <i>Review of Scientific Instruments</i> , <b>2013</b> , 84, 023706	1.7	21
69	Engineering and metrology of epitaxial graphene. <i>Solid State Communications</i> , <b>2011</b> , 151, 1094-1099	1.6	21
68	Single electron transistor with a single conjugated molecule. <i>Current Applied Physics</i> , <b>2004</b> , 4, 554-558	2.6	21
67	Strong electronic coupling between single C60 molecules and gold electrodes prepared by quench condensation at 4 K. A single molecule three terminal device study. <i>Faraday Discussions</i> , <b>2006</b> , 131, 337-45; discussion 393-402	3.6	20
66	A single electron transistor on an atomic force microscope probe. <i>Nano Letters</i> , <b>2006</b> , 6, 937-41	11.5	20
65	Bianthrone in a Single-Molecule Junction: Conductance Switching with a Bistable Molecule Facilitated by Image Charge Effects $\square$ <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 20686-20695	3.8	19
64	Superconducting microwave parametric amplifier based on a quasi-fractal slow propagation line. <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 083901	2.5	19
63	Towards quantum-limited coherent detection of terahertz waves in charge-neutral graphene. <i>Nature Astronomy</i> , <b>2019</b> , 3, 983-988	12.1	18
62	Tunneling Through a Single Quench-condensed Cluster. <i>Journal of Low Temperature Physics</i> , <b>2000</b> , 118, 307-316	1.3	18
61	Tunable superconducting microstrip resonators. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 172601	3.4	18
60	Hot carrier relaxation of Dirac fermions in bilayer epitaxial graphene. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 164202	1.8	17
59	A prototype of RK/200 quantum Hall array resistance standard on epitaxial graphene. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 044506	2.5	17
58	Galvanically split superconducting microwave resonators for introducing internal voltage bias. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 052601	3.4	16
57	Aligned growth of gold nanorods in PMMA channels: parallel preparation of nanogaps. <i>ACS Nano</i> , <b>2012</b> , 6, 3861-7	16.7	15

56	Point contact readout for a quantum dot terahertz sensor. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 073501	3.4	15
55	Reststrahl band-assisted photocurrents in epitaxial graphene layers. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	14
54	Influence of Impurity Spin Dynamics on Quantum Transport in Epitaxial Graphene. <i>Physical Review Letters</i> , <b>2015</b> , 115, 106602	7.4	14
53	Near-Field Scanning Microwave Microscopy in the Single Photon Regime. <i>Scientific Reports</i> , <b>2019</b> , 9, 125399	4.9	13
52	Low contact resistance in epitaxial graphene devices for quantum metrology. <i>AIP Advances</i> , <b>2015</b> , 5, 087134	3.4	13
51	Insulating phase of mercury in thin quench-condensed films. <i>Physical Review B</i> , <b>1995</b> , 51, 5514-5517	3.3	13
50	Verification of electron doping in single-layer graphene due to H <sub>2</sub> exposure with thermoelectric power. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 142110	3.4	11
49	High mobility epitaxial graphene devices via aqueous-ozone processing. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 063503	3.4	11
48	Dual electrical properties of quench-condensed mercury films. Dependence on the substrate material. <i>Journal of Low Temperature Physics</i> , <b>1996</b> , 103, 35-47	1.3	11
47	Two-level systems in superconducting quantum devices due to trapped quasiparticles. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	11
46	Effect of graphene substrate type on formation of BiSe nanoplates. <i>Scientific Reports</i> , <b>2019</b> , 9, 4791	4.9	9
45	Polymer-encapsulated molecular doped epigraphene for quantum resistance metrology. <i>Metrologia</i> , <b>2019</b> , 56, 045004	2.1	8
44	Analytical solution for the Klein-Gordon equation and action function of the solution for the Dirac equation in counterpropagating laser waves. <i>Physical Review A</i> , <b>2015</b> , 92,	2.6	8
43	Physics of a disordered Dirac point in epitaxial graphene from temperature-dependent magnetotransport measurements. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	8
42	Coupling of a locally implanted rare-earth ion ensemble to a superconducting micro-resonator. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 102601	3.4	8
41	Apparent Power Law Scaling of Variable Range Hopping Conduction in Carbonized Polymer Nanofibers. <i>Scientific Reports</i> , <b>2016</b> , 6, 37783	4.9	8
40	Angle-Dependent Microresonator ESR Characterization of Locally Doped Gd <sup>3+</sup> :Al <sub>2</sub> O <sub>3</sub> . <i>Physical Review Applied</i> , <b>2016</b> , 6,	4.3	7
39	Phase coherence and energy relaxation in epitaxial graphene under microwave radiation. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 093103	3.4	7

38	Site-selective immobilization of functionalized DNA origami on nanopatterned Teflon AF. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 7637-7643	7.1	7
37	Fabrication of aluminum single-electron transistors with low resistance-capacitance product. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 6822-6826	2.5	7
36	Non-linear $I-V$ characteristics of polypyrrole micro-line synthesized using scanning probe microscope. <i>Current Applied Physics</i> , <b>2002</b> , 2, 23-25	2.6	7
35	Fabrication of clean nanogaps using a combined electrochemical-chemical method. <i>Small</i> , <b>2009</b> , 5, 2541-41	4.1	6
34	Anab initiostudy of the field-induced position change of a C60molecule adsorbed on a gold tip. <i>Nanotechnology</i> , <b>2007</b> , 18, 165501	3.4	6
33	Ambipolar charge transport in quasi-free-standing monolayer graphene on SiC obtained by gold intercalation. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	6
32	Fast Tunable High-Q-Factor Superconducting Microwave Resonators. <i>Physical Review Applied</i> , <b>2020</b> , 14,	4.3	6
31	Nanopatterning of mobile lipid monolayers on electron-beam-sculpted Teflon AF surfaces. <i>ACS Nano</i> , <b>2015</b> , 9, 1271-9	16.7	5
30	Kinetic inductance as a microwave circuit design variable by multilayer fabrication. <i>Superconductor Science and Technology</i> , <b>2015</b> , 28, 085007	3.1	5
29	Probing variable range hopping lengths by magneto conductance in carbonized polymer nanofibers. <i>Scientific Reports</i> , <b>2018</b> , 8, 4948	4.9	5
28	Detection of Coherent Terahertz Radiation from a High-Temperature Superconductor Josephson Junction by a Semiconductor Quantum-Dot Detector. <i>Physical Review Applied</i> , <b>2016</b> , 5,	4.3	5
27	Coherent interaction with two-level fluctuators using near field scanning microwave microscopy. <i>Scientific Reports</i> , <b>2015</b> , 5, 17176	4.9	5
26	Coulomb blockade electrometer with a high-T <sub>c</sub> island. <i>JETP Letters</i> , <b>1996</b> , 63, 126-132	1.2	5
25	Chemical Sensing with Atomically Thin Platinum Templated by a 2D Insulator. <i>Advanced Materials Interfaces</i> , <b>2020</b> , 7, 1902104	4.6	5
24	Enhancing optoelectronic properties of SiC-grown graphene by a surface layer of colloidal quantum dots. <i>2D Materials</i> , <b>2017</b> , 4, 031001	5.9	4
23	Accurate Real-Time Monitoring of Quality Factor and Center Frequency of Superconducting Resonators. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2014</b> , 24, 1-5	1.8	4
22	Giant field effect in self-assembled metallo-organic nanoscale networks. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	4
21	Clustering and Morphology Evolution of Gold on Nanostructured Surfaces of Silicon Carbide: Implications for Catalysis and Sensing. <i>ACS Applied Nano Materials</i> , <b>2021</b> , 4, 1282-1293	5.6	4

20	The performance limits of epigraphene Hall sensors doped across the Dirac point. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 223504	3.4	3
19	Electrostatic effects in coupled quantum dot-point contact-single electron transistor devices. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 014322	2.5	3
18	Thermal Stability of Epitaxial Graphene Electrodes for Conductive Polymer Nanofiber Devices. <i>Crystals</i> , <b>2017</b> , 7, 378	2.3	2
17	Effects of quasiparticle tunnelling in a circuit-QED realization of a strongly driven two-level system. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , <b>2013</b> , 46, 224019	1.3	2
16	Spontaneous shape distortion in quench-condensed bismuth clusters below 8 K. <i>Physical Review Letters</i> , <b>2000</b> , 84, 5836-9	7.4	2
15	Observation of Coulomb blockade in nanostructured epitaxial bilayer graphene on SiC. <i>Carbon</i> , <b>2017</b> , 119, 426-430	10.4	1
14	PC2: Identifying noise processes in superconducting resonators <b>2013</b> ,		1
13	Tunnel barriers for an all-high-Tc single electron tunneling transistor. <i>Physica C: Superconductivity and Its Applications</i> , <b>2002</b> , 368, 337-342	1.3	1
12	A single electron tunnling (SET) approach to high-Tc superconductors. <i>European Physical Journal D</i> , <b>1996</b> , 46, 2305-2306		1
11	Defect switching in a mesoscopic sample induced by a scanning tunnelling microscope. <i>Journal of Physics Condensed Matter</i> , <b>1994</b> , 6, L473-L478	1.8	1
10	Pulsed electron spin resonance of an organic microcrystal by dispersive readout. <i>Journal of Magnetic Resonance</i> , <b>2020</b> , 321, 106853	3	1
9	Electron-phonon coupling of epigraphene at millikelvin temperatures measured by quantum transport thermometry. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 103102	3.4	0
8	On the nature of decoherence in quantum circuits: Revealing the structural motif of the surface radicals in AlO <sub>x</sub> . <i>Science Advances</i> , <b>2022</b> , 8, eabm6169	14.3	0
7	Highly efficient UV detection in a metal-semiconductor-metal detector with epigraphene. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 191101	3.4	0
6	Practical and Fundamental Impact of Epitaxial Graphene on Quantum Metrology. <i>Mapan - Journal of Metrology Society of India</i> , <b>2013</b> , 28, 239-250	1	
5	THz Spectroscopy Using Low Temperature Mesoscopic Devices. <i>Journal of Low Temperature Physics</i> , <b>2012</b> , 167, 467-472	1.3	
4	Anomalous Coulomb blockade in nanoconstricted quench-condensed Bi films. <i>Physica B: Condensed Matter</i> , <b>2000</b> , 280, 401-402	2.8	
3	Insulating modifications of metal in cold deposited films. <i>European Physical Journal D</i> , <b>1996</b> , 46, 2477-2478		

- 2 Movement of scattering centers in a point contact induced by a scanning tunneling microscope.  
*Physica B: Condensed Matter*, **1994**, 194-196, 991-992 2.8
- 1 Conductance Quantization in Gold Nanowires at Low Temperature **1997**, 237-242