

Bryan L Gallagher

List of Publications by Year in descending order

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111
papers

5,119
citations

136740

32
h-index

88477

70
g-index

113
all docs

113
docs citations

113
times ranked

4748
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical switching of an antiferromagnet. <i>Science</i> , 2016, 351, 587-590.	6.0	1,049
2	High-Curie-temperature Ga _{1-x} MnxAs obtained by resistance-monitored annealing. <i>Applied Physics Letters</i> , 2002, 81, 4991-4993.	1.5	318
3	An antidamping spin-orbit torque originating from the Berry curvature. <i>Nature Nanotechnology</i> , 2014, 9, 211-217.	15.6	273
4	The electron transport properties of metallic glasses. <i>Physics Reports</i> , 1988, 170, 265-324.	10.3	243
5	Spin-orbit-driven ferromagnetic resonance. <i>Nature Nanotechnology</i> , 2011, 6, 413-417.	15.6	182
6	Achieving high Curie temperature in (Ga,Mn)As. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	165
7	Non-volatile ferroelectric control of ferromagnetism in (Ga,Mn)As. <i>Nature Materials</i> , 2008, 7, 464-467.	13.3	150
8	Spin-dependent phenomena and device concepts explored in (Ga,Mn)As. <i>Reviews of Modern Physics</i> , 2014, 86, 855-896.	16.4	141
9	Spin Reorientation Transition in Single-Domain(Ga,Mn)As. <i>Physical Review Letters</i> , 2005, 95, 217204.	2.9	133
10	Hall effect and hole densities in Ga _{1-x} MnxAs. <i>Applied Physics Letters</i> , 2002, 81, 3010-3012.	1.5	125
11	Current polarity-dependent manipulation of antiferromagnetic domains. <i>Nature Nanotechnology</i> , 2018, 13, 362-365.	15.6	116
12	Anisotropic Magnetoresistance Components in (Ga,Mn)As. <i>Physical Review Letters</i> , 2007, 99, 147207.	2.9	107
13	Dc-transport properties of ferromagnetic (Ga,Mn)As semiconductors. <i>Applied Physics Letters</i> , 2003, 83, 320-322.	1.5	98
14	Direct comparison of the quantized Hall resistance in gallium arsenide and silicon. <i>Physical Review Letters</i> , 1991, 66, 969-973.	2.9	97
15	High-quality GaMnAs films grown with arsenic dimers. <i>Journal of Crystal Growth</i> , 2003, 247, 42-48.	0.7	88
16	Large Tunneling Anisotropic Magnetoresistance in (Ga,Mn)As Nanoconstrictions. <i>Physical Review Letters</i> , 2005, 94, 127202.	2.9	88
17	Sol-gel formation of ordered nanostructured doped ZnO films. <i>Journal of Materials Chemistry</i> , 2004, 14, 1087.	6.7	87
18	Surface effects in Mn L _{3,2} x-ray absorption spectra from (Ga,Mn)As. <i>Applied Physics Letters</i> , 2004, 84, 4065-4067.	1.5	82

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19	The thermoelectric powers and resistivities of amorphous transition metal alloys. Journal of Physics F: Metal Physics, 1982, 12, 1721-1741.	1.6	78
20	Hybridization in amorphous metals. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1983, 47, 163-176.	0.6	72
21	Thermoelectric powers of amorphous transition metal alloys and electron-phonon enhancement. Journal of Physics F: Metal Physics, 1981, 11, L207-L212.	1.6	67
22	Influence of the Mn interstitial on the magnetic and transport properties of (Ga,Mn)As. Journal of Applied Physics, 2004, 95, 6512-6514.	1.1	66
23	Piezoelectric control of the mobility of a domain wall driven by adiabatic and non-adiabatic torques. Nature Materials, 2013, 12, 808-814.	13.3	64
24	The positive Hall coefficients of amorphous transition-metal alloys. Journal of Physics F: Metal Physics, 1983, 13, 119-128.	1.6	63
25	Magnetoresistance and Hall effect in the ferromagnetic semiconductor $Ga_{1-x}Mn_xAs$. Journal of Applied Physics, 2003, 93, 6787-6789.	1.1	56
26	Temperature dependence of large positive magnetoresistance in hybrid ferromagnetic/semiconductor devices. Applied Physics Letters, 1998, 72, 1724-1726.	1.5	55
27	Observation of universal thermopower fluctuations. Physical Review Letters, 1990, 64, 2058-2061.	2.9	51
28	The growth of GaMnAs films by molecular beam epitaxy using arsenic dimers. Journal of Crystal Growth, 2003, 251, 311-316.	0.7	44
29	Angle-Dependent X-Ray Magnetic Circular Dichroism from (Ga,Mn)As: Anisotropy and Identification of Hybridized States. Physical Review Letters, 2006, 96, 117207.	2.9	39
30	Microscopic Analysis of the Valence Band and Impurity Band Theories of (Ga,Mn)As. Physical Review Letters, 2010, 105, 227202.	2.9	36
31	Growth and electrical transport properties of very high mobility two-dimensional hole gases displaying persistent photoconductivity. Applied Physics Letters, 1994, 65, 2054-2056.	1.5	35
32	P-type conductivity in cubic GaMnN layers grown by molecular beam epitaxy. Semiconductor Science and Technology, 2004, 19, L13-L16.	1.0	35
33	p-type conductivity in cubic (Ga,Mn)N thin films. Applied Physics Letters, 2005, 86, 152114.	1.5	34
34	Structural chemistry of Cu ₃ N powders obtained by ammonolysis reactions. Solid State Sciences, 2007, 9, 907-913.	1.5	32
35	Determining Curie temperatures in dilute ferromagnetic semiconductors: High Curie temperature (Ga,Mn)As. Applied Physics Letters, 2014, 104, .	1.5	29
36	The thermopower of metallic glasses. Journal of Physics F: Metal Physics, 1985, 15, 911-919.	1.6	27

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37	Domain imaging and domain wall propagation in (Ga, Mn)As thin films with tensile strain. Journal of Applied Physics, 2007, 101, 106101.	1.1	27
38	Synthesis, stoichiometry and thermal stability of Zn ₃ N ₂ powders prepared by ammonolysis reactions. Journal of Solid State Chemistry, 2008, 181, 158-165.	1.4	27
39	Graphical computing in the undergraduate laboratory: Teaching and interfacing with LabVIEW. American Journal of Physics, 2003, 71, 1062-1074.	0.3	26
40	Current-driven domain wall motion across a wide temperature range in a (Ga,Mn)(As,P) device. Applied Physics Letters, 2010, 97, .	1.5	25
41	The thermopower of Si inversion layers. Semiconductor Science and Technology, 1987, 2, 456-459.	1.0	24
42	The temperature dependence of the Hall coefficient of metallic glasses: further evidence for electron-electron interaction effects. Journal of Physics F: Metal Physics, 1984, 14, L225-L229.	1.6	22
43	Observation of the transition to an insulating state consistent with a Wigner solid in a high-density 2D hole gas. Physica B: Condensed Matter, 1993, 184, 95-99.	1.3	22
44	Determination of the Mn concentration in GaMnAs. Semiconductor Science and Technology, 2005, 20, 369-373.	1.0	22
45	The influence of small amounts of crystallinity on the transport properties of metallic glasses. Journal of Non-Crystalline Solids, 1983, 57, 251-263.	1.5	20
46	The effect of interface roughness scattering and background impurity scattering on the thermopower of a 2DEC in a Si MOSFET. Journal of Physics Condensed Matter, 1990, 2, 10401-10410.	0.7	19
47	The origin and control of the sources of AMR in (Ga,Mn)As devices. Journal of Magnetism and Magnetic Materials, 2009, 321, 1001-1008.	1.0	18
48	Photoemission studies on metallic glasses using synchrotron radiation. Materials Science and Engineering, 1988, 99, 265-267.	0.1	17
49	Focus on Dilute Magnetic Semiconductors. New Journal of Physics, 2008, 10, 055004.	1.2	17
50	Influence of low temperature annealing on the micromagnetic structure of GaMnAs films. Journal of Applied Physics, 2004, 95, 3225-3227.	1.1	16
51	Magnetic force microscopy studies of the domain structure of Co/Pd multilayers in a magnetic field. Journal of Applied Physics, 2001, 89, 7534-7536.	1.1	14
52	Mn L _{2,3} x-ray absorption from (Ga,Mn)As and (Ga,Mn)N. Journal of Applied Physics, 2004, 95, 7166-7168.	1.1	14
53	Magnetic Linear Dichroism in the Angular Dependence of Core-Level Photoemission from (Ga,Mn)As Using Hard X Rays. Physical Review Letters, 2011, 107, 197601.	2.9	14
54	Ferroelectric polymer gates for non-volatile field effect control of ferromagnetism in (Ga, Mn)As layers. Nanotechnology, 2011, 22, 254004.	1.3	14

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55	Spin gating electrical current. Applied Physics Letters, 2012, 101, .	1.5	14
56	The extreme quantum regime of 2D electron and hole systems. Physica B: Condensed Matter, 1994, 201, 301-314.	1.3	12
57	Longitudinal and Hall resistance induced by large-amplitude magnetic barriers. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 6, 755-758.	1.3	12
58	Photoelectron spectroscopy study of Ga _{1-x} MnxAs(001) surface oxide and low temperature cleaning. Surface Science, 2005, 585, 66-74.	0.8	11
59	Tuning perpendicular magnetic anisotropy in (Ga,Mn)(As,P) by thermal annealing. Applied Physics Letters, 2010, 97, 122504.	1.5	11
60	High magnetic field millimetre and submillimetre spectroscopy of ultra-high mobility 2D hole systems. Physica B: Condensed Matter, 1995, 211, 440-443.	1.3	10
61	Quantum Hall effect breakdown in two-dimensional hole gases. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 6, 136-139.	1.3	10
62	Surface morphology and magnetic anisotropy in (Ga,Mn)As. Applied Physics Letters, 2011, 98, 152503.	1.5	10
63	Observation of the rectification fluctuations in a mesoscopic n+-GaAs wire. Journal of Physics Condensed Matter, 1990, 2, 5641-5645.	0.7	9
64	Electrical transport of 2D electrons in non-uniform magnetic fields. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 11, 171-176.	1.3	9
65	Magnetic domain imaging of ferromagnetic GaMnAs films. Journal of Applied Physics, 2004, 95, 7399-7401.	1.1	9
66	Molecular beam epitaxy of p-type cubic GaMnN layers. Journal of Crystal Growth, 2005, 278, 685-689.	0.7	9
67	Paramagnetic to antiferromagnetic transition in epitaxial tetragonal CuMnAs (invited). Journal of Applied Physics, 2015, 117, .	1.1	9
68	A direct comparison of the quantized Hall resistance in high critical current gallium arsenide and silicon devices. Surface Science, 1992, 263, 112-115.	0.8	8
69	Title is missing!. Journal of Physics Condensed Matter, 1993, 5, L449-L456.	0.7	8
70	Transport properties of a two-dimensional electron gas due to a spatially random magnetic field. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 6, 751-754.	1.3	8
71	Ordinary and extraordinary Coulomb blockade magnetoresistance in a (Ga, Mn)As single electron transistor. Solid State Communications, 2007, 144, 536-541.	0.9	8
72	Coulomb blockade anisotropic magnetoresistance and voltage controlled magnetic switching in a ferromagnetic GaMnAs single electron transistor. Journal of Magnetism and Magnetic Materials, 2007, 310, 1883-1888.	1.0	8

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73	Fast switching of magnetization in the ferromagnetic semiconductor (Ga,Mn)(As,P) using nonequilibrium phonon pulses. Applied Physics Letters, 2011, 99, .	1.5	8
74	Giant magnetoresistance induced by magnetic barriers. IEEE Transactions on Magnetism, 2001, 37, 1992-1994.	1.2	7
75	The growth of high quality GaMnAs films by MBE. Journal of Materials Science: Materials in Electronics, 2004, 15, 727-731.	1.1	7
76	Photoemission of Ga _{1-x} Mn _x As with high Curie temperature and transformation into MnAs of zincblende structure. Physica Status Solidi (B): Basic Research, 2009, 246, 1435-1439.	0.7	7
77	Magneto-optical and micromagnetic simulation study of the current-driven domain wall motion in ferromagnetic (Ga,Mn)As. Journal of Magnetism and Magnetic Materials, 2009, 321, 971-973.	1.0	7
78	180° phase shift of phonon drag magnetothermopower oscillations in high mobility 2DEGs. Surface Science, 1992, 263, 183-186.	0.8	6
79	The effect of current, illumination and contact nature on equilibration between bulk and edge current-carrying states. Semiconductor Science and Technology, 1994, 9, 1455-1464.	1.0	6
80	Gating of InAs/GaSb quantum wells using a silicon monoxide gate insulator. Applied Physics Letters, 1998, 73, 88-90.	1.5	6
81	Boundary scattering in wet-etched InAs/GaSb heterostructure wires: with and without magnetic field. Semiconductor Science and Technology, 1999, 14, 478-483.	1.0	6
82	The transport of 2D electrons through magnetic barriers. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 7, 997-1000.	1.3	6
83	Coercivity enlargement in (Ga,Mn)As thin films with small amount of MnAs nanoclusters. Journal of Magnetism and Magnetic Materials, 2007, 310, 2126-2128.	1.0	6
84	Nanoscale Potential Fluctuations in (GaMn)As/GaAs Heterostructures: From Individual Ions to Charge Clusters and Electrostatic Quantum Dots. Nano Letters, 2010, 10, 4874-4879.	4.5	6
85	Non-volatile ferroelectric gating of magnetotransport anisotropy in (Ga,Mn)(As,P). Applied Physics Letters, 2012, 100, .	1.5	6
86	Switching the uniaxial magnetic anisotropy by ion irradiation induced compensation. Journal Physics D: Applied Physics, 2018, 51, 145001.	1.3	6
87	Observation of a spin polarization phase transition of the 4/3 fractional quantum Hall state in a high-mobility 2D hole system. Journal of Physics Condensed Matter, 1993, 5, L565-L570.	0.7	5
88	Magnetothermopower in silicon MOSFETs. Journal of Physics Condensed Matter, 1993, 5, 1355-1364.	0.7	5
89	Quantum transport of p-type GaAs/(AlGa)As heterostructures grown on non-(100) substrates by molecular beam epitaxy. Microelectronics Journal, 1995, 26, 739-744.	1.1	5
90	Investigation of radiative recombination from Mn-related states in Ga _{1-x} Mn _x As. Applied Physics Letters, 2003, 83, 866-868.	1.5	5

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91	Characterization of Ga _{1-x} Mn _x As/(001)GaAs epilayers grown by low-temperature molecular beam epitaxy. Philosophical Magazine Letters, 2006, 86, 395-401.	0.5	5
92	Magnetic and structural properties of (Ga,Mn)As/(Al,Ga,Mn)As bilayer films. Applied Physics Letters, 2013, 102, 112404.	1.5	5
93	Interfacial contribution to thickness dependent in-plane anisotropic magnetoresistance. AIP Advances, 2015, 5, 127108.	0.6	5
94	Quantum Hall effect breakdown of two dimensional hole gases. Microelectronic Engineering, 1999, 47, 35-37.	1.1	4
95	Quasi-ballistic transport of 2D electrons through magnetic barriers. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 229-232.	1.3	4
96	Growth and characterization of p-type As heterostructures grown on high-index GaAs surfaces. Thin Solid Films, 1995, 267, 106-113.	0.8	3
97	Electrical excitation and detection of magnetic dynamics with impedance matching. Applied Physics Letters, 2012, 101, 182402.	1.5	3
98	Investigation of exchange coupled bilayer Fe/CuMnAs by pump-probe experiment. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600441.	1.2	3
99	Universal thermopower and rectification fluctuations. Surface Science, 1990, 229, 326-330.	0.8	2
100	Studies of the extreme quantum limit of 2D hole systems. Physica B: Condensed Matter, 1995, 211, 417-419.	1.3	2
101	Structural characterisation of zinc-blende Ga _{1-x} Mn _x N epilayers grown by MBE as a function of Ga flux. Journal of Crystal Growth, 2005, 284, 324-334.	0.7	2
102	Microstructural characterization of low-temperature grown GaMnN on GaAs(001) substrates by plasma-assisted MBE. Semiconductor Science and Technology, 2007, 22, 1131-1139.	1.0	2
103	Chapter 4 Transport Properties of Ferromagnetic Semiconductors. Semiconductors and Semimetals, 2008, , 135-205.	0.4	2
104	A low field technique for measuring magnetic and magnetoresistance anisotropy coefficients applied to (Ga,Mn)As. Applied Physics Letters, 2009, 95, .	1.5	2
105	Domain wall resistance in perpendicular (Ga,Mn)As: Dependence on pinning. Journal of Magnetism and Magnetic Materials, 2010, 322, 3481-3484.	1.0	2
106	Reconfigurable Boolean Logic Using Magnetic Single-Electron Transistors. PLoS ONE, 2015, 10, e0125142.	1.1	2
107	Light-emitting diodes based on GaMnAs/GaAs heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 1002-1006.	1.3	1
108	Theoretical Calculation of Drag Component of Tensor M in Quantizing Magnetic Field. Communications in Theoretical Physics, 1995, 23, 11-18.	1.1	0

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109	Magnetoresistance oscillations in a periodic magnetic field due to internal Landau band structure. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 12, 212-215.	1.3	0
110	The growth of high quality GaMnAs layers and heterostructures by molecular beam epitaxy. <i>Physica Status Solidi (B): Basic Research</i> , 2007, 244, 2944-2949.	0.7	0
111	Analysing Surface Structures on (Ga, Mn)As by Atomic Force Microscopy. <i>Journal of Nanoscience and Nanotechnology</i> , 2012, 12, 7545-7549.	0.9	0