

Xingxu Yan

List of Publications by Year in descending order

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117625

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83
all docs

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docs citations

83
times ranked

8433
citing authors

#	ARTICLE	IF	CITATIONS
1	Probing molecular vibrations by monochromated electron microscopy. Trends in Chemistry, 2022, 4, 76-90.	8.5	7
2	Surface reaction dependence of molecular beam epitaxy grown aluminum on various orientations of β -Ga ₂ O ₃ . APL Materials, 2022, 10, 011110.	5.1	1
3	Catalysts by pyrolysis: Direct observation of transformations during re-pyrolysis of transition metal-nitrogen-carbon materials leading to state-of-the-art platinum group metal-free electrocatalyst. Materials Today, 2022, 53, 58-70.	14.2	23
4	High-density switchable skyrmion-like polar nanodomains integrated on silicon. Nature, 2022, 603, 63-67.	27.8	79
5	Direct observation of elemental fluctuation and oxygen octahedral distortion-dependent charge distribution in high entropy oxides. Nature Communications, 2022, 13, 2358.	12.8	35
6	Manipulating Coordination Structures of Mixed-Valence Copper Single Atoms on 1T-MoS ₂ for Efficient Hydrogen Evolution. ACS Catalysis, 2022, 12, 7687-7695.	11.2	26
7	Nanoscale imaging of phonon dynamics by electron microscopy. Nature, 2022, 606, 292-297.	27.8	34
8	Chiral molecular intercalation superlattices. Nature, 2022, 606, 902-908.	27.8	67
9	Fe-N-C Electrocatalysts' Durability: Effects of Single Atoms' Mobility and Clustering. ACS Catalysis, 2021, 11, 484-494.	11.2	53
10	Solar-assisted co-electrolysis of glycerol and water for concurrent production of formic acid and hydrogen. Journal of Materials Chemistry A, 2021, 9, 19975-19983.	10.3	18
11	Directly Probing the Local Coordination, Charge State, and Stability of Single Atom Catalysts by Advanced Electron Microscopy: A Review. Small, 2021, 17, e2006482.	10.0	49
12	Effective Electrochemical Modulation of SERS Intensity Assisted by Core-Shell Nanoparticles. Analytical Chemistry, 2021, 93, 4441-4448.	6.5	17
13	High-order superlattices by rolling up van der Waals heterostructures. Nature, 2021, 591, 385-390.	27.8	163
14	Activating a Two-Dimensional PtSe ₂ Basal Plane for the Hydrogen Evolution Reaction through the Simultaneous Generation of Atomic Vacancies and Pt Clusters. Nano Letters, 2021, 21, 3857-3863.	9.1	40
15	Revealing Abnormal Phonon Polaritons Confined at the Edge of Curved Two-Dimensional Boron Nitride. Microscopy and Microanalysis, 2021, 27, 130-132.	0.4	0
16	Phonon Reflections from Nanostructured Interfaces Imaged by Momentum-Averaged and Resolved Vibrational EELS. Microscopy and Microanalysis, 2021, 27, 1204-1206.	0.4	1
17	Probing phonon propagation in materials by angle-resolved and angle-averaged vibrational EELS. Microscopy and Microanalysis, 2021, 27, 118-120.	0.4	0
18	High-Throughput Intelligent Analysis of High and Low-Loss EELS. Microscopy and Microanalysis, 2021, 27, 626-628.	0.4	0

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19	Space- and Angle-Resolved Vibrational Spectroscopy to Probe the Local Phonon Modes at Planar Defects. <i>Microscopy and Microanalysis</i> , 2021, 27, 1190-1192.	0.4	0
20	Capturing 3D atomic defects and phonon localization at the 2D heterostructure interface. <i>Science Advances</i> , 2021, 7, eabi6699.	10.3	13
21	Laser-irradiated Holey Graphene-supported Single-Atom Catalyst towards Hydrogen Evolution and Oxygen Reduction. <i>Advanced Energy Materials</i> , 2021, 11, 2101619.	19.5	43
22	Single-defect phonons imaged by electron microscopy. <i>Nature</i> , 2021, 589, 65-69.	27.8	108
23	Direct observation of polarization-induced two-dimensional electron/hole gases at ferroelectric-insulator interface. <i>Npj Quantum Materials</i> , 2021, 6, .	5.2	6
24	Experimental observation of localized interfacial phonon modes. <i>Nature Communications</i> , 2021, 12, 6901.	12.8	46
25	Origin of the Enhanced Piezoelectricity of Vanadium-Doped $\text{La}_{2-x}\text{Ti}_x\text{O}_7$ Ceramics. <i>Journal of Physical Chemistry C</i> , 2021, 125, 26180-26187.	3.1	3
26	Anomalous Linear Layer-Dependent Blue Shift of Ultraviolet-Range Interband Transition in Two-Dimensional MoS_2 . <i>Journal of Physical Chemistry C</i> , 2020, 124, 1609-1616.	3.1	1
27	Uniformity Is Key in Defining Structure-Function Relationships for Atomically Dispersed Metal Catalysts: The Case of Pt/CeO_2 . <i>Journal of the American Chemical Society</i> , 2020, 142, 169-184.	13.7	170
28	Probing Local Vibration Modes at Single Planar Defects by Vibrational Spectroscopy. <i>Microscopy and Microanalysis</i> , 2020, 26, 952-953.	0.4	0
29	Size-Dependent Nickel-Based Electrocatalysts for Selective CO_2 Reduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 18572-18577.	13.8	100
30	Size-Dependent Nickel-Based Electrocatalysts for Selective CO_2 Reduction. <i>Angewandte Chemie</i> , 2020, 132, 18731-18736.	2.0	30
31	Dynamic evolution and reversibility of single-atom Ni(II) active site in 1T-MoS ₂ electrocatalysts for hydrogen evolution. <i>Nature Communications</i> , 2020, 11, 4114.	12.8	112
32	Anomalous Linear Layer-dependent Blue Shift of Interband Transition in Two-Dimensional Materials. <i>Microscopy and Microanalysis</i> , 2020, 26, 634-635.	0.4	0
33	Directly Probing Local Coordination, Charge State and Stability of Single Atom Catalysts. <i>Microscopy and Microanalysis</i> , 2020, 26, 2468-2469.	0.4	1
34	General synthesis of two-dimensional van der Waals heterostructure arrays. <i>Nature</i> , 2020, 579, 368-374.	27.8	393
35	Improved Electrical Properties of Layer Structured $\text{La}_2\text{Ti}_{1.96}\text{V}_{0.04}\text{O}_7$ Ceramics. <i>Journal of Electronic Materials</i> , 2020, 49, 2584-2595.	2.2	4
36	Transmission Electron Microscopy of Catalytic Nanomaterials at Atomic Resolution. <i>Microscopy and Microanalysis</i> , 2019, 25, 2054-2055.	0.4	0

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37	Intrinsic Conductance of Domain Walls in BiFeO ₃ . <i>Advanced Materials</i> , 2019, 31, e1902099.	21.0	39
38	Mapping the Nanoscale Redshift of Optical Phonon Modes in a Strained Quantum Dot System. <i>Microscopy and Microanalysis</i> , 2019, 25, 626-627.	0.4	1
39	High Spatial Resolution Low-Voltage Electron Imaging and Spectroscopy of Two-Dimensional Materials and Semiconductor Nanostructures. <i>Microscopy and Microanalysis</i> , 2019, 25, 468-469.	0.4	0
40	Highly crystalline ReSe ₂ atomic layers synthesized by chemical vapor transport. <i>Information Materials</i> , 2019, 1, 552-558.	17.3	24
41	Probing Thermal-induced Phonon Energy Shift of SiC in Nanoscale by <i>in situ</i> Vibrational Spectroscopy. <i>Microscopy and Microanalysis</i> , 2019, 25, 622-623.	0.4	2
42	In Situ Observations of Abnormal Pore Size Changes of a Zirconium Based Metal-Organic Framework Using Atomic Resolution S/TEM and EELS. <i>Microscopy and Microanalysis</i> , 2019, 25, 1486-1487.	0.4	1
43	Observation of Strong Polarization Enhancement in Ferroelectric Tunnel Junctions. <i>Nano Letters</i> , 2019, 19, 6812-6818.	9.1	18
44	Unexpected Strong Thermally Induced Phonon Energy Shift for Mapping Local Temperature. <i>Nano Letters</i> , 2019, 19, 7494-7502.	9.1	17
45	Rational Design of Graphene-Supported Single Atom Catalysts for Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2019, 9, 1803689.	19.5	279
46	Atomically engineering activation sites onto metallic 1T-MoS ₂ catalysts for enhanced electrochemical hydrogen evolution. <i>Nature Communications</i> , 2019, 10, 982.	12.8	311
47	Real-space charge-density imaging with sub-Ångström resolution by four-dimensional electron microscopy. <i>Nature</i> , 2019, 575, 480-484.	27.8	127
48	PdCo bimetallic nano-electrocatalyst as effective air-cathode for aqueous metal-air batteries. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 5001-5011.	7.1	31
49	Stable iridium dinuclear heterogeneous catalysts supported on metal-oxide substrate for solar water oxidation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 2902-2907.	7.1	229
50	Stacking-mode confined growth of 2H-MoTe ₂ /MoS ₂ bilayer heterostructures for UV-visible IR photodetectors. <i>Nano Energy</i> , 2018, 49, 200-208.	16.0	96
51	Discovery of a magnetic conductive interface in PbZr _{0.2} Ti _{0.8} O ₃ /SrTiO ₃ heterostructures. <i>Nature Communications</i> , 2018, 9, 685.	12.8	20
52	Intercorrelated In-Plane and Out-of-Plane Ferroelectricity in Ultrathin Two-Dimensional Layered Semiconductor In ₂ Se ₃ . <i>Nano Letters</i> , 2018, 18, 1253-1258.	9.1	509
53	Gate-Induced Interfacial Superconductivity in 1T-SnSe ₂ . <i>Nano Letters</i> , 2018, 18, 1410-1415.	9.1	81
54	Investigating Thermal Behavior of Surface Phonon in SiC by in-situ Vibrational Spectroscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 416-417.	0.4	0

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55	Bilayer MoS ₂ quantum dots with tunable magnetism and spin. AIP Advances, 2018, 8, 115103.	1.3	2
56	Anisotropic polarization-induced conductance at a ferroelectric-insulator interface. Nature Nanotechnology, 2018, 13, 1132-1136.	31.5	53
57	Promotion of Ternary Pt-Sn-Ag Catalysts toward Ethanol Oxidation Reaction: Revealing Electronic and Structural Effects of Additive Metals. ACS Energy Letters, 2018, 3, 2550-2557.	17.4	41
58	Layer-Dependent Chemically Induced Phase Transition of Two-Dimensional MoS ₂ . Nano Letters, 2018, 18, 3435-3440.	9.1	69
59	Control of Domain Structures in Multiferroic Thin Films through Defect Engineering. Advanced Materials, 2018, 30, e1802737.	21.0	31
60	End-On Bound Iridium Dinuclear Heterogeneous Catalysts on WO ₃ for Solar Water Oxidation. ACS Central Science, 2018, 4, 1166-1172.	11.3	69
61	Investigation of Surface and Bulk Vibrational Modes in SiC Polytypes using Spatially Resolved Monochromated HREELS. Microscopy and Microanalysis, 2018, 24, 462-463.	0.4	0
62	High-Mobility Multilayered MoS ₂ Flakes with Low Contact Resistance Grown by Chemical Vapor Deposition. Advanced Materials, 2017, 29, 1604540.	21.0	214
63	Two-Dimensional Semiconductors Grown by Chemical Vapor Transport. Angewandte Chemie - International Edition, 2017, 56, 3611-3615.	13.8	92
64	Two-Dimensional Semiconductors Grown by Chemical Vapor Transport. Angewandte Chemie, 2017, 129, 3665-3669.	2.0	9
65	Atomic interpretation of high activity on transition metal and nitrogen-doped carbon nanofibers for catalyzing oxygen reduction. Journal of Materials Chemistry A, 2017, 5, 3336-3345.	10.3	88
66	Direct observation of multiple rotational stacking faults coexisting in freestanding bilayer MoS ₂ . Scientific Reports, 2017, 7, 8323.	3.3	15
67	Revealing Surface Elemental Composition and Dynamic Processes Involved in Facet-Dependent Oxidation of Pt ₃ Co Nanoparticles via <i>in Situ</i> Transmission Electron Microscopy. Nano Letters, 2017, 17, 4683-4688.	9.1	71
68	Probing the light harvesting and charge rectification of bismuth nanoparticles behind the promoted photoreactivity onto Bi/BiOCl catalyst by (in-situ) electron microscopy. Applied Catalysis B: Environmental, 2017, 201, 495-502.	20.2	34
69	Pyridinic-Nitrogen-Dominated Graphene Aerogels with Fe-N-C Coordination for Highly Efficient Oxygen Reduction Reaction. Advanced Functional Materials, 2016, 26, 5708-5717.	14.9	360
70	Controlled Synthesis of Lead-Free and Stable Perovskite Derivative Cs ₂ Snl ₆ Nanocrystals via a Facile Hot-Injection Process. Chemistry of Materials, 2016, 28, 8132-8140.	6.7	310
71	Core-shell heterostructures of $\text{M-NaLuF}_4\text{:Yb/Er@NaLuF}_4\text{:Yb@MF}_2$ (M = Ca, Sr, Ba) with remarkably enhanced upconversion luminescence. Dalton Transactions, 2016, 45, 11129-11136.	3.3	15
72	Electrocatalysis enhancement of iron-based catalysts induced by synergy of methanol and oxygen-containing groups. Nano Energy, 2016, 21, 265-275.	16.0	12

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73	Controllable synthesis of porous iron–nitrogen–carbon nanofibers with enhanced oxygen reduction electrocatalysis in acidic medium. <i>RSC Advances</i> , 2015, 5, 50324-50327.	3.6	3
74	Optimized electrospinning synthesis of iron–nitrogen–carbon nanofibers for high electrocatalysis of oxygen reduction in alkaline medium. <i>Nanotechnology</i> , 2015, 26, 165401.	2.6	11
75	Hierarchical ultrathin rolled-up Co(OH)(CO ₃) _{0.5} films assembled on Ni _{0.25} Co _{0.75} Sx nanosheets for enhanced supercapacitive performance. <i>RSC Advances</i> , 2014, 4, 57458-57462.	3.6	4
76	Controllable Synthesis and Enhanced Electrocatalysis of Iron–based Catalysts Derived From Electrospun Nanofibers. <i>Small</i> , 2014, 10, 4072-4079.	10.0	31
77	Controlled Synthesis, Structural Evolution, and Photoluminescence Properties of Nanoscale One-Dimensional Hierarchical ZnO/ZnS Heterostructures. <i>Journal of Physical Chemistry C</i> , 2011, 115, 1831-1837.	3.1	36
78	Wafer-Scale High-Throughput Ordered Arrays of Si and Coaxial Si/Si _{1-x} Ge _x Wires: Fabrication, Characterization, and Photovoltaic Application. <i>ACS Nano</i> , 2011, 5, 6629-6636.	14.6	67
79	Generating Electricity from Biofluid with a Nanowire–Based Biofuel Cell for Self-Powered Nanodevices. <i>Advanced Materials</i> , 2010, 22, 5388-5392.	21.0	99