

Richard P Champion

List of Publications by Year in descending order

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78
papers

4,197
citations

201575

27
h-index

106281

65
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79
all docs

79
docs citations

79
times ranked

4302
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} Mn _x As 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	Terahertz electrical writing speed in an antiferromagnetic memory. <i>Science Advances</i> , 2018, 4, eaar3566.	4.7	221
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} Mn _x As. <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	High-quality GaMnAs films grown with arsenic dimers. <i>Journal of Crystal Growth</i> , 2003, 247, 42-48.	0.7	88
15	Large Tunneling Anisotropic Magnetoresistance in (Ga,Mn)As Nanoconstrictions. <i>Physical Review Letters</i> , 2005, 94, 127202.	2.9	88
16	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
17	Influence of the Mn interstitial on the magnetic and transport properties of (Ga,Mn)As. <i>Journal of Applied Physics</i> , 2004, 95, 6512-6514.	1.1	66
18	Piezoelectric control of the mobility of a domain wall driven by adiabatic and non-adiabatic torques. <i>Nature Materials</i> , 2013, 12, 808-814.	13.3	64

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19	Magnetoresistance and Hall effect in the ferromagnetic semiconductor Ga _{1-x} Mn _x As. Journal of Applied Physics, 2003, 93, 6787-6789.	1.1	56
20	The growth of GaMnAs films by molecular beam epitaxy using arsenic dimers. Journal of Crystal Growth, 2003, 251, 311-316.	0.7	44
21	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
22	Microscopic Analysis of the Valence Band and Impurity Band Theories of (Ga,Mn)As. Physical Review Letters, 2010, 105, 227202.	2.9	36
23	P-type conductivity in cubic GaMnN layers grown by molecular beam epitaxy. Semiconductor Science and Technology, 2004, 19, L13-L16.	1.0	35
24	p-type conductivity in cubic (Ga,Mn)N thin films. Applied Physics Letters, 2005, 86, 152114.	1.5	34
25	Insight into the Growth and Control of Single-Crystal Layers of Ge _{1-x} Sb _x Te Phase-Change Material. Crystal Growth and Design, 2011, 11, 4606-4610.	1.4	34
26	Determining Curie temperatures in dilute ferromagnetic semiconductors: High Curie temperature (Ga,Mn)As. Applied Physics Letters, 2014, 104, .	1.5	29
27	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
28	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
29	Determination of the Mn concentration in GaMnAs. Semiconductor Science and Technology, 2005, 20, 369-373.	1.0	22
30	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
31	Nanoscale thermoelectrical detection of magnetic domain wall propagation. Physical Review B, 2017, 95, .	1.1	17
32	Influence of low temperature annealing on the micromagnetic structure of GaMnAs films. Journal of Applied Physics, 2004, 95, 3225-3227.	1.1	16
33	Direct Laser Writing of Nanoscale Light-Emitting Diodes. Advanced Materials, 2010, 22, 3176-3180.	11.1	16
34	Mn ^{L3,2} x-ray absorption from (Ga,Mn)As and (Ga,Mn)N. Journal of Applied Physics, 2004, 95, 7166-7168.	1.1	14
35	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
36	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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37	Spin gating electrical current. Applied Physics Letters, 2012, 101, .	1.5	14
38	Molecular beam epitaxy of CuMnAs. Physical Review Materials, 2020, 4, .	0.9	14
39	Atomically sharp domain walls in an antiferromagnet. Science Advances, 2022, 8, eabn3535.	4.7	12
40	Photoelectron spectroscopy study of Ga _{1-x} Mn _x As(001) surface oxide and low temperature cleaning. Surface Science, 2005, 585, 66-74.	0.8	11
41	Tuning perpendicular magnetic anisotropy in (Ga,Mn)(As,P) by thermal annealing. Applied Physics Letters, 2010, 97, 122504.	1.5	11
42	Surface morphology and magnetic anisotropy in (Ga,Mn)As. Applied Physics Letters, 2011, 98, 152503.	1.5	10
43	Magnetic domain imaging of ferromagnetic GaMnAs films. Journal of Applied Physics, 2004, 95, 7399-7401.	1.1	9
44	Molecular beam epitaxy of p-type cubic GaMnN layers. Journal of Crystal Growth, 2005, 278, 685-689.	0.7	9
45	Coherent phonon optics in a chip with an electrically controlled active device. Scientific Reports, 2015, 5, 8279.	1.6	9
46	Paramagnetic to antiferromagnetic transition in epitaxial tetragonal CuMnAs (invited). Journal of Applied Physics, 2015, 117, .	1.1	9
47	Ordinary and extraordinary Coulomb blockade magnetoresistance in a (Ga, Mn)As single electron transistor. Solid State Communications, 2007, 144, 536-541.	0.9	8
48	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
49	Fast switching of magnetization in the ferromagnetic semiconductor (Ga,Mn)(As,P) using nonequilibrium phonon pulses. Applied Physics Letters, 2011, 99, .	1.5	8
50	Asymmetric magnetic relaxation behavior of domains and domain walls observed through the FeRh first-order metamagnetic phase transition. Physical Review B, 2020, 102, .	1.1	8
51	Defect-driven antiferromagnetic domain walls in CuMnAs films. Nature Communications, 2022, 13, 724.	5.8	8
52	The growth of high quality GaMnAs films by MBE. Journal of Materials Science: Materials in Electronics, 2004, 15, 727-731.	1.1	7
53	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
54	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

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55	Nano-sized light emitting diodes by near field laser exposure. Applied Physics Letters, 2011, 98, .	1.5	7
56	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
57	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
58	Non-volatile ferroelectric gating of magnetotransport anisotropy in (Ga,Mn)(As,P). Applied Physics Letters, 2012, 100, .	1.5	6
59	Investigation of radiative recombination from Mn-related states in Ga _{1-x} MnxAs. Applied Physics Letters, 2003, 83, 866-868.	1.5	5
60	Characterization of Ga _{1-x} MnxAs/(001)GaAs epilayers grown by low-temperature molecular beam epitaxy. Philosophical Magazine Letters, 2006, 86, 395-401.	0.5	5
61	Magnetic and structural properties of (Ga,Mn)As/(Al,Ga,Mn)As bilayer films. Applied Physics Letters, 2013, 102, 112404.	1.5	5
62	Hysteretic effects and magnetotransport of electrically switched CuMnAs. Physical Review B, 2021, 104, .	1.1	5
63	Protected Long-Distance Guiding of Hypersound Underneath a Nanocorrugated Surface. ACS Nano, 2021, 15, 4802-4810.	7.3	4
64	Electrical excitation and detection of magnetic dynamics with impedance matching. Applied Physics Letters, 2012, 101, 182402.	1.5	3
65	Investigation of exchange coupled bilayer Fe/CuMnAs by pump-probe experiment. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600441.	1.2	3
66	A high electron mobility phonotransistor. Communications Physics, 2018, 1, .	2.0	3
67	Structural characterisation of zinc-blende Ga _{1-x} MnxN epilayers grown by MBE as a function of Ga flux. Journal of Crystal Growth, 2005, 284, 324-334.	0.7	2
68	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
69	A low field technique for measuring magnetic and magnetoresistance anisotropy coefficients applied to (Ga,Mn)As. Applied Physics Letters, 2009, 95, .	1.5	2
70	Domain wall resistance in perpendicular (Ga,Mn)As: Dependence on pinning. Journal of Magnetism and Magnetic Materials, 2010, 322, 3481-3484.	1.0	2
71	Anion modulation epitaxy (AME), an alternative growth strategy for group III nitrides. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 530-533.	0.8	2
72	Light-emitting diodes based on GaMnAs/GaAs heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 1002-1006.	1.3	1

#	ARTICLE	IF	CITATIONS
73	Tracking Data Certification for the Lunar Reconnaissance Orbiter. , 2010, , .		1
74	III-V semiconductor waveguides for photonic functionality at 780 nm. , 2014, , .		1
75	Modelling Photocathode Performance using Density Functional Theory. , 2019, , .		1
76	The growth of high quality GaMnAs layers and heterostructures by molecular beam epitaxy. Physica Status Solidi (B): Basic Research, 2007, 244, 2944-2949.	0.7	0
77	Analysing Surface Structures on (Ga, Mn)As by Atomic Force Microscopy. Journal of Nanoscience and Nanotechnology, 2012, 12, 7545-7549.	0.9	0
78	Modeling Photocathode Performance Using MedeA-VASP Simulation Software. IEEE Transactions on Nuclear Science, 2020, 67, 1987-1992.	1.2	0