

X Renshaw Wang

List of Publications by Year in descending order

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92
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101543

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67
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93
all docs

93
docs citations

93
times ranked

7231
citing authors

#	ARTICLE	IF	CITATIONS
1	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	31.4	371
2	Electronic phase separation at the LaAlO ₃ /SrTiO ₃ interface. Nature Communications, 2011, 2, 188.	12.8	366
3	Ultrahigh energy storage in superparaelectric relaxor ferroelectrics. Science, 2021, 374, 100-104.	12.6	276
4	Orientation-Dependent Oxygen Evolution on RuO ₂ without Lattice Exchange. ACS Energy Letters, 2017, 2, 876-881.	17.4	251
5	Tuning perovskite oxides by strain: Electronic structure, properties, and functions in (electro)catalysis and ferroelectricity. Materials Today, 2019, 31, 100-118.	14.2	169
6	Electrical switching of the topological anomalous Hall effect in a non-collinear antiferromagnet above room temperature. Nature Electronics, 2018, 1, 172-177.	26.0	165
7	Imaging and control of ferromagnetism in LaMnO ₃ /SrTiO ₃ heterostructures. Science, 2015, 349, 716-719.	12.6	153
8	The Role of Ru Redox in pH-Dependent Oxygen Evolution on Rutile Ruthenium Dioxide Surfaces. Chem, 2017, 2, 668-675.	11.7	151
9	Room temperature ferromagnetism in partially hydrogenated epitaxial graphene. Applied Physics Letters, 2011, 98, .	3.3	126
10	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. Nature Communications, 2020, 11, 3729.	12.8	120
11	Metastable 1T ⁻² -phase group VIB transition metal dichalcogenide crystals. Nature Materials, 2021, 20, 1113-1120.	27.5	119
12	Interface Engineering and Emergent Phenomena in Oxide Heterostructures. Advanced Materials, 2018, 30, e1802439.	21.0	118
13	Metal-Insulator Transition in SrTiO_3 Films Induced by Frozen-Out Carriers. Physical Review Letters, 2011, 107, 146802.	7.8	116
14	Nonvolatile Multistates Memories for High-Density Data Storage. ACS Applied Materials & Interfaces, 2020, 12, 42449-42471.	8.0	101
15	Anisotropic two-dimensional electron gas at the LaAlO ₃ /SrTiO ₃ (110) interface. Nature Communications, 2013, 4, 1838.	12.8	96
16	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.	16.0	93
17	Metamaterials based on the phase transition of VO ₂ . Nanotechnology, 2018, 29, 024002.	2.6	90
18	Multi-Nonvolatile State Resistive Switching Arising from Ferroelectricity and Oxygen Vacancy Migration. Advanced Materials, 2017, 29, 1606165.	21.0	84

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19	Van der Waals integration of high- $\hat{\rho}$ perovskite oxides and two-dimensional semiconductors. Nature Electronics, 2022, 5, 233-240.	26.0	68
20	Low-temperature sintering of microwave ceramics with high Q_f values through LiF addition. Journal of the American Ceramic Society, 2019, 102, 1893-1903.	3.8	66
21	Improved microwave dielectric properties of CaMgSi ₂ O ₆ ceramics through CuO doping. Journal of Alloys and Compounds, 2019, 772, 40-48.	5.5	66
22	Electronic correlation and strain effects at the interfaces between polar and nonpolar complex oxides. Physical Review B, 2012, 86, .	3.2	63
23	Electron Accumulation and Emergent Magnetism in LaMnO_3 Magneto-resistance of two-dimensional and three-dimensional electron gas in $\text{LaAlO}_3/\text{SrTiO}_3$ heterostructures: Influence of magnetic ordering, interface scattering, and dimensionality. Physical Review B, 2011, 84, .	7.8	63
24	A new route to graphene layers by selective laser ablation. AIP Advances, 2011, 1, .	3.2	58
25	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.	1.3	56
26	Regulating oxygen activity of perovskites to promote NO _x oxidation and reduction kinetics. Nature Catalysis, 2021, 4, 663-673.	4.6	54
27	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, .	34.4	54
28	Ambipolar ferromagnetism by electrostatic doping of a manganite. Nature Communications, 2018, 9, 1897.	3.2	52
29	Rayleigh-instability-driven simultaneous morphological and compositional transformation from Co nanowires to CoO octahedra. Applied Physics Letters, 2010, 97, 203112.	12.8	51
30	Microstructure-based fractal models for heat and mass transport properties of cement paste. International Journal of Heat and Mass Transfer, 2018, 126, 432-447.	3.3	46
31	Local Electrical Imaging of Tetragonal Domains and Field-Induced Ferroelectric Twin Walls in Conducting SrTiO_3 . Physical Review Letters, 2016, 116, 257601.	4.8	45
32	Large room-temperature quantum linear magnetoresistance in multilayered epitaxial graphene: Evidence for two-dimensional magnetotransport. Applied Physics Letters, 2012, 101, .	7.8	43
33	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. Nature Communications, 2019, 10, 3149.	3.3	42
34	Critical behavior at a dynamic vortex insulator-to-metal transition. Science, 2015, 349, 1202-1205.	12.8	42
35	Ferromagnetism and Conductivity in Atomically Thin SrRuO_3 . Physical Review X, 2019, 9, .	12.6	40
36		8.9	40

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37	Biaxial strain-induced transport property changes in atomically tailored SrTiO_3 systems. <i>Physical Review B</i> , 2014, 90, .	3.2	38
38	Decreasing the Hydroxylation Affinity of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ Perovskites To Promote Oxygen Reduction Electrocatalysis. <i>Chemistry of Materials</i> , 2017, 29, 9990-9997.	6.7	37
39	Electrical measurement of non-destructively p-type doped graphene using molybdenum trioxide. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	36
40	Tuning the Interface Conductivity of $\text{LaAlO}_3/\text{SrTiO}_3$ Using Ion Beams: Implications for Patterning. <i>ACS Nano</i> , 2013, 7, 10572-10581.	14.6	34
41	Flexible Quasi-van der Waals Ferroelectric Hafnium-Based Oxide for Integrated High-Performance Nonvolatile Memory. <i>Advanced Science</i> , 2020, 7, 2001266.	11.2	32
42	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. <i>Scientific Reports</i> , 2015, 5, 8677.	3.3	29
43	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.	21.0	27
44	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. <i>Journal of the American Chemical Society</i> , 2020, 142, 2948-2955.	13.7	27
45	Emulation of Synaptic Plasticity on a Cobalt-Based Synaptic Transistor for Neuromorphic Computing. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 11864-11872.	8.0	26
46	Magnetic-field induced resistivity minimum with in-plane linear magnetoresistance of the Fermi liquid in SrTiO_3 single crystals. <i>Physical Review B</i> , 2012, 85, .	3.2	25
47	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.	2.8	25
48	New Family of Plasmonic Photocatalysts without Noble Metals. <i>Chemistry of Materials</i> , 2019, 31, 2320-2327.	6.7	25
49	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.	10.3	24
50	Enhanced electric resistivity and dielectric energy storage by vacancy defect complex. <i>Energy Storage Materials</i> , 2021, 42, 836-844.	18.0	24
51	Tailoring the Two Dimensional Electron Gas at Polar $\text{ABO}_3/\text{SrTiO}_3$ Interfaces for Oxide Electronics. <i>Scientific Reports</i> , 2015, 5, 13314.	3.3	23
52	Interface-Induced Enhancement of Ferromagnetism in Insulating LaMnO_3 Ultrathin Films. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 44931-44937.	8.0	23
53	Enhancement of oxygen surface exchange on epitaxial $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_3$ thin films using advanced heterostructured oxide interface engineering. <i>MRS Communications</i> , 2016, 6, 204-209.	1.8	22
54	Analysing magnetism using scanning SQUID microscopy. <i>Review of Scientific Instruments</i> , 2017, 88, 123706.	1.3	22

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55	Layer-Dependent Interlayer Antiferromagnetic Spin Reorientation in Air-Stable Semiconductor CrSBr. ACS Nano, 2022, 16, 11876-11883.	14.6	22
56	Reversible metal-insulator transition in LaAlO ₃ /SrTiO ₃ thin films mediated by intragap defects: An alternative mechanism for resistive switching. Physical Review B, 2011, 84, .	3.2	21
57	Defect dynamics and spectral observation of twinning in single crystalline LaAlO ₃ under subbandgap excitation. Applied Physics Letters, 2011, 98, .	3.3	20
58	Tailoring the electronic properties of SrRuO ₃ films in SrRuO ₃ /LaAlO ₃ superlattices. Applied Physics Letters, 2012, 101, 223105.	3.3	20
59	Long-range magnetic coupling across a polar insulating layer. Nature Communications, 2016, 7, 11015.	12.8	19
60	Enhanced Metal-Insulator Transition in Freestanding VO ₂ Down to 5 nm Thickness. ACS Applied Materials & Interfaces, 2021, 13, 16688-16693.	8.0	19
61	Static and ultrafast dynamics of defects of SrTiO ₃ in LaAlO ₃ /SrTiO ₃ heterostructures. Applied Physics Letters, 2011, 98, 081916.	3.3	18
62	CO ₂ Reactivity on Cobalt-Based Perovskites. Journal of Physical Chemistry C, 2018, 122, 20391-20401.	3.1	18
63	Tailoring magnetic order via atomically stacking 3d electrons to achieve high-performance spintronic devices. Applied Physics Reviews, 2020, 7, .	11.3	18
64	Atomically flat interface between a single-terminated LaAlO ₃ substrate and SrTiO ₃ thin film is insulating. AIP Advances, 2012, 2, 012147.	1.3	17
65	Multistate Tuning of Third Harmonic Generation in Fano-Resonant Hybrid Dielectric Metasurfaces. Advanced Functional Materials, 2021, 31, 2104627.	14.9	17
66	Chemical Vapor Deposition of Superconducting FeTe _{1-x} Se _x Nanosheets. Nano Letters, 2021, 21, 5338-5344.	9.1	15
67	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.	3.3	14
68	An Artificial Skyrmion Platform with Robust Tunability in Synthetic Antiferromagnetic Multilayers. Advanced Functional Materials, 2020, 30, 1907140.	14.9	14
69	Conducting channel at the LaAlO ₃ /SrTiO ₃ interface. Physical Review B, 2013, 88, .	3.2	13
70	Ferromagnetism and matrix-dependent charge transfer in strained LaMnO ₃ /LaCoO ₃ superlattices. Materials Research Letters, 2018, 6, 501-507.	8.7	13
71	Large spectral weight transfer in optical conductivity of SrTiO ₃ induced by intrinsic vacancies. Journal of Applied Physics, 2014, 115, 213706.	2.5	12
72	Parallel charge sheets of electron liquid and gas in La _{0.5} Sr _{0.5} TiO ₃ /SrTiO ₃ heterostructures. Scientific Reports, 2015, 5, 18282.	3.3	12

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73	Direct Observation of Room-Temperature Stable Magnetism in LaAlO ₃ /SrTiO ₃ Heterostructures. ACS Applied Materials & Interfaces, 2018, 10, 9774-9781.	8.0	12
74	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, .	3.3	11
75	Interfacial-hybridization-modified Ir ferromagnetism and electronic structure in $\text{LaMnO}_3/\text{LaAlO}_3$ superlattices. Physical Review Research, 2020, 2, .		
76	Electrical properties and subband occupancy at the $\text{LaO}_3/\text{SrTiO}_3$ interface. Physical Review Materials, 2017, 1, .		
77	Nonreciprocal Transport in a Bilayer of MnBi ₂ Te ₄ and Pt. Nano Letters, 2022, 22, 1366-1373.	9.1	7
78	Effect of high oxygen pressure annealing on superconducting Nd _{1.85} Ce _{0.15} CuO ₄ thin films by pulsed laser deposition from Cu-enriched targets. Superconductor Science and Technology, 2014, 27, 044017.	3.5	6
79	Cu_2O superlattices. Applied Physics Letters, 2015, 107, 112401.	3.2	5
80	Strain accommodation through facet matching in La _{1.85} Sr _{0.15} CuO ₄ /Nd _{1.85} Ce _{0.15} CuO ₄ ramp-edge junctions. APL Materials, 2015, 3, 086101.	5.1	5
81	Diffusion and distribution of deuterium in scandium deuteride thin films under irradiation of deuterium ion beam. Scientific Reports, 2017, 7, 13304.	3.3	5
82	Electrical shielding box measurement of the negative hydrogen beam from Penning ion gauge ion source. Review of Scientific Instruments, 2012, 83, 063302.	1.3	4
83	The role of strain and polar discontinuity in magnetism in LaMnO ₃ /SrTiO ₃ /LaAlO ₃ (0001) heterostructures. Science Bulletin, 2018, 63, 949-951.	9.0	3
84	Nano-engineering the evolution of skyrmion crystal in synthetic antiferromagnets. Applied Physics Reviews, 2022, 9, 021404.	11.3	3
85	Nature of Electron Scattering in LaAlO ₃ /SrTiO ₃ Interfaces Near the Critical Thickness. Advanced Materials Interfaces, 2015, 2, 1400437.	3.7	2
86	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.	1.8	2
87	Bipolar Conduction and Giant Positive Magnetoresistance in Doped Metallic Titanium Oxide Heterostructures. Advanced Materials Interfaces, 2021, 8, 2002147.	3.7	2
88	Reversible modulation of metal-insulator transition in VO ₂ via chemically induced oxygen migration. Applied Physics Letters, 2021, 119, 133102.	3.3	2
89	Direct Measurements of Field-Dependent Ordering in a Low-Field Vortex Glass State. IEEE Transactions on Applied Superconductivity, 2016, , 1-1.	1.7	1
90	Multistate Tuning of Third Harmonic Generation in Fano-Resonant Hybrid Dielectric Metasurfaces (Adv. Funct. Mater. 48/2021). Advanced Functional Materials, 2021, 31, .	14.9	1

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91	The influence of La substitution and oxygen reduction in ambipolar La-doped $\text{YBa}_{2-x}\text{Cu}_{3-x}\text{O}_{7-y}$ thin films. Superconductor Science and Technology, 2012, 25, 124003.	3.5	0
92	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.	3.5	0