

# Roberto C Myers

## List of Publications by Year in descending order

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98  
papers

8,305  
citations

101543

36  
h-index

43889

91  
g-index

100  
all docs

100  
docs citations

100  
times ranked

7361  
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral Measurement of the Breakdown Limit of $\text{Ga}_2\text{O}_3$ and Tunnel Ionization of Self-Trapped Excitons and Holes. <i>Physical Review Applied</i> , 2021, 16, .	3.3	3
2	Molecular beam epitaxy of GaN on 2H-MoS <sub>2</sub> . <i>Applied Physics Letters</i> , 2020, 117, .	3.0	25
3	Deep-Recessed $\text{In}_x\text{Ga}_{1-x}$ Delta-Doped Field-Effect Transistors With <i>In Situ</i> Epitaxial Passivation. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 4813-4819.	3.3	2
4	Local electric field measurement in GaN diodes by exciton Franz-Keldysh photocurrent spectroscopy. <i>Applied Physics Letters</i> , 2020, 116, .	2.1	1
5	Interface-induced ferromagnetism in $\frac{1}{4}\text{-Fe}_2\text{O}_3/\frac{1}{2}\text{-Ga}_2\text{O}_3$ superlattices. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	3.0	5
6	Ferromagnetic Epitaxial $\frac{1}{4}\text{-Fe}_2\text{O}_3$ on $\frac{1}{2}\text{-Ga}_2\text{O}_3$ : A New Monoclinic Form of Fe <sub>2</sub> O <sub>3</sub> . <i>Crystal Growth and Design</i> , 2019, 19, 4205-4211.	1.2	7
7	Enhanced uniformity of III-nitride nanowire arrays on bulk metallic glass and nanocrystalline substrates. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019, 37, .	3.2	18
8	Long lifetime of thermally excited magnons in bulk yttrium iron garnet. <i>Physical Review B</i> , 2019, 100, .	13.7	22
9	Excimer-Mediated Intermolecular Charge Transfer in Self-Assembled Donor-Acceptor Dyes on Metal Oxides. <i>Journal of the American Chemical Society</i> , 2019, 141, 8727-8731.	1.2	3
10	Controlled nucleation of monolayer MoSe <sub>2</sub> islands on Si (111) by MBE. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019, 37, 021211.	3.3	18
11	Nanoscale current uniformity and injection efficiency of nanowire light emitting diodes. <i>Applied Physics Letters</i> , 2018, 112, .	14.6	14
12	Nanoscale Electronic Conditioning for Improvement of Nanowire Light-Emitting-Diode Efficiency. <i>ACS Nano</i> , 2018, 12, 3551-3556.	1.2	2
13	Simultaneous molecular beam epitaxy growth at multiple uniform substrate temperatures. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, 011203.	3.0	3
14	Hexagonal Nanopyramidal Prisms of Nearly Intrinsic InN on Patterned GaN Nanowire Arrays. <i>Crystal Growth and Design</i> , 2018, 18, 1191-1197.	0.4	7
15	Nano-Cathodoluminescence Measurement of Asymmetric Carrier Trapping and Radiative Recombination in GaN and InGaN Quantum Disks. <i>Microscopy and Microanalysis</i> , 2018, 24, 93-98.	7.8	16
16	Nonlocal Spin Transport Mediated by a Vortex Liquid in Superconductors. <i>Physical Review Letters</i> , 2018, 121, 187203.	2.5	52
17	Molecular beam epitaxy of 2D-layered gallium selenide on GaN substrates. <i>Journal of Applied Physics</i> , 2017, 121, .	1.5	1
18	Three-dimensional lattice matching of epitaxially embedded nanoparticles. <i>Journal of Crystal Growth</i> , 2017, 459, 209-214.		

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19	Scalable Nernst thermoelectric power using a coiled galphenol wire. AIP Advances, 2017, 7, .	1.3	33
20	Thermally driven long-range magnon spin currents in yttrium iron garnet due to intrinsic spin Seebeck effect. Physical Review B, 2017, 96, .	3.2	30
21	Effect of quantum well shape and width on deep ultraviolet emission in AlGaIn nanowire LEDs. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 947-952.	1.8	9
22	Nanowire LEDs grown directly on flexible metal foil. Applied Physics Letters, 2016, 108, .	3.3	93
23	Self-assembled InN micro-mushrooms by upside-down pendeoepitaxy. Journal of Crystal Growth, 2016, 443, 90-97.	1.5	7
24	Ultrathin GaN quantum disk nanowire LEDs with sub-250 nm electroluminescence. Nanoscale, 2016, 8, 8024-8032.	5.6	44
25	Tunnel junction integrated ultraviolet nanowire LEDs. , 2015, , .		1
26	Effect of the magnon dispersion on the longitudinal spin Seebeck effect in yttrium iron garnets. Physical Review B, 2015, 92, .	3.2	111
27	Long-range pure magnon spin diffusion observed in a nonlocal spin-Seebeck geometry. Physical Review B, 2015, 92, .	3.2	104
28	Anisotropic defect-induced ferromagnetism and transport in Gd-doped GaN two-dimensional electron gasses. Physical Review B, 2015, 92, .	3.2	2
29	Semiconductor Nanowire Light-Emitting Diodes Grown on Metal: A Direction Toward Large-Scale Fabrication of Nanowire Devices. Small, 2015, 11, 5402-5408.	10.0	99
30	Molecular beam epitaxy of InN nanowires on Si. Journal of Crystal Growth, 2015, 428, 59-70.	1.5	10
31	Tuning the polarization-induced free hole density in nanowires graded from GaN to AlN. Applied Physics Letters, 2015, 106, .	3.3	20
32	Electronic Structure and Photocatalytic Water Oxidation Activity of $\text{TiNO}_{2-x}$ ( $x = \text{Ce, Pr, and Nd}$ ) Perovskite Nitride Oxides. Chemistry of Materials, 2015, 27, 2414-2420.	6.7	17
33	Phonon-induced diamagnetic force and its effect on the lattice thermal conductivity. Nature Materials, 2015, 14, 601-606.	27.5	45
34	Moving spins with heat: Prospects for thermally powered spintronics. , 2015, , .		0
35	Tunnel junction enhanced nanowire ultraviolet light emitting diodes. Applied Physics Letters, 2015, 107, .	3.3	58
36	Optical Control of Internal Electric Fields in Band Gap-Graded InGaIn Nanowires. Nano Letters, 2015, 15, 332-338.	9.1	25

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37	Deep ultraviolet emitting polarization induced nanowire light emitting diodes with Al <sub>x</sub> Ga <sub>1-x</sub> N active regions. Nanotechnology, 2014, 25, 455201.	2.6	53
38	Catalyst-free ZnO nanowires on silicon by pulsed laser deposition with tunable density and aspect ratio. Physica E: Low-Dimensional Systems and Nanostructures, 2014, 62, 95-103.	2.7	20
39	p-type doping of MoS <sub>2</sub> thin films using Nb. Applied Physics Letters, 2014, 104, 092104.	3.3	268
40	Spin-Seebeck like signal in ferromagnetic bulk metallic glass without platinum contacts. Solid State Communications, 2014, 198, 40-44.	1.9	12
41	Spin caloritronics. Energy and Environmental Science, 2014, 7, 885.	30.8	361
42	Electron Energy Loss Spectroscopy and Localized Cathodoluminescence Characterization of GaN Quantum Discs. Microscopy and Microanalysis, 2014, 20, 578-579.	0.4	1
43	Compositionally Graded III-Nitride Nanowire Heterostructures: Growth, Characterization, and Applications. , 2014, , 85-119.		1
44	Atomically sharp 318-nm Gd:AlGa <sub>N</sub> ultraviolet light emitting diodes on Si with low threshold voltage. Applied Physics Letters, 2013, 102, .	3.3	8
45	Molecular Beam Epitaxy of Graded-Composition InGa <sub>N</sub> Nanowires. Journal of Electronic Materials, 2013, 42, 863-867.	2.2	13
46	Mixed Polarity in Polarization-Induced p-n Junction Nanowire Light-Emitting Diodes. Nano Letters, 2013, 13, 3029-3035.	9.1	77
47	Full-Scale Characterization of UVLED Al <sub>x</sub> Ga <sub>1-x</sub> N Nanowires via Advanced Electron Microscopy. ACS Nano, 2013, 7, 5045-5051.	14.6	10
48	GdN Nanoisland-Based GaN Tunnel Junctions. Nano Letters, 2013, 13, 2570-2575.	9.1	54
49	Single nanowire AlN/GaN double barrier resonant tunneling diodes with bipolar tunneling at room and cryogenic temperatures. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, 06FA03.	1.2	7
50	Semipolar InN/AlN multiple quantum wells on {101 $\bar{5}$ } faceted AlN on silicon. Applied Physics Letters, 2013, 103, .	3.3	4
51	Ferromagnetism and infrared electrodynamics of Ga <sub>1-x</sub> Mn <sub>x</sub> As. Physical Review B, 2013, 87, .		
52	Graded nanowire ultraviolet LEDs by polarization engineering. , 2012, , .		3
53	Deep traps in nonpolar m-plane GaN grown by ammonia-based molecular beam epitaxy. Applied Physics Letters, 2012, 100, .	3.3	36
54	Epitaxial ferromagnetic nanoislands of cubic GdN in hexagonal GaN. Applied Physics Letters, 2012, 100, .	3.3	23

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55	Exploiting piezoelectric charge for high performance graded InGaN nanowire solar cells. Applied Physics Letters, 2012, 101, .	3.3	37
56	Coaxial nanowire resonant tunneling diodes from non-polar AlN/GaN on silicon. Applied Physics Letters, 2012, 100, .	3.3	35
57	Record low tunnel junction specific resistivity ( $\rho_{tj}$ ) of $1.0784314 \times 10^{-10}$ $\Omega$ cm for inter-band tunnel junctions. , 2012, , .		0
58	Giant spin Seebeck effect in a non-magnetic material. Nature, 2012, 487, 210-213.	27.8	164
59	Polarization-Induced pn Diodes in Wide-Band-Gap Nanowires with Ultraviolet Electroluminescence. Nano Letters, 2012, 12, 915-920.	9.1	106
60	Three-Dimensional GaN/AlN Nanowire Heterostructures by Separating Nucleation and Growth Processes. Nano Letters, 2011, 11, 866-871.	9.1	97
61	Infrared probe of the insulator-to-metal transition in $\text{Mn}_x\text{Ga}_{1-x}$ nanowires. Physical Review Letters, 2011, 106, 186601.	3.2	25
62	Spin-Seebeck Effect: A Phonon Driven Spin Distribution. Physical Review Letters, 2011, 106, 186601.	7.8	168
63	Observation of the spin-Seebeck effect in a ferromagnetic semiconductor. Nature Materials, 2010, 9, 898-903.	27.5	665
64	Interlayer and interfacial exchange coupling in ferromagnetic metal/semiconductor heterostructures. Physical Review B, 2010, 81, .	3.2	19
65	Polarized Emission From Twin Microdisk Photonic Molecules. IEEE Journal of Quantum Electronics, 2009, 45, 932-936.	1.9	3
66	Zero-field optical manipulation of magnetic ions in semiconductors. Nature Materials, 2008, 7, 203-208.	27.5	67
67	Chapter 1 Single Spin Coherence in Semiconductors. Semiconductors and Semimetals, 2008, , 1-44.	0.7	1
68	Stoichiometric growth of high Curie temperature heavily alloyed GaMnAs. Applied Physics Letters, 2008, 92, 192502.	3.3	57
69	Onset of Ferromagnetism in Low-Doped $\text{Ga}_{1-x}\text{Mn}_x\text{As}$ Quantum Wells. Physical Review Letters, 2007, 99, 227205.	3.8	81
70	Confinement engineering of s-d exchange interactions in $\text{Ga}_{1-x}\text{Mn}_x\text{As}/\text{Al}_y\text{Ga}_{1-y}\text{As}$ quantum wells. Physical Review B, 2007, 75, .	3.2	31
71	Dimensionally constrained D'yakonov-Perel' spin relaxation in n-InGaAs channels: transition from 2D to 1D. New Journal of Physics, 2007, 9, 342-342.	2.9	32
72	Suppression of Spin Relaxation in Submicron InGaAs Wires. Physical Review Letters, 2006, 97, 036805.	7.8	115

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73	Generating Spin Currents in Semiconductors with the Spin Hall Effect. Physical Review Letters, 2006, 97, 096605.	7.8	123
74	Enhancement of spin coherence using Q-factor engineering in semiconductor microdisc lasers. Nature Materials, 2006, 5, 261-264.	27.5	69
75	Nuclear and ion spins in semiconductor nanostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 264-271.	2.7	0
76	Tunneling through MnAs particles at a GaAs p <sup>+</sup> n <sup>+</sup> junction. Journal of Vacuum Science & Technology B, 2006, 24, 1639.	1.3	9
77	Room temperature electron spin coherence in telecom-wavelength quaternary quantum wells. Applied Physics Letters, 2006, 89, 142104.	3.3	11
78	Spatial imaging and mechanical control of spin coherence in strained GaAs epilayers. Applied Physics Letters, 2006, 88, 241918.	3.3	22
79	Antisite effect on hole-mediated ferromagnetism in (Ga,Mn)As. Physical Review B, 2006, 74, .	3.2	45
80	Spatial imaging of the spin Hall effect and current-induced polarization in two-dimensional electron gases. Nature Physics, 2005, 1, 31-35.	16.7	415
81	Structural, electrical, and magneto-optical characterization of paramagnetic GaMnAs quantum wells. Physical Review B, 2005, 72, .	3.2	70
82	Optoelectronic control of spin dynamics at near-terahertz frequencies in magnetically doped quantum wells. Physical Review B, 2005, 72, .	3.2	18
83	Manipulating a domain wall in (Ga,Mn)As. Journal of Applied Physics, 2005, 97, 10D314.	2.5	2
84	Electron spin interferometry using a semiconductor ring structure. Applied Physics Letters, 2005, 86, 162107.	3.3	30
85	Local manipulation of nuclear spin in a semiconductor quantum well. , 2005, , .		0
86	Electrical initialization and manipulation of electron spins in an L-shaped strained n-InGaAs channel. Applied Physics Letters, 2005, 87, 022503.	3.3	44
87	Antiferromagnetic dExchange Coupling in GaMnAs. Physical Review Letters, 2005, 95, 017204.	7.8	59
88	Spin transfer and coherence in coupled quantum wells. Physical Review B, 2004, 70, .	3.2	33
89	Current-Induced Spin Polarization in Strained Semiconductors. Physical Review Letters, 2004, 93, 176601.	7.8	373
90	Control of electron-spin coherence using Landau level quantization in a two-dimensional electron gas. Physical Review B, 2004, 70, .	3.2	23

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91	Pinning a domain wall in (Ga,Mn)As with focused ion beam lithography. Applied Physics Letters, 2004, 85, 5622-5624.	3.3	18
92	Coherent spin manipulation without magnetic fields in strained semiconductors. Nature, 2004, 427, 50-53.	27.8	436
93	Observation of the Spin Hall Effect in Semiconductors. Science, 2004, 306, 1910-1913.	12.6	2,247
94	Tunable spin polarization in III-V quantum wells with a ferromagnetic barrier. Physical Review B, 2004, 69, .	3.2	53
95	Highly enhanced Curie temperature in low-temperature annealed [Ga,Mn]As epilayers. Applied Physics Letters, 2003, 82, 2302-2304.	3.3	302
96	Gigahertz Electron Spin Manipulation Using Voltage-Controlled g-Tensor Modulation. Science, 2003, 299, 1201-1204.	12.6	254
97	Independent electronic and magnetic doping in (Ga,Mn)As based digital ferromagnetic heterostructures. Physical Review B, 2003, 68, .	3.2	31
98	Local Manipulation of Nuclear Spin in a Semiconductor Quantum Well. Physical Review Letters, 2003, 91, 207602.	7.8	49