X Renshaw Wang

List of Publications by Year
in descending order

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92 papers	4,804 citations	101543 36 h-index	98798 67 g-index
93 all docs	93 docs citations	93 times ranked	7231 citing authors

#	Article	IF	Citations
1	Nonreciprocal Transport in a Bilayer of MnBi₂Te₄ and Pt. Nano Letters, 2022, 22, 1366-1373.	9.1	7
2	Emulation of Synaptic Plasticity on a Cobalt-Based Synaptic Transistor for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2022, 14, 11864-11872.	8.0	26
3	Nano-engineering the evolution of skyrmion crystal in synthetic antiferromagnets. Applied Physics Reviews, 2022, 9, 021404.	11.3	3
4	Van der Waals integration of high-Î¹ perovskite oxides and two-dimensional semiconductors. Nature Electronics, 2022, 5, 233-240.	26.0	68
5	Layer-Dependent Interlayer Antiferromagnetic Spin Reorientation in Air-Stable Semiconductor CrSBr. ACS Nano, 2022, 16, 11876-11883.	14.6	22
6	Bipolar Conduction and Giant Positive Magnetoresistance in Doped Metallic Titanium Oxide Heterostructures. Advanced Materials Interfaces, 2021, 8, 2002147.	3.7	2
7	Enhanced Metalâ€“Insulator Transition in Freestanding VO₂ Down to 5 nm Thickness. ACS Applied Materials & Interfaces, 2021, 13, 16688-16693.	8.0	19
8	Metastable 1Tâ€²-phase group VIB transition metal dichalcogenide crystals. Nature Materials, 2021, 20, 1113-1120.	27.5	119
9	Chemical Vapor Deposition of Superconducting FeTe_{1â€“x}Se_x Nanosheets. Nano Letters, 2021, 21, 5338-5344.	9.1	15
10	Regulating oxygen activity of perovskites to promote NOx oxidation and reduction kinetics. Nature Catalysis, 2021, 4, 663-673.	34.4	54
11	Reversible modulation of metalâ€“insulator transition in VO2 via chemically induced oxygen migration. Applied Physics Letters, 2021, 119, 133102.	3.3	2
12	Multistate Tuning of Third Harmonic Generation in Fanoâ€Resonant Hybrid Dielectric Metasurfaces. Advanced Functional Materials, 2021, 31, 2104627.	14.9	17
13	Ultrahigh energy storage in superparaelectric relaxor ferroelectrics. Science, 2021, 374, 100-104.	12.6	276
14	Enhanced electric resistivity and dielectric energy storage by vacancy defect complex. Energy Storage Materials, 2021, 42, 836-844.	18.0	24
15	Multistate Tuning of Third Harmonic Generation in Fanoâ€Resonant Hybrid Dielectric Metasurfaces (Adv. Funct. Mater. 48/2021). Advanced Functional Materials, 2021, 31, .	14.9	1
16	An Artificial Skyrmion Platform with Robust Tunability in Synthetic Antiferromagnetic Multilayers. Advanced Functional Materials, 2020, 30, 1907140.	14.9	14
17	Tailoring magnetic order via atomically stacking 3d/5d electrons to achieve high-performance spintronic devices. Applied Physics Reviews, 2020, 7, .	11.3	18
18	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. Nature Communications, 2020, 11, 3729.	12.8	120

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19	Flexible Quasiâ€van der Waals Ferroelectric Hafniumâ€Based Oxide for Integrated Highâ€Performance Nonvolatile Memory. Advanced Science, 2020, 7, 2001266.	11.2	32
20	Nonvolatile Multistates Memories for High-Density Data Storage. ACS Applied Materials & Interfaces, 2020, 12, 42449-42471.	8.0	101
21	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. Journal of the American Chemical Society, 2020, 142, 2948-2955.	13.7	27
22	Interfacial-hybridization-modified Ir ferromagnetism and electronic structure in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>LaMnO</mml:mi><mml:mn>3</mml:mn></ superlattices. Physical Review Research, 2020, 2, .	3.6	10
23	Lowâ€temperature sintering of microwave ceramics with high Qf values through LiF addition. Journal of the American Ceramic Society, 2019, 102, 1893-1903.	3.8	66
24	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. Nature Communications, 2019, 10, 3149.	12.8	42
25	Erasable and recreatable two-dimensional electron gas at the heterointerface of SrTiO ₃ and a water-dissolvable overlayer. Science Advances, 2019, 5, eaaw7286.	10.3	24
26	Controlling the Magnetic Properties of LaMnO 3 /SrTiO 3 Heterostructures by Stoichiometry and Electronic Reconstruction: Atomicâ€Scale Evidence. Advanced Materials, 2019, 31, 1901386.	21.0	27
27	Tuning perovskite oxides by strain: Electronic structure, properties, and functions in (electro)catalysis and ferroelectricity. Materials Today, 2019, 31, 100-118.	14.2	169
28	New Family of Plasmonic Photocatalysts without Noble Metals. Chemistry of Materials, 2019, 31, 2320-2327.	6.7	25
29	Ferromagnetism and Conductivity in Atomically Thin <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SrRuO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn> Physical Review X, 2019, 9, .	8.9	40
30	Improved microwave dielectric properties of CaMgSi2O6 ceramics through CuO doping. Journal of Alloys and Compounds, 2019, 772, 40-48.	5.5	66
31	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
32	Metamaterials based on the phase transition of VO₂. Nanotechnology, 2018, 29, 024002.	2.6	90
33	Direct Observation of Room-Temperature Stable Magnetism in LaAlO₃/SrTiO₃ Heterostructures. ACS Applied Materials & Interfaces, 2018, 10, 9774-9781.	8.0	12
34	Speciation and Electronic Structure of La1â^'xSrxCoO3â^'Î´ During Oxygen Electrolysis. Topics in Catalysis, 2018, 61, 2161-2174.	2.8	25
35	Ambipolar ferromagnetism by electrostatic doping of a manganite. Nature Communications, 2018, 9, 1897.	12.8	51
36	Ferromagnetism and matrix-dependent charge transfer in strained LaMnO₃â€“LaCoO₃ superlattices. Materials Research Letters, 2018, 6, 501-507.	8.7	13

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37	The role of strain and polar discontinuity in magnetism in LaMnO3/SrTiO3/LaAlO3 (0â€¯0â€¯1) heterostructures. Science Bulletin, 2018, 63, 949-951.	9.0	3
38	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	31.4	371
39	Interface Engineering and Emergent Phenomena in Oxide Heterostructures. Advanced Materials, 2018, 30, e1802439.	21.0	118
40	CO₂ Reactivity on Cobalt-Based Perovskites. Journal of Physical Chemistry C, 2018, 122, 20391-20401.	3.1	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.	4.8	45
42	Multiâ€Nonvolatile State Resistive Switching Arising from Ferroelectricity and Oxygen Vacancy Migration. Advanced Materials, 2017, 29, 1606165.	21.0	84
43	Effect of oxygen adsorbability on the control of Li2O2 growth in Li-O2 batteries: Implications for cathode catalyst design. Nano Energy, 2017, 36, 68-75.	16.0	93
44	Orientation-Dependent Oxygen Evolution on RuO₂ without Lattice Exchange. ACS Energy Letters, 2017, 2, 876-881.	17.4	251
45	Electron Accumulation and Emergent Magnetism in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>LaMnO</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub> Heterostructures. Physical Review Letters, 2017, 119, 156801.	7.8	63
46	Diffusion and distribution of deuterium in scandium deuteride thin films under irradiation of deuterium ion beam. Scientific Reports, 2017, 7, 13304.	3.3	5
47	The Role of Ru Redox in pH-Dependent Oxygen Evolution on Rutile Ruthenium Dioxide Surfaces. CheM, 2017, 2, 668-675.	11.7	151
48	Decreasing the Hydroxylation Affinity of La_{1â€“x}Sr_xMnO₃ Perovskites To Promote Oxygen Reduction Electrocatalysis. Chemistry of Materials, 2017, 29, 9990-9997.	6.7	37
49	Analysing magnetism using scanning SQUID microscopy. Review of Scientific Instruments, 2017, 88, 123706.	1.3	22
50	Interface-Induced Enhancement of Ferromagnetism in Insulating LaMnO₃ Ultrathin Films. ACS Applied Materials & Interfaces, 2017, 9, 44931-44937.	8.0	23
51	Electrical properties and subband occupancy at the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mrow><mml:mo>(</mml:mo><mml:mi>La</mml:mi><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mo>/</mml:mo><mml:mi>SrTi</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><. Physical Review Materials, 2017, 1, .	2.4	8
52	Enhancement of oxygen surface exchange on epitaxial La0.6Sr0.4Co0.2Fe0.8O3-Î´ thin films using advanced heterostructured oxide interface engineering. MRS Communications, 2016, 6, 204-209.	1.8	22
53	Local Electrical Imaging of Tetragonal Domains and Field-Induced Ferroelectric Twin Walls in Conducting<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SrTiO</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub> Physical Review Letters, 2016, 116, 257601.	7.8	43
54	Long-range magnetic coupling across a polar insulating layer. Nature Communications, 2016, 7, 11015.	12.8	19

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55	Ramp-edge junctions between superconducting Nd_{1.85}Ce_{0.15}CuO₄and La_{1.85}Sr_{0.15}CuO₄. Superconductor Science and Technology, 2016, 29, 035001.	3.5	0
56	Kinetics of Oxygen Surface Exchange on Epitaxial Ruddlesdenâ€“Popper Phases and Correlations to First-Principles Descriptors. Journal of Physical Chemistry Letters, 2016, 7, 244-249.	4.6	54
57	Direct Measurements of Field-Dependent Ordering in a Low-Field Vortex Glass State. IEEE Transactions on Applied Superconductivity, 2016, , 1-1.	1.7	1
58	Analysis of low-field isotropic vortex glass containing vortex groups in YBa2Cu3O7â^'x thin films visualized by scanning SQUID microscopy. Scientific Reports, 2015, 5, 8677.	3.3	29
59	Tailoring the Two Dimensional Electron Gas at Polar ABO3/SrTiO3 Interfaces for Oxide Electronics. Scientific Reports, 2015, 5, 13314.	3.3	23
60	Parallel charge sheets of electron liquid and gas in La0.5Sr0.5TiO3/SrTiO3 heterostructures. Scientific Reports, 2015, 5, 18282.	3.3	12
61	Strain accommodation through facet matching in La1.85Sr0.15CuO4/Nd1.85Ce0.15CuO4 ramp-edge junctions. APL Materials, 2015, 3, 086101.	5.1	5
62	Nature of Electron Scattering in LaAlO₃/SrTiO₃ Interfaces Near the Critical Thickness. Advanced Materials Interfaces, 2015, 2, 1400437.	3.7	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.	1.8	2
64	Imaging and control of ferromagnetism in LaMnO ₃ /SrTiO ₃ heterostructures. Science, 2015, 349, 716-719.	12.6	153
65	Critical behavior at a dynamic vortex insulator-to-metal transition. Science, 2015, 349, 1202-1205.	12.6	40
66	Effect of high oxygen pressure annealing on superconducting Nd_{1.85}Ce_{0.15}CuO₄thin films by pulsed laser deposition from Cu-enriched targets. Superconductor Science and Technology, 2014, 27, 044017.	3.5	6
67	Large spectral weight transfer in optical conductivity of SrTiO3 induced by intrinsic vacancies. Journal of Applied Physics, 2014, 115, 213706.	2.5	12
68	Biaxial strain-induced transport property changes in atomically tailored<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></m systems. Physical Review B, 2014, 90, .	3.2	38
69	Anisotropic two-dimensional electron gas at the LaAlO3/SrTiO3 (110) interface. Nature Communications, 2013, 4, 1838.	12.8	96
70	Tuning the Interface Conductivity of LaAlO₃/SrTiO₃ Using Ion Beams: Implications for Patterning. ACS Nano, 2013, 7, 10572-10581.	14.6	34
71	Conducting channel at the LaAlO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>/SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow	3.2	13
72	Fourfold oscillation in anisotropic magnetoresistance and planar Hall effect at the LaAlO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>/SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>heterointerfaces: Effect of carrier confinement and electric field on magnetic interactions. Physical Review B, 2013, 87, .	3.2	52

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73	The influence of La substitution and oxygen reduction in ambipolar La-doped YBa₂Cu₃O_ythin films. Superconductor Science and Technology, 2012, 25, 124003.	3.5	0
74	Large room-temperature quantum linear magnetoresistance in multilayered epitaxial graphene: Evidence for two-dimensional magnetotransport. Applied Physics Letters, 2012, 101, .	3.3	42
75	Evolution of variable range hopping in strongly localized two dimensional electron gas at NdAlO3/SrTiO3 (100) heterointerfaces. Applied Physics Letters, 2012, 101, 231604.	3.3	14
76	Tailoring the electronic properties of SrRuO3 films in SrRuO3/LaAlO3 superlattices. Applied Physics Letters, 2012, 101, 223105.	3.3	20
77	Electronic correlation and strain effects at the interfaces between polar and nonpolar complex oxides. Physical Review B, 2012, 86, .	3.2	63
78	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
79	display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>Cu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>O<mml:math	3.2	5
80	Atomically flat interface between a single-terminated LaAlO3 substrate and SrTiO3 thin film is insulating. AIP Advances, 2012, 2, 012147.	1.3	17
81	in SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>single	3.2	25
82	Metal-Insulator Transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mrow><mml:mn>3</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math> Films Induced by Frozen-Out Carriers. Physical Review Letters, 2011, 107, 146802.	7.8	116
83	Electrical measurement of non-destructively p-type doped graphene using molybdenum trioxide. Applied Physics Letters, 2011, 99, .	3.3	36
84	Room temperature ferromagnetism in partially hydrogenated epitaxial graphene. Applied Physics Letters, 2011, 98, .	3.3	126
85	Electronic phase separation at the LaAlO3/SrTiO3 interface. Nature Communications, 2011, 2, 188.	12.8	366
86	A new route to graphene layers by selective laser ablation. AIP Advances, 2011, 1, .	1.3	56
87	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>/SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>heterostructures: Influence of magnetic ordering,	3.2	58
88	Metal-insulator transition at a depleted LaAlO3/SrTiO3 interface: Evidence for charge transfer induced by SrTiO3 phase transitions. Applied Physics Letters, 2011, 99, .	3.3	11
89	Reversible metal-insulator transition in LaAlO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>thin films mediated by intragap defects: An	3.2	21
90	â€‡Static and ultrafast dynamics of defects of SrTiO3 in LaAlO3/SrTiO3 heterostructures. Applied Physics Letters, 2011, 98, 081916.	3.3	18

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91	Defect dynamics and spectral observation of twinning in single crystalline LaAlO3 under subbandgap excitation. Applied Physics Letters, 2011, 98, .	3.3	20
92	Rayleigh-instability-driven simultaneous morphological and compositional transformation from Co nanowires to CoO octahedra. Applied Physics Letters, 2010, 97, 203112.	3.3	46