

# Gavin Burnell

## List of Publications by Year in descending order

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132  
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133  
docs citations

133  
times ranked

4135  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced Spin-Orbit Coupling in Heavy Metals via Molecular Coupling. ACS Applied Materials & Interfaces, 2021, 13, 5228-5234.	4.0	10
2	Spin-singlet to triplet Cooper pair converter interface. Communications Physics, 2021, 4, .	2.0	7
3	Pt and CoB trilayer Josephson $\pi$ junctions with perpendicular magnetic anisotropy. Scientific Reports, 2021, 11, 11173.	1.6	2
4	Scanning Thermal Microscopy and Ballistic Phonon Transport in Lateral Spin Valves. Physical Review Letters, 2021, 127, 035901.	2.9	3
5	Meissner screening as a probe for inverse superconductor-ferromagnet proximity effects. Physical Review B, 2021, 104, .	1.1	5
6	Time-resolved visualization of the magnetization canting induced by field-like spin-orbit torques. Applied Physics Letters, 2020, 117, 212404.	1.5	4
7	Current-induced dynamical tilting of chiral domain walls in curved microwires. Applied Physics Letters, 2020, 116, .	1.5	3
8	Spin-valve Josephson junctions with perpendicular magnetic anisotropy for cryogenic memory. Applied Physics Letters, 2020, 116, 022601.	1.5	12
9	Diameter-independent skyrmion Hall angle observed in chiral magnetic multilayers. Nature Communications, 2020, 11, 428.	5.8	89
10	Reversible spin storage in metal oxide-fullerene heterojunctions. Science Advances, 2020, 6, eaax1085.	4.7	10
11	Phase boundary exchange coupling in the mixed magnetic phase regime of a Pd-doped FeRh epilayer. Physical Review Materials, 2020, 4, .	0.9	6
12	Distortions to the penetration depth and coherence length of superconductor/normal-metal superlattices. Physical Review Materials, 2020, 4, .	0.9	7
13	Origin of superconductivity at nickel-bismuth interfaces. Physical Review Research, 2020, 2, .	1.3	12
14	Controlling the electromagnetic proximity effect by tuning the mixing between superconducting and ferromagnetic order. Physical Review B, 2019, 100, .	1.1	15
15	Manifestation of the electromagnetic proximity effect in superconductor-ferromagnet thin film structures. Applied Physics Letters, 2019, 115, .	1.5	18
16	Deterministic Field-Free Skyrmion Nucleation at a Nanoengineered Injector Device. Nano Letters, 2019, 19, 7246-7255.	4.5	56
17	Effects of poling and crystallinity on the dielectric properties of $\text{Pb}(\text{In}_{1/2}\text{Nb}_{1/2})\text{O}_3\text{-Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3\text{-PbTiO}_3$ at cryogenic temperatures. Scientific Reports, 2019, 9, 2442.	1.6	6
18	Thermally and field-driven mobility of emergent magnetic charges in square artificial spin ice. Scientific Reports, 2019, 9, 15989.	1.6	18

#	ARTICLE	IF	CITATIONS
19	Magnetic properties, domain-wall creep motion, and the Dzyaloshinskii-Moriya interaction in Pt/Co/Ir thin films. <i>Physical Review B</i> , 2018, 97, .	1.1	24
20	Frustration and thermalization in an artificial magnetic quasicrystal. <i>Nature Physics</i> , 2018, 14, 309-314.	6.5	62
21	In-situ Electrical Transport Measurements Combined with Scanning Transmission X-ray Microscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 78-79.	0.2	0
22	Discrete Hall resistivity contribution from Néel skyrmions in multilayer nanodiscs. <i>Nature Nanotechnology</i> , 2018, 13, 1161-1166.	15.6	81
23	Domain wall energy and strain in Pt/Co/Ir thin films on piezoelectric transducers. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 344002.	0.7	7
24	Observation of Anomalous Meissner Screening in $Cu/Nb$ Thin Films. <i>Physical Review Letters</i> , 2018, 120, 247001.	2.9	34
25	Reconfigurable superconducting vortex pinning potential for magnetic disks in hybrid structures. <i>Scientific Reports</i> , 2017, 7, 45182.	1.6	11
26	Emergent magnetism at transition-metal/nanocarbon interfaces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 5583-5588.	3.3	20
27	Optical conversion of pure spin currents in hybrid molecular devices. <i>Nature Communications</i> , 2017, 8, 926.	5.8	12
28	Control of Superconductivity with a Single Ferromagnetic Layer in Niobium/Erbium Bilayers. <i>Physical Review Applied</i> , 2017, 7, .	1.5	11
29	Pinning and hysteresis in the field dependent diameter evolution of skyrmions in Pt/Co/Ir superlattice stacks. <i>Scientific Reports</i> , 2017, 7, 15125.	1.6	61
30	Continuously tuneable critical current in superconductor-ferromagnet multilayers. <i>Applied Physics Letters</i> , 2017, 110, 262601.	1.5	7
31	Synthetic ferrimagnet nanowires with very low critical current density for coupled domain wall motion. <i>Scientific Reports</i> , 2017, 7, 1640.	1.6	28
32	Probing the spiral magnetic phase in 6nm textured erbium using polarised neutron reflectometry. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 055801.	0.7	3
33	Magnetic Phases of Sputter Deposited Thin-Film Erbium. <i>Scientific Reports</i> , 2016, 6, 39021.	1.6	3
34	Remotely induced magnetism in a normal metal using a superconducting spin-valve. <i>Nature Physics</i> , 2016, 12, 57-61.	6.5	55
35	Spin relaxation through Kondo scattering in Cu/Py lateral spin valves. <i>Physical Review B</i> , 2015, 92, .	1.1	25
36	Irreversible magnetization switching at the onset of superconductivity in a superconductor ferromagnet hybrid. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	8

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37	Modification of perpendicular magnetic anisotropy and domain wall velocity in Pt/Co/Pt by voltage-induced strain. Scientific Reports, 2015, 5, 7921.	1.6	82
38	Magnetic microscopy and topological stability of homochiral Néel domain walls in a Pt/Co/AlOx trilayer. Nature Communications, 2015, 6, 8957.	5.8	117
39	High contrast 3D proximity correction for electron-beam lithography: An enabling technique for the fabrication of suspended masks for complete device fabrication within an UHV environment. Microelectronic Engineering, 2015, 143, 5-10.	1.1	5
40	Controlled suppression of superconductivity by the generation of polarized Cooper pairs in spin-valve structures. Physical Review B, 2015, 91, .	1.1	62
41	Beating the Stoner criterion using molecular interfaces. Nature, 2015, 524, 69-73.	13.7	151
42	Direct Measurement of Spin Polarization in Ferromagnetic-C<sub>60</sub> Interfaces Using Point-Contact Andreev Reflection. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	3
43	Effects of spin doping and spin injection in the luminescence and vibrational spectrum of C60. Applied Physics Letters, 2014, 105, .	1.5	3
44	Measuring and tailoring the Dzyaloshinskii-Moriya interaction in perpendicularly magnetized thin films. Physical Review B, 2014, 90, .	1.1	351
45	Spin-polarized electron transfer in $\langle \text{ferromagnet} \rangle$ . Physical Review B, 2014, 90, .		
46	Numerical model of crossed Andreev reflection and charge imbalance. Physical Review B, 2012, 86, .	1.1	6
47	Transport spin polarization of the rare-earth transition-metal alloy $\text{Co}_{1-x}\text{Gd}_x$ . Physical Review B, 2012, 85, .		
48	Stochastic switching asymmetry in magnetoresistive stacks due to adjacent nanowire stray field. Applied Physics Letters, 2012, 101, 262404.	1.5	5
49	Biotemplated Magnetic Nanoparticle Arrays. Small, 2012, 8, 204-208.	5.2	66
50	Nanoparticle Arrays: Biotemplated Magnetic Nanoparticle Arrays (Small 2/2012). Small, 2012, 8, 203-203.	5.2	1
51	Remote domain wall chirality measurement via stray field detection. Journal of Applied Physics, 2011, 110, 123912.	1.1	6
52	Analysis of $\text{Fe}_{1-x}\text{Se}_x$ $\hat{z}$ $\text{Te}_x$ thin films grown by radio frequency sputtering. Superconductor Science and Technology, 2011, 24, 075023.	1.8	22
53	Transport measurements on carbon nanotubes structurally characterized by electron diffraction. Physical Review B, 2011, 84, .	1.1	4
54	A review of methods for the accurate determination of the chiral indices of carbon nanotubes from electron diffraction patterns. Carbon, 2011, 49, 4961-4971.	5.4	34

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55	Magnetoresistance of Domain Walls in Superconductor/Ferromagnet Hybrid Systems. Journal of Superconductivity and Novel Magnetism, 2011, 24, 911-914.	0.8	2
56	Device fabrication with precisely placed carbon nanotubes of known chiral vector. Journal of Physics: Conference Series, 2010, 241, 012082.	0.3	4
57	Conductance features in point contact Andreev reflection spectra. Journal of Physics Condensed Matter, 2009, 21, 095701.	0.7	30
58	Perfectly Ordered, Free-Standing Nanowire Arrays With Controllable Geometry. Advanced Engineering Materials, 2009, 11, 907-911.	1.6	2
59	Nanoscale Ferromagnet-Superconductor Devices for Detection of Crossed Andreev Reflection. IEEE Transactions on Applied Superconductivity, 2009, 19, 706-710.	1.1	0
60	Interface properties of Pb-InAs planar structures for Andreev spectroscopy. Applied Physics Letters, 2008, 92, .	1.5	8
61	Spin transfer switching and low-field precession in exchange-biased spin valve nanopillars. Applied Physics Letters, 2008, 92, .	1.5	8
62	Transport and Magnetic Properties of Strong Ferromagnetic Pi-Junctions. IEEE Transactions on Applied Superconductivity, 2007, 17, 641-644.	1.1	6
63	Controlled, perfect ordering in ultrathin anodic aluminum oxide templates on silicon. Applied Physics Letters, 2007, 91, 143123.	1.5	40
64	Nucleation and propagation of domains walls in a Co-Pt multilayer wire. Journal of Applied Physics, 2007, 101, 09F508.	1.1	11
65	Zero to $\pi$ transition in superconductor-ferromagnet-superconductor junctions. Physical Review B, 2007, 76, .	1.1	99
66	Transformation of spin information into large electrical signals using carbon nanotubes. Nature, 2007, 445, 410-413.	13.7	325
67	$0-\pi$ oscillations in nanostructured Nb/Fe/Nb Josephson junctions. European Physical Journal B, 2007, 58, 123-126.	0.6	23
68	Planar Andreev Spectroscopy in InAs. AIP Conference Proceedings, 2007, , .	0.3	1
69	Critical Current Oscillations in Strong Ferromagnetic Junctions. Physical Review Letters, 2006, 97, 177003.	2.9	201
70	SCENET roadmap for superconductor digital electronics. Physica C: Superconductivity and Its Applications, 2006, 439, 1-41.	0.6	58
71	Characterisation of MgB2 thin films of varying Tc by Raman spectroscopy. Journal of Physics and Chemistry of Solids, 2006, 67, 333-335.	1.9	1
72	Dielectric characterization of strontium titanate thin films using Josephson-junction-based on-chip resonators. Superconductor Science and Technology, 2006, 19, 427-432.	1.8	7

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73	Prospects for detection of spin accumulation using submicron planar Andreev array spectroscopy. Applied Physics Letters, 2006, 89, 262505.	1.5	6
74	Electrical transport between epitaxial manganites and carbon nanotubes. Applied Physics Letters, 2006, 88, 083120.	1.5	13
75	Device Fabrication and Optimisation for Josephson Broadband Spectroscopy of Ferroelectric Thin Films. Ferroelectrics, 2005, 329, 125-130.	0.3	7
76	Focused ion beam fabrication and properties of nanoscale Josephson junctions for sensors and other applications. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1455-1462.	0.8	1
77	Giant-Magnetoresistive/Superconducting Contacts and Josephson Junction Devices. IEEE Transactions on Applied Superconductivity, 2005, 15, 904-907.	1.1	0
78	The effect of oxygenation on the superconducting properties of MgB2 thin films. Applied Physics Letters, 2005, 86, 022502.	1.5	14
79	Normal-state properties of high-angle grain boundaries in $(Y,Ca)Ba_2Cu_3O_{7-x}$ . Physical Review B, 2005, 71, .	1.1	6
80	Absence of spin scattering of in-plane spring domain walls. Physical Review B, 2005, 71, .	1.1	4
81	Characteristics of strong ferromagnetic Josephson junctions with epitaxial barriers. Physical Review B, 2005, 71, .	1.1	62
82	Grain Boundary Properties of Tl-2212 and Tl-1223 Thin Films. IEEE Transactions on Applied Superconductivity, 2005, 15, 2931-2934.	1.1	5
83	Spin Valve Josephson Junctions. IEEE Transactions on Applied Superconductivity, 2005, 15, 908-911.	1.1	4
84	Current-perpendicular-to-plane giant magnetoresistance in submicron pseudo-spin-valve devices. Physical Review B, 2005, 72, .	1.1	7
85	Investigation of YBCO SQUIDS With Gold Damping Resistors. IEEE Transactions on Applied Superconductivity, 2005, 15, 789-792.	1.1	0
86	In situ magnetoresistance measurements during nanopatterning of pseudo-spin-valve structures. Journal of Applied Physics, 2005, 97, 054302.	1.1	6
87	Fabrication and Characterization of Sub-Micron Thin Film Intrinsic Josephson Junction Arrays. IEEE Transactions on Applied Superconductivity, 2005, 15, 237-240.	1.1	2
88	In situ fabrication of a cross-bridge Kelvin resistor structure by focused ion beam microscopy. Nanotechnology, 2004, 15, 786-789.	1.3	11
89	Capacitance measurements on grain boundaries in $Y_{1-x}Ca_xBa_2Cu_3O_{7-x}$ . Physical Review B, 2004, 70, .	1.1	12
90	Controllable Josephson current through a pseudospin-valve structure. Applied Physics Letters, 2004, 84, 1153-1155.	1.5	90

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91	Critical currents in vicinal $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films. <i>Physical Review B</i> , 2004, 70, .	1.1	29
92	Josephson fluxon flow and phase diffusion in thin-film intrinsic Josephson junctions. <i>Journal of Applied Physics</i> , 2004, 95, 4941-4948.	1.1	16
93	The normal-state resistivity of grain boundaries in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ . <i>Applied Physics Letters</i> , 2004, 84, 4089-4091.	1.5	11
94	Transport properties of sharp antiferromagnetic boundaries in Gd/Fe multilayers. <i>Physical Review B</i> , 2004, 69, .	1.1	17
95	Y-Ba-Cu-O grain boundary resistivity above and below the critical temperature. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 2886-2889.	1.1	6
96	Is it possible to fabricate a relaxation oscillation SQUID, using high temperature superconductors and grain boundary junctions?. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 845-848.	1.1	0
97	Sub-micron thin film intrinsic Josephson junctions. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 821-824.	1.1	10
98	$\text{MgB}_2$ ; Thin Film Growth and Characterisation. <i>Materials Science Forum</i> , 2003, 426-432, 3379-3384.	0.3	0
99	Proximity and Josephson effects in superconductor/antiferromagnetic $\text{Nb}/\text{Fe}_{50}\text{Mn}_{50}$ heterostructures. <i>Physical Review B</i> , 2003, 68, .	1.1	44
100	Decoupling of a current-biased intrinsic Josephson junction from its environment. <i>Physical Review B</i> , 2003, 67, .	1.1	16
101	Corbino geometry Josephson junction. <i>Physical Review B</i> , 2003, 67, .	1.1	7
102	Disorder-induced collapse of the electron-phonon coupling in $\text{MgB}_2$ observed by Raman spectroscopy. <i>Physical Review B</i> , 2003, 68, .	1.1	27
103	Magnesium diboride superconducting quantum interference devices fabricated by focused ion beam. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 869-872.	1.1	0
104	Fabrication of nanoscale heterostructure devices with a focused ion beam microscope. <i>Nanotechnology</i> , 2003, 14, 630-632.	1.3	63
105	$\text{MgB}_2$ junctions and SQUIDs fabricated by focused ion beam. <i>Superconductor Science and Technology</i> , 2003, 16, 254-259.	1.8	3
106	Josephson effects in $\text{MgB}_2$ metal masked ion damage junctions. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 1071-1074.	1.1	3
107	Realization and properties of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Josephson junctions by metal masked ion damage technique. <i>Applied Physics Letters</i> , 2002, 80, 814-816.	1.5	29
108	Directly coupled superconducting quantum interference device magnetometer fabricated in magnesium diboride by focused ion beam. <i>Applied Physics Letters</i> , 2002, 81, 102-104.	1.5	33

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109	Realization and properties of MgB <sub>2</sub> metal-masked ion damage junctions. Applied Physics Letters, 2002, 81, 3600-3602.	1.5	16
110	In situ magnetoresistance measurements during patterning of spin valve devices. Journal of Applied Physics, 2002, 91, 8575.	1.1	4
111	Irradiation damage technology for manufacturable Josephson junctions. Nuclear Instruments & Methods in Physics Research B, 2002, 188, 183-188.	0.6	7
112	Novel Josephson junction geometries in NbCu bilayers fabricated by focused ion beam microscope. Physica C: Superconductivity and Its Applications, 2002, 367, 267-271.	0.6	1
113	Asymmetry modulated SQUIDs made by direct focused ion beam milling. Physica C: Superconductivity and Its Applications, 2002, 368, 241-245.	0.6	4
114	Multiple-peak switching current distribution in Tl <sub>1-x</sub> Ba <sub>x</sub> Ca <sub>1-x</sub> Cu <sub>1-x</sub> O intrinsic Josephson junctions. Physica C: Superconductivity and Its Applications, 2002, 372-376, 322-326.	0.6	7
115	Nanoscale superconductor-normal metal-superconductor junctions fabricated by focused ion beam. Physica C: Superconductivity and Its Applications, 2002, 372-376, 14-17.	0.6	4
116	Masked ion damage and implantation for device fabrication. Vacuum, 2002, 69, 11-15.	1.6	9
117	Active supercurrent control in superconductor/ferromagnet heterostructures. IEEE Transactions on Applied Superconductivity, 2001, 11, 904-907.	1.1	33
118	Ferroelectric characterisation using Josephson junctions. IEEE Transactions on Applied Superconductivity, 2001, 11, 1158-1161.	1.1	2
119	Nanofabricated SNS junction series arrays in superconductor-normal metal bilayers. Superconductor Science and Technology, 2001, 14, 1086-1089.	1.8	5
120	Nanoscale SNS junction fabrication in superconductor-normal metal bilayers. IEEE Transactions on Applied Superconductivity, 2001, 11, 1126-1129.	1.1	11
121	Planar superconductor-normal-superconductor Josephson junctions in MgB <sub>2</sub> . Applied Physics Letters, 2001, 79, 3464-3466.	1.5	74
122	Capacitance as a probe of high angle grain boundary transport in oxide superconductors. IEEE Transactions on Applied Superconductivity, 2001, 11, 418-421.	1.1	11
123	Niobium-copper superconductor-normal metal-superconductor asymmetry modulated SQUIDs. IEEE Transactions on Applied Superconductivity, 2001, 11, 1243-1246.	1.1	3
124	Asymmetry modulated SQUIDs. Superconductor Science and Technology, 2000, 13, 983-988.	1.8	6
125	Alternating current Josephson effect in intrinsic Josephson bridges in Tl <sub>2</sub> Ba <sub>2</sub> CaCu <sub>2</sub> O <sub>8</sub> thin films. Applied Physics Letters, 2000, 76, 3603-3605.	1.5	29
126	Voltage responses to optical pulses of unbiased normal and superconducting samples. Applied Physics Letters, 1997, 71, 1415-1417.	1.5	4



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127	Electronic cooling in Nb/AlO/sub x//Al/AlO/sub x//Nb double tunnel junctions. IEEE Transactions on Applied Superconductivity, 1997, 7, 2415-2418.	1.1	5
128	Large low-field magnetoresistance in La <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> induced by artificial grain boundaries. Nature, 1997, 387, 266-268.	13.7	433
129	Microstructural and electron spectroscopic characterization of carbon nanostructures and nanotubes produced using multimetal catalysts. Journal of Physics and Chemistry of Solids, 1997, 58, 1091-1102.	1.9	11
130	Epitaxial base layer Nb superconducting tunnel junctions with Ta absorbers. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 370, 50-52.	0.7	3
131	Inelastic quasiparticle scattering and multiplication in superconductors. Journal of Applied Physics, 1994, 76, 1105-1110.	1.1	3
132	Nanomagnetic Arrays Formed with the Biom mineralization Protein Mms6. Journal of Nano Research, 0, 17, 127-146.	0.8	18