Adam P Micolich

List of Publications by Year in Descending Order

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	Postgrowth Shaping and Transport Anisotropy in Two-Dimensional InAs Nanofins. *ACS Nano*, **2021**, 15, 7226-7236	16.7	0
125	Single-Material OECT-Based Flexible Complementary Circuits Featuring Polyaniline in Both Conducting Channels. *Advanced Functional Materials*, **2021**, 31, 2007205	15.6	16
124	Integrated bioelectronic proton-gated logic elements utilizing nanoscale patterned Nafion. *Materials Horizons*, **2021**, 8, 224-233	14.4	6
123	Impact of invasive metal probes on Hall measurements in semiconductor nanostructures. *Nanoscale* , **2020**, 12, 20317-20325	7.7	4
122	Regaining a Spatial Dimension: Mechanically Transferrable Two-Dimensional InAs Nanofins Grown by Selective Area Epitaxy. *Nano Letters*, **2019**, 19, 4666-4677	11.5	16
121	Nanopore blockade sensors for ultrasensitive detection of proteins in complex biological samples. *Nature Communications*, **2019**, 10, 2109	17.4	68
120	A parylene coating system specifically designed for producing ultra-thin films for nanoscale device applications. *Review of Scientific Instruments*, **2019**, 90, 083901	1.7	7
119	Nonvolatile Memory Action Due to Hot-Carrier Charge Injection in Graphene-on-Parylene Transistors. *ACS Applied Electronic Materials*, **2019**, 1, 2260-2267	4	4
118	Achieving short high-quality gate-all-around structures for horizontal nanowire field-effect transistors. *Nanotechnology*, **2019**, 30, 064001	3.4	7
117	p-GaAs Nanowire Metal-Semiconductor Field-Effect Transistors with Near-Thermal Limit Gating. *Nano Letters*, **2018**, 18, 5673-5680	11.5	5
116	Using Ultrathin Parylene Films as an Organic Gate Insulator in Nanowire Field-Effect Transistors. *Nano Letters*, **2018**, 18, 4431-4439	11.5	9
115	Near-thermal limit gating in heavily doped III-V semiconductor nanowires using polymer electrolytes. *Physical Review Materials*, **2018**, 2,	3.2	5
114	Towards low-dimensional hole systems in Be-doped GaAs nanowires. *Nanotechnology*, **2017**, 28, 134005	3.4	8
113	Hybrid Nanowire Ion-to-Electron Transducers for Integrated Bioelectronic Circuitry. *Nano Letters*, **2017**, 17, 827-833	11.5	21
112	The influence of atmosphere on the performance of pure-phase WZ and ZB InAs nanowire transistors. *Nanotechnology*, **2017**, 28, 454001	3.4	12
111	Seeing shapes in seemingly random spatial patterns: Fractal analysis of Rorschach inkblots. *PLoS ONE*, **2017**, 12, e0171289	3.7	14
110	Hybrid nanowire ion-to-electron transducers for integrated bioelectronic circuitry (Conference Presentation) **2016**,		1

109	A conducting polymer with enhanced electronic stability applied in cardiac models. *Science Advances*, **2016**, 2, e1601007	14.3	131
108	Using light and heat to controllably switch and reset disorder configuration in nanoscale devices. *Physical Review B*, **2015**, 91,	3.3	5
107	InAs Nanowire Transistors with Multiple, Independent Wrap-Gate Segments. *Nano Letters*, **2015**, 15, 2836-43	11.5	27
106	Using Polymer Electrolyte Gates to Set-and-Freeze Threshold Voltage and Local Potential in Nanowire-based Devices and Thermoelectrics. *Advanced Functional Materials*, **2015**, 25, 255-262	15.6	12
105	Fabrication and characterisation of gallium arsenide ambipolar quantum point contacts. *Applied Physics Letters*, **2015**, 106, 183504	3.4	5
104	An all-organic active pixel photosensor featuring ion-gel transistors **2015**, 3, 8-13		3
103	Radio-frequency reflectometry on an undoped AlGaAs/GaAs single electron transistor. *Applied Physics Letters*, **2014**, 104, 012114	3.4	5
102	Electron-beam patterning of polymer electrolyte films to make multiple nanoscale gates for nanowire transistors. *Nano Letters*, **2014**, 14, 94-100	11.5	22
101	Is thermal annealing a viable alternative for crystallisation in triethylsilylethynyl anthradithiophene organic transistors? **2014**, 2, 7-14		2
100	How InAs crystal phase affects the electrical performance of InAs nanowire FETs **2014**,		1
99	Determining the stability and activation energy of Si acceptors in AlGaAs using quantum interference in an open hole quantum dot. *Physical Review B*, **2014**, 89,	3.3	1
98	Is it the boundaries or disorder that dominates electron transport in semiconductor 'billiards'?. *Fortschritte Der Physik*, **2013**, 61, 332-347	5.7	10
97	A study of transport suppression in an undoped AlGaAs/GaAs quantum dot single-electron transistor. *Journal of Physics Condensed Matter*, **2013**, 25, 505302	1.8	4
96	Using a tunable quantum wire to measure the large out-of-plane spin splitting of quasi two-dimensional holes in a GaAs nanostructure. *Nano Letters*, **2013**, 13, 148-52	11.5	21
95	The effect of (NH4)2Sx passivation on the (311)A GaAs surface and its use in AlGaAs/GaAs heterostructure devices. *Journal of Physics Condensed Matter*, **2013**, 25, 325304	1.8	7
94	Scaling of the Kondo zero-bias peak in a hole quantum dot at finite temperatures. *Physical Review B* , **2013**, 87,	3.3	11
93	Electronic comparison of InAs wurtzite and zincblende phases using nanowire transistors. *Physica Status Solidi - Rapid Research Letters*, **2013**, 7, 911-914	2.5	12
92	Realizing lateral wrap-gated nanowire FETs: controlling gate length with chemistry rather than lithography. *Nano Letters*, **2012**, 12, 1-6	11.5	72

91	Extreme sensitivity of the spin-splitting and 0.7 anomaly to confining potential in one-dimensional nanoelectronic devices. *Nano Letters*, **2012**, 12, 4495-502	11.5	18
90	Fabrication and characterization of ambipolar devices on an undoped AlGaAs/GaAs heterostructure. *Applied Physics Letters*, **2012**, 100, 052101	3.4	30
89	Impact of small-angle scattering on ballistic transport in quantum dots. *Physical Review Letters*, **2012**, 108, 196807	7.4	24
88	Origin of gate hysteresis in p-type Si-doped AlGaAs/GaAs heterostructures. *Physical Review B*, **2012**, 86,	3.3	12
87	Probing the sensitivity of electron wave interference to disorder-induced scattering in solid-state devices. *Physical Review B*, **2012**, 85,	3.3	6
86	What lurks below the last plateau: experimental studies of the 0.7 ?2e(2)/h conductance anomaly in one-dimensional systems. *Journal of Physics Condensed Matter*, **2011**, 23, 443201	1.8	75
85	Tracking the energies of one-dimensional sub-band edges in quantum point contacts using dc conductance measurements. *Journal of Physics Condensed Matter*, **2011**, 23, 362201	1.8	3
84	A tunable metal-organic resistance thermometer. *ChemPhysChem*, **2011**, 12, 116-21	3.2	
83	Resistively detected nuclear magnetic resonance in n- and p-type GaAs quantum point contacts. *Nano Letters*, **2011**, 11, 3147-50	11.5	24
82	(100) GaAs/AlxGa1?As heterostructures for Zeeman spin splitting studies of hole quantum wires. *Journal of Crystal Growth*, **2011**, 323, 48-51	1.6	
81	Observation of the Kondo effect in a spin-3/2 hole quantum dot. *Physical Review Letters*, **2011**, 107, 076805	7.4	23
80	Electrometry using the quantum Hall effect in a bilayer two-dimensional electron system. *Applied Physics Letters*, **2010**, 96, 212102	3.4	5
79	Field-orientation dependence of the Zeeman spin splitting in (In,Ga)As quantum point contacts. *Physical Review B*, **2010**, 81,	3.3	17
78	Competition between superconductivity and weak localization in metal-mixed ion-implanted polymers. *Physical Review B*, **2010**, 81,	3.3	2
77	AlGaAs/GaAs single electron transistor fabricated without modulation doping. *Applied Physics Letters*, **2010**, 96, 112104	3.4	20
76	Observation of orientation- andk-dependent Zeeman spin-splitting in hole quantum wires on (100)-oriented AlGaAs/GaAs heterostructures. *New Journal of Physics*, **2010**, 12, 033043	2.9	25
75	Fabrication and characterization of an induced GaAs single hole transistor. *Applied Physics Letters*, **2010**, 96, 092103	3.4	20
74	Origin of the hysteresis in bilayer two-dimensional systems in the quantum Hall regime. *Physical Review B*, **2010**, 82,	3.3	3

73	Piezoelectric rotator for studying quantum effects in semiconductor nanostructures at high magnetic fields and low temperatures. *Review of Scientific Instruments*, **2010**, 81, 113905	1.7	17
72	Ground-plane screening of Coulomb interactions by a nearby two-dimensional system. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 42, 1228-1231	3	
71	Crystallographic anisotropy of the Zeeman splitting in 1D hole quantum wires. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 42, 967-970	3	
70	Radio-frequency reflectometryÂ fast and sensitive measurement method for two-dimensional systems. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 42, 1192-1195	3	1
69	Ballistic induced hole quantum wires fabricated on a (100)-oriented AlGaAs/GaAs heterostructure. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 42, 1111-1113	3	2
68	Ground-plane screening of Coulomb interactions in two-dimensional systems: How effectively can one two-dimensional system screen interactions in another. *Physical Review B*, **2009**, 80,	3.3	12
67	Preparation of metal mixed plastic superconductors: Electrical properties of tin-antimony thin films on plastic substrates. *Journal of Applied Physics*, **2009**, 105, 093909	2.5	2
66	The interplay between one-dimensional confinement and two-dimensional crystallographic anisotropy effects in ballistic hole quantum wires. *New Journal of Physics*, **2009**, 11, 043018	2.9	20
65	Role of background impurities in the single-particle relaxation lifetime of a two-dimensional electron gas. *Physical Review B*, **2009**, 80,	3.3	32
64	Emerging challenges in wind energy forecasting for Australia. *Australian Meteorological Magazine*, **2009**, 58, 99-106		5
63	Impact of long- and short-range disorder on the metallic behaviour of two-dimensional systems. *Nature Physics*, **2008**, 4, 55-59	16.2	35
62	The 0.7 anomaly in one-dimensional hole quantum wires. *Journal of Physics Condensed Matter*, **2008** , 20, 164205	1.8	8
61	Effect of screening long-range Coulomb interactions on the metallic behavior in two-dimensional hole systems. *Physical Review B*, **2008**, 77,	3.3	14
60	Enhanced Zeeman splitting in Ga0.25In0.75As quantum point contacts. *Applied Physics Letters*, **2008** , 93, 012105	3.4	22
59	Radio-frequency reflectometry on large gated two-dimensional systems. *Review of Scientific Instruments*, **2008**, 79, 123901	1.7	10
58	Ohmic conduction of sub-10nm P-doped silicon nanowires at cryogenic temperatures. *Applied Physics Letters*, **2008**, 92, 052101	3.4	11
57	0.7 Structure and zero bias anomaly in ballistic hole quantum wires. *Physical Review Letters*, **2008**, 100, 016403	7.4	26
56	Quantum transport in one-dimensional GaAs hole systems. *International Journal of Nanotechnology*, **2008**, 5, 318	1.5	1

55	0.7 Structure and zero bias anomaly in one-dimensional hole systems. *Physica E: Low-Dimensional Systems and Nanostructures*, **2008**, 40, 1501-1503	3	
54	Metallic behavior in low-disorder two-dimensional hole systems in the presence of long- and short-range disorder. *Physica E: Low-Dimensional Systems and Nanostructures*, **2008**, 40, 1599-1601	3	
53	Screening long-range Coulomb interactions in 2D hole systems using a bilayer heterostructure. *Physica E: Low-Dimensional Systems and Nanostructures*, **2008**, 40, 1700-1702	3	1
52	Authenticating Pollock paintings using fractal geometry. *Pattern Recognition Letters*, **2007**, 28, 695-702	4.7	66
51	An improved process for fabricating high-mobility organic molecular crystal field-effect transistors. *Journal of Applied Physics*, **2007**, 102, 084511	2.5	7
50	The effect of temperature and gas flow on the physical vapour growth of mm-scale rubrene crystals for organic FETs **2007**,		3
49	Single particle and momentum relaxation times in two-dimensional electron systems (updated May 14, 2008) **2007**,		1
48	Zeeman splitting in ballistic hole quantum wires. *Physical Review Letters*, **2006**, 97, 026403	7.4	75
47	Ballistic transport in induced one-dimensional hole systems. *Applied Physics Letters*, **2006**, 89, 092105	3.4	46
46	Fabrication of induced two-dimensional hole systems on (311)A GaAs. *Journal of Applied Physics*, **2006**, 99, 023707	2.5	25
45	Conductance quantization and the 0.7□e2□ conductance anomaly in one-dimensional hole systems. *Applied Physics Letters*, **2006**, 88, 012107	3.4	37
44	Superconductivity in metal-mixed ion-implanted polymer films. *Applied Physics Letters*, **2006**, 89, 152503	3.4	6
43	Revisiting Pollock's drip paintings (Reply). *Nature*, **2006**, 444, E10-E11	50.4	19
42	Ballistic transport in one-dimensional bilayer hole systems. *Physica E: Low-Dimensional Systems and Nanostructures*, **2006**, 34, 550-552	3	2
41	Fabrication and characterization of a 2D hole system a in novel (311)A GaAs SISFET. *Microelectronics Journal*, **2005**, 36, 327-330	1.8	2
40	Interaction correction to the longitudinal conductivity and Hall resistivity in high-quality two-dimensional GaAs electron and hole systems. *Physical Review B*, **2005**, 72,	3.3	10
39	Evolution of the bilayer □1 quantum Hall state under charge imbalance. *Physical Review B*, **2005**, 71,	3.3	14
38	Three key questions on fractal conductance fluctuations: Dynamics, quantization, and coherence. *Physical Review B*, **2004**, 70,	3.3	14

37	Stability of the bilayer □1 quantum Hall state under charge imbalance. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 22, 40-43	3	1
36	Geometry-independence of fractal ballistic processes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2003**, 19, 225-229	3	
35	Fractal Transport Behavior in Coupled-Dot System. *Journal of the Physical Society of Japan*, **2003**, 72, 203-204	1.5	
34	Quantum ratchets act as heat pumps. *Physica B: Condensed Matter*, **2002**, 314, 464-468	2.8	7
33	The dependence of fractal conductance fluctuations on semiconductor billiard parameters. *Physica B: Condensed Matter*, **2002**, 314, 477-480	2.8	
32	The dependence of fractal conductance fluctuations on soft-wall profile in a double-2DEG billiard. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 12, 841-844	3	0
31	Discrete energy level spectrum dependence of fractal conductance fluctuations in semiconductor billiards. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 13, 683-686	3	1
30	Dependence of fractal conductance fluctuations on soft-wall profile in a double-layer semiconductor billiard. *Applied Physics Letters*, **2002**, 80, 4381-4383	3.4	12
29	The Construction of Jackson Pollock's Fractal Drip Paintings. *Leonardo*, **2002**, 35, 203-207	0.1	43
28	Chaos in Quantum Ratchets. *Physica Scripta*, **2001**, T90, 54	2.6	11
27	Evolution of fractal patterns during a classical-quantum transition. *Physical Review Letters*, **2001**, 87, 036802	7.4	53
26	Compact fourth-order finite difference method for solving differential equations. *Physical Review E* , **2001**, 64, 047701	2.4	1
25	Effects of geometrical ray chaos on the electromagnetic eigenmodes of a gradient index optical cavity. *Physical Review E*, **2001**, 64, 026203	2.4	9
24	Electromagnetic wave chaos in gradient refractive index optical cavities. *Physical Review Letters*, **2001**, 86, 5466-9	7.4	22
23	A physical explanation for the origin of self-similar magnetoconductance fluctuations in semiconductor billiards. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 726-730	3	7
22	Temperature and size dependence of fractal MCF in semiconductor billiards. *Microelectronic Engineering*, **2000**, 51-52, 241-247	2.5	
21	An investigation of Weierstrass self-similarity in a semiconductor billiard. *Europhysics Letters*, **2000**, 49, 417-423	1.6	9
20	Comment on □ractal Conductance Fluctuations in a Soft-Wall Stadium and a Sinai Billiard□*Physical Review Letters*, **1999**, 83, 1074-1074	7.4	4

19	Chaotic ray dynamics and fast optical switching in micro-cavities with a graded refractive index. *Physica B: Condensed Matter*, **1999**, 272, 484-487	2.8	2
18	Fractal analysis of Pollock's drip paintings. *Nature*, **1999**, 399, 422-422	50.4	206
17	Temperature dependent fractal dimension of magneto-conductance fluctuations in semiconductor billiards. *Superlattices and Microstructures*, **1999**, 25, 157-161	2.8	8
16	Fractal expressionism. *Physics World*, **1999**, 12, 25-28	0.5	32
15	Observation of Fractal Conductance Fluctuations over Three Orders of Magnitude. *Australian Journal of Physics*, **1999**, 52, 887		3
14	The influence of environmental coupling on phase breaking in open quantum dots. *Solid-State Electronics*, **1998**, 42, 1281-1285	1.7	4
13	Self-similar conductance fluctuations in a Sinai billiard with a mixed chaotic phase space. *Physica B: Condensed Matter*, **1998**, 249-251, 334-338	2.8	16
12	Geometry-induced fractal behaviour:. *Physica B: Condensed Matter*, **1998**, 249-251, 343-347	2.8	
11	Wave function scarring and magnetotransport in quantum dots. *Physica B: Condensed Matter*, **1998**, 249-251, 353-357	2.8	3
10	Experimental and theoretical investigations of clusters in the magneto-fingerprints of Sinai billiards. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **1998**, 51, 212-215	3.1	2
9	Environmental coupling and phase breaking in open quantum dots. *Journal of Physics Condensed Matter*, **1998**, 10, L55-L61	1.8	15
8	Geometry-induced fractal behaviour in a semiconductor billiard. *Journal of Physics Condensed Matter*, **1998**, 10, 1339-1347	1.8	25
7	Scale factor mapping of statistical and exact self-similarity in billiards. *Semiconductor Science and Technology*, **1998**, 13, A41-A43	1.8	3
6	Exact and statistical self-similarity in magnetoconductance fluctuations: A unified picture. *Physical Review B*, **1998**, 58, 11107-11110	3.3	12
5	Fractal transistors. *Semiconductor Science and Technology*, **1997**, 12, 1459-1464	1.8	3
4	Correlation analysis of self-similarity in semiconductor billiards. *Physical Review B*, **1997**, 56, R12733-R12736	3.3	15
3	Quantum transport in open mesoscopic cavities. *Chaos, Solitons and Fractals*, **1997**, 8, 1299-1324	9.3	30
2	Phase Breaking as a Probe of the Intrinsic Level Spectrum of Open Quantum Dots. *Physica Status Solidi (B): Basic Research*, **1997**, 204, 314-317	1.3	12

1	Prospects for single-molecule electrostatic detection in molecular motor gliding motility assays. *New Journal of Physics*,	2.9	2