Utkur M Mirsaidov

List of Publications by Year
in descending order

102	4,068	81743	123241
papers	citations	39 h-index	61 g-index

104	104	104	5433
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Multistep nucleation of nanocrystals in aqueous solution. Nature Chemistry, 2017, 9, 77-82.	6.6	312
2	Direct observation of the nanoscale Kirkendall effect during galvanic replacement reactions. Nature Communications, 2017, 8, 1224.	5.8	175
3	Detecting SNPs Using a Synthetic Nanopore. Nano Letters, 2007, 7, 1680-1685.	4.5	133
4	Visualizing the Conversion of Metalâ€“Organic Framework Nanoparticles into Hollow Layered Double Hydroxide Nanocages. Journal of the American Chemical Society, 2021, 143, 1854-1862.	6.6	111
5	Imaging Protein Structure in Water at 2.7Ânm Resolution by Transmission Electron Microscopy. Biophysical Journal, 2012, 102, L15-L17.	0.2	105
6	Hydration Layer-Mediated Pairwise Interaction of Nanoparticles. Nano Letters, 2016, 16, 786-790.	4.5	103
7	Disorder Engineering in Monolayer Nanosheets Enabling Photothermic Catalysis for Full Solar Spectrum (250â€“2500â€...nm) Harvesting. Angewandte Chemie - International Edition, 2019, 58, 3077-3081.	7.2	100
8	Laser-Guided Assembly of Heterotypic Three-Dimensional Living Cell Microarrays. Biophysical Journal, 2006, 91, 3465-3473.	0.2	99
9	Rapid, Scalable Construction of Highly Crystalline Acylhydrazone Two-Dimensional Covalent Organic Frameworks via Dipole-Induced Antiparallel Stacking. Journal of the American Chemical Society, 2020, 142, 4932-4943.	6.6	99
10	Direct observation of stick-slip movements of water nanodroplets induced by an electron beam. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7187-7190.	3.3	97
11	Direct Observation of Interactions between Nanoparticles and Nanoparticle Self-Assembly in Solution. Accounts of Chemical Research, 2017, 50, 1303-1312.	7.6	97
12	Live cell lithography: Using optical tweezers to create synthetic tissue. Lab on A Chip, 2008, 8, 2174.	3.1	89
13	Partitioning the interlayer space of covalent organic frameworks by embedding pseudorotaxanes in their backbones. Nature Chemistry, 2020, 12, 1115-1122.	6.6	88
14	Bonding Pathways of Gold Nanocrystals in Solution. Nano Letters, 2014, 14, 6639-6643.	4.5	87
15	Two-dimensional adaptive membranes with programmable water and ionic channels. Nature Nanotechnology, 2021, 16, 174-180.	15.6	86
16	Phase Selection in Self-catalyzed GaAs Nanowires. Nano Letters, 2020, 20, 1669-1675.	4.5	83
17	Nanopore Sequencing: Electrical Measurements of the Code of Life. IEEE Nanotechnology Magazine, 2010, 9, 281-294.	1.1	81
18	Electron Beam Manipulation of Nanoparticles. Nano Letters, 2012, 12, 5644-5648.	4.5	80

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19	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. Energy and Environmental Science, 2020, 13, 229-237.	15.6	78
20	Nanopores in solid-state membranes engineered for single molecule detection. Nanotechnology, 2010, 21, 065502.	1.3	77
21	Desorption-Mediated Motion of Nanoparticles at the Liquidâ€“Solid Interface. Journal of Physical Chemistry C, 2016, 120, 20462-20470.	1.5	75
22	Slowing the translocation of double-stranded DNA using a nanopore smaller than the double helix. Nanotechnology, 2010, 21, 395501.	1.3	74
23	Optimal optical trap for bacterial viability. Physical Review E, 2008, 78, 021910.	0.8	73
24	Nanoparticle Dynamics in a Nanodroplet. Nano Letters, 2014, 14, 2111-2115.	4.5	73
25	Real-Time Dynamics of Galvanic Replacement Reactions of Silver Nanocubes and Au Studied by Liquid-Cell Transmission Electron Microscopy. ACS Nano, 2016, 10, 7689-7695.	7.3	67
26	In Situ Kinetic and Thermodynamic Growth Control of Auâ€“Pd Coreâ€“Shell Nanoparticles. Journal of the American Chemical Society, 2018, 140, 11680-11685.	6.6	66
27	Structural changes in noble metal nanoparticles during CO oxidation and their impact on catalyst activity. Nature Communications, 2020, 11, 2133.	5.8	63
28	Scrolling graphene into nanofluidic channels. Lab on A Chip, 2013, 13, 2874.	3.1	60
29	Interactions and Attachment Pathways between Functionalized Gold Nanorods. ACS Nano, 2017, 11, 1633-1640.	7.3	60
30	Linker-Mediated Self-Assembly Dynamics of Charged Nanoparticles. ACS Nano, 2016, 10, 7443-7450.	7.3	59
31	Three-step nucleation of metalâ€“organic framework nanocrystals. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	58
32	Dynamics of hydrogen nanobubbles in KLH protein solution studied with in situ wet-TEM. Soft Matter, 2013, 9, 8856.	1.2	57
33	Real-Time Imaging of the Formation of Auâ€“Ag Coreâ€“Shell Nanoparticles. Journal of the American Chemical Society, 2016, 138, 5190-5193.	6.6	55
34	Nanoelectromechanics of Methylated DNA in a Synthetic Nanopore. Biophysical Journal, 2009, 96, L32-L34.	0.2	54
35	Calix[4]pyrrole Schiff Base Macrocycles:Â Novel Binucleating Ligands for Cu(I) and Cu(II). Inorganic Chemistry, 2005, 44, 6736-6743.	1.9	52
36	Quantum Growth of Magnetic Nanoplatelets of Co on Si with High Blocking Temperature. Nano Letters, 2005, 5, 87-90.	4.5	43

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37	Self-aligned wet-cell for hydrated microbiology observation in TEM. Lab on A Chip, 2012, 12, 340-347.	3.1	42
38	Nanoparticle Interactions Guided by Shapeâ€Dependent Hydrophobic Forces. Advanced Materials, 2018, 30, e1707077.	11.1	42
39	Interface-mediated Kirkendall effect and nanoscale void migration in bimetallic nanoparticles during interdiffusion. Nature Communications, 2019, 10, 2831.	5.8	42
40	A Schiff Base Expanded Porphyrin Macrocycle that Acts as a Versatile Binucleating Ligand for Late First-Row Transition Metals. Inorganic Chemistry, 2005, 44, 2125-2127.	1.9	40
41	Dynamics of amphiphilic block copolymers in an aqueous solution: direct imaging of micelle formation and nanoparticle encapsulation. Nanoscale, 2019, 11, 2299-2305.	2.8	40
42	Direct Observations of the Rotation and Translation of Anisotropic Nanoparticles Adsorbed at a Liquidâ€“Solid Interface. Nano Letters, 2019, 19, 2871-2878.	4.5	40
43	Analyzing the forces binding a restriction endonuclease to DNA using a synthetic nanopore. Nucleic Acids Research, 2009, 37, 4170-4179.	6.5	39
44	Nanodroplet-Mediated Assembly of Platinum Nanoparticle Rings in Solution. Nano Letters, 2016, 16, 1092-1096.	4.5	38
45	Constructing ambivalent imidazopyridinium-linked covalent organic frameworks. , 2022, 1, 382-392.		38
46	Realâ€Time Imaging of Nanoscale Redox Reactions over Bimetallic Nanoparticles. Advanced Functional Materials, 2019, 29, 1903242.	7.8	36
47	Transient Clustering of Reaction Intermediates during Wet Etching of Silicon Nanostructures. Nano Letters, 2017, 17, 2953-2958.	4.5	35
48	A direct observation of nanometer-size void dynamics in an ultra-thin water film. Soft Matter, 2012, 8, 7108.	1.2	32
49	Jamming prokaryotic cell-to-cell communications in a model biofilm. Lab on A Chip, 2009, 9, 925-934.	3.1	31
50	Liquid phase transmission electron microscopy for imaging of nanoscale processes in solution. MRS Bulletin, 2020, 45, 704-712.	1.7	26
51	Intermediate Structures of Ptâ€“Ni Nanoparticles during Selective Chemical and Electrochemical Etching. Journal of Physical Chemistry Letters, 2019, 10, 6090-6096.	2.1	25
52	Chirality Transfer in Galvanic Replacement Reactions. Nano Letters, 2019, 19, 7427-7433.	4.5	25
53	Dynamics of Templated Assembly of Nanoparticle Filaments within Nanochannels. Advanced Materials, 2017, 29, 1702682.	11.1	24
54	Selective Wet Etching of Silicon Germanium in Composite Vertical Nanowires. ACS Applied Materials & Interfaces, 2019, 11, 36839-36846.	4.0	24

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55	Aggregation dynamics of nanoparticles at solidâ€“liquid interfaces. Nanoscale, 2017, 9, 10044-10050.	2.8	24
56	CTAB-Influenced Electrochemical Dissolution of Silver Dendrites. Langmuir, 2016, 32, 3601-3607.	1.6	22
57	Nanodroplet Depinning from Nanoparticles. ACS Nano, 2015, 9, 9020-9026.	7.3	20
58	Nucleation Dynamics of Water Nanodroplets. Microscopy and Microanalysis, 2014, 20, 407-415.	0.2	19
59	Molecular diagnostics for personal medicine using a nanopore. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2010, 2, 367-381.	3.3	18
60	Growth Dynamics of Vertical and Lateral Layered Double Hydroxide Nanosheets during Electrodeposition. Nano Letters, 2021, 21, 5977-5983.	4.5	18
61	Dynamics of a nanodroplet under a transmission electron microscope. Physics of Fluids, 2014, 26, 012003.	1.6	14
62	Binary Chiral Nanoparticles Exhibit Amplified Optical Activity and Enhanced Refractive Index Sensitivity. Small, 2020, 16, e1906048.	5.2	14
63	Formation Pathways of Porous Alloy Nanoparticles through Selective Chemical and Electrochemical Etching. Small, 2021, 17, e2006953.	5.2	14
64	Nanoscale Elastocapillary Effect Induced by Thin-Liquid-Film Instability. Journal of Physical Chemistry Letters, 2020, 11, 2751-2758.	2.1	13
65	Analytical method for parameterizing the random profile components of nanosurfaces imaged by atomic force microscopy. Analyst, The, 2011, 136, 570-576.	1.7	10
66	Spontaneous Reshaping and Splitting of AgCl Nanocrystals under Electron Beam Illumination. Small, 2018, 14, e1803231.	5.2	10
67	Allâ€Dielectric Nanostructures with a Thermoresponsible Dynamic Polymer Shell. Angewandte Chemie - International Edition, 2021, 60, 12737-12741.	7.2	10
68	Disorder Engineering in Monolayer Nanosheets Enabling Photothermic Catalysis for Full Solar Spectrum (250â€“2500â€...nm) Harvesting. Angewandte Chemie, 2019, 131, 3109-3113.	1.6	9
69	Preventing the Capillary-Induced Collapse of Vertical Nanostructures. ACS Applied Materials & Interfaces, 2022, 14, 5537-5544.	4.0	7
70	Oscillator microfabrication, micromagnets, and magnetic resonance force microscopy. , 2004, , .		6
71	Deep Learning-Based High Throughput Inspection in 3D Nanofabrication and Defect Reversal in Nanopillar Arrays: Implications for Next Generation Transistors. ACS Applied Nano Materials, 2021, 4, 2664-2672.	2.4	6
72	Dynamics of thin precursor film in wetting of nanopatterned surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	6

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73	Revealing the Origin of Lowâ€Temperature Activity of Niâ€“Rh Nanostructures during CO Oxidation Reaction with Operando TEM. Advanced Science, 2022, 9, e2105599.	5.6	6
74	External field effects on the resonant frequency of magnetically capped oscillators for magnetic resonance force microscopy. Journal of Applied Physics, 2003, 93, 6572-6574.	1.1	5
75	Real-Time Electron Nanoscopy of Photovoltaic Absorber Formation from Kesterite Nanoparticles. ACS Applied Energy Materials, 2020, 3, 122-128.	2.5	5
76	Evolution of Anisotropic Arrow Nanostructures during Controlled Overgrowth. Advanced Functional Materials, 2021, 31, 2008639.	7.8	5
77	Probing Nanoparticle Dynamics in 200 nm Thick Liquid Layers at Millisecond Time Resolution. Microscopy and Microanalysis, 2015, 21, 267-268.	0.2	3
78	Real time observation of gold nanoparticle aggregation dynamics on a 2D membrane. Microscopy and Microanalysis, 2016, 22, 808-809.	0.2	3
79	Hopping Diffusion of Gold Nanoparticles Observed with Liquid Cell TEM. Microscopy and Microanalysis, 2016, 22, 750-751.	0.2	3
80	Growth Dynamics of Gallium Nanodroplets Driven by Thermally Activated Surface Diffusion. Journal of Physical Chemistry Letters, 2019, 10, 5082-5089.	2.1	3
81	Effect of Electron Beam on Nanoparticle Dynamics in Solution during in situ TEM Observation. Microscopy and Microanalysis, 2015, 21, 257-258.	0.2	2
82	Response to â€œElectron Microscopy of Biological Specimens in Liquid Waterâ€• Biophysical Journal, 2012, 103, 165-166.	0.2	1
83	Nanoscale Dynamics in Ultrathin Liquids Visualized with TEM. Microscopy and Microanalysis, 2014, 20, 1502-1503.	0.2	1
84	Ecology of a Simple Synthetic Biofilm. Biological and Medical Physics Series, 2015, , 205-226.	0.3	1
85	Capturing Dynamics in Liquids with High-Speed CMOS Cameras - Opportunities and Challenges. Microscopy and Microanalysis, 2017, 23, 860-861.	0.2	1
86	Allâ€Dielectric Nanostructures with a Thermoresponsible Dynamic Polymer Shell. Angewandte Chemie, 2021, 133, 12847-12851.	1.6	1
87	Bonding Pathways of Gold Nanocrystals in Solution. Microscopy and Microanalysis, 2015, 21, 269-270.	0.2	0
88	The Two Dimensional Nanoplate Dynamics Revealed by in situ Liquid Cell TEM. Microscopy and Microanalysis, 2015, 21, 261-262.	0.2	0
89	Role of Fluid-Mediated Interactions in Guiding Nanoparticle Assembly. Microscopy and Microanalysis, 2015, 21, 259-260.	0.2	0
90	B12-O-13In-situTEM observation of biological specimen in liquid cells. Microscopy (Oxford,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.7	0

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91	Numerical study of homogeneous nanodroplet growth. Journal of Colloid and Interface Science, 2015, 438, 47-54.	5.0	0
92	Hydration Layer-mediated Pairwise Interaction of Nanoparticles resolved by in situ TEM. Microscopy and Microanalysis, 2016, 22, 756-757.	0.2	0
93	Visualizing Nanoscale Assembly in Solution Using In Situ TEM. Microscopy and Microanalysis, 2016, 22, 34-35.	0.2	0
94	Nanoscale Water Imaged by In Situ TEM. , 0, , 276-290.		0
95	Nanocrystal Dynamics: Spontaneous Reshaping and Splitting of AgCl Nanocrystals under Electron Beam Illumination (Small 48/2018). Small, 2018, 14, 1870231.	5.2	0
96	Growth Dynamics of Ga Nanodroplets on 2D Substrate. Microscopy and Microanalysis, 2018, 24, 264-265.	0.2	0
97	Direct Visualization of Solution-based Nanofabrication Processes with In Situ TEM: Chemical Wet-etching and Solution-based Cleaning/Drying of High-Aspect-Ratio Nanostructures. Microscopy and Microanalysis, 2018, 24, 276-277.	0.2	0
98	Operando Transmission Electron Microscopy of Noble Metal Nano-catalysts During CO Oxidation. Microscopy and Microanalysis, 2019, 25, 2020-2021.	0.2	0
99	Titelbild: Disorder Engineering in Monolayer Nanosheets Enabling Photothermic Catalysis for Full Solar Spectrum (250â€“2500â€…nm) Harvesting (Angew. Chem. 10/2019). Angewandte Chemie, 2019, 131, 2933-2933.	1.6	0
100	Visualizing Chemical Processes in Semiconductors with In Situ TEM. Microscopy and Microanalysis, 2020, 26, 2038-2038.	0.2	0
101	Third Generation DNA Sequencing with a Nanopore. , 2011, , 287-311.		0
102	Visualizing the Growth of LDH Nanomaterial through Electrodeposition and Chemical Conversion. Microscopy and Microanalysis, 2021, 27, 23-24.	0.2	0