Ilke Arslan

List of Publications by Year
in descending order

49 papers	3,422 citations	218677 26 h-index	233421 45 g-index
52 all docs	52 docs citations	52 times ranked	4628 citing authors

#	Article	IF	Citations
1	Direct <i>in Situ</i> Determination of the Mechanisms Controlling Nanoparticle Nucleation and Growth. ACS Nano, 2012, 6, 8599-8610.	14.6	378
2	Controlled Growth of Nanoparticles from Solution with In Situ Liquid Transmission Electron Microscopy. Nano Letters, 2011, 11, 2809-2813.	9.1	332
3	Demonstration of an Electrochemical Liquid Cell for Operando Transmission Electron Microscopy Observation of the Lithiation/Delithiation Behavior of Si Nanowire Battery Anodes. Nano Letters, 2013, 13, 6106-6112.	9.1	265
4	Current status and future directions for in situ transmission electron microscopy. Ultramicroscopy, 2016, 170, 86-95.	1.9	181
5	Experimental procedures to mitigate electron beam induced artifacts during in situ fluid imaging of nanomaterials. Ultramicroscopy, 2013, 127, 53-63.	1.9	176
6	Direct Observation of Aggregative Nanoparticle Growth: Kinetic Modeling of the Size Distribution and Growth Rate. Nano Letters, 2014, 14, 373-378.	9.1	172
7	Highly aligned, template-free growth and characterization of vertical GaN nanowires on sapphire by metalâ€“organic chemical vapour deposition. Nanotechnology, 2006, 17, 5773-5780.	2.6	159
8	Reducing the missing wedge: High-resolution dual axis tomography of inorganic materials. Ultramicroscopy, 2006, 106, 994-1000.	1.9	144
9	The potential for Bayesian compressive sensing to significantly reduce electron dose in high-resolution STEM images. Microscopy (Oxford, England), 2014, 63, 41-51.	1.5	140
10	Probing the Degradation Mechanisms in Electrolyte Solutions for Li-Ion Batteries by in Situ Transmission Electron Microscopy. Nano Letters, 2014, 14, 1293-1299.	9.1	137
11	Atomic-Scale Imaging and Spectroscopy for <i>In Situ</i> Liquid Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2012, 18, 621-627.	0.4	125
12	Towards better 3-D reconstructions by combining electron tomography and atom-probe tomography. Ultramicroscopy, 2008, 108, 1579-1585.	1.9	112
13	Direct <i>in Situ</i> Observation of Nanoparticle Synthesis in a Liquid Crystal Surfactant Template. ACS Nano, 2012, 6, 3589-3596.	14.6	93
14	Visualizing macromolecular complexes with in situ liquid scanning transmission electron microscopy. Micron, 2012, 43, 1085-1090.	2.2	89
15	Improving Stability of Zeolites in Aqueous Phase via Selective Removal of Structural Defects. Journal of the American Chemical Society, 2016, 138, 4408-4415.	13.7	79
16	A novel dual-axis iterative algorithm for electron tomography. Journal of Structural Biology, 2006, 153, 55-63.	2.8	70
17	The Chemical Application of High-Resolution Electron Tomography: Bright Field or Dark Field?. Angewandte Chemie - International Edition, 2004, 43, 6745-6747.	13.8	64
18	Threeâ€Dimensional Concentration Mapping of Organic Blends. Advanced Functional Materials, 2013, 23, 2115-2122.	14.9	64

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19	Beating Heterogeneity of Single-Site Catalysts: MgO-Supported Iridium Complexes. ACS Catalysis, 2018, 8, 3489-3498.	11.2	64
20	Toward Three-Dimensional Nanoengineering of Heterogeneous Catalysts. Journal of the American Chemical Society, 2008, 130, 5716-5719.	13.7	63
21	Atomic and Electronic Structure of Mixed and Partial Dislocations in GaN. Physical Review Letters, 2005, 94, 025504.	7.8	59
22	Impact of Aqueous Medium on Zeolite Framework Integrity. Chemistry of Materials, 2015, 27, 3533-3545.	6.7	50
23	Gaining Control over Radiolytic Synthesis of Uniform Sub-3-nanometer Palladium Nanoparticles: Use of Aromatic Liquids in the Electron Microscope. Langmuir, 2016, 32, 1468-1477.	3.5	47
24	<i>In-Situ</i> Electrochemical Transmission Electron Microscopy for Battery Research. Microscopy and Microanalysis, 2014, 20, 484-492.	0.4	45
25	Three-Dimensional Pore Evolution of Nanoporous Metal Particles for Energy Storage. Journal of the American Chemical Society, 2011, 133, 9144-9147.	13.7	41
26	Scalable synthesis of nanoporous palladium powders. International Journal of Hydrogen Energy, 2009, 34, 5585-5591.	7.1	31
27	Recovering fine details from under-resolved electron tomography data using higher order total variation<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0004.gif" overflow="scroll"><mml:msub subscriptshift="65%"><mml:mrow><mml:mo>â„“</mml:mo></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:m Ultramicroscopy, 2017, 174, 97-105.	1.9	24
28	Examining Elemental Surface Enrichment in Ultrafine Aerosol Particles Using Analytical Scanning Transmission Electron Microscopy. Aerosol Science and Technology, 2004, 38, 365-381.	3.1	21
29	Using Electrons As a High-Resolution Probe of Optical Modes in Individual Nanowires. Nano Letters, 2009, 9, 4073-4077.	9.1	20
30	Direct visualisation, by aberration-corrected electron microscopy, of the crystallisation of bimetallic nanoparticle catalysts. Chemical Communications, 2005, , 5805.	4.1	19
31	Three-Dimensional Visualization of Surface Defects in Coreâ˜'Shell Nanowires. Journal of Physical Chemistry C, 2008, 112, 11093-11097.	3.1	18
32	Metamorphic growth of relaxed single crystalline aluminum on silicon (111). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	17
33	Perfect Strain Relaxation in Metamorphic Epitaxial Aluminum on Silicon through Primary and Secondary Interface Misfit Dislocation Arrays. ACS Nano, 2018, 12, 6843-6850.	14.6	17
34	In Situ Observation of Directed Nanoparticle Aggregation During the Synthesis of Ordered Nanoporous Metal in Soft Templates. Chemistry of Materials, 2014, 26, 1426-1433.	6.7	14
35	Electron tomography and fractal aspects of MoS2 and MoS2/Co spheres. Scientific Reports, 2017, 7, 12322.	3.3	12
36	Seeing atoms in three dimensions. Nature Materials, 2012, 11, 911-912.	27.5	11

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37	Iridium Atoms Bonded to Crystalline Powder MgO: Characterization by Imaging and Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 459-468.	3.1	10
38	Material profile influences in bulk-heterojunctions. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1291-1300.	2.1	9
39	Ultrafast formation of a transient two-dimensional diamondlike structure in twisted bilayer graphene. Physical Review B, 2020, 102, .	3.2	8
40	Genesis of Delaminated-Zeolite Morphology: 3-D Characterization of Changes by STEM Tomography. Journal of Physical Chemistry Letters, 2015, 6, 2598-2602.	4.6	5
41	Nucleation and growth of metamorphic epitaxial aluminum on silicon (111) 7 Ã— 7 and surfaces. Journal of Materials Research, 2017, 32, 4067-4075.	2.6	5
42	Improved Three-Dimensional (3D) Resolution of Electron Tomograms Using Robust Mathematical Data-Processing Techniques. Microscopy and Microanalysis, 2017, 23, 1121-1129.	0.4	4
43	Nano-metrology of platinum-ruthenium bimetallic catalysts and the cluster-to-crystal transformation. Journal of Physics: Conference Series, 2006, 26, 207-210.	0.4	3
44	Atomic scale defect analysis in the scanning transmission electron microscope. Microscopy Research and Technique, 2006, 69, 330-342.	2.2	2
45	III-nitride nanowires: growth, properties, and applications. , 2010, , .		0
46	Controlled Radiolytic Synthesis in the Fluid Stage. Towards Understanding the Effect of the Electron Beam in Liquids. Microscopy and Microanalysis, 2015, 21, 2125-2126.	0.4	0
47	In-situ, Ex-situ, and 3-D Imaging of Nanomaterials in the STEM. Microscopy and Microanalysis, 2017, 23, 1870-1871.	0.4	0
48	Photo-induced ultrafast phase transition in twisted bilayer graphene. Microscopy and Microanalysis, 2021, 27, 2954-2956.	0.4	0
49	Porosity and Fractality of MoS2 and MoS2/Co-catalytic Spheres. , 2019, , 151-166.		0