Mingzhao Liu

List of Publications by Year
in descending order

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77	4,478	147801	102487
papers	citations	31 h-index	66 g-index

78	78	78	6943
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mechanism of Silver(I)-Assisted Growth of Gold Nanorods and Bipyramids. Journal of Physical Chemistry B, 2005, 109, 22192-22200.	2.6	922
2	Synthesis and Optical Characterization of Au/Ag Core/Shell Nanorods. Journal of Physical Chemistry B, 2004, 108, 5882-5888.	2.6	421
3	Excitation of Dark Plasmons in Metal Nanoparticles by a Localized Emitter. Physical Review Letters, 2009, 102, 107401.	7.8	201
4	Damping of acoustic vibrations in gold nanoparticles. Nature Nanotechnology, 2009, 4, 492-495.	31.5	191
5	Optical trapping and alignment of single gold nanorods by using plasmon resonances. Optics Letters, 2006, 31, 2075.	3.3	184
6	Discrete Nanocubes as Plasmonic Reporters of Molecular Chirality. Nano Letters, 2013, 13, 3145-3151.	9.1	178
7	Enhancing Water Splitting Activity and Chemical Stability of Zinc Oxide Nanowire Photoanodes with Ultrathin Titania Shells. Journal of Physical Chemistry C, 2013, 117, 13396-13402.	3.1	164
8	Optical properties of rodlike and bipyramidal gold nanoparticles from three-dimensional computations. Physical Review B, 2007, 76, .	3.2	127
9	Ultrafast resonant optical scattering from single gold nanorods: Large nonlinearities and plasmon saturation. Physical Review B, 2006, 73, .	3.2	120
10	Water photolysis with a cross-linked titanium dioxidenanowire anode. Chemical Science, 2011, 2, 80-87.	7.4	116
11	The Role of Surface Oxygen Vacancies in BiVO₄. Chemistry of Materials, 2020, 32, 2899-2909.	6.7	108
12	The impact of surface composition on the interfacial energetics and photoelectrochemical properties of BiVO4. Nature Energy, 2021, 6, 287-294.	39.5	108
13	Plasmon resonance-based optical trapping of single and multiple Au nanoparticles. Optics Express, 2007, 15, 12017.	3.4	103
14	Reduced damping of surface plasmons at low temperatures. Physical Review B, 2009, 79, .	3.2	98
15	Preparation and optical properties of silver chalcogenide coated gold nanorods. Journal of Materials Chemistry, 2006, 16, 3942.	6.7	88
16	Dielectric Sensing with Deposited Gold Bipyramids. Journal of Physical Chemistry C, 2008, 112, 19279-19282.	3.1	84
17	Direct Observation of the Redistribution of Sulfur and Polysufides in Liâ€“S Batteries During the First Cycle by In Situ Xâ€Ray Fluorescence Microscopy. Advanced Energy Materials, 2015, 5, 1500072.	19.5	84
18	Ultrafast Resonant Dynamics of Surface Plasmons in Gold Nanorods. Journal of Physical Chemistry C, 2007, 111, 116-123.	3.1	81

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19	Developing new understanding of photoelectrochemical water splitting via in-situ techniques: A review on recent progress. Green Energy and Environment, 2017, 2, 100-111.	8.7	76
20	Unconventional Relation between Charge Transport and Photocurrent via Boosting Small Polaron Hopping for Photoelectrochemical Water Splitting. ACS Energy Letters, 2018, 3, 2232-2239.	17.4	61
21	Surface Proton Transfer Promotes Four-Electron Oxygen Reduction on Gold Nanocrystal Surfaces in Alkaline Solution. Journal of the American Chemical Society, 2017, 139, 7310-7317.	13.7	51
22	Stretchable Photonic Crystal Cavity with Wide Frequency Tunability. Nano Letters, 2013, 13, 248-252.	9.1	50
23	Quantifying Bulk and Surface Recombination Processes in Nanostructured Water Splitting Photocatalysts via In Situ Ultrafast Spectroscopy. Nano Letters, 2015, 15, 1076-1082.	9.1	50
24	Generation of Ensembles of Individually Resolvable Nitrogen Vacancies Using Nanometer-Scale Apertures in Ultrahigh-Aspect Ratio Planar Implantation Masks. Nano Letters, 2015, 15, 1751-1758.	9.1	44
25	Ultrathin Lutetium Oxide Film as an Epitaxial Holeâ€Blocking Layer for Crystalline Bismuth Vanadate Water Splitting Photoanodes. Advanced Functional Materials, 2018, 28, 1705512.	14.9	40
26	Semiconductorâ€Based Photoelectrochemical Water Splitting at the Limit of Very Wide Depletion Region. Advanced Functional Materials, 2016, 26, 219-225.	14.9	39
27	Interstitial Lithium Doping in BiVO₄ Thin Film Photoanode for Enhanced Solar Water Splitting Activity. Chemistry of Materials, 2020, 32, 6401-6409.	6.7	37
28	Valence-programmable nanoparticle architectures. Nature Communications, 2020, 11, 2279.	12.8	37
29	Anomalous Conductivity Tailored by Domain-Boundary Transport in Crystalline Bismuth Vanadate Photoanodes. Chemistry of Materials, 2018, 30, 1677-1685.	6.7	35
30	Polarized Single-Particle Quantum Dot Emitters through Programmable Cluster Assembly. ACS Nano, 2020, 14, 1369-1378.	14.6	34
31	Supra-Nanoparticle Functional Assemblies through Programmable Stacking. ACS Nano, 2017, 11, 7036-7048.	14.6	32
32	Mechanistic Insights into Defect-Assisted Carrier Transport in Bismuth Vanadate Photoanodes. Journal of Physical Chemistry C, 2019, 123, 20730-20736.	3.1	32
33	Improved Stability and Performance of Visible Photoelectrochemical Water Splitting on Solution-Processed Organic Semiconductor Thin Films by Ultrathin Metal Oxide Passivation. Chemistry of Materials, 2018, 30, 324-335.	6.7	29
34	Bi-continuous pattern formation in thin films via solid-state interfacial dealloying studied by multimodal characterization. Materials Horizons, 2019, 6, 1991-2002.	12.2	28
35	Gas Transport Selectivity of Ultrathin, Nanoporous, Inorganic Membranes Made from Block Copolymer Templates. Chemistry of Materials, 2017, 29, 9572-9578.	6.7	25
36	Designing optical metamaterial with hyperbolic dispersion based on an Al:ZnO/ZnO nano-layered structure using the atomic layer deposition technique. Applied Optics, 2016, 55, 2993.	2.1	24

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37	Effects of Residual Solvent Molecules Facilitating the Infiltration Synthesis of ZnO in a Nonreactive Polymer. Chemistry of Materials, 2017, 29, 4535-4545.	6.7	24
38	Surface-Energy Induced Formation of Single Crystalline Bismuth Nanowires over Vanadium Thin Film at Room Temperature. Nano Letters, 2014, 14, 5630-5635.	9.1	23
39	Unravelling Photocarrier Dynamics beyond the Space Charge Region for Photoelectrochemical Water Splitting. Chemistry of Materials, 2017, 29, 4036-4043.	6.7	23
40	Modulating Carrier Transport via Defect Engineering in Solar Water Splitting Devices. ACS Energy Letters, 2019, 4, 834-843.	17.4	23
41	Role of size and defects in ultrafast broadband emission dynamics of ZnO nanostructures. Applied Physics Letters, 2014, 104, .	3.3	21
42	Temperature Effect on Photoelectrochemical Water Splitting: A Model Study Based on BiVO₄ Photoanodes. ACS Applied Materials & Interfaces, 2021, 13, 61227-61236.	8.0	21
43	Photoelectrochemical water splitting with a SrTiO₃:Nb/SrTiO₃ n⁺â€“n homojunction structure. Physical Chemistry Chemical Physics, 2017, 19, 2760-2767.	2.8	20
44	Application of ultrathin TiO₂ layers in solar energy conversion devices. Energy Science and Engineering, 2022, 10, 1614-1629.	4.0	19
45	The role of the domain size and titanium dopant in nanocrystalline hematite thin films for water photolysis. Nanoscale, 2015, 7, 18515-18523.	5.6	17
46	Charge trapping and de-trapping in isolated CdSe/ZnS nanocrystals under an external electric field: indirect evidence for a permanent dipole moment. Nanoscale, 2015, 7, 14897-14905.	5.6	15
47	Hydrothermal growth of ZnO nanowire arrays: fine tuning by precursor supersaturation. CrystEngComm, 2017, 19, 584-591.	2.6	15
48	Near band edge photoluminescence of ZnO nanowires: Optimization via surface engineering. Applied Physics Letters, 2017, 111, 231901.	3.3	15
49	New aspects of improving the performance of WO₃ thin films for photoelectrochemical water splitting by tuning the ultrathin depletion region. RSC Advances, 2019, 9, 899-905.	3.6	14
50	Ultrathin Amorphous Titania on Nanowires: Optimization of Conformal Growth and Elucidation of Atomic-Scale Motifs. Nano Letters, 2019, 19, 3457-3463.	9.1	14
51	Tailoring Surface Opening of Hollow Nanocubes and Their Application as Nanocargo Carriers. ACS Central Science, 2018, 4, 1742-1750.	11.3	13
52	Resolving the Evolution of Atomic Layer-Deposited Thin-Film Growth by Continuous In Situ X-Ray Absorption Spectroscopy. Chemistry of Materials, 2021, 33, 1740-1751.	6.7	13
53	Atomic Layer-Deposited Titanium-Doped Vanadium Oxide Thin Films and Their Thermistor Applications. Journal of Electronic Materials, 2017, 46, 2153-2157.	2.2	12
54	Hydrogen evolution activity tuning via two-dimensional electron accumulation at buried interfaces. Journal of Materials Chemistry A, 2019, 7, 20696-20705.	10.3	11

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55	Block copolymer self assembly for design and vapor-phase synthesis of nanostructured antireflective surfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, 06FE02.	1.2	10
56	Design nanoporous metal thin films via solid state interfacial dealloying. Nanoscale, 2021, 13, 17725-17736.	5.6	9
57	Influence of Thermal Annealing on Free Carrier Concentration in (GaN)_{1â€“x}(ZnO)_x Semiconductors. Journal of Physical Chemistry C, 2017, 121, 23249-23258.	3.1	8
58	Broadband mid-infrared second harmonic generation using epitaxial polydomain barium titanate thin films. Photonics Research, 2019, 7, 1193.	7.0	8
59	Engineering the structural, plasmonic, and optical properties of multilayered aluminum-doped zinc oxide metamaterial grown by pulsed laser deposition. Applied Optics, 2019, 58, 5681.	1.8	8
60	Multicomponent Oxynitride Thin Films: Precise Growth Control and Excited State Dynamics. Chemistry of Materials, 2019, 31, 3461-3467.	6.7	7
61	Thin-film synthesis of superconductor-on-insulator A15 vanadium silicide. Scientific Reports, 2021, 11, 2358.	3.3	3
62	Ultrafast optical nonlinearities of plasmons in single gold nanorods. , 2005, , .		1
63	Optical nonlinearities of metal nanoparticles: single-particle measurements and correlation to structure. , 2006, , .		1
64	Optical trapping and alignment of single gold nanorods using plasmon resonances. , 2006, , .		1
65	Seedless Growth of Bismuth Nanowire Array via Vacuum Thermal Evaporation. Journal of Visualized Experiments, 2015, , e53396.	0.3	1
66	Exciton diffusion in solid solutions of luminescent lanthanide Î²-diketonates. Physical Chemistry Chemical Physics, 2021, 23, 914-920.	2.8	1
67	Ultrafast Optical Nonlinearities of Single Metal Nanoparticles. Springer Series in Chemical Physics, 2007, , 639-641.	0.2	1
68	Ultrafast Optical Nonlinearities of Metal Nanoparticles: Single-Particle Measurements and Correlation to Structure. , 2006, , .		1
69	Enhancing CO Oxidation Activity via Tuning a Charge Transfer Between Gold Nanoparticles and Supports. Journal of Physical Chemistry C, 2022, 126, 4836-4844.	3.1	1
70	Back Cover Image. Energy Science and Engineering, 2022, 10, .	4.0	1
71	Plasmon-enhanced optical trapping of individual metal nanorods. , 2007, , .		0
72	Metallic colloids and their plasmonic properties. , 2007, , .		0

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73	Synthesis and Optical Properties of 1D Metal and Core/Shell Colloidal Nanostructures. ACS Symposium Series, 2008, , 63-76.	0.5	0
74	(Invited) Surface Plasmon Resonance Sensors for Biomolecular Chirality. ECS Transactions, 2017, 77, 29-34.	0.5	0
75	Structural and optical characterization of highly anisotropic low loss Al:ZnO/ZnO multilayered metamaterial with hyperbolic dispersion grown by pulsed layer deposition. , 2017, , .		0
76	Mid-infrared frequency doubling using strip-loaded silicon nitride on epitaxial barium titanate thin film waveguides. Optics Letters, 2020, 45, 6358.	3.3	0
77	Probing structures and structural evolution of nanomaterials by X-ray absorption fine structure spectroscopy. , 2021, , .		0