

Kevin Edmonds

List of Publications by Year in descending order

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136
times ranked

5383
citing authors

#	ARTICLE	IF	CITATIONS
1	Defect-driven antiferromagnetic domain walls in CuMnAs films. Nature Communications, 2022, 13, 724.	12.8	8
2	Atomically sharp domain walls in an antiferromagnet. Science Advances, 2022, 8, eabn3535.	10.3	12
3	Quenching of an antiferromagnet into high resistivity states using electrical or ultrashort optical pulses. Nature Electronics, 2021, 4, 30-37.	26.0	31
4	Magnetism and magnetoresistance in the critical region of a dilute ferromagnet. Scientific Reports, 2021, 11, 2300.	3.3	0
5	Electrical control of antiferromagnets for the next generation of computing technology. Applied Physics Letters, 2020, 117, .	3.3	12
6	Low-energy switching of antiferromagnetic CuMnAs/GaP using sub-10 nanosecond current pulses. Journal of Applied Physics, 2020, 127, .	2.5	5
7	Spin flop and crystalline anisotropic magnetoresistance in CuMnAs. Physical Review B, 2020, 101, .	3.2	27
8	Tuning Interfacial Spins in Antiferromagneticâ€“Ferromagneticâ€“Heavy-Metal Heterostructures via Spin-Orbit Torque. Physical Review Applied, 2020, 13, .	3.8	57
9	Deterministic Magnetization Switching Using Lateral Spinâ€“Orbit Torque. Advanced Materials, 2020, 32, e1907929.	21.0	123
10	Molecular beam epitaxy of CuMnAs. Physical Review Materials, 2020, 4, .	2.4	14
11	Magneto-Seebeck microscopy of domain switching in collinear antiferromagnet CuMnAs. Physical Review Materials, 2020, 4, .	2.4	25
12	Spin Logic Devices via Electric Field Controlled Magnetization Reversal by Spin-Orbit Torque. IEEE Electron Device Letters, 2019, 40, 1554-1557.	3.9	69
13	Thermal stability of interstitial and substitutional Mn in ferromagnetic (Ga,Mn)As. Physical Review B, 2019, 100, .	3.2	1
14	Multilevel information storage using magnetoelastic layer stacks. Scientific Reports, 2019, 9, 3156.	3.3	3
15	Gating effects in antiferromagnetic CuMnAs. AIP Advances, 2019, 9, 115101.	1.3	1
16	Manipulation of Magnetization by Spinâ€“Orbit Torque. Advanced Quantum Technologies, 2019, 2, 1800052.	3.9	50
17	Switching the uniaxial magnetic anisotropy by ion irradiation induced compensation. Journal Physics D: Applied Physics, 2018, 51, 145001.	2.8	6
18	Current polarity-dependent manipulation of antiferromagnetic domains. Nature Nanotechnology, 2018, 13, 362-365.	31.5	116

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19	Spin switching in antiferromagnets using Néel-order spin-orbit torques. Chinese Physics B, 2018, 27, 107201.	1.4	2
20	Adjustable Current-Induced Magnetization Switching Utilizing Interlayer Exchange Coupling. Advanced Electronic Materials, 2018, 4, 1800224.	5.1	105
21	Optical determination of the Néel vector in a CuMnAs thin-film antiferromagnet. Nature Photonics, 2017, 11, 91-96.	31.4	103
22	Effect of lithographically-induced strain relaxation on the magnetic domain configuration in microfabricated epitaxially grown Fe ₈₁ Ga ₁₉ . Scientific Reports, 2017, 7, 42107.	3.3	3
23	Imaging Current-Induced Switching of Antiferromagnetic Domains in CuMnAs. Physical Review Letters, 2017, 118, 057701.	7.8	153
24	Investigation of exchange coupled bilayer Fe/CuMnAs by pump-probe experiment. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600441.	2.4	3
25	Antiferromagnetic CuMnAs multi-level memory cell with microelectronic compatibility. Nature Communications, 2017, 8, 15434.	12.8	149
26	Electric field control of deterministic current-induced magnetization switching in a hybrid ferromagnetic/ferroelectric structure. Nature Materials, 2017, 16, 712-716.	27.5	401
27	Control of antiferromagnetic spin axis orientation in bilayer Fe/CuMnAs films. Scientific Reports, 2017, 7, 11147.	3.3	9
28	Deterministic control of magnetic vortex wall chirality by electric field. Scientific Reports, 2017, 7, 7613.	3.3	14
29	Piezo Voltage Controlled Planar Hall Effect Devices. Scientific Reports, 2016, 6, 28458.	3.3	40
30	Spin-orbit torque in Pt/CoNiCo/Pt symmetric devices. Scientific Reports, 2016, 6, 20778.	3.3	92
31	Three-dimensional Heisenberg critical behavior in the highly disordered dilute ferromagnetic semiconductor (Ga,Mn)As. Physical Review B, 2016, 93, .	3.2	14
32	Precise tuning of the Curie temperature of (Ga,Mn)As-based magnetic semiconductors by hole compensation: Support for valence-band ferromagnetism. Physical Review B, 2016, 94, .	3.2	17
33	Electrical switching of an antiferromagnet. Science, 2016, 351, 587-590.	12.6	1,049
34	Antiferromagnetic structure in tetragonal CuMnAs thin films. Scientific Reports, 2015, 5, 17079.	3.3	68
35	Magnetic coupling in ferromagnetic semiconductor (Ga,Mn)As/(Al,Ga,Mn)As bilayers. Journal of Applied Physics, 2015, 118, 053913.	2.5	1
36	Electronic structure of (Ga,Mn)As as seen by synchrotron radiation. Semiconductor Science and Technology, 2015, 30, 043001.	2.0	15

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37	Identification of the interstitial Mn site in ferromagnetic (Ga,Mn)As. Applied Physics Letters, 2015, 106, .	3.3	7
38	Paramagnetic to antiferromagnetic transition in epitaxial tetragonal CuMnAs (invited). Journal of Applied Physics, 2015, 117, .	2.5	9
39	Comparison of micromagnetic parameters of the ferromagnetic semiconductors (Ga,Mn)(As,P) and (Ga,Mn)As. Physical Review B, 2014, 90, .	3.2	11
40	Voltage controlled modification of flux closure domains in planar magnetic structures for microwave applications. Applied Physics Letters, 2014, 105, 062405.	3.3	13
41	Temperature dependence of spin-orbit torque effective fields in the diluted magnetic semiconductor (Ga,Mn)As. Applied Physics Letters, 2014, 105, 012402.	3.3	6
42	Determining Curie temperatures in dilute ferromagnetic semiconductors: High Curie temperature (Ga,Mn)As. Applied Physics Letters, 2014, 104, .	3.3	29
43	Anisotropic current-controlled magnetization reversal in the ferromagnetic semiconductor (Ga,Mn)As. Applied Physics Letters, 2013, 103, 022401.	3.3	32
44	Tetragonal phase of epitaxial room-temperature antiferromagnet CuMnAs. Nature Communications, 2013, 4, 2322.	12.8	123
45	High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As. Physical Review B, 2013, 87, .	3.2	34
46	Magnetostrictive thin films for microwave spintronics. Scientific Reports, 2013, 3, 2220.	3.3	73
47	Electrical control of magnetic reversal processes in magnetostrictive structures. Applied Physics Letters, 2013, 102, .	3.3	26
48	Magnetic and structural properties of (Ga,Mn)As/(Al,Ga,Mn)As bilayer films. Applied Physics Letters, 2013, 102, 112404.	3.3	5
49	Crystalline anisotropic magnetoresistance in quaternary ferromagnetic semiconductor (Ga,Mn)(As,Sb). Applied Physics Letters, 2013, 102, .	3.3	7
50	Piezoelectric strain induced variation of the magnetic anisotropy in a high Curie temperature (Ga,Mn)As sample. Applied Physics Letters, 2012, 101, 082406.	3.3	7
51	Analysing Surface Structures on (Ga, Mn)As by Atomic Force Microscopy. Journal of Nanoscience and Nanotechnology, 2012, 12, 7545-7549.	0.9	0
52	Magnetic domain wall propagation under ferroelectric control. Physical Review B, 2012, 86, .	3.2	16
53	Non-volatile voltage control of magnetization and magnetic domain walls in magnetostrictive epitaxial thin films. Applied Physics Letters, 2012, 101, 072402.	3.3	79
54	Non-volatile ferroelectric gating of magnetotransport anisotropy in (Ga,Mn)(As,P). Applied Physics Letters, 2012, 100, .	3.3	6

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55	Surface morphology and magnetic anisotropy in (Ga,Mn)As. Applied Physics Letters, 2011, 98, 152503.	3.3	10
56	Fast switching of magnetization in the ferromagnetic semiconductor (Ga,Mn)(As,P) using nonequilibrium phonon pulses. Applied Physics Letters, 2011, 99, .	3.3	8
57	Polarized x-ray spectroscopy of quaternary ferromagnetic semiconductor (Ga,Mn)(As,P) thin films. Applied Physics Letters, 2011, 99, 022502.	3.3	4
58	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.	7.8	14
59	Enhanced Curie temperature and nonvolatile switching of ferromagnetism in ultrathin (Ga,Mn)As channels. Physical Review B, 2011, 83, .	3.2	12
60	Ferroelectric polymer gates for non-volatile field effect control of ferromagnetism in (Ga, Mn)As layers. Nanotechnology, 2011, 22, 254004.	2.6	14
61	Control of Ferromagnetism in a (Ga, Mn)As-Based Multiferroic System via a Ferroelectric Gate. , 2010, , .		0
62	Microscopic Analysis of the Valence Band and Impurity Band Theories of (Ga,Mn)As. Physical Review Letters, 2010, 105, 227202.	7.8	36
63	Valence-state model of strain-dependent magnetic circular dichroism from ferromagnetic semiconductors. Physical Review B, 2010, 81, .	3.2	12
64	Element-resolved orbital polarization in (III,Mn)As ferromagnetic semiconductors from K -edge x-ray magnetic circular dichroism. Physical Review B, 2010, 81, .	3.2	17
65	Current-driven domain wall motion across a wide temperature range in a (Ga,Mn)(As,P) device. Applied Physics Letters, 2010, 97, .	3.3	25
66	Exchange bias in a ferromagnetic semiconductor induced by a ferromagnetic metal: Fe/(Ga,Mn)As bilayer films studied by XMCD measurements and SQUID magnetometry. Physical Review B, 2010, 81, .	3.2	30
67	Tuning perpendicular magnetic anisotropy in (Ga,Mn)(As,P) by thermal annealing. Applied Physics Letters, 2010, 97, 122504.	3.3	11
68	A low field technique for measuring magnetic and magnetoresistance anisotropy coefficients applied to (Ga,Mn)As. Applied Physics Letters, 2009, 95, .	3.3	2
69	Manipulation of the magnetic configuration of (Ga,Mn)As nanostructures. Applied Physics Letters, 2009, 95, 062502.	3.3	3
70	Photoemission of Ga _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.	1.5	7
71	Toward a low-voltage multiferroic transistor: Magnetic (Ga,Mn)As under ferroelectric control. Applied Physics Letters, 2009, 94, .	3.3	20
72	Non-volatile ferroelectric control of ferromagnetism in (Ga,Mn)As. Nature Materials, 2008, 7, 464-467.	27.5	150

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73	Curie Point Singularity in the Temperature Derivative of Resistivity in (Ga,Mn)As. Physical Review Letters, 2008, 101, 077201.	7.8	132
74	Voltage control of magnetocrystalline anisotropy in ferromagnetic-semiconductor-piezoelectric hybrid structures. Physical Review B, 2008, 78, .	3.2	90
75	Huge tunnelling anisotropic magnetoresistance in (Ga,Mn)As nanoconstrictions. New Journal of Physics, 2008, 10, 085004.	2.9	2
76	Magnetic properties of sol-gel-derived doped ZnO as a potential ferromagnetic semiconductor: a synchrotron-based study. New Journal of Physics, 2008, 10, 055012.	2.9	18
77	Magnetic reversal under external field and current-driven domain wall motion in (Ga,Mn)As: influence of extrinsic pinning. New Journal of Physics, 2008, 10, 085007.	2.9	10
78	Domain Walls in the $\langle \text{Ga} \rangle \langle \text{Mn} \rangle$ Tj $\frac{E_{\text{q0}}}{2BT} / \text{Overl}$ stretchy="false"> Physical Review Letters, 2008, 100, 047202.	2.9	10
79	Achieving high Curie temperature in (Ga,Mn)As. Applied Physics Letters, 2008, 93, .	3.3	165
80	Valence band orbital polarization in III-V ferromagnetic semiconductors. Physical Review B, 2008, 77, .	3.2	16
81	Compositional dependence of ferromagnetism in (Al,Ga,Mn)As magnetic semiconductors. Physical Review B, 2008, 78, .	3.2	12
82	Strain dependence of the Mn anisotropy in ferromagnetic semiconductors observed by x-ray magnetic circular dichroism. Physical Review B, 2008, 77, .	3.2	7
83	Molecular beam epitaxy grown (Ga,Mn)(As,P) with perpendicular to plane magnetic easy axis. Journal of Applied Physics, 2008, 104, .	2.5	35
84	Microstructural characterization of low-temperature grown GaMnN on GaAs(0001) substrates by plasma-assisted MBE. Semiconductor Science and Technology, 2007, 22, 1131-1139.	2.0	2
85	Measuring the hole chemical potential in ferromagnetic Ga _{1-x} MnxAs ⁺ /GaAs heterostructures by photoexcited resonant tunneling. Applied Physics Letters, 2007, 90, 082106.	3.3	12
86	Domain imaging and domain wall propagation in (Ga, Mn)As thin films with tensile strain. Journal of Applied Physics, 2007, 101, 106101.	2.5	27
87	Anisotropic Magnetoresistance Components in (Ga,Mn)As. Physical Review Letters, 2007, 99, 147207.	7.8	107
88	Secondary magnetic phases in (Ga,Mn)As determined by x-ray magnetic circular dichroism. Journal of Applied Physics, 2007, 102, 023902.	2.5	8
89	Depth dependence of the Mn valence and Mn-Mn coupling in (Ga,Mn)N. Physical Review B, 2007, 76, .	3.2	20
90	Character of states near the Fermi level in (Ga,Mn)As: Impurity to valence band crossover. Physical Review B, 2007, 76, .	3.2	139

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91	The growth of high quality GaMnAs layers and heterostructures by molecular beam epitaxy. Physica Status Solidi (B): Basic Research, 2007, 244, 2944-2949.	1.5	0
92	Holes respond to strain. Nature Materials, 2007, 6, 472-473.	27.5	2
93	Magnetic domain structure and magnetization reversal in (311)B Ga _{0.91} Mn _{0.09} As films. Journal of Applied Physics, 2006, 99, 093908.	2.5	7
94	Angle-Dependent X-Ray Magnetic Circular Dichroism from (Ga,Mn)As: Anisotropy and Identification of Hybridized States. Physical Review Letters, 2006, 96, 117207.	7.8	39
95	Ferromagnetic nanodevices based on (Ga,Mn)As. Current Opinion in Solid State and Materials Science, 2006, 10, 108-113.	11.5	5
96	Nanoscale characterisation of electronic and spintronic nitrides and arsenides. Journal of Physics: Conference Series, 2006, 26, 175-178.	0.4	0
97	Microstructural characterisation of zinc-blende Ga _{1-x} Mn _x N grown by MBE as a function of Mn flux. Journal of Physics: Conference Series, 2006, 26, 179-182.	0.4	2
98	AMR and magnetometry studies of ultra thin GaMnAs films. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4078-4081.	0.8	15
99	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.	1.2	5
100	Low-temperature magnetization of (Ga,Mn)As semiconductors. Physical Review B, 2006, 73, .	3.2	48
101	Giant anisotropy in x-ray magnetic linear dichroism in (Ga,Mn)As. Physical Review B, 2006, 73, .	3.2	26
102	Control of coercivities in (Ga,Mn)As thin films by small concentrations of MnAs nanoclusters. Applied Physics Letters, 2006, 88, 022510.	3.3	41
103	Local structure around Mn atoms in cubic (Ga,Mn)N thin films probed by fluorescence extended x-ray absorption fine structure. Applied Physics Letters, 2006, 88, 051905.	3.3	16
104	Conductivity of Cubic GaMnN Grown on Undoped GaN Layers. , 2006, , .		0
105	Search For Hole Mediated Ferromagnetism In Cubic (Ga,Mn)N. AIP Conference Proceedings, 2005, , .	0.4	3
106	Mn doping and p-type conductivity in zinc-blende GaMnN layers grown by molecular beam epitaxy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1294.	1.6	19
107	Magnetism in (Ga,Mn)As Thin Films With TC Up To 173K. AIP Conference Proceedings, 2005, , .	0.4	60
108	In-plane uniaxial anisotropy rotations in (Ga,Mn)As thin films. Physical Review B, 2005, 71, .	3.2	188

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109	p-type conductivity in cubic (Ga,Mn)N thin films. Applied Physics Letters, 2005, 86, 152114.	3.3	34
110	Large Tunneling Anisotropic Magnetoresistance in (Ga,Mn)As Nanoconstrictions. Physical Review Letters, 2005, 94, 127202.	7.8	88
111	Structural characterization of zincblende Ga _{1-x} Mn _x N epilayers grown by molecular beam epitaxy on (001) GaAs substrates. Applied Physics Letters, 2005, 87, 031902.	3.3	2
112	Spin Reorientation Transition in Single-Domain(Ga,Mn)As. Physical Review Letters, 2005, 95, 217204.	7.8	133
113	EdmondsetÅal.Reply:. Physical Review Letters, 2005, 94, .	7.8	7
114	Ferromagnetic moment and antiferromagnetic coupling in (Ga,Mn)As thin films. Physical Review B, 2005, 71, .	3.2	101
115	(Ga,Mn)As grown on (311) GaAs substrates: Modified Mn incorporation and magnetic anisotropies. Physical Review B, 2005, 72, .	3.2	37
116	Prospects for high temperature ferromagnetism in (Ga,Mn)As semiconductors. Physical Review B, 2005, 72, .	3.2	382
117	Anisotropic magnetoresistance and magnetic anisotropy in high-quality (Ga,Mn)As films. Physical Review B, 2005, 72, .	3.2	93
118	Intrinsic and extrinsic contributions to the lattice parameter of GaMnAs. Applied Physics Letters, 2005, 86, 071902.	3.3	37
119	Determination of the Mn concentration in GaMnAs. Semiconductor Science and Technology, 2005, 20, 369-373.	2.0	22
120	P-type conductivity in cubic GaMnN layers grown by molecular beam epitaxy. Semiconductor Science and Technology, 2004, 19, L13-L16.	2.0	35
121	Surface effects in Mn L _{3,2} x-ray absorption spectra from (Ga,Mn)As. Applied Physics Letters, 2004, 84, 4065-4067.	3.3	82
122	Magnetic domain imaging of ferromagnetic GaMnAs films. Journal of Applied Physics, 2004, 95, 7399-7401.	2.5	9
123	Influence of low temperature annealing on the micromagnetic structure of GaMnAs films. Journal of Applied Physics, 2004, 95, 3225-3227.	2.5	16
124	Mn L _{3,2} x-ray absorption from (Ga,Mn)As and (Ga,Mn)N. Journal of Applied Physics, 2004, 95, 7166-7168.	2.5	14
125	The growth of high quality GaMnAs films by MBE. Journal of Materials Science: Materials in Electronics, 2004, 15, 727-731.	2.2	7
126	Influence of the Mn interstitial on the magnetic and transport properties of (Ga,Mn)As. Journal of Applied Physics, 2004, 95, 6512-6514.	2.5	66

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127	Sol-gel formation of ordered nanostructured doped ZnO films. Journal of Materials Chemistry, 2004, 14, 1087.	6.7	87
128	Mn Interstitial Diffusion in(Ga,Mn)As. Physical Review Letters, 2004, 92, 037201.	7.8	476
129	Dc-transport properties of ferromagnetic (Ga,Mn)As semiconductors. Applied Physics Letters, 2003, 83, 320-322.	3.3	98
130	Magnetoresistance and Hall effect in the ferromagnetic semiconductor Ga _{1-x} MnxAs. Journal of Applied Physics, 2003, 93, 6787-6789.	2.5	56
131	Even-odd transition in the Shubnikov-de Haas oscillations in a two-dimensional electron gas subjected to periodic magnetic and electric modulations. Physical Review B, 2002, 66, .	3.2	32
132	High-Curie-temperature Ga _{1-x} MnxAs obtained by resistance-monitored annealing. Applied Physics Letters, 2002, 81, 4991-4993.	3.3	318
133	Hall effect and hole densities in Ga _{1-x} MnxAs. Applied Physics Letters, 2002, 81, 3010-3012.	3.3	125
134	Magnetoresistance oscillations in a periodic magnetic field due to internal Landau band structure. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 212-215.	2.7	0
135	Magnetoresistance oscillations due to internal Landau band structure of a two-dimensional electron system in a periodic magnetic field. Physical Review B, 2001, 64, .	3.2	38
136	Magnetic linear dichroism in angular-resolved Fe3p and Fe2p core-level photoemission for thin Fe films on graphite. Physical Review B, 2000, 61, 5026-5032.	3.2	10