Christopher Allen

List of Publications by Year
in descending order

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Version: 2024-02-01

69 papers	5,030 citations	136950 32 h-index	98798 67 g-index
72 all docs	72 docs citations	72 times ranked	7419 citing authors

#	Article	IF	Citations
1	General synthesis and definitive structural identification of MN4C4 single-atom catalysts with tunable electrocatalytic activities. Nature Catalysis, 2018, 1, 63-72.	34.4	1,476
2	A fundamental look at electrocatalytic sulfur reduction reaction. Nature Catalysis, 2020, 3, 762-770.	34.4	455
3	Spatial control of defect creation in graphene at the nanoscale. Nature Communications, 2012, 3, 1144.	12.8	305
4	Dynamics of Single Fe Atoms in Graphene Vacancies. Nano Letters, 2013, 13, 1468-1475.	9.1	228
5	Large Single Crystals of Graphene on Melted Copper Using Chemical Vapor Deposition. ACS Nano, 2012, 6, 5010-5017.	14.6	218
6	Visible light-driven CO₂reduction by enzyme coupled CdS nanocrystals. Chemical Communications, 2012, 48, 58-60.	4.1	184
7	Mechanistic insight into the active centers of single/dual-atom Ni/Fe-based oxygen electrocatalysts. Nature Communications, 2021, 12, 5589.	12.8	173
8	Structural Reconstruction of the Graphene Monovacancy. ACS Nano, 2013, 7, 4495-4502.	14.6	131
9	Atomic Structure and Dynamics of Single Platinum Atom Interactions with Monolayer MoS₂. ACS Nano, 2017, 11, 3392-3403.	14.6	126
10	Bifunctional Single Atom Electrocatalysts: Coordinationâ€“Performance Correlations and Reaction Pathways. ACS Nano, 2020, 14, 13279-13293.	14.6	107
11	Lowâ€Coordinated Coï£¿Nï£¿C on Oxygenated Graphene for Efficient Electrocatalytic H₂O₂ Production. Advanced Functional Materials, 2022, 32, 2106886.	14.9	97
12	Atomic Structure and Spectroscopy of Single Metal (Cr, V) Substitutional Dopants in Monolayer MoS₂. ACS Nano, 2016, 10, 10227-10236.	14.6	96
13	Adsorption and activation of molecular oxygen over atomic copper(I/II) site on ceria. Nature Communications, 2020, 11, 4008.	12.8	95
14	Edge-hosted Fe-N3 sites on a multiscale porous carbon framework combining high intrinsic activity with efficient mass transport for oxygen reduction. Chem Catalysis, 2021, 1, 1291-1307.	6.1	86
15	Low-dose phase retrieval of biological specimens using cryo-electron ptychography. Nature Communications, 2020, 11, 2773.	12.8	72
16	Four-probe electrical transport measurements on individual metallic nanowires. Nanotechnology, 2007, 18, 065204.	2.6	71
17	Atomically Flat Zigzag Edges in Monolayer MoS₂ by Thermal Annealing. Nano Letters, 2017, 17, 5502-5507.	9.1	70
18	Temperature Dependence of the Reconstruction of Zigzag Edges in Graphene. ACS Nano, 2015, 9, 4786-4795.	14.6	68

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19	Molecular nitrogen promotes catalytic hydrodeoxygenation. Nature Catalysis, 2019, 2, 1078-1087.	34.4	63
20	Atomic electrostatic maps of 1D channels in 2D semiconductors using 4D scanning transmission electron microscopy. Nature Communications, 2019, 10, 1127.	12.8	62
21	Atomic structure and formation mechanism of sub-nanometer pores in 2D monolayer MoS₂. Nanoscale, 2017, 9, 6417-6426.	5.6	54
22	Ultralong 1D Vacancy Channels for Rapid Atomic Migration during 2D Void Formation in Monolayer MoS₂. ACS Nano, 2018, 12, 7721-7730.	14.6	54
23	Growth of vertically-aligned carbon nanotube forests on conductive cobalt disilicide support. Journal of Applied Physics, 2010, 108, .	2.5	53
24	Atomic Resolution Defocused Electron Ptychography at Low Dose with a Fast, Direct Electron Detector. Scientific Reports, 2019, 9, 3919.	3.3	44
25	Detectorsâ€"The ongoing revolution in scanning transmission electron microscopy and why this important to material characterization. APL Materials, 2020, 8, .	5.1	44
26	One-Pot Synthesis of Lithium-Rich Cathode Material with Hierarchical Morphology. Nano Letters, 2016, 16, 7503-7508.	9.1	42
27	Controlled formation of closed-edge nanopores in graphene. Nanoscale, 2015, 7, 11602-11610.	5.6	38
28	Partial Dislocations in Graphene and Their Atomic Level Migration Dynamics. Nano Letters, 2015, 15, 5950-5955.	9.1	37
29	Thermally Induced Dynamics of Dislocations in Graphene at Atomic Resolution. ACS Nano, 2015, 9, 10066-10075.	14.6	36
30	Simultaneous Identification of Low and High Atomic Number Atoms in Monolayer 2D Materials Using 4D Scanning Transmission Electron Microscopy. Nano Letters, 2019, 19, 6482-6491.	9.1	36
31	Formation and Healing of Defects in Atomically Thin GaSe and InSe. ACS Nano, 2019, 13, 5112-5123.	14.6	35
32	A review of methods for the accurate determination of the chiral indices of carbon nanotubes from electron diffraction patterns. Carbon, 2011, 49, 4961-4971.	10.3	34
33	Phase reconstruction using fast binary 4D STEM data. Applied Physics Letters, 2020, 116, .	3.3	34
34	Two-Dimensional Coalescence Dynamics of Encapsulated Metallofullerenes in Carbon Nanotubes. ACS Nano, 2011, 5, 10084-10089.	14.6	31
35	In Situ Atomic-Scale Studies of the Formation of Epitaxial Pt Nanocrystals on Monolayer Molybdenum Disulfide. ACS Nano, 2017, 11, 9057-9067.	14.6	27
36	Hollow Electron Ptychographic Diffractive Imaging. Physical Review Letters, 2018, 121, 146101.	7.8	27

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37	Orientation dependent interlayer stacking structure in bilayer MoS₂domains. Nanoscale, 2017, 9, 13060-13068.	5.6	19
38	In situ high temperature atomic level dynamics of large inversion domain formations in monolayer MoS2. Nanoscale, 2019, 11, 1901-1913.	5.6	19
39	Temperature dependence of atomic vibrations in mono-layer graphene. Journal of Applied Physics, 2015, 118, .	2.5	18
40	Single-molecule imaging and kinetic analysis of intermolecular polyoxometalate reactions. Chemical Science, 2021, 12, 7377-7387.	7.4	18
41	Imaging the atomic structure and local chemistry of platelets in natural type Ia diamond. Nature Materials, 2018, 17, 243-248.	27.5	17
42	Sulfur Promotion in Au/C Catalyzed Acetylene Hydrochlorination. Small, 2021, 17, 2007221.	10.0	16
43	Automated Single-Particle Reconstruction of Heterogeneous Inorganic Nanoparticles. Microscopy and Microanalysis, 2020, 26, 1168-1175.	0.4	13
44	Quantifying the performance of a hybrid pixel detector with GaAs:Cr sensor for transmission electron microscopy. Ultramicroscopy, 2021, 227, 113298.	1.9	12
45	Magnetic field enhanced nano-tip fabrication for four-probe STM studies. Nanotechnology, 2008, 19, 085201.	2.6	11
46	Phase Variations and Layer Epitaxy of 2D PdSe₂ Grown on 2D Monolayers by Direct Selenization of Molecular Pd Precursors. ACS Nano, 2020, 14, 11677-11690.	14.6	10
47	Optically enhanced charge transfer between C₆₀and single-wall carbon nanotubes in hybrid electronic devices. Nanoscale, 2014, 6, 572-580.	5.6	9
48	Low-Dose Scanning Electron Diffraction Microscopy of Mechanochemically Nanostructured Pharmaceuticals. Microscopy and Microanalysis, 2019, 25, 1746-1747.	0.4	6
49	Effects of Rashba-spinâ€“orbit coupling on superconducting boron-doped nanocrystalline diamond films: evidence of interfacial triplet superconductivity. New Journal of Physics, 2020, 22, 093039.	2.9	6
50	The Identification of Inner Tube Defects in Doubleâ€Wall Carbon Nanotubes. Small, 2012, 8, 3810-3815.	10.0	5
51	Aberration measurement of the probe-forming system of an electron microscope using two-dimensional materials. Ultramicroscopy, 2017, 182, 195-204.	1.9	5
52	Low Dose Defocused Probe Electron Ptychography Using a Fast Direct Electron Detector. Microscopy and Microanalysis, 2018, 24, 186-187.	0.4	5
53	Device fabrication with precisely placed carbon nanotubes of known chiral vector. Journal of Physics: Conference Series, 2010, 241, 012082.	0.4	4
54	Transport measurements on carbon nanotubes structurally characterized by electron diffraction. Physical Review B, 2011, 84, .	3.2	4

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55	Atomic resolution HOLZ-STEM imaging of atom position modulation in oxide heterostructures. Ultramicroscopy, 2021, 226, 113296.	1.9	4
56	Aberration-corrected transmission electron microscopy of a non-graphitizing carbon. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	4
57	Fast and Low-dose Electron Ptychography. Microscopy and Microanalysis, 2018, 24, 224-225.	0.4	3
58	Electron Ptychography Using Fast Binary 4D STEM Data. Microscopy and Microanalysis, 2019, 25, 1662-1663.	0.4	3
59	Observing Structural Dynamics and Measuring Chemical Kinetics in Low Dimensional Materials Using High Speed Imaging. Microscopy and Microanalysis, 2019, 25, 1682-1683.	0.4	2
60	Electron Exit Wave Reconstruction From a Single Defocused Image Using a Gaussian Basis. Microscopy and Microanalysis, 2015, 21, 745-746.	0.4	1
61	Response to â€œComment on â€˜Temperature dependence of atomic vibrations in mono-layer grapheneâ€™â€•[J. Appl. Phys. 119, 066101 (2016)]. Journal of Applied Physics, 2016, 119, 066102.	2.5	1
62	A quantitative method for measuring small residual beam tilts in high-resolution transmission electron microscopy. Ultramicroscopy, 2018, 184, 18-28.	1.9	1
63	Imaging Structure and Magnetisation in New Ways Using 4D STEM. Microscopy and Microanalysis, 2018, 24, 180-181.	0.4	1
64	Electron ptychography using an ultrafast direct electron detector. Microscopy and Microanalysis, 2019, 25, 20-21.	0.4	1
65	Transforming Transmission Electron Microscopy with MerlinEM Electron Counting Detector. Microscopy and Microanalysis, 2020, 26, 1944-1945.	0.4	1
66	Counting molecules in nano test tubes: a method for determining the activation parameters of thermally driven reactions through direct imaging. Chemical Communications, 2021, 57, 10628-10631.	4.1	1
67	Characterization of thin film displacements in the electron microscope. Applied Physics Letters, 2017, 111, 203104.	3.3	0
68	Focused-probe STEM Ptychography: Developments and Opportunities. Microscopy and Microanalysis, 2020, 26, 470-471.	0.4	0
69	Low-dose scanning electron diffraction and pharmaceutical nanostructure. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, e83-e84.	0.1	0