Karen C Bustillo

List of Publications by Year
in descending order

40 papers	1,567 citations	471509 17 h-index	330143 37 g-index
43 all docs	43 docs citations	43 times ranked	2377 citing authors

#	Article	IF	Citations
1	A spongy nickel-organic CO ₂ reduction photocatalyst for nearly 100% selective CO production. Science Advances, 2017, 3, e1700921.	10.3	175
2	Formation of two-dimensional transition metal oxide nanosheets with nanoparticles as intermediates. Nature Materials, 2019, 18, 970-976.	27.5	169
3	In Situ Study of Lithiation and Delithiation of MoS₂ Nanosheets Using Electrochemical Liquid Cell Transmission Electron Microscopy. Nano Letters, 2015, 15, 5214-5220.	9.1	135
4	Strain fields in twisted bilayer graphene. Nature Materials, 2021, 20, 956-963.	27.5	126
5	py4DSTEM: A Software Package for Four-Dimensional Scanning Transmission Electron Microscopy Data Analysis. Microscopy and Microanalysis, 2021, 27, 712-743.	0.4	121
6	Reversible disorder-order transitions in atomic crystal nucleation. Science, 2021, 371, 498-503.	12.6	117
7	Diffraction imaging of nanocrystalline structures in organic semiconductor molecular thin films. Nature Materials, 2019, 18, 860-865.	27.5	99
8	Direct imaging of short-range order and its impact on deformation in Ti-6Al. Science Advances, 2019, 5, eaax2799.	10.3	86
9	Patterned probes for high precision 4D-STEM bragg measurements. Ultramicroscopy, 2020, 209, 112890.	1.9	61
10	Orientation mapping of semicrystalline polymers using scanning electron nanobeam diffraction. Micron, 2016, 88, 30-36.	2.2	54
11	In Situ Study of Fe₃Ptâ€“Fe₂O₃ Coreâ€“Shell Nanoparticle Formation. Journal of the American Chemical Society, 2015, 137, 14850-14853.	13.7	51
12	4D-STEM of Beam-Sensitive Materials. Accounts of Chemical Research, 2021, 54, 2543-2551.	15.6	48
13	Nanoscale mosaicity revealed in peptide microcrystals by scanning electron nanodiffraction. Communications Biology, 2019, 2, 26.	4.4	47
14	In Situ Study of Spinel Ferrite Nanocrystal Growth Using Liquid Cell Transmission Electron Microscopy. Chemistry of Materials, 2015, 27, 8146-8152.	6.7	39
15	Palladium oxidation leads to methane combustion activity: Effects of particle size and alloying with platinum. Journal of Chemical Physics, 2019, 151, 154703.	3.0	30
16	Selective nitrogen doping of graphene oxide by laser irradiation for enhanced hydrogen evolution activity. Chemical Communications, 2018, 54, 13726-13729.	4.1	28
17	Hierarchically-structured large superelastic deformation in ferroelastic-ferroelectrics. Acta Materialia, 2019, 181, 501-509.	7.9	20
18	Hard Ferromagnetism Down to the Thinnest Limit of Iron-Intercalated Tantalum Disulfide. Journal of the American Chemical Society, 2022, 144, 12167-12176.	13.7	19

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19	Defect-mediated ripening of core-shell nanostructures. Nature Communications, 2022, 13, 2211.	12.8	17
20	Growth mechanism of coreâ€“shell PtNiâ€“Ni nanoparticles using in situ transmission electron microscopy. Nanoscale, 2018, 10, 11281-11286.	5.6	15
21	Identification of a quasi-liquid phase at solidâ€“liquid interface. Nature Communications, 2022, 13, .	12.8	15
22	Growth and assembly of cobalt oxide nanoparticle rings at liquid nanodroplets with solid junction. Nanoscale, 2017, 9, 13915-13921.	5.6	10
23	Observation of Surface Ligands-Controlled Etching of Palladium Nanocrystals. Nano Letters, 2021, 21, 6640-6647.	9.1	10
24	Multibeam Electron Diffraction. Microscopy and Microanalysis, 2021, 27, 129-139.	0.4	9
25	Atomic structures determined from digitally defined nanocrystalline regions. IUCrJ, 2020, 7, 490-499.	2.2	8
26	Nanobeam Scanning Diffraction for Orientation Mapping of Polymers. Microscopy and Microanalysis, 2017, 23, 1782-1783.	0.4	7
27	A unique pathway of PtNi nanoparticle formation observed with liquid cell transmission electron microscopy. Nanoscale, 2020, 12, 1414-1418.	5.6	7
28	Scanning Nanobeam Diffraction and Energy Dispersive Spectroscopy Characterization of a Model Mn-Promoted Co/Al₂O₃ Nanosphere Catalyst for Fischerâ€“Tropsch Synthesis. ACS Catalysis, 2020, 10, 12071-12079.	11.2	7
29	Tetragonal CoMn₂O₄ nanocrystals on electrospun carbon fibers as high-performance battery-type supercapacitor electrode materials. Dalton Transactions, 2021, 50, 15669-15678.	3.3	7
30	Cryogenic 4D-STEM analysis of an amorphous-crystalline polymer blend: Combined nanocrystalline and amorphous phase mapping. IScience, 2022, 25, 103882.	4.1	7
31	Quantitative characterization of high temperature oxidation using electron tomography and energy-dispersive X-ray spectroscopy. Scientific Reports, 2018, 8, 10239.	3.3	6
32	Dynamics of Polymer Nanocapsule Buckling and Collapse Revealed by In Situ Liquid-Phase TEM. Langmuir, 2022, 38, 7168-7178.	3.5	5
33	Hybrid nanocapsules for in situ TEM imaging of gas evolution reactions in confined liquids. Nanoscale, 2020, 12, 18606-18615.	5.6	4
34	Development of Diffraction Scanning Techniques for Beam Sensitive Polymers.. Microscopy and Microanalysis, 2016, 22, 492-493.	0.4	2
35	Anomalous Shape Evolution of Ag₂O₂ Nanocrystals Modulated by Surface Adsorbates during Electron Beam Etching. Nano Letters, 2019, 19, 591-597.	9.1	2
36	4DSTEM of Beam-sensitive Materials: Optimizing SNR and Improving Spatial Resolution. Microscopy and Microanalysis, 2020, 26, 1734-1735.	0.4	2

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37	Detailed Investigation of Silicon Nitride Phase Plates Prepared by Focused Ion Beam Milling. Microscopy and Microanalysis, 2019, 25, 900-901.	0.4	1
38	Determining Atomic Structures from Digitally Defined Regions of Nanocrystals. Microscopy and Microanalysis, 2020, 26, 748-749.	0.4	0
39	A strain-driven thermotropic phase boundary in BaTiO3 at room temperature by cycling compression. AIP Advances, 2021, 11, 115122.	1.3	0
40	Response to Comment on â€œReversible disorder-order transitions in atomic crystal nucleationâ€• Science, 2022, 375, eabj3683.	12.6	0