

X Renshaw Wang

List of Publications by Year in descending order

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92
papers

4,804
citations

116194

36
h-index

111975

67
g-index

93
all docs

93
docs citations

93
times ranked

8343
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonreciprocal Transport in a Bilayer of MnBi ₂ Te ₄ and Pt. Nano Letters, 2022, 22, 1366-1373.	4.5	7
2	Emulation of Synaptic Plasticity on a Cobalt-Based Synaptic Transistor for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2022, 14, 11864-11872.	4.0	26
3	Nano-engineering the evolution of skyrmion crystal in synthetic antiferromagnets. Applied Physics Reviews, 2022, 9, 021404.	5.5	3
4	Van der Waals integration of high- \hat{n} perovskite oxides and two-dimensional semiconductors. Nature Electronics, 2022, 5, 233-240.	13.1	68
5	Layer-Dependent Interlayer Antiferromagnetic Spin Reorientation in Air-Stable Semiconductor CrSBr. ACS Nano, 2022, 16, 11876-11883.	7.3	22
6	Bipolar Conduction and Giant Positive Magnetoresistance in Doped Metallic Titanium Oxide Heterostructures. Advanced Materials Interfaces, 2021, 8, 2002147.	1.9	2
7	Enhanced Metal-Insulator Transition in Freestanding VO ₂ Down to 5 nm Thickness. ACS Applied Materials & Interfaces, 2021, 13, 16688-16693.	4.0	19
8	Metastable 1T ⁻² -phase group VIB transition metal dichalcogenide crystals. Nature Materials, 2021, 20, 1113-1120.	13.3	119
9	Chemical Vapor Deposition of Superconducting FeTe _{1-x} Se _x Nanosheets. Nano Letters, 2021, 21, 5338-5344.	4.5	15
10	Regulating oxygen activity of perovskites to promote NO _x oxidation and reduction kinetics. Nature Catalysis, 2021, 4, 663-673.	16.1	54
11	Reversible modulation of metal-insulator transition in VO ₂ via chemically induced oxygen migration. Applied Physics Letters, 2021, 119, 133102.	1.5	2
12	Multistate Tuning of Third Harmonic Generation in Fano-Resonant Hybrid Dielectric Metasurfaces. Advanced Functional Materials, 2021, 31, 2104627.	7.8	17
13	Ultrahigh energy storage in superparaelectric relaxor ferroelectrics. Science, 2021, 374, 100-104.	6.0	276
14	Enhanced electric resistivity and dielectric energy storage by vacancy defect complex. Energy Storage Materials, 2021, 42, 836-844.	9.5	24
15	Multistate Tuning of Third Harmonic Generation in Fano-Resonant Hybrid Dielectric Metasurfaces (Adv. Funct. Mater. 48/2021). Advanced Functional Materials, 2021, 31, .	7.8	1
16	An Artificial Skyrmion Platform with Robust Tunability in Synthetic Antiferromagnetic Multilayers. Advanced Functional Materials, 2020, 30, 1907140.	7.8	14
17	Tailoring magnetic order via atomically stacking 3d/5d electrons to achieve high-performance spintronic devices. Applied Physics Reviews, 2020, 7, .	5.5	18
18	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. Nature Communications, 2020, 11, 3729.	5.8	120

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19	Flexible Quasi-van der Waals Ferroelectric Hafnium-Based Oxide for Integrated High-Performance Nonvolatile Memory. <i>Advanced Science</i> , 2020, 7, 2001266.	5.6	32
20	Nonvolatile Multistates Memories for High-Density Data Storage. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 42449-42471.	4.0	101
21	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. <i>Journal of the American Chemical Society</i> , 2020, 142, 2948-2955.	6.6	27
22	Interfacial-hybridization-modified Ir ferromagnetism and electronic structure in $\text{LaMnO}_3/\text{IrO}_2$ superlattices. <i>Physical Review Research</i> , 2020, 2, .	1.3	10
23	Low-temperature sintering of microwave ceramics with high Q_f values through LiF addition. <i>Journal of the American Ceramic Society</i> , 2019, 102, 1893-1903.	1.9	66
24	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. <i>Nature Communications</i> , 2019, 10, 3149.	5.8	42
25	Erasable and recreatable two-dimensional electron gas at the heterointerface of SrTiO_3 and a water-dissolvable overlayer. <i>Science Advances</i> , 2019, 5, eaaw7286.	4.7	24
26	Controlling the Magnetic Properties of $\text{LaMnO}_3/\text{SrTiO}_3$ Heterostructures by Stoichiometry and Electronic Reconstruction: Atomic-Scale Evidence. <i>Advanced Materials</i> , 2019, 31, 1901386.	11.1	27
27	Tuning perovskite oxides by strain: Electronic structure, properties, and functions in (electro)catalysis and ferroelectricity. <i>Materials Today</i> , 2019, 31, 100-118.	8.3	169
28	New Family of Plasmonic Photocatalysts without Noble Metals. <i>Chemistry of Materials</i> , 2019, 31, 2320-2327.	3.2	25
29	Ferromagnetism and Conductivity in Atomically Thin SrRuO_3 . <i>Physical Review X</i> , 2019, 9, .	2.8	40
30	Improved microwave dielectric properties of $\text{CaMgSi}_2\text{O}_6$ ceramics through CuO doping. <i>Journal of Alloys and Compounds</i> , 2019, 772, 40-48.	2.8	66
31	Electrical switching of the topological anomalous Hall effect in a non-collinear antiferromagnet above room temperature. <i>Nature Electronics</i> , 2018, 1, 172-177.	13.1	165
32	Metamaterials based on the phase transition of VO_2 . <i>Nanotechnology</i> , 2018, 29, 024002.	1.3	90
33	Direct Observation of Room-Temperature Stable Magnetism in $\text{LaAlO}_3/\text{SrTiO}_3$ Heterostructures. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 9774-9781.	4.0	12
34	Speciation and Electronic Structure of $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$ During Oxygen Electrolysis. <i>Topics in Catalysis</i> , 2018, 61, 2161-2174.	1.3	25
35	Ambipolar ferromagnetism by electrostatic doping of a manganite. <i>Nature Communications</i> , 2018, 9, 1897.	5.8	51
36	Ferromagnetism and matrix-dependent charge transfer in strained $\text{LaMnO}_3/\text{LaCoO}_3$ superlattices. <i>Materials Research Letters</i> , 2018, 6, 501-507.	4.1	13

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37	The role of strain and polar discontinuity in magnetism in LaMnO ₃ /SrTiO ₃ /LaAlO ₃ (0001) heterostructures. Science Bulletin, 2018, 63, 949-951.	4.3	3
38	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	15.6	371
39	Interface Engineering and Emergent Phenomena in Oxide Heterostructures. Advanced Materials, 2018, 30, e1802439.	11.1	118
40	CO ₂ Reactivity on Cobalt-Based Perovskites. Journal of Physical Chemistry C, 2018, 122, 20391-20401.	1.5	18
41	Microstructure-based fractal models for heat and mass transport properties of cement paste. International Journal of Heat and Mass Transfer, 2018, 126, 432-447.	2.5	45
42	Multi-Nonvolatile State Resistive Switching Arising from Ferroelectricity and Oxygen Vacancy Migration. Advanced Materials, 2017, 29, 1606165.	11.1	84
43	Effect of oxygen adsorbability on the control of Li ₂ O ₂ growth in Li-O ₂ batteries: Implications for cathode catalyst design. Nano Energy, 2017, 36, 68-75.	8.2	93
44	Orientation-Dependent Oxygen Evolution on RuO ₂ without Lattice Exchange. ACS Energy Letters, 2017, 2, 876-881.	8.8	251
45	Electron Accumulation and Emergent Magnetism in LaMnO_3 Heterostructures. Physical Review Letters, 2017, 119, 156801.	2.9	63
46	Diffusion and distribution of deuterium in scandium deuteride thin films under irradiation of deuterium ion beam. Scientific Reports, 2017, 7, 13304.	1.6	5
47	The Role of Ru Redox in pH-Dependent Oxygen Evolution on Rutile Ruthenium Dioxide Surfaces. Chem, 2017, 2, 668-675.	5.8	151
48	Decreasing the Hydroxylation Affinity of La _{1-x} Sr _x MnO ₃ Perovskites To Promote Oxygen Reduction Electrocatalysis. Chemistry of Materials, 2017, 29, 9990-9997.	3.2	37
49	Analysing magnetism using scanning SQUID microscopy. Review of Scientific Instruments, 2017, 88, 123706.	0.6	22
50	Interface-Induced Enhancement of Ferromagnetism in Insulating LaMnO ₃ Ultrathin Films. ACS Applied Materials & Interfaces, 2017, 9, 44931-44937.	4.0	23
51	Electrical properties and subband occupancy at the $\text{LaO}_3/\text{SrTiO}_3$ interface. Physical Review Materials, 2017, 1, .	0.9	8
52	Enhancement of oxygen surface exchange on epitaxial La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O _{3-δ} thin films using advanced heterostructured oxide interface engineering. MRS Communications, 2016, 6, 204-209.	0.8	22
53	Local Electrical Imaging of Tetragonal Domains and Field-Induced Ferroelectric Twin Walls in Conducting SrTiO_3 . Physical Review Letters, 2016, 116, 257601.	2.9	43
54	Long-range magnetic coupling across a polar insulating layer. Nature Communications, 2016, 7, 11015.	5.8	19

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55	Ramp-edge junctions between superconducting $\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ and $\text{La}_{1.85}\text{Sr}_{0.15}\text{CuO}_4$. Superconductor Science and Technology, 2016, 29, 035001.	1.8	0
56	Kinetics of Oxygen Surface Exchange on Epitaxial Ruddlesden-Popper Phases and Correlations to First-Principles Descriptors. Journal of Physical Chemistry Letters, 2016, 7, 244-249.	2.1	54
57	Direct Measurements of Field-Dependent Ordering in a Low-Field Vortex Glass State. IEEE Transactions on Applied Superconductivity, 2016, , 1-1.	1.1	1
58	Analysis of low-field isotropic vortex glass containing vortex groups in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films visualized by scanning SQUID microscopy. Scientific Reports, 2015, 5, 8677.	1.6	29
59	Tailoring the Two Dimensional Electron Gas at Polar $\text{ABO}_3/\text{SrTiO}_3$ Interfaces for Oxide Electronics. Scientific Reports, 2015, 5, 13314.	1.6	23
60	Parallel charge sheets of electron liquid and gas in $\text{La}_{0.5}\text{Sr}_{0.5}\text{TiO}_3/\text{SrTiO}_3$ heterostructures. Scientific Reports, 2015, 5, 18282.	1.6	12
61	Strain accommodation through facet matching in $\text{La}_{1.85}\text{Sr}_{0.15}\text{CuO}_4/\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ ramp-edge junctions. APL Materials, 2015, 3, 086101.	2.2	5
62	Nature of Electron Scattering in $\text{LaAlO}_3/\text{SrTiO}_3$ Interfaces Near the Critical Thickness. Advanced Materials Interfaces, 2015, 2, 1400437.	1.9	2
63	Manipulating Electronic States at Oxide Interfaces Using Focused Micro X-Rays from Standard Lab Sources. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1267-1272.	0.8	2
64	Imaging and control of ferromagnetism in $\text{LaMnO}_3/\text{SrTiO}_3$ heterostructures. Science, 2015, 349, 716-719.	6.0	153
65	Critical behavior at a dynamic vortex insulator-to-metal transition. Science, 2015, 349, 1202-1205.	6.0	40
66	Effect of high oxygen pressure annealing on superconducting $\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ thin films by pulsed laser deposition from Cu-enriched targets. Superconductor Science and Technology, 2014, 27, 044017.	1.8	6
67	Large spectral weight transfer in optical conductivity of SrTiO_3 induced by intrinsic vacancies. Journal of Applied Physics, 2014, 115, 213706.	1.1	12
68	Biaxial strain-induced transport property changes in atomically tailored SrTiO_3 systems. Physical Review B, 2014, 90, .	1.1	38
69	Anisotropic two-dimensional electron gas at the $\text{LaAlO}_3/\text{SrTiO}_3$ (110) interface. Nature Communications, 2013, 4, 1838.	5.8	96
70	Tuning the Interface Conductivity of $\text{LaAlO}_3/\text{SrTiO}_3$ Using Ion Beams: Implications for Patterning. ACS Nano, 2013, 7, 10572-10581.	7.3	34
71	Conducting channel at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review B, 2013, 88, 040401.	1.1	13
72	Fourfold oscillation in anisotropic magnetoresistance and planar Hall effect at the $\text{LaAlO}_3/\text{SrTiO}_3$ heterointerfaces: Effect of carrier confinement and electric field on magnetic interactions. Physical Review B, 2013, 87, .	1.1	52

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73	The influence of La substitution and oxygen reduction in ambipolar La-doped YBa ₂ Cu ₃ O _x thin films. Superconductor Science and Technology, 2012, 25, 124003.	1.8	0
74	Large room-temperature quantum linear magnetoresistance in multilayered epitaxial graphene: Evidence for two-dimensional magnetotransport. Applied Physics Letters, 2012, 101, .	1.5	42
75	Evolution of variable range hopping in strongly localized two dimensional electron gas at NdAlO ₃ /SrTiO ₃ (100) heterointerfaces. Applied Physics Letters, 2012, 101, 231604.	1.5	14
76	Tailoring the electronic properties of SrRuO ₃ films in SrRuO ₃ /LaAlO ₃ superlattices. Applied Physics Letters, 2012, 101, 223105.	1.5	20
77	Electronic correlation and strain effects at the interfaces between polar and nonpolar complex oxides. Physical Review B, 2012, 86, .	1.1	63
78	Electrical shielding box measurement of the negative hydrogen beam from Penning ion gauge ion source. Review of Scientific Instruments, 2012, 83, 063302.	0.6	4
79	Metallic state in La-doped YBa ₂ Cu ₃ O _x thin films. Applied Physics Letters, 2012, 101, 231604.	1.1	5
80	Atomically flat interface between a single-terminated LaAlO ₃ substrate and SrTiO ₃ thin film is insulating. AIP Advances, 2012, 2, 012147.	0.6	17
81	Magnetic-field induced resistivity minimum with in-plane linear magnetoresistance of the Fermi liquid in SrTiO ₃ . Physical Review B, 2012, 85, .	1.1	25
82	Metal-Insulator Transition in SrTiO ₃ Films Induced by Frozen-Out Carriers. Physical Review Letters, 2011, 107, 146802.	1.1	16
83	Electrical measurement of non-destructively p-type doped graphene using molybdenum trioxide. Applied Physics Letters, 2011, 99, .	1.5	36
84	Room temperature ferromagnetism in partially hydrogenated epitaxial graphene. Applied Physics Letters, 2011, 98, .	1.5	126
85	Electronic phase separation at the LaAlO ₃ /SrTiO ₃ interface. Nature Communications, 2011, 2, 188.	5.8	366
86	A new route to graphene layers by selective laser ablation. AIP Advances, 2011, 1, .	0.6	56
87	Magnetoresistance of two-dimensional and three-dimensional electron gas in LaAlO ₃ /SrTiO ₃ heterostructures: Influence of magnetic ordering, interface scattering, and dimensionality. Physical Review B, 2011, 84, .	1.1	58
88	Metal-insulator transition at a depleted LaAlO ₃ /SrTiO ₃ interface: Evidence for charge transfer induced by SrTiO ₃ phase transitions. Applied Physics Letters, 2011, 99, .	1.5	11
89	Reversible metal-insulator transition in LaAlO ₃ thin films mediated by intragap defects: An alternative mechanism for resistive switching. Physical Review B, 2011, 84, .	1.1	21
90	Static and ultrafast dynamics of defects of SrTiO ₃ in LaAlO ₃ /SrTiO ₃ heterostructures. Applied Physics Letters, 2011, 98, 081916.	1.5	18

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91	Defect dynamics and spectral observation of twinning in single crystalline LaAlO ₃ under subbandgap excitation. Applied Physics Letters, 2011, 98, .	1.5	20
92	Rayleigh-instability-driven simultaneous morphological and compositional transformation from Co nanowires to CoO octahedra. Applied Physics Letters, 2010, 97, 203112.	1.5	46