

# Gang Xiao

## List of Publications by Year in descending order

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104  
papers

5,127  
citations

117625

34  
h-index

88630

70  
g-index

105  
all docs

105  
docs citations

105  
times ranked

4230  
citing authors



#	ARTICLE	IF	CITATIONS
19	Inelastic tunneling spectroscopy of magnetic tunnel junctions based on CoFeB/MgO/CoFeB with Mg insertion layer. Journal of Applied Physics, 2006, 99, 08T305.	2.5	72
20	Giant spin Hall effect and magnetotransport in a Ta/CoFeB/MgO layered structure: A temperature dependence study. Physical Review B, 2015, 91, .	3.2	71
21	Magnetic domain structures of La <sub>0.67</sub> Sr <sub>0.33</sub> MnO <sub>3</sub> thin films with different morphologies. Journal of Applied Physics, 1997, 82, 3934-3939.	2.5	68
22	Effect of film roughness in MgO-based magnetic tunnel junctions. Applied Physics Letters, 2006, 88, 182508.	3.3	68
23	Variations in the magnetic anisotropy properties of epitaxial CrO <sub>2</sub> films as a function of thickness. Physical Review B, 2005, 71, .	3.2	63
24	Extraordinary Hall effect in (111) and (100)-orientated Co/Pt superlattices. Journal of Applied Physics, 1997, 81, 5367-5369.	2.5	62
25	Detection of DNA labeled with magnetic nanoparticles using MgO-based magnetic tunnel junction sensors. Journal of Applied Physics, 2008, 103, .	2.5	60
26	Probing magnetic anisotropy effects in epitaxial CrO <sub>2</sub> thin films. Physical Review B, 2000, 62, 8931-8934.	3.2	56
27	Low-frequency magnetic noise in magnetic tunnel junctions. Physical Review B, 2004, 69, .	3.2	51
28	Selective-area and lateral overgrowth of chromium dioxide (CrO <sub>2</sub> ) films by chemical vapor deposition. Applied Physics Letters, 1999, 75, 2996-2998.	3.3	48
29	Thermal stability of magnetic tunneling junctions with MgO barriers for high temperature spintronics. Applied Physics Letters, 2006, 89, 023504.	3.3	48
30	Electronic transport and magnetoresistance in polycrystalline and epitaxial CrO <sub>2</sub> nanowires. Physical Review B, 2008, 77, .	3.2	48
31	Transport and magnetic properties of in situ grown thin film La <sub>0.67</sub> Sr <sub>0.33</sub> MnO <sub>3</sub> . Applied Physics Letters, 1995, 67, 2726-2728.	3.3	46
32	PicoTesla magnetic tunneling junction sensors integrated with double staged magnetic flux concentrators. Applied Physics Letters, 2018, 113, .	3.3	40
33	Quantitative detection of DNA labeled with magnetic nanoparticles using arrays of MgO-based magnetic tunnel junction sensors. Applied Physics Letters, 2008, 93, 033903.	3.3	39
34	Low frequency noise in highly sensitive magnetic tunnel junctions with (001) MgO tunnel barrier. Applied Physics Letters, 2007, 91, .	3.3	34
35	Field sensing characteristics of magnetic tunnel junctions with (001) MgO tunnel barrier. Journal of Applied Physics, 2008, 103, 113911.	2.5	34
36	Deterministic Current Induced Magnetic Switching Without External Field using Giant Spin Hall Effect of $\hat{I}^2$ -W. Scientific Reports, 2018, 8, 8144.	3.3	34

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37	Giant Hall resistance in Pt-based ferromagnetic alloys. Applied Physics Letters, 2004, 85, 73-75.	3.3	33
38	Emission studies of the gas-phase oxidation of Mn during pulsed laser deposition of manganates in O <sub>2</sub> and N <sub>2</sub> O atmospheres. Journal of Applied Physics, 1996, 80, 513-517.	2.5	32
39	Thermal stability, sensitivity, and noise characteristics of MgO-based magnetic tunnel junctions (invited). Journal of Applied Physics, 2007, 101, 09B502.	2.5	29
40	High Contrast Far-Field Radiative Thermal Diode. Scientific Reports, 2017, 7, 6339.	3.3	29
41	Magnetotransport in doped manganate perovskites. IBM Journal of Research and Development, 1998, 42, 89-102.	3.1	28
42	Temperature study of the giant spin Hall effect in the bulk limit of $\langle \mathbf{m} \rangle^2$ . Physical Review B, 2018, 98, .	3.2	28
43	Effects of superparamagnetism in MgO based magnetic tunnel junctions. Physical Review B, 2009, 79, .	3.2	26
44	Submicron electrical current density imaging of embedded microstructures. Applied Physics Letters, 2003, 82, 3272-3274.	3.3	24
45	Magnetic domain configurations of epitaxial chromium dioxide (CrO <sub>2</sub> ) nanostructures. Applied Physics Letters, 2007, 91, 113512.	3.3	24
46	Giant magnetoresistive structures based on CrO <sub>2</sub> with epitaxial RuO <sub>2</sub> as the spacer layer. Journal of Applied Physics, 2005, 97, 10C924.	2.5	23
47	Controlled modification of skyrmion information in a three-terminal racetrack memory. Nanoscale, 2019, 11, 6952-6961.	5.6	23
48	Spin-orbit torque switching of chiral magnetization across a synthetic antiferromagnet. Communications Physics, 2021, 4, .	5.3	23
49	Large magnetic Hall effect in ferromagnetic FePt <sub>100</sub> thin films. Journal of Applied Physics, 1996, 79, 6126.	2.5	21
50	Impedance spectroscopy of micron sized magnetic tunnel junctions with MgO tunnel barrier. Applied Physics Letters, 2010, 96, 232506.	3.3	21
51	Large magnetocapacitance effect in magnetic tunnel junctions based on Debye-Fröhlich model. Applied Physics Letters, 2015, 107, .	3.3	21
52	Low-Frequency Noise of Magnetic Sensors Based on the Anomalous Hall Effect in FePt Alloys. Sensors, 2019, 19, 3537.	3.8	20
53	Anomalous Hall Sensors with High Sensitivity and Stability Based on Interlayer Exchange-Coupled Magnetic Thin Films. Physical Review Applied, 2020, 13, .	3.8	20
54	Direct imaging of an inhomogeneous electric current distribution using the trajectory of magnetic half-skyrmions. Science Advances, 2020, 6, eaay1876.	10.3	20



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73	Magnetic characterization of magnetic tunnel junction devices using circle transfer curves. Journal of Applied Physics, 2008, 103, 033507.	2.5	8
74	A $\hat{I}^2$ -Ta system for current induced magnetic switching in the absence of external magnetic field. AIP Advances, 2018, 8, .	1.3	8
75	Manipulation of the interlayer exchange coupling in perpendicular magnetized thin films via tunable magnetic-layer and spacer thicknesses. Physical Review B, 2020, 102, .	3.2	8
76	Correlations between $T_c$ and $n/m^*$ (carrier density/ effective mass) in high- $T_c$ and organic superconductors. Hyperfine Interactions, 1991, 63, 131-137.	0.5	7
77	Microstructures of magnetic tunneling junctions. Journal of Applied Physics, 2003, 93, 467-470.	2.5	7
78	Influence of substrate treatment on the growth morphology and magnetic anisotropy of epitaxial CrO <sub>2</sub> films. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1513-1520.	1.8	7
79	Controlling the anomalous Hall effect by electric-field-induced piezo-strain in Fe <sub>40</sub> Pt <sub>60</sub> (001)-Pb(Mg <sub>1/3</sub> Nb <sub>2/3</sub> ) <sub>0.67</sub> Ti <sub>0.33</sub> O <sub>3</sub> multiferroic heterostructures. Applied Physics Letters, 2018, 112, .	3.3	7
80	Nonhysteretic Vortex Magnetic Tunnel Junction Sensor with High Dynamic Reserve. Physical Review Applied, 2020, 14, .	3.8	7
81	Noise characterization of ultrasensitive anomalous Hall effect sensors based on Co <sub>40</sub> Fe <sub>40</sub> B <sub>20</sub> thin films with compensated in-plane and perpendicular magnetic anisotropies. Applied Physics Letters, 2020, 116, .	3.3	7
82	Observation and theoretical calculations of voltage-induced large magnetocapacitance beyond 330% in MgO-based magnetic tunnel junctions. Scientific Reports, 2021, 11, 13807.	3.3	7
83	Micron-Scale Anomalous Hall Sensors Based on FePt <sub>1-x</sub> Thin Films with a Large Hall Angle and near the Spin-Reorientation Transition. Nanomaterials, 2021, 11, 854.	4.1	6
84	Electric-field-assisted non-volatile magnetic switching in a magnetoelectronic hybrid structure. IScience, 2021, 24, 102734.	4.1	6
85	Spin-dependent shot noise in MgO-based magnetic tunnel junctions under noncollinear magnetization alignment. Physical Review B, 2019, 100, .	3.2	5
86	Magnetic tunnel junction based gradiometer for detection of cracks in cement. Sensors and Actuators A: Physical, 2021, 331, 112966.	4.1	5
87	Large magnetocapacitance beyond 420% in epitaxial magnetic tunnel junctions with an MgAl <sub>2</sub> O <sub>4</sub> barrier. Scientific Reports, 2022, 12, 7190.	3.3	5
88	Switching behavior and its strain dependence in epitaxial CrO <sub>2</sub> /thin films. IEEE Transactions on Magnetics, 2001, 37, 2596-2598.	2.1	4
89	Reversible optical control of the metal-insulator transition across the epitaxial heterointerface of a VO <sub>2</sub> /Nb:TiO <sub>2</sub> junction. Science China Materials, 2021, 64, 1687-1702.	6.3	4
90	Magnetotransport properties of polycrystalline and epitaxial chromium dioxide nanowires. Journal of Applied Physics, 2008, 103, .	2.5	3

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91	Spin curvature induced resistivity in epitaxial half-metallic CrO <sub>2</sub> thin films. <i>Nanoscale</i> , 2020, 12, 3958-3964.	5.6	3
92	Scanning magnetoresistive microscopy study of quasi-static magnetic switching in mesoscopic square dots: observation of field-driven transition between flux-closure states. <i>IEEE Transactions on Magnetics</i> , 2005, 41, 2226-2229.	2.1	2
93	Superconducting electron focusing and guiding based on the Andreev reflection mechanism. <i>Applied Physics Letters</i> , 1992, 60, 504-506.	3.3	1
94	Sub-200 Oe Giant Magnetoresistance in Manganite Tunnel Junctions. <i>Materials Research Society Symposia Proceedings</i> , 1997, 494, 221.	0.1	1
95	Ultrafast magnetization dynamics in magnetic tunneling junctions. <i>Applied Physics Letters</i> , 2011, 98, 263506.	3.3	1
96	Resistance of single domain walls in half-metallic CrO <sub>2</sub> epitaxial nanostructures. <i>Nanoscale</i> , 2021, 13, 20034-20040.	5.6	1
97	Anomalous Hall Effect And Giant Magnetoresistance In Co-alk And Fe-( Cu, Ag, Au, Pt) Granular Alloys. , 1993, , .		0
98	Strain dependence and magnetic anisotropy in chromium dioxide thin films. <i>Materials Research Society Symposia Proceedings</i> , 2000, 648, 1.	0.1	0
99	Micromagnetic investigations of mesoscopic magnetic rings via magnetic force and magnetoresistive microscopy. , 0, , .		0
100	Real-time current density imaging of electromigration processes using scanning magnetoresistive microscopy. , 0, , .		0
101	Magnetic stability under magnetic cycling of MgO-based magnetic tunneling junctions with an exchange-biased synthetic antiferromagnetic pinned layer. <i>AIP Advances</i> , 2016, 6, 025303.	1.3	0
102	An all-inorganic, fully dense, stretchable ceramic magnetic film. <i>Nanoscale Advances</i> , 2021, 3, 800-804.	4.6	0
103	Sign inversion phenomenon of voltage-induced tunnel magnetocapacitance. <i>Applied Physics Letters</i> , 2021, 118, 182403.	3.3	0
104	Characterization of PN junctions of doped Mott insulators. <i>AIP Advances</i> , 2021, 11, 125226.	1.3	0