

# Jian Liu

## List of Publications by Year in descending order

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73  
papers

4,032  
citations

126907

33  
h-index

114465

63  
g-index

74  
all docs

74  
docs citations

74  
times ranked

5309  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deterministic switching of ferromagnetism at room temperature using an electric field. Nature, 2014, 516, 370-373.	27.8	570
2	Room-temperature antiferromagnetic memory resistor. Nature Materials, 2014, 13, 367-374.	27.5	546
3	Heterointerface engineered electronic and magnetic phases of NdNiO <sub>3</sub> thin films. Nature Communications, 2013, 4, 2714.	12.8	167
4	Asymmetric Orbital-Lattice Interactions in Ultrathin Correlated Oxide Films. Physical Review Letters, 2011, 107, 116805.	7.8	158
5	Anisotropic magnetoresistance in an antiferromagnetic semiconductor. Nature Communications, 2014, 5, 4671.	12.8	136
6	Emerging magnetism and anomalous Hall effect in iridate-manganite heterostructures. Nature Communications, 2016, 7, 12721.	12.8	123
7	Quantum confinement of Mott electrons in ultrathin LaNiO <sub>3</sub> /LaAlO <sub>3</sub> superlattices. Nature Communications, 2016, 7, 12721.	3.2	122
8	Ultrafast energy- and momentum-resolved dynamics of magnetic correlations in the photo-doped Mott insulator Sr <sub>2</sub> IrO <sub>4</sub> . Nature Materials, 2016, 15, 601-605.	27.5	120
9	Atomic-scale control of magnetic anisotropy via novel spin-orbit coupling effect in La <sub>2/3</sub> Sr <sub>1/3</sub> MnO <sub>3</sub> /SrIrO <sub>3</sub> superlattices. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6397-6402.	7.1	108
10	Tuning Perpendicular Magnetic Anisotropy by Oxygen Octahedral Rotations in $\text{La}_{2/3}\text{Sr}_{1/3}\text{MnO}_3/\text{SrIrO}_3$ superlattices. Nature Communications, 2016, 7, 12721.		

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19	A Strain-Driven Antiferroelectric-to-Ferroelectric Phase Transition in La-Doped BiFeO <sub>3</sub> Thin Films on Si. Nano Letters, 2017, 17, 5823-5829.	9.1	64
20	Electron Accumulation and Emergent Magnetism in $\text{LaMnO}_3$ Heterostructures. Physical Review Letters, 2017, 119, 156801.	7.8	63
21	Induced Magnetization in $\text{LaMnO}_3$ . Physical Review Letters, 2014, 113, 047204.	7.8	59
22	180° Ferroelectric Stripe Nanodomains in BiFeO <sub>3</sub> Thin Films. Nano Letters, 2015, 15, 6506-6513.	9.1	58
23	Two-Dimensional Antiferromagnetic Insulator Unraveled from Interlayer Exchange Coupling in Artificial Perovskite Iridate Superlattices. Physical Review Letters, 2017, 119, 027204.	7.8	55
24	Optical study of strained ultrathin films of strongly correlated $\text{LaNiO}_3$ . Physical Review B, 2011, 83, .	3.2	54
25	Local electronic and magnetic studies of an artificial La <sub>2</sub> FeCrO <sub>6</sub> double perovskite. Applied Physics Letters, 2010, 97, 013105.	3.3	47
26	Giant magnetic response of a two-dimensional antiferromagnet. Nature Physics, 2018, 14, 806-810.	16.7	44
27	Connecting bulk symmetry and orbital polarization in strained RNiO <sub>3</sub> ultrathin films. Physical Review B, 2013, 88, .	3.2	40
28	Experimental evidence for bipolaron condensation as a mechanism for the metal-insulator transition in rare-earth nickelates. Nature Communications, 2018, 9, 86.	12.8	40
29	Suppression of superconductivity by anisotropic strain near a nematic quantum critical point. Nature Physics, 2020, 16, 1189-1193.	16.7	39
30	Effect of polar discontinuity on the growth of LaNiO <sub>3</sub> /LaAlO <sub>3</sub> superlattices. Applied Physics Letters, 2010, 96, .	3.3	37
31	Metal-Insulator Transition and Orbital Reconstruction in Mott-Type Quantum Wells Made of NdNiO <sub>3</sub> . Physical Review Letters, 2012, 109, 107402.	7.8	37
32	Depth-resolved subsurface defects in chemically etched SrTiO <sub>3</sub> . Applied Physics Letters, 2009, 94, .	3.3	36
33	Novel Electronic Behavior Driving $\text{NdNiO}_3$ Mott Transition. Physical Review Letters, 2015, 115, 036401.	7.8	34
34	Strain-modulated Mott transition in EuNiO <sub>3</sub> ultrathin films. Physical Review B, 2013, 88, .	3.2	31
35	Optical probe of strong correlations in LaNiO <sub>3</sub> thin films. Journal of Applied Physics, 2011, 110, .	2.5	28
36	Magnetism in iridate heterostructures leveraged by structural distortions. Scientific Reports, 2019, 9, 4263.	3.3	26

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37	Giant reversible nanoscale piezoresistance at room temperature in Sr <sub>2</sub> IrO <sub>4</sub> thin films. <i>Nanoscale</i> , 2015, 7, 3453-3459.	5.6	24
38	Epitaxial Growth of Intermetallic MnPt Films on Oxides and Large Exchange Bias. <i>Advanced Materials</i> , 2016, 28, 118-123.	21.0	24
39	Sub-monolayer nucleation and growth of complex oxides at high supersaturation and rapid flux modulation. <i>Journal of Applied Physics</i> , 2011, 109, 114303.	2.5	23
40	Visualizing nanoscale electronic band alignment at the $\text{La}_{2/3}\text{MnO}_3/\text{SrTiO}_3$ interface. <i>Physical Review B</i> , 2010, 82, .	3.2	22
41	Pure electronic metal-insulator transition at the interface of complex oxides. <i>Scientific Reports</i> , 2016, 6, 27934.	3.3	22
42	Decoupling Carrier Concentration and Electron-Phonon Coupling in Oxide Heterostructures Observed with Resonant Inelastic X-Ray Scattering. <i>Physical Review Letters</i> , 2018, 121, 236802.	7.8	22
43	Novel spin-orbit coupling driven emergent states in iridate-based heterostructures. <i>Journal of Physics and Chemistry of Solids</i> , 2019, 128, 39-53.	4.0	21
44	Deterministic reversal of single magnetic vortex circulation by an electric field. <i>Science Bulletin</i> , 2020, 65, 1260-1267.	9.0	21
45	Charge order and antiferromagnetism in epitaxial ultrathin films of $\text{EuNiO}_3$ . <i>Physical Review B</i> , 2015, 92, .	1.8	18
46	Strain-dependent transport properties of the ultra-thin correlated metal, $\text{LaNiO}_3$ . <i>New Journal of Physics</i> , 2011, 13, 073037.	2.9	16
47	Heterostructuring and strain effects on the infrared optical properties of nickelates. <i>Physical Review B</i> , 2012, 86, .	3.2	16
48	Electronic and magnetic properties of (1 1 1)-oriented $\text{CoCr}_2\text{O}_4$ epitaxial thin film. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	16
49	Strain effects on structural and magnetic properties of $\text{SrIrO}_3/\text{SrTiO}_3$ superlattice. <i>Materials Today Physics</i> , 2018, 4, 43-49.	6.0	16
50	The transport-structural correspondence across the nematic phase transition probed by elasto X-ray diffraction. <i>Nature Materials</i> , 2021, 20, 1519-1524.	27.5	16
51	Controlling entangled spin-orbit coupling of $\text{La}_{2/3}\text{MnO}_3$ states with interfacial heterostructure engineering. <i>Physical Review B</i> , 2018, 97, .	4.2	14
52	Epitaxial stabilization of ultra-thin films of $\text{EuNiO}_3$ . <i>Journal Physics D: Applied Physics</i> , 2013, 46, 385303.	2.8	13
53	Anomalous magnetoresistance due to longitudinal spin fluctuations in a $J_{eff} = 1/2$ Mott semiconductor. <i>Nature Communications</i> , 2019, 10, 5301.	12.8	12
54	Probing single magnon excitations in $\text{Sr}_2\text{IrO}_4$ using O <i>K</i> -edge resonant inelastic x-ray scattering. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 202202.	1.8	11

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55	Structure of epitaxial SrIrO <sub>3</sub> perovskite studied by interference between X-ray waves diffracted by the substrate and the thin film. Journal of Applied Crystallography, 2017, 50, 385-398.	4.5	11
56	Anomalous magnetoresistance in centrosymmetric skyrmion-lattice magnet Gd <sub>2</sub> PdSi <sub>3</sub> . New Journal of Physics, 2020, 22, 083056.	2.9	11
57	Built-in Electric Field Induced Mechanical Property Change at the Lanthanum Nickelate/Nb-doped Strontium Titanate Interfaces. Scientific Reports, 2016, 6, 19017.	3.3	10
58	Superconductor to Mott insulator transition in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> /LaCaMnO <sub>3</sub> heterostructures. Scientific Reports, 2016, 6, 33184.	3.3	10
59	Comprehensive Electrical Control of Metamagnetic Transition of a Quasi-2D Antiferromagnet by In Situ Anisotropic Strain. Advanced Materials, 2020, 32, e2002451.	21.0	10
60	Strain-Modulated Slater-Mott Crossover of Pseudospin-Half Square-Lattice in (SrIrO <sub>3</sub> ) <sub>1</sub> /(SrTiO <sub>3</sub> ) <sub>1</sub> Superlattices. Physical Review Letters, 2020, 124, 177601.	7.8	10
61	Antiferromagnetic excitonic insulator state in Sr <sub>3</sub> Ir <sub>2</sub> O <sub>7</sub> . Nature Communications, 2022, 13, 913.	12.8	10
62	Designing iridate-based superlattice with large magnetoelectric coupling. Journal of Materials Chemistry C, 2019, 7, 13294-13300.	5.5	9
63	Possible scale invariant linear magnetoresistance in pyrochlore iridates Bi <sub>2</sub> Ir <sub>2</sub> O <sub>7</sub> . New Journal of Physics, 2019, 21, 113041.	2.9	8
64	Manipulation of the Electronic State of Mott Iridate Superlattice through Protonation Induced Electron Filling. Advanced Functional Materials, 2021, 31, 2100261.	14.9	7
65	Manipulation of the Electronic State and Magnetic Properties of a Mott Insulator $\text{Pr}_{0.6}\text{Ba}_{0.4}\text{Ir}_2\text{O}_{10}$ Strongly anisotropic antiferromagnetic coupling in $\text{EuFe}_2\text{O}_{10}$ revealed by stress detwinning. Physical Review B, 2021, 104, .	3.2	4
66	Strongly anisotropic antiferromagnetic coupling in $\text{EuFe}_2\text{O}_{10}$ revealed by stress detwinning. Physical Review B, 2021, 104, .	7.8	4
67	Controllable Emergent Spatial Spin Modulation in $\text{Sr}_2\text{IrO}_4$ by <i>In Situ</i> Shear Strain. Physical Review Letters, 2022, 129, .	7.8	4
68	Photoinduced coherent acoustic phonon dynamics inside Mott insulator Sr <sub>2</sub> IrO <sub>4</sub> films observed by femtosecond X-ray pulses. Applied Physics Letters, 2017, 110, .	3.3	3
69	Recovery of photoexcited magnetic ordering in Sr <sub>2</sub> IrO <sub>4</sub> . Journal of Physics Condensed Matter, 2019, 31, 255801.	1.8	2
70	Epitaxial stabilization of Sr <sub>3</sub> Ir <sub>2</sub> O <sub>7</sub> thin films. Applied Physics Letters, 2019, 114, .	3.3	2
71	Publisher's Note: Strain-modulated Mott transition in EuNiO <sub>3</sub> ultrathin films [Phys. Rev. B 88, 075116 (2013)]. Physical Review B, 2013, 88, .	3.2	1
72	Epitaxial growth and antiferromagnetism of Sn-substituted perovskite iridate SrIr <sub>0.8</sub> Sn <sub>0.2</sub> O <sub>3</sub> . Physical Review Materials, 2019, 3, .	2.4	1

#	ARTICLE	IF	CITATIONS
73	Ferromagnetism: Epitaxial Growth of Intermetallic MnPt Films on Oxides and Large Exchange Bias (Adv. Mater. 1/2016). Advanced Materials, 2016, 28, 204-204.	21.0	0