

Masaya Kataoka

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

76
papers

1,739
citations

22
h-index

39
g-index

84
ext. papers

1,998
ext. citations

5.8
avg, IF

4.22
L-index

#	Paper	IF	Citations
76	Single-electron sources. <i>Frontiers of Nanoscience</i> , 2021 , 20, 101-145	0.7	
75	Single-hole pump in germanium. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 434001	3	
74	Realisation of a quantum current standard at liquid helium temperature with sub-ppm reproducibility. <i>Metrologia</i> , 2020 , 57, 025013	2.1	5
73	Mitigating decoherence in hot electron interferometry. <i>New Journal of Physics</i> , 2020 , 22, 103031	2.9	1
72	Results and model for single-gate ratchet charge pumping. <i>Journal of Applied Physics</i> , 2020 , 127, 094301	2.5	1
71	Energy relaxation in hot electron quantum optics via acoustic and optical phonon emission. <i>Physical Review B</i> , 2019 , 99,	3.3	9
70	Evidence for universality of tunable-barrier electron pumps. <i>Metrologia</i> , 2019 , 56, 044004	2.1	19
69	Picosecond coherent electron motion in a silicon single-electron source. <i>Nature Nanotechnology</i> , 2019 , 14, 1019-1023	28.7	12
68	Continuous-variable tomography of solitary electrons. <i>Nature Communications</i> , 2019 , 10, 5298	17.4	13
67	LO-Phonon Emission Rate of Hot Electrons from an On-Demand Single-Electron Source in a GaAs/AlGaAs Heterostructure. <i>Physical Review Letters</i> , 2018 , 121, 137703	7.4	14
66	Robust operation of a GaAs tunable barrier electron pump. <i>Metrologia</i> , 2017 , 54, 299-306	2.1	23
65	Single carrier trapping and de-trapping in scaled silicon complementary metal-oxide-semiconductor field-effect transistors at low temperatures. <i>Semiconductor Science and Technology</i> , 2017 , 32, 075001	1.8	9
64	Time-resolved single-electron wave-packet detection. <i>Physica Status Solidi (B): Basic Research</i> , 2017 , 254, 1600547	1.3	10
63	Ultrafast voltage sampling using single-electron wavepackets. <i>Applied Physics Letters</i> , 2017 , 110, 102105	3.4	19
62	High-accuracy current generation in the nanoampere regime from a silicon single-trap electron pump. <i>Scientific Reports</i> , 2017 , 7, 45137	4.9	22
61	Thermal-Error Regime in High-Accuracy Gigahertz Single-Electron Pumping. <i>Physical Review Applied</i> , 2017 , 8,	4.3	26
60	Phonon emission and arrival times of electrons from a single-electron source. <i>Physical Review B</i> , 2016 , 93,	3.3	13

59	Time-of-Flight Measurements of Single-Electron Wave Packets in Quantum Hall Edge States. <i>Physical Review Letters</i> , 2016 , 116, 126803	7.4	44
58	Non-invasive charge detection in surface-acoustic-wave-defined dynamic quantum dots. <i>Applied Physics Letters</i> , 2016 , 109, 183501	3.4	
57	Scaling the current from a GHz electron pump using a CCC 2016 ,		2
56	High-resolution error detection in the capture process of a single-electron pump. <i>Applied Physics Letters</i> , 2016 , 108, 023502	3.4	12
55	Gigahertz single-electron pumping in silicon with an accuracy better than 9.2 parts in 10 ⁷ . <i>Applied Physics Letters</i> , 2016 , 109, 013101	3.4	37
54	Ultrafast Emission and Detection of a Single-Electron Gaussian Wave Packet: A Theoretical Study. <i>Physical Review Letters</i> , 2016 , 117, 146802	7.4	20
53	Measurement and control of electron wave packets from a single-electron source. <i>Physical Review B</i> , 2015 , 92,	3.3	31
52	Precision measurement of a potential-profile tunable single-electron pump. <i>Metrologia</i> , 2015 , 52, 195-200		58
51	Redefinition of the Ampere. <i>Measurement and Control</i> , 2014 , 47, 315-322	1.5	3
50	Sub-ppm measurements of single-electron pump currents 2014 ,		2
49	Clock-controlled emission of single-electron wave packets in a solid-state circuit. <i>Physical Review Letters</i> , 2013 , 111, 216807	7.4	88
48	Gigahertz quantized charge pumping in graphene quantum dots. <i>Nature Nanotechnology</i> , 2013 , 8, 417-420	8.7	99
47	Rectification in mesoscopic alternating current-gated semiconductor devices. <i>Journal of Applied Physics</i> , 2013 , 114, 164505	2.5	12
46	Towards a quantum representation of the ampere using single electron pumps. <i>Nature Communications</i> , 2012 , 3, 930	17.4	160
45	Stabilization of single-electron pumps by high magnetic fields. <i>Physical Review B</i> , 2012 , 86,	3.3	41
44	On-demand single-electron transfer between distant quantum dots. <i>Nature</i> , 2011 , 477, 439-42	50.4	208
43	Tunable nonadiabatic excitation in a single-electron quantum dot. <i>Physical Review Letters</i> , 2011 , 106, 126801	7.4	56
42	Single- and few-electron dynamic quantum dots in a perpendicular magnetic field. <i>Journal of Applied Physics</i> , 2011 , 109, 102422	2.5	9

41	Localized magnetic fields in arbitrary directions using patterned nanomagnets. <i>Nano Letters</i> , 2010 , 10, 1549-53	11.5	15
40	An accurate high-speed single-electron quantum dot pump. <i>New Journal of Physics</i> , 2010 , 12, 073013	2.9	47
39	Scanned gate microscopy of surface-acoustic-wave-induced current through a depleted one-dimensional GaAs channel. <i>Physical Review B</i> , 2010 , 82,	3.3	4
38	Coherent time evolution of a single-electron wave function. <i>Physical Review Letters</i> , 2009 , 102, 156801	7.4	52
37	Gated-charge force microscopy for imaging a surface-acoustic-wave-induced charge in a depleted one-dimensional channel. <i>Physical Review B</i> , 2008 , 78,	3.3	5
36	Kondo effect from a tunable bound state within a quantum wire. <i>Physical Review Letters</i> , 2008 , 100, 026807	7.4	54
35	Measurement of Coulomb-energy-dependent tunnelling rates in surface-acoustic-wave-defined dynamic quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 1136-1138	3	8
34	Investigation of single-electron dynamics in tunnelling between zero- and one-dimensional states. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 1017-1021	3	3
33	Temporal isolation of surface-acoustic-wave-driven luminescence from a lateral p \bar{n} junction using pulsed techniques. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 1775-1779	3	3
32	Electron population control of a highly isolated quantum dot using surface-acoustic waves. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 1596-1598	3	1
31	Geometric suppression of single-particle energy spacings in quantum antidots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 1633-1636	3	1
30	Electron interactions in an antidot in the integer quantum Hall regime. <i>Physics Reports</i> , 2008 , 456, 127-165.7	15.7	20
29	Energy-dependent tunneling from few-electron dynamic quantum dots. <i>Physical Review Letters</i> , 2007 , 99, 156802	7.4	41
28	Pulse-induced acoustoelectric vibrations in surface-gated GaAs-based quantum devices. <i>Physical Review B</i> , 2007 , 75,	3.3	5
27	Collapse of nonequilibrium charge states in an isolated quantum dot using surface acoustic waves. <i>Physical Review B</i> , 2007 , 75,	3.3	4
26	Temporal characteristics of surface-acoustic-wave-driven luminescence from a lateral p-n junction. <i>Applied Physics Letters</i> , 2007 , 91, 013506	3.4	9
25	Single-electron population and depopulation of an isolated quantum dot using a surface-acoustic-wave pulse. <i>Physical Review Letters</i> , 2007 , 98, 046801	7.4	33
24	Examination of multiply reflected surface acoustic waves by observing acoustoelectric current generation under pulse modulation. <i>Physical Review B</i> , 2006 , 74,	3.3	7

23	Surface-acoustic-wave-driven luminescence from a lateral p-n junction. <i>Applied Physics Letters</i> , 2006 , 89, 243505	3.4	17
22	Examination of surface acoustic wave reflections by observing acoustoelectric current generation under pulse modulation. <i>Applied Physics Letters</i> , 2006 , 89, 132102	3.4	12
21	Experimental investigation of the surface acoustic wave electron capture mechanism. <i>Physical Review B</i> , 2006 , 74,	3.3	30
20	Quantum-dot thermometry of electron heating by surface acoustic waves. <i>Applied Physics Letters</i> , 2006 , 89, 122104	3.4	25
19	The effect of pulse-modulated surface acoustic waves on acoustoelectric current quantization. <i>Journal of Applied Physics</i> , 2006 , 100, 063710	2.5	21
18	Numerical investigation of a piezoelectric surface acoustic wave interaction with a one-dimensional channel. <i>Physical Review B</i> , 2006 , 74,	3.3	12
17	The excitation spectrum of quantum antidots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2006 , 34, 195-198	3	6
16	Single-electron transfer between double quantum dots defined by surface acoustic waves. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2006 , 34, 546-549	3	6
15	Evidence for a finite compressibility of a quasi-one-dimensional ballistic channel. <i>Microelectronics Journal</i> , 2005 , 36, 331-333	1.8	
14	Surface-acoustic-wave single-electron interferometry. <i>Physical Review B</i> , 2005 , 72,	3.3	22
13	Comment on "Absence of compressible edge channel rings in quantum antidots". <i>Physical Review Letters</i> , 2004 , 92, 199703; author reply 199704	7.4	10
12	Noninvasive lateral detection of Coulomb blockade in a quantum dot fabricated using atomic force microscopy. <i>Journal of Applied Physics</i> , 2004 , 95, 2557-2559	2.5	12
11	Selective spin-resolved edge-current injection into a quantum antidot. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 22, 168-172	3	
10	Kondo effect of an antidot in the integer quantum Hall regime: a microscopic calculation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 22, 554-557	3	3
9	Kondo-like behaviour as manifestation of many-body interactions around a quantum antidot. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 22, 558-561	3	
8	Selective spin-resolved edge-current injection into a quantum antidot. <i>Physical Review B</i> , 2003 , 68,	3.3	9
7	Coulomb blockade and kondo effect in a quantum Hall antidot. <i>Physical Review Letters</i> , 2003 , 91, 26680	7.4	14
6	Spin-splitting of Aharonov-Bohm oscillations in an antidot. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 12, 782-786	3	3

5	Kondo effect in a quantum antidot. <i>Physical Review Letters</i> , 2002 , 89, 226803	7.4	35
4	Detection of Coulomb charging around an antidot. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000 , 6, 495-498	3	3
3	Coulomb blockade of tunneling through compressible rings formed around an antidot: An explanation for $h/2e$ Aharonov-Bohm oscillations. <i>Physical Review B</i> , 2000 , 62, R4817-R4820	3.3	36
2	Detection of Coulomb Charging around an Antidot in the Quantum Hall Regime. <i>Physical Review Letters</i> , 1999 , 83, 160-163	7.4	62
1	Nanosession: Qubit Systems 357-366		