Harold U Baranger

List of Publications by Year
in descending order

171	9,425	31949 53	40954 93
papers	citations	h-index	g-index

173	173	173	4849
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electrical linear-response theory in an arbitrary magnetic field: A new Fermi-surface formation. Physical Review B, 1989, 40, 8169-8193.	1.1	436
2	Conductance fluctuations in the ballistic regime: A probe of quantum chaos?. Physical Review Letters, 1990, 65, 2442-2445.	2.9	430
3	Mesoscopic transport through chaotic cavities: A randomS-matrix theory approach. Physical Review Letters, 1994, 73, 142-145.	2.9	327
4	Classical and quantum ballistic-transport anomalies in microjunctions. Physical Review B, 1991, 44, 10637-10675.	1.1	279
5	Weak Localization in Chaotic versus Nonchaotic Cavities: A Striking Difference in the Line Shape. Physical Review Letters, 1994, 73, 2111-2114.	2.9	276
6	Weak localization and integrability in ballistic cavities. Physical Review Letters, 1993, 70, 3876-3879.	2.9	245
7	Detecting a Majorana-fermion zero mode using a quantum dot. Physical Review B, 2011, 84, .	1.1	232
8	Propagation around a Bend in a Multichannel Electron Waveguide. Physical Review Letters, 1988, 60, 2081-2084.	2.9	226
9	Quantum-Interference-Controlled Molecular Electronics. Nano Letters, 2008, 8, 3257-3261.	4.5	221
10	Persistent Quantum Beats and Long-Distance Entanglement from Waveguide-Mediated Interactions. Physical Review Letters, 2013, 110, 113601.	2.9	212
11	Communication Through a Diffusive Medium: Coherence and Capacity. Science, 2000, 287, 287-290.	6.0	208
12	Quantumâ€chaotic scattering effects in semiconductor microstructures. Chaos, 1993, 3, 665-682.	1.0	206
13	Electron transport through molecules:â€ƒSelf-consistent and non-self-consistent approaches. Physical Review B, 2004, 70, .	1.1	205
14	Waveguide QED: Many-body bound-state effects in coherent and Fock-state scattering from a two-level system. Physical Review A, 2010, 82, .	1.0	186
15	Non-Gaussian Distribution of Coulomb Blockade Peak Heights in Quantum Dots. Physical Review Letters, 1996, 76, 1695-1698.	2.9	178
16	Breakdown of quantized conductance in point contacts calculated using realistic potentials. Physical Review B, 1991, 43, 12638-12641.	1.1	171
17	Quenching of the Hall resistance in ballistic microstructures: A collimation effect. Physical Review Letters, 1989, 63, 414-417.	2.9	153
18	Symmetry Classes in Graphene Quantum Dots: Universal Spectral Statistics, Weak Localization, and Conductance Fluctuations. Physical Review Letters, 2009, 102, 056806.	2.9	149

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19	Experimental studies of the acoustic signature of proton beams traversing fluid media. Nuclear Instruments & Methods, 1979, 161, 203-217.	1.2	143
20	Floquet Majorana Fermions for Topological Qubits in Superconducting Devices and Cold-Atom Systems. Physical Review Letters, 2013, 111, 047002.	2.9	140
21	Waveguide-QED-Based Photonic Quantum Computation. Physical Review Letters, 2013, 111, 090502.	2.9	128
22	Observation of quantum wire formation at intersecting quantum wells. Applied Physics Letters, 1992, 61, 1956-1958.	1.5	125
23	Near-perfect conduction through a ferrocene-based molecular wire. Physical Review B, 2005, 71, .	1.1	121
24	Contact atomic structure and electron transport through molecules. Journal of Chemical Physics, 2005, 122, 074704.	1.2	119
25	Organometallic Spintronics:Â Dicobaltocene Switch. Nano Letters, 2005, 5, 1959-1962.	4.5	112
26	Cavity-Free Photon Blockade Induced by Many-Body Bound States. Physical Review Letters, 2011, 107, 223601.	2.9	107
27	Role of the exchange-correlation potential in ab initio electron transport calculations. Journal of Chemical Physics, 2007, 126, 201102.	1.2	103
28	Waveguide QED: Power spectra and correlations of two photons scattered off multiple distant qubits and a mirror. Physical Review A, 2015, 91, .	1.0	102
29	Effect of phase breaking on quantum transport through chaotic cavities. Physical Review B, 1995, 51, 4703-4706.	1.1	98
30	Exciting a Bound State in the Continuum through Multiphoton Scattering Plus Delayed Quantum Feedback. Physical Review Letters, 2019, 122, 073601.	2.9	94
31	Graphene rings in magnetic fields: Aharonovâ€“Bohm effect and valley splitting. Semiconductor Science and Technology, 2010, 25, 034003.	1.0	93
32	Molecular Conductance:Â Chemical Trends of Anchoring Groups. Journal of the American Chemical Society, 2004, 126, 15897-15904.	6.6	92
33	Thermopower of Molecular Junctions: An ab Initio Study. Nano Letters, 2009, 9, 1011-1014.	4.5	91
34	Resistance fluctuations in multiprobe microstructures: Length dependence and nonlocality. Physical Review B, 1988, 37, 6521-6524.	1.1	86
35	Interactions and interference in quantum dots:â€ƒKinks in Coulomb-blockade peak positions. Physical Review B, 2000, 61, R2425-R2428.	1.1	84
36	Strongly correlated photons generated by coupling a three- or four-level system to a waveguide. Physical Review A, 2012, 85, .	1.0	84

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37	Models of electrodes and contacts in molecular electronics. Journal of Chemical Physics, 2005, 123, 114701.	1.2	79
38	Suppression of the Aharonov-Bohm effect in the quantized Hall regime. Physical Review B, 1989, 39, 6227-6230.	1.1	78
39	Ballistic electrons in an inhomogeneous submicron structure: Thermal and contact effects. Physical Review B, 1984, 30, 7349-7351.	1.1	72
40	Coulomb blockade of tunneling through a double quantum dot. Physical Review B, 1996, 54, 5637-5646.	1.1	72
41	Correlation-induced inhomogeneity in circular quantum dots. Nature Physics, 2006, 2, 336-340.	6.5	72
42	Negative Differential Resistance and Hysteresis through an Organometallic Molecule from Molecular-Level Crossing. Journal of the American Chemical Society, 2006, 128, 6274-6275.	6.6	71
43	Organometallic molecular rectification. Journal of Chemical Physics, 2006, 124, 024718.	1.2	71
44	Quantum phase transition in a resonant level coupled to interacting leads. Nature, 2012, 488, 61-64.	13.7	71
45	Quenching of the Hall resistance in a novel geometry. Physical Review Letters, 1989, 63, 996-999.	2.9	66
46	Tunneling spectroscopy of quantum charge fluctuations in the Coulomb blockade. Physical Review B, 1996, 53, 1034-1037.	1.1	63
47	Title is missing!. Waves in Random and Complex Media, 1999, 9, 105-146.	1.5	63
48	Ballistic structure in the electron distribution function of small semiconducting structures: General features and specific trends. Physical Review B, 1987, 36, 1487-1502.	1.1	61
49	Phonon decoherence of a double quantum dot charge qubit. Physical Review B, 2005, 71, .	1.1	60
50	Observation of Majorana quantum critical behaviour in a resonant level coupled to a dissipative environment. Nature Physics, 2013, 9, 732-737.	6.5	60
51	Multiprobe electron waveguides: Filtering and bend resistances. Physical Review B, 1990, 42, 11479-11495.	1.1	58
52	Generalized multipolaron expansion for the spin-boson model: Environmental entanglement and the biased two-state system. Physical Review B, 2014, 90, .	1.1	58
53	One-dimensional waveguide coupled to multiple qubits: photon-photon correlations. EPJ Quantum Technology, 2014, 1, .	2.9	55
54	Stabilizing spin coherence through environmental entanglement in strongly dissipative quantum systems. Physical Review B, 2014, 89, .	1.1	53

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55	Intermolecular effect in molecular electronics. Journal of Chemical Physics, 2005, 122, 044703.	1.2	51
56	Incipient Wigner localization in circular quantum dots. Physical Review B, 2007, 76, .	1.1	50
57	Contact Transparency of Nanotube-Molecule-Nanotube Junctions. Physical Review Letters, 2007, 99, 146802.	2.9	50
58	Cobaltocene as a spin filter. Journal of Chemical Physics, 2007, 127, 141104.	1.2	47
59	Time-dependent transport through molecular junctions. Journal of Chemical Physics, 2010, 132, 234105.	1.2	45
60	Electron transport through molecules: Gate-induced polarization and potential shift. Physical Review B, 2005, 71, .	1.1	44
61	Short paths and information theory in quantum chaotic scattering: transport through quantum dots. Europhysics Letters, 1996, 33, 465-470.	0.7	43
62	Electron transport through single conjugated organic molecules: Basis set effects in ab initio calculations. Journal of Chemical Physics, 2007, 127, 144107.	1.2	43
63	Tunneling into a Two-Dimensional Electron Liquid in a Weak Magnetic Field. Physical Review Letters, 1995, 74, 3435-3438.	2.9	42
64	Interactions in chaotic nanoparticles: Fluctuations in Coulomb blockade peak spacings. Physical Review B, 2001, 64, .	1.1	39
65	Random Berry phase magnetoresistance as a probe of interface roughness in Si MOSFETâ€™s. Physical Review B, 2001, 64, .	1.1	39
66	Interference of chiral Andreev edge states. Nature Physics, 2020, 16, 862-867.	6.5	39
67	Interfaces within graphene nanoribbons. New Journal of Physics, 2009, 11, 095022.	1.2	38
68	Chaos and Interacting Electrons in Ballistic Quantum Dots. Physical Review Letters, 1998, 80, 895-899.	2.9	37
69	Non-Markovian dynamics of a qubit due to single-photon scattering in a waveguide. New Journal of Physics, 2018, 20, 043035.	1.2	37
70	Localization in an inhomogeneous quantum wire. Physical Review B, 2009, 80, .	1.1	35
71	Reflection symmetric ballistic microstructures: Quantum transport properties. Physical Review B, 1996, 54, R14297-R14300.	1.1	34
72	Chaos in Quantum Dots: Dynamical Modulation of Coulomb Blockade Peak Heights. Physical Review Letters, 1999, 83, 2640-2643.	2.9	32

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73	Wireless propagation in buildings: a statistical scattering approach. IEEE Transactions on Vehicular Technology, 1999, 48, 947-955.	3.9	32
74	Spectroscopy of the Kondo Problem in a Box. Physical Review Letters, 2006, 96, 176802.	2.9	32
75	Quantum Phase Transitions of Hard-Core Bosons in Background Potentials. Physical Review Letters, 2006, 97, 115703.	2.9	31
76	Density-functional theory simulation of large quantum dots. Physical Review B, 2003, 68, .	1.1	30
77	Quantum-mechanical features in the resistance of a submircon junction. Physical Review Letters, 1991, 66, 930-933.	2.9	29
78	Decoherence by Correlated Noise and Quantum Error Correction. Physical Review Letters, 2006, 97, 040501.	2.9	29
79	Zigzag Phase Transition in Quantum Wires. Physical Review Letters, 2013, 110, 246802.	2.9	29
80	Inequivalence of weak localization and coherent backscattering. Physical Review B, 1994, 50, 8230-8244.	1.1	27
81	Semiclassical density functional theory: Strutinsky energy corrections in quantum dots. Physical Review B, 2001, 63, .	1.1	27
82	Spin and Conductance-Peak-Spacing Distributions in Large Quantum Dots: A Density-Functional Theory Study. Physical Review Letters, 2003, 90, 026806.	2.9	27
83	Mesoscopic Kondo problem. Europhysics Letters, 2005, 71, 973-979.	0.7	27
84	Interaction-induced strong localization in quantum dots. Physical Review B, 2008, 77, .	1.1	27
85	Coexistence of excitonic lasing with electronâ€“hole plasma spontaneous emission in one-dimensional semiconductor structures. Solid State Communications, 2001, 120, 423-427.	0.9	26
86	Spin andeâˆ’einteractions in quantum dots: Leading order corrections to universality and temperature effects. Physical Review B, 2002, 66, .	1.1	26
87	Exchange and the Coulomb blockade:â€ƒPeak height statistics in quantum dots. Physical Review B, 2003, 67, .	1.1	26
88	Particle production in ultrastrong-coupling waveguide QED. Physical Review A, 2018, 98, .	1.0	26
89	Coulomb-blockade peak-spacing distribution: Interplay of temperature and spin. Physical Review B, 2001, 64, .	1.1	25
90	Driven-dissipative phase transition in a Kerr oscillator: From semiclassical <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script">PT</mml:mi></mml:math> symmetry to quantum fluctuations. Physical Review A, 2021, 103, .	1.0	25

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91	Analytic Boltzmann equation approach for negative differential mobility in twoâ€valley semiconductors. Applied Physics Letters, 1986, 49, 176-178.	1.5	24
92	Heralded Bell State of Dissipative Qubits Using Classical Light in a Waveguide. Physical Review Letters, 2019, 122, 140502.	2.9	24
93	Mesoscopic tunneling magnetoresistance. Physical Review B, 2001, 63, .	1.1	22
94	Addition Energies of Fullerenes and Carbon Nanotubes as Quantum Dots: The Role of Symmetry. Physical Review Letters, 2003, 91, 116803.	2.9	22
95	Multiple emitters in a waveguide: Nonreciprocity and correlated photons at perfect elastic transmission. Physical Review A, 2017, 96, .	1.0	22
96	Real-space and magnetic-field correlation of quantum-resistance fluctuations in the ballistic regime in narrow GaAs-AlxGa1â^'xAs wires. Physical Review B, 1988, 37, 2745-2748.	1.1	21
97	Conductance of quantum point contacts calculated using realistic potentials. Superlattices and Microstructures, 1991, 9, 187-190.	1.4	21
98	Sequential versus coherent tunneling in double-barrier diodes investigated by differential absorption spectroscopy. Physical Review B, 1991, 44, 1353-1356.	1.1	21
99	Resilient Quantum Computation in Correlated Environments: A Quantum Phase Transition Perspective. Physical Review Letters, 2007, 98, 040501.	2.9	21
100	Nanotube-metal junctions: 2- and 3-terminal electrical transport. Journal of Chemical Physics, 2006, 124, 181102.	1.2	20
101	Two-stage Kondo effect and Kondo-box level spectroscopy in a carbon nanotube. Physical Review B, 2010, 82, .	1.1	20
102	The invariant measure for scattering matrices with block symmetries. Journal of Physics A, 1996, 29, 881-888.	1.6	19
103	Semiclassical theory of Coulomb blockade peak heights in chaotic quantum dots. Physical Review B, 2001, 64, .	1.1	19
104	Hamiltonian formulation of quantum error correction and correlated noise: Effects of syndrome extraction in the long-time limit. Physical Review A, 2008, 78, .	1.0	19
105	Tunable quantum phase transitions in a resonant level coupled to two dissipative baths. Physical Review B, 2014, 89, .	1.1	18
106	On the sign problem in the Hirschâ€“Fye algorithm for impurity problems. Journal of Physics A, 2005, 38, 10307-10310.	1.6	17
107	Photon correlations generated by inelastic scattering in a one-dimensional waveguide coupled to three-level systems. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 78, 92-99.	1.3	16
108	Quantum interference and complex photon statistics in waveguide QED. Physical Review A, 2018, 97, .	1.0	16

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109	Spin qubits in multielectron quantum dots. Physical Review B, 2004, 69, .	1.1	15
110	Fermi edge singularities in the mesoscopic regime: Anderson orthogonality catastrophe. Physical Review B, 2005, 72, .	1.1	15
111	Heterocontact effects in point-contact electron-phonon spectroscopy of the alkali metals. Physical Review B, 1985, 31, 6197-6206.	1.1	14
112	Electron-electron interactions in isolated and realistic quantum dots: A density functional theory study. Physical Review B, 2004, 69, .	1.1	14
113	Cluster algorithms for quantum impurity models and mesoscopic Kondo physics. Physical Review B, 2005, 71, .	1.1	14
114	Quantum Phase Transition and Emergent Symmetry in a Quadruple Quantum Dot System. Physical Review Letters, 2010, 105, 256801.	2.9	14
115	Geometrical effects on the Hall resistance in ballistic microstructures. Surface Science, 1990, 229, 212-215.	0.8	13
116	Adiabatic turn-on and the asymptotic limit in linear-response theory for open systems. Physical Review B, 1993, 48, 17569-17572.	1.1	13
117	Mesoscopic fluctuations in quantum dots in the Kondo regime. Physical Review B, 2003, 68, .	1.1	12
118	Fermi-Edge Singularities in the Mesoscopic X-Ray Edge Problem. Physical Review Letters, 2004, 93, 176807.	2.9	12
119	Landau Fermi-liquid picture of spin density functional theory: Strutinsky approach to quantum dots. Physical Review B, 2004, 70, .	1.1	12
120	Ballistic peaks in the distribution function from intervalley transfer in a submicron structure. Applied Physics Letters, 1987, 51, 1708-1710.	1.5	11
121	Theory of Coulomb blockade of tunneling through a double quantum dot. Surface Science, 1996, 361-362, 623-626.	0.8	11
122	Transport signatures of Majorana quantum criticality realized by dissipative resonant tunneling. Physical Review B, 2014, 89, .	1.1	11
123	One-dimensional ballistic transport in AlGaAs/GaAs electron waveguides. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1989, 7, 2039.	1.6	10
124	Anisotropy in ferromagnetic nanoparticles: Level-to-level fluctuations of a collective effect. Europhysics Letters, 2005, 72, 110-116.	0.7	10
125	Quantum transport and chaos in semiconductor microstructures. Physica D: Nonlinear Phenomena, 1995, 83, 30-45.	1.3	8
126	Electronic transport through ballistic chaotic cavities: an information theoretic approach. Physica A: Statistical Mechanics and Its Applications, 1995, 220, 15-23.	1.2	8

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127	Semiclassical approach to orbital magnetism of interacting diffusive quantum systems. Physica E: Low-Dimensional Systems and Nanostructures, 1997, 1, 268-273.	1.3	8
128	Improving intrinsic decoherence in multiple-quantum-dot charge qubits. Physical Review B, 2007, 76, .	1.1	8
129	Ground state and excitations of quantum dots with magnetic impurities. Physical Review B, 2009, 80, .	1.1	8
130	Dynamics of a qubit in a high-impedance transmission line from a bath perspective. Physical Review A, 2016, 93, .	1.0	8
131	Ballistic electrons in a submicron structure: The distribution function and two valley effects. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1985, 134, 470-474.	0.9	7
132	Interaction effects in the mesoscopic regime: A quantum Monte Carlo study of irregular quantum dots. Physical Review B, 2005, 71, .	1.1	7
133	Mesoscopic Anderson box: Connecting weak to strong coupling. Physical Review B, 2012, 85, .	1.1	7
134	Relationship between resistance, localization length, and inelastic-scattering length. Physical Review B, 1992, 45, 1488-1491.	1.1	6
135	Large excitonic confinement in asymmetric quantum T wires. Superlattices and Microstructures, 1997, 22, 359-364.	1.4	6
136	Bound on quantum computation time: Quantum error correction in a critical environment. Physical Review A, 2010, 82, .	1.0	6
137	Rescuing a Quantum Phase Transition with Quantum Noise. Physical Review Letters, 2017, 118, 050402.	2.9	6
138	Experimental Studies of the Acoustic Signature of Proton Beams Traversing Fluid Media. IEEE Transactions on Nuclear Science, 1978, 25, 325-332.	1.2	5
139	Interaction-induced magnetization of a two-dimensional electron gas. Physical Review B, 2000, 62, 1935-1942.	1.1	5
140	Statistics of wave functions in disordered systems with applications to Coulomb blockade peak spacing. Physical Review B, 2005, 72, .	1.1	5
141	Level spacings in random matrix theory and Coulomb blockade peaks in quantum dots. Physical Review B, 2007, 76, .	1.1	5
142	Fermi edge singularities in the mesoscopic regime: Photoabsorption spectra. Physical Review B, 2007, 76, .	1.1	5
143	Studying the insulatorâ€“conductor interface with a scanning tunneling microscope. Applied Physics Letters, 1995, 66, 1352-1354.	1.5	4
144	Scrambling and gate-induced fluctuations in realistic quantum dots. Physical Review B, 2005, 71, .	1.1	4

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145	Decoy-state quantum key distribution with nonclassical light generated in a one-dimensional waveguide. Optics Letters, 2013, 38, 622.	1.7	4
146	Development of Ab Initio Calculation for Electron Transport and the Effects of Lead and Contact Structures in Molecular Electronics. Journal of Computational and Theoretical Nanoscience, 2006, 3, 819-823.	0.4	4
147	Change in sign of the photocurrent in a coherent asymmetric superlattice. Applied Physics Letters, 1995, 67, 3560-3562.	1.5	3
148	From weak- to strong-coupling mesoscopic Fermi liquids. Europhysics Letters, 2012, 97, 17006.	0.7	3
149	Stabilization of a Majorana zero mode through quantum frustration. Physical Review B, 2020, 102, .	1.1	3
150	Nonequilibrium quantum critical steady state: Transport through a dissipative resonant level. Physical Review Research, 2021, 3, .	1.3	3
151	Interactions and broken time-reversal symmetry in chaotic quantum dots. Physical Review B, 2005, 71, .	1.1	2
152	Quantum Monte Carlo study of disordered fermions. Physical Review B, 2005, 72, .	1.1	2
153	Multilevel algorithm for quantum-impurity models. Physical Review E, 2005, 71, 036708.	0.8	2
154	Coulomb blockade peak spacings: Interplay of spin and dot-lead coupling. Physical Review B, 2005, 72, .	1.1	2
155	Detecting photon-photon interactions in a superconducting circuit. Physical Review B, 2015, 92, .	1.1	2
156	Publisherâ€™s Note: Mesoscopic fluctuations in quantum dots in the Kondo regime [Phys. Rev. B68, 161305 (2003)]. Physical Review B, 2004, 69, .	1.1	1
157	‹title›Phonon decoherence in quantum dot qubits‹/title›. , 2005, 5815, 53.		1
158	Conductance of quantum impurity models from quantum Monte Carlo. Physical Review B, 2010, 82, .	1.1	1
159	Mesoscopic fluctuations in the Fermi-liquid regime of the Kondo problem. European Physical Journal B, 2013, 86, 1.	0.6	1
160	Chaos in Ballistic Nanostructures. , 1999, , 537-628.		1
161	Conductance of a dissipative quantum dot: Nonequilibrium crossover near a non-Fermi-liquid quantum critical point. Physical Review B, 2021, 104, .	1.1	1
162	Selective Population of Modes in Electron Waveguides: Bend Resistances and Quenching of the Hall Resistance. NATO ASI Series Series B: Physics, 1990, , 121-132.	0.2	1

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163	Statistical wave scattering: from the atomic nucleus to mesoscopic systems to microwave cavities. Physica A: Statistical Mechanics and Its Applications, 2002, 306, 323-333.	1.2	0
164	Kondo effect and mesoscopic fluctuations. Pramana - Journal of Physics, 2011, 77, 769-779.	0.9	0
165	Hamiltonian methods in quantum error correction and fault tolerance. , 0, , 585-611.		0
166	Reprint of : Photon correlations generated by inelastic scattering in a one-dimensional waveguide coupled to three-level systems. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 82, 71-78.	1.3	0
167	Title is missing!. Waves in Random and Complex Media, 2000, 10, 337-337.	1.5	0
168	Quantum Wires and Ballistic Point Contacts. , 1989, , 317-417.		0
169	Transport in Electron Waveguides: Filtering and Bend Resistances. , 1991, , 201-206.		0
170	Potential Fluctuations in Heterostructure Devices. NATO ASI Series Series B: Physics, 1991, , 387-397.	0.2	0
171	Coherent Ballistic Transport in Micro-Junctions: Quenching, Fluctuations, and Chaos. , 1992, , 44-61.		0