

# Adam P Micolich

## List of Publications by Citations

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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.

126 papers	1,991 citations	23 h-index	38 g-index
161 ext. papers	2,240 ext. citations	5.4 avg, IF	4.57 L-index

#	Paper	IF	Citations
126	Fractal analysis of Pollock's drip paintings. <i>Nature</i> , <b>1999</b> , 399, 422-422	50.4	206
125	A conducting polymer with enhanced electronic stability applied in cardiac models. <i>Science Advances</i> , <b>2016</b> , 2, e1601007	14.3	131
124	What lurks below the last plateau: experimental studies of the $0.7 \frac{2e^2}{h}$ conductance anomaly in one-dimensional systems. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 443201	1.8	75
123	Zeeman splitting in ballistic hole quantum wires. <i>Physical Review Letters</i> , <b>2006</b> , 97, 026403	7.4	75
122	Realizing lateral wrap-gated nanowire FETs: controlling gate length with chemistry rather than lithography. <i>Nano Letters</i> , <b>2012</b> , 12, 1-6	11.5	72
121	Nanopore blockade sensors for ultrasensitive detection of proteins in complex biological samples. <i>Nature Communications</i> , <b>2019</b> , 10, 2109	17.4	68
120	Authenticating Pollock paintings using fractal geometry. <i>Pattern Recognition Letters</i> , <b>2007</b> , 28, 695-702	4.7	66
119	Evolution of fractal patterns during a classical-quantum transition. <i>Physical Review Letters</i> , <b>2001</b> , 87, 036802	7.4	53
118	Ballistic transport in induced one-dimensional hole systems. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 092105	3.4	46
117	The Construction of Jackson Pollock's Fractal Drip Paintings. <i>Leonardo</i> , <b>2002</b> , 35, 203-207	0.1	43
116	Conductance quantization and the $0.7 \frac{2e^2}{h}$ conductance anomaly in one-dimensional hole systems. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 012107	3.4	37
115	Impact of long- and short-range disorder on the metallic behaviour of two-dimensional systems. <i>Nature Physics</i> , <b>2008</b> , 4, 55-59	16.2	35
114	Role of background impurities in the single-particle relaxation lifetime of a two-dimensional electron gas. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	32
113	Fractal expressionism. <i>Physics World</i> , <b>1999</b> , 12, 25-28	0.5	32
112	Fabrication and characterization of ambipolar devices on an undoped AlGaAs/GaAs heterostructure. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 052101	3.4	30
111	Quantum transport in open mesoscopic cavities. <i>Chaos, Solitons and Fractals</i> , <b>1997</b> , 8, 1299-1324	9.3	30
110	InAs Nanowire Transistors with Multiple, Independent Wrap-Gate Segments. <i>Nano Letters</i> , <b>2015</b> , 15, 2836-43	11.5	27

109	0.7 Structure and zero bias anomaly in ballistic hole quantum wires. <i>Physical Review Letters</i> , <b>2008</b> , 100, 016403	7.4	26
108	Observation of orientation- and k-dependent Zeeman spin-splitting in hole quantum wires on (100)-oriented AlGaAs/GaAs heterostructures. <i>New Journal of Physics</i> , <b>2010</b> , 12, 033043	2.9	25
107	Fabrication of induced two-dimensional hole systems on (311)A GaAs. <i>Journal of Applied Physics</i> , <b>2006</b> , 99, 023707	2.5	25
106	Geometry-induced fractal behaviour in a semiconductor billiard. <i>Journal of Physics Condensed Matter</i> , <b>1998</b> , 10, 1339-1347	1.8	25
105	Impact of small-angle scattering on ballistic transport in quantum dots. <i>Physical Review Letters</i> , <b>2012</b> , 108, 196807	7.4	24
104	Resistively detected nuclear magnetic resonance in n- and p-type GaAs quantum point contacts. <i>Nano Letters</i> , <b>2011</b> , 11, 3147-50	11.5	24
103	Observation of the Kondo effect in a spin-3/2 hole quantum dot. <i>Physical Review Letters</i> , <b>2011</b> , 107, 076805	7.4	23
102	Electron-beam patterning of polymer electrolyte films to make multiple nanoscale gates for nanowire transistors. <i>Nano Letters</i> , <b>2014</b> , 14, 94-100	11.5	22
101	Enhanced Zeeman splitting in Ga <sub>0.25</sub> In <sub>0.75</sub> As quantum point contacts. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 012105	3.4	22
100	Electromagnetic wave chaos in gradient refractive index optical cavities. <i>Physical Review Letters</i> , <b>2001</b> , 86, 5466-9	7.4	22
99	Hybrid Nanowire Ion-to-Electron Transducers for Integrated Bioelectronic Circuitry. <i>Nano Letters</i> , <b>2017</b> , 17, 827-833	11.5	21
98	Using a tunable quantum wire to measure the large out-of-plane spin splitting of quasi two-dimensional holes in a GaAs nanostructure. <i>Nano Letters</i> , <b>2013</b> , 13, 148-52	11.5	21
97	AlGaAs/GaAs single electron transistor fabricated without modulation doping. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 112104	3.4	20
96	Fabrication and characterization of an induced GaAs single hole transistor. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 092103	3.4	20
95	The interplay between one-dimensional confinement and two-dimensional crystallographic anisotropy effects in ballistic hole quantum wires. <i>New Journal of Physics</i> , <b>2009</b> , 11, 043018	2.9	20
94	Revisiting Pollock's drip paintings (Reply). <i>Nature</i> , <b>2006</b> , 444, E10-E11	50.4	19
93	Extreme sensitivity of the spin-splitting and 0.7 anomaly to confining potential in one-dimensional nanoelectronic devices. <i>Nano Letters</i> , <b>2012</b> , 12, 4495-502	11.5	18
92	Field-orientation dependence of the Zeeman spin splitting in (In,Ga)As quantum point contacts. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	17

91	Piezoelectric rotator for studying quantum effects in semiconductor nanostructures at high magnetic fields and low temperatures. <i>Review of Scientific Instruments</i> , <b>2010</b> , 81, 113905	1.7	17
90	Regaining a Spatial Dimension: Mechanically Transferrable Two-Dimensional InAs Nanofins Grown by Selective Area Epitaxy. <i>Nano Letters</i> , <b>2019</b> , 19, 4666-4677	11.5	16
89	Self-similar conductance fluctuations in a Sinai billiard with a mixed chaotic phase space. <i>Physica B: Condensed Matter</i> , <b>1998</b> , 249-251, 334-338	2.8	16
88	Single-Material OECT-Based Flexible Complementary Circuits Featuring Polyaniline in Both Conducting Channels. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2007205	15.6	16
87	Correlation analysis of self-similarity in semiconductor billiards. <i>Physical Review B</i> , <b>1997</b> , 56, R12733-R12736	3.3	15
86	Environmental coupling and phase breaking in open quantum dots. <i>Journal of Physics Condensed Matter</i> , <b>1998</b> , 10, L55-L61	1.8	15
85	Seeing shapes in seemingly random spatial patterns: Fractal analysis of Rorschach inkblots. <i>PLoS ONE</i> , <b>2017</b> , 12, e0171289	3.7	14
84	Effect of screening long-range Coulomb interactions on the metallic behavior in two-dimensional hole systems. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	14
83	Three key questions on fractal conductance fluctuations: Dynamics, quantization, and coherence. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	14
82	Evolution of the bilayer $\nu=1$ quantum Hall state under charge imbalance. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	14
81	The influence of atmosphere on the performance of pure-phase WZ and ZB InAs nanowire transistors. <i>Nanotechnology</i> , <b>2017</b> , 28, 454001	3.4	12
80	Using Polymer Electrolyte Gates to Set-and-Freeze Threshold Voltage and Local Potential in Nanowire-based Devices and Thermoelectrics. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 255-262	15.6	12
79	Electronic comparison of InAs wurtzite and zincblende phases using nanowire transistors. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 911-914	2.5	12
78	Ground-plane screening of Coulomb interactions in two-dimensional systems: How effectively can one two-dimensional system screen interactions in another. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	12
77	Origin of gate hysteresis in p-type Si-doped AlGaAs/GaAs heterostructures. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	12
76	Phase Breaking as a Probe of the Intrinsic Level Spectrum of Open Quantum Dots. <i>Physica Status Solidi (B): Basic Research</i> , <b>1997</b> , 204, 314-317	1.3	12
75	Dependence of fractal conductance fluctuations on soft-wall profile in a double-layer semiconductor billiard. <i>Applied Physics Letters</i> , <b>2002</b> , 80, 4381-4383	3.4	12
74	Exact and statistical self-similarity in magnetoconductance fluctuations: A unified picture. <i>Physical Review B</i> , <b>1998</b> , 58, 11107-11110	3.3	12

73	Scaling of the Kondo zero-bias peak in a hole quantum dot at finite temperatures. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	11
72	Ohmic conduction of sub-10nm P-doped silicon nanowires at cryogenic temperatures. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 052101	3.4	11
71	Chaos in Quantum Ratchets. <i>Physica Scripta</i> , <b>2001</b> , T90, 54	2.6	11
70	Is it the boundaries or disorder that dominates electron transport in semiconductor 'billiards'?. <i>Fortschritte Der Physik</i> , <b>2013</b> , 61, 332-347	5.7	10
69	Radio-frequency reflectometry on large gated two-dimensional systems. <i>Review of Scientific Instruments</i> , <b>2008</b> , 79, 123901	1.7	10
68	Interaction correction to the longitudinal conductivity and Hall resistivity in high-quality two-dimensional GaAs electron and hole systems. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	10
67	Using Ultrathin Parylene Films as an Organic Gate Insulator in Nanowire Field-Effect Transistors. <i>Nano Letters</i> , <b>2018</b> , 18, 4431-4439	11.5	9
66	Effects of geometrical ray chaos on the electromagnetic eigenmodes of a gradient index optical cavity. <i>Physical Review E</i> , <b>2001</b> , 64, 026203	2.4	9
65	An investigation of Weierstrass self-similarity in a semiconductor billiard. <i>Europhysics Letters</i> , <b>2000</b> , 49, 417-423	1.6	9
64	Towards low-dimensional hole systems in Be-doped GaAs nanowires. <i>Nanotechnology</i> , <b>2017</b> , 28, 134005	3.4	8
63	The 0.7 anomaly in one-dimensional hole quantum wires. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 164205	1.8	8
62	Temperature dependent fractal dimension of magneto-conductance fluctuations in semiconductor billiards. <i>Superlattices and Microstructures</i> , <b>1999</b> , 25, 157-161	2.8	8
61	A parylene coating system specifically designed for producing ultra-thin films for nanoscale device applications. <i>Review of Scientific Instruments</i> , <b>2019</b> , 90, 083901	1.7	7
60	The effect of (NH <sub>4</sub> ) <sub>2</sub> S <sub>x</sub> passivation on the (311)A GaAs surface and its use in AlGaAs/GaAs heterostructure devices. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 325304	1.8	7
59	An improved process for fabricating high-mobility organic molecular crystal field-effect transistors. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 084511	2.5	7
58	Quantum ratchets act as heat pumps. <i>Physica B: Condensed Matter</i> , <b>2002</b> , 314, 464-468	2.8	7
57	A physical explanation for the origin of self-similar magnetoconductance fluctuations in semiconductor billiards. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2000</b> , 7, 726-730	3	7
56	Achieving short high-quality gate-all-around structures for horizontal nanowire field-effect transistors. <i>Nanotechnology</i> , <b>2019</b> , 30, 064001	3.4	7

55	Probing the sensitivity of electron wave interference to disorder-induced scattering in solid-state devices. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	6
54	Superconductivity in metal-mixed ion-implanted polymer films. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 152503	3.4	6
53	Integrated bioelectronic proton-gated logic elements utilizing nanoscale patterned Nafion. <i>Materials Horizons</i> , <b>2021</b> , 8, 224-233	14.4	6
52	Using light and heat to controllably switch and reset disorder configuration in nanoscale devices. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	5
51	p-GaAs Nanowire Metal-Semiconductor Field-Effect Transistors with Near-Thermal Limit Gating. <i>Nano Letters</i> , <b>2018</b> , 18, 5673-5680	11.5	5
50	Radio-frequency reflectometry on an undoped AlGaAs/GaAs single electron transistor. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 012114	3.4	5
49	Fabrication and characterisation of gallium arsenide ambipolar quantum point contacts. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 183504	3.4	5
48	Electrometry using the quantum Hall effect in a bilayer two-dimensional electron system. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 212102	3.4	5
47	Near-thermal limit gating in heavily doped III-V semiconductor nanowires using polymer electrolytes. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	5
46	Emerging challenges in wind energy forecasting for Australia. <i>Australian Meteorological Magazine</i> , <b>2009</b> , 58, 99-106		5
45	Nonvolatile Memory Action Due to Hot-Carrier Charge Injection in Graphene-on-Parylene Transistors. <i>ACS Applied Electronic Materials</i> , <b>2019</b> , 1, 2260-2267	4	4
44	A study of transport suppression in an undoped AlGaAs/GaAs quantum dot single-electron transistor. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 505302	1.8	4
43	The influence of environmental coupling on phase breaking in open quantum dots. <i>Solid-State Electronics</i> , <b>1998</b> , 42, 1281-1285	1.7	4
42	Comment on Fractal Conductance Fluctuations in a Soft-Wall Stadium and a Sinai Billiard. <i>Physical Review Letters</i> , <b>1999</b> , 83, 1074-1074	7.4	4
41	Impact of invasive metal probes on Hall measurements in semiconductor nanostructures. <i>Nanoscale</i> , <b>2020</b> , 12, 20317-20325	7.7	4
40	An all-organic active pixel photosensor featuring ion-gel transistors <b>2015</b> , 3, 8-13		3
39	Tracking the energies of one-dimensional sub-band edges in quantum point contacts using dc conductance measurements. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 362201	1.8	3
38	Origin of the hysteresis in bilayer two-dimensional systems in the quantum Hall regime. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	3

37	Fractal transistors. <i>Semiconductor Science and Technology</i> , <b>1997</b> , 12, 1459-1464	1.8	3
36	Wave function scarring and magnetotransport in quantum dots. <i>Physica B: Condensed Matter</i> , <b>1998</b> , 249-251, 353-357	2.8	3
35	The effect of temperature and gas flow on the physical vapour growth of mm-scale rubrene crystals for organic FETs <b>2007</b> ,		3
34	Scale factor mapping of statistical and exact self-similarity in billiards. <i>Semiconductor Science and Technology</i> , <b>1998</b> , 13, A41-A43	1.8	3
33	Observation of Fractal Conductance Fluctuations over Three Orders of Magnitude. <i>Australian Journal of Physics</i> , <b>1999</b> , 52, 887		3
32	Is thermal annealing a viable alternative for crystallisation in triethylsilylethynyl anthradithiophene organic transistors? <b>2014</b> , 2, 7-14		2
31	Competition between superconductivity and weak localization in metal-mixed ion-implanted polymers. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	2
30	Preparation of metal mixed plastic superconductors: Electrical properties of tin-antimony thin films on plastic substrates. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 093909	2.5	2
29	Ballistic induced hole quantum wires fabricated on a (100)-oriented AlGaAs/GaAs heterostructure. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2010</b> , 42, 1111-1113	3	2
28	Experimental and theoretical investigations of clusters in the magneto-fingerprints of Sinai billiards. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>1998</b> , 51, 212-215	3.1	2
27	Ballistic transport in one-dimensional bilayer hole systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2006</b> , 34, 550-552	3	2
26	Fabrication and characterization of a 2D hole system a in novel (311)A GaAs SISFET. <i>Microelectronics Journal</i> , <b>2005</b> , 36, 327-330	1.8	2
25	Chaotic ray dynamics and fast optical switching in micro-cavities with a graded refractive index. <i>Physica B: Condensed Matter</i> , <b>1999</b> , 272, 484-487	2.8	2
24	Prospects for single-molecule electrostatic detection in molecular motor gliding motility assays. <i>New Journal of Physics</i> ,	2.9	2
23	How InAs crystal phase affects the electrical performance of InAs nanowire FETs <b>2014</b> ,		1
22	Determining the stability and activation energy of Si acceptors in AlGaAs using quantum interference in an open hole quantum dot. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	1
21	Radio-frequency reflectometryA fast and sensitive measurement method for two-dimensional systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2010</b> , 42, 1192-1195	3	1
20	Quantum transport in one-dimensional GaAs hole systems. <i>International Journal of Nanotechnology</i> , <b>2008</b> , 5, 318	1.5	1



19	Screening long-range Coulomb interactions in 2D hole systems using a bilayer heterostructure. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2008</b> , 40, 1700-1702	3	1
18	Single particle and momentum relaxation times in two-dimensional electron systems (updated May 14, 2008) <b>2007</b> ,		1
17	Stability of the bilayer $\nu=1$ quantum Hall state under charge imbalance. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2004</b> , 22, 40-43	3	1
16	Discrete energy level spectrum dependence of fractal conductance fluctuations in semiconductor billiards. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2002</b> , 13, 683-686	3	1
15	Compact fourth-order finite difference method for solving differential equations. <i>Physical Review E</i> , <b>2001</b> , 64, 047701	2.4	1
14	Hybrid nanowire ion-to-electron transducers for integrated bioelectronic circuitry (Conference Presentation) <b>2016</b> ,		1
13	The dependence of fractal conductance fluctuations on soft-wall profile in a double-2DEG billiard. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2002</b> , 12, 841-844	3	0
12	Postgrowth Shaping and Transport Anisotropy in Two-Dimensional InAs Nanofins. <i>ACS Nano</i> , <b>2021</b> , 15, 7226-7236	16.7	0
11	A tunable metal-organic resistance thermometer. <i>ChemPhysChem</i> , <b>2011</b> , 12, 116-21	3.2	
10	(100) GaAs/Al <sub>x</sub> Ga <sub>1-x</sub> As heterostructures for Zeeman spin splitting studies of hole quantum wires. <i>Journal of Crystal Growth</i> , <b>2011</b> , 323, 48-51	1.6	
9	Ground-plane screening of Coulomb interactions by a nearby two-dimensional system. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2010</b> , 42, 1228-1231	3	
8	Crystallographic anisotropy of the Zeeman splitting in 1D hole quantum wires. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2010</b> , 42, 967-970	3	
7	Geometry-induced fractal behaviour. <i>Physica B: Condensed Matter</i> , <b>1998</b> , 249-251, 343-347	2.8	
6	0.7 Structure and zero bias anomaly in one-dimensional hole systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2008</b> , 40, 1501-1503	3	
5	Metallic behavior in low-disorder two-dimensional hole systems in the presence of long- and short-range disorder. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2008</b> , 40, 1599-1601	3	
4	The dependence of fractal conductance fluctuations on semiconductor billiard parameters. <i>Physica B: Condensed Matter</i> , <b>2002</b> , 314, 477-480	2.8	
3	Geometry-independence of fractal ballistic processes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2003</b> , 19, 225-229	3	
2	Temperature and size dependence of fractal MCF in semiconductor billiards. <i>Microelectronic Engineering</i> , <b>2000</b> , 51-52, 241-247	2.5	



- 1 Fractal Transport Behavior in Coupled-Dot System. *Journal of the Physical Society of Japan*, **2003**, 72, 203-204 1.5