Dehong Hu

List of Publications by Year
in descending order

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118 papers	11,301 citations	44069 48 h-index	28297 105 g-index
120 all docs	120 docs citations	120 times ranked	15927 citing authors

#	Article	IF	Citations
1	Self-Assembled TiO₂â€“Graphene Hybrid Nanostructures for Enhanced Li-Ion Insertion. ACS Nano, 2009, 3, 907-914.	14.6	1,596
2	Aptamer/Graphene Oxide Nanocomplex for in Situ Molecular Probing in Living Cells. Journal of the American Chemical Society, 2010, 132, 9274-9276.	13.7	1,020
3	Ternary Self-Assembly of Ordered Metal Oxideâ^'Graphene Nanocomposites for Electrochemical Energy Storage. ACS Nano, 2010, 4, 1587-1595.	14.6	795
4	Stable cycling of high-voltage lithium metal batteries in ether electrolytes. Nature Energy, 2018, 3, 739-746.	39.5	767
5	Discrete Intensity Jumps and Intramolecular Electronic Energy Transfer in the Spectroscopy of Single Conjugated Polymer Molecules. Science, 1997, 277, 1074-1077.	12.6	508
6	Collapse of stiff conjugated polymers with chemical defects into ordered, cylindrical conformations. Nature, 2000, 405, 1030-1033.	27.8	433
7	First Observation of the Key Intermediate in the â€œLight-Switchâ€•Mechanism of [Ru(phen)2dppz]2+. Journal of the American Chemical Society, 1997, 119, 11458-11467.	13.7	370
8	Unmasking Electronic Energy Transfer of Conjugated Polymers by Suppression of O2 Quenching. Science, 2000, 289, 1327-1330.	12.6	356
9	Classifying the Photophysical Dynamics of Single- and Multiple-Chromophoric Molecules by Single Molecule Spectroscopy. Journal of Physical Chemistry A, 1998, 102, 7564-7575.	2.5	281
10	Polyvinylpyrrolidone-induced anisotropic growth of gold nanoprisms in plasmon-driven synthesis. Nature Materials, 2016, 15, 889-895.	27.5	239
11	Investigation on the charging process of Li2O2-based air electrodes in Liâ€“O2 batteries with organic carbonate electrolytes. Journal of Power Sources, 2011, 196, 3894-3899.	7.8	229
12	Reaction mechanisms for the limited reversibility of Liâ€“O2 chemistry in organic carbonate electrolytes. Journal of Power Sources, 2011, 196, 9631-9639.	7.8	198
13	Investigation of the rechargeability of Liâ€“O2 batteries in non-aqueous electrolyte. Journal of Power Sources, 2011, 196, 5674-5678.	7.8	197
14	In Situ Live Cell Sensing of Multiple Nucleotides Exploiting DNA/RNA Aptamers and Graphene Oxide Nanosheets. Analytical Chemistry, 2013, 85, 6775-6782.	6.5	189
15	A symmetric organic-based nonaqueous redox flow battery and its state of charge diagnostics by FTIR. Journal of Materials Chemistry A, 2016, 4, 5448-5456.	10.3	167
16	Single-Molecule Spectroscopy of the Conjugated Polymer MEH-PPV. Journal of the American Chemical Society, 1999, 121, 6936-6937.	13.7	162
17	Localizing gene regulation reveals a staggered wood decay mechanism for the brown rot fungus Postia placenta. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10968-10973.	7.1	160
18	Factors affecting the battery performance of anthraquinone-based organic cathode materials. Journal of Materials Chemistry, 2012, 22, 4032.	6.7	126

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19	Cholesterol Dictates the Freedom of EGF Receptors and HER2 in the Plane of the Membrane. Biophysical Journal, 2005, 89, 1362-1373.	0.5	116
20	Photoswitchable Nanoparticles Enable High-Resolution Cell Imaging: PULSAR Microscopy. Journal of the American Chemical Society, 2008, 130, 15279-15281.	13.7	105
21	Enzyme-Directed Assembly of Nanoparticles in Tumors Monitored by in Vivo Whole Animal Imaging and ex Vivo Super-Resolution Fluorescence Imaging. Journal of the American Chemical Society, 2013, 135, 18710-18713.	13.7	104
22	Lipopolysaccharide Density and Structure Govern the Extent and Distance of Nanoparticle Interaction with Actual and Model Bacterial Outer Membranes. Environmental Science & Technology, 2015, 49, 10642-10650.	10.0	103
23	Intermittent Single-Molecule Interfacial Electron Transfer Dynamics. Journal of the American Chemical Society, 2004, 126, 9374-9381.	13.7	102
24	Polystyrene nano- and microplastic accumulation at Arabidopsis and wheat root cap cells, but no evidence for uptake into roots. Environmental Science: Nano, 2020, 7, 1942-1953.	4.3	102
25	Phototrophic biofilm assembly in microbial-mat-derived unicyanobacterial consortia: model systems for the study of autotroph-heterotroph interactions. Frontiers in Microbiology, 2014, 5, 109.	3.5	97
26	Probing Single-Molecule T4 Lysozyme Conformational Dynamics by Intramolecular Fluorescence Energy Transfer. Journal of Physical Chemistry B, 2003, 107, 7947-7956.	2.6	92
27	Potential of Nanocrystalline Celluloseâ€“Fibrin Nanocomposites for Artificial Vascular Graft Applications. Biomacromolecules, 2013, 14, 1063-1071.	5.4	90
28	A Specific Nucleophilic Ring-Opening Reaction of Aziridines as a Unique Platform for the Construction of Hydrogen Polysulfides Sensors. Organic Letters, 2015, 17, 2776-2779.	4.6	83
29	Single-molecule fluorescence spectroelectrochemistry of cresyl violet. Chemical Communications, 2008, , 5490.	4.1	77
30	Direct Probes of 4 nm Diameter Gold Nanoparticles Interacting with Supported Lipid Bilayers. Journal of Physical Chemistry C, 2015, 119, 534-546.	3.1	77
31	Quantitative Modeling of DNA-Mediated Electron Transfer between Metallointercalators. Journal of Physical Chemistry B, 1997, 101, 299-303.	2.6	76
32	High-throughput and high-efficiency sample preparation for single-cell proteomics using a nested nanowell chip. Nature Communications, 2021, 12, 6246.	12.8	76
33	Spatial Confinement of Exciton Transfer and the Role of Conformational Order in Organic Nanoparticles. Nano Letters, 2002, 2, 1121-1124.	9.1	73
34	Structural and Electronic Characterization of Chemical and Conformational Defects in Conjugated Polymers. Journal of Physical Chemistry B, 2001, 105, 6103-6107.	2.6	72
35	Bridging Hydrometallurgy and Biochemistry: A Protein-Based Process for Recovery and Separation of Rare Earth Elements. ACS Central Science, 2021, 7, 1798-1808.	11.3	71
36	Revealing Two-State Proteinâ^'Protein Interactions of Calmodulin by Single-Molecule Spectroscopy. Journal of the American Chemical Society, 2006, 128, 10034-10042.	13.7	69

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37	Ultrafast Imaging of Surface Plasmons Propagating on a Gold Surface. Nano Letters, 2015, 15, 3472-3478.	9.1	69
38	Formation of supported lipid bilayers containing phase-segregated domains and their interaction with gold nanoparticles. Environmental Science: Nano, 2016, 3, 45-55.	4.3	68
39	Raman Scattering at Plasmonic Junctions Shorted by Conductive Molecular Bridges. Nano Letters, 2013, 13, 1858-1861.	9.1	62
40	Multi-omics analysis reveals regulators of the response to nitrogen limitation in Yarrowia lipolytica. BMC Genomics, 2016, 17, 138.	2.8	62
41	Correlated atomic force microscopy and fluorescence lifetime imaging of live bacterial cells. Colloids and Surfaces B: Biointerfaces, 2004, 34, 205-212.	5.0	56
42	Genetic and metabolic links between the murine microbiome and memory. Microbiome, 2020, 8, 53.	11.1	56
43	A fundamental study on the [(Î¼-Cl)₃Mg₂(THF)₆]⁺ dimer electrolytes for rechargeable Mg batteries. Chemical Communications, 2015, 51, 2312-2315.	4.1	53
44	Clay Nanoparticle-Supported Single-Molecule Fluorescence Spectroelectrochemistry. Nano Letters, 2009, 9, 655-658.	9.1	52
45	Alexa Fluor-Labeled Fluorescent Cellulose Nanocrystals for Bioimaging Solid Cellulose in Spatially Structured Microenvironments. Bioconjugate Chemistry, 2015, 26, 593-601.	3.6	52
46	Shifts in oxidation states of cerium oxide nanoparticles detected inside intact hydrated cells and organelles. Biomaterials, 2015, 62, 147-154.	11.4	52
47	Single-Molecule Study of Proteinâ^'Protein Interaction Dynamics in a Cell Signaling System. Journal of Physical Chemistry B, 2004, 108, 737-744.	2.6	51
48	Super-resolution fluorescence nanoscopy applied to imaging coreâ€“shell photoswitching nanoparticles and their self-assemblies. Chemical Communications, 2011, 47, 1258-1260.	4.1	51
49	Intracellular accumulation dynamics and fate of zinc ions in alveolar epithelial cells exposed to airborne ZnO nanoparticles at the airâ€“liquid interface. Nanotoxicology, 2015, 9, 9-22.	3.0	51
50	Correlated topographic and spectroscopic imaging beyond diffraction limit by atomic force microscopy metallic tip-enhanced near-field fluorescence lifetime microscopy. Review of Scientific Instruments, 2003, 74, 3347-3355.	1.3	46
51	Lipid Corona Formation from Nanoparticle Interactions with Bilayers. CheM, 2018, 4, 2709-2723.	11.7	46
52	Effects of cell positive cans and separators on the performance of high-voltage Li-ion batteries. Journal of Power Sources, 2012, 213, 160-168.	7.8	44
53	Single-Molecule Nanosecond Anisotropy Dynamics of Tethered Protein Motions. Journal of Physical Chemistry B, 2003, 107, 618-626.	2.6	42
54	Submicrometer and Nanoscale Inorganic Particles Exploit the Actin Machinery To Be Propelled along Microvilli-like Structures into Alveolar Cells. ACS Nano, 2007, 1, 463-475.	14.6	42

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55	Tumor Retention of Enzyme-Responsive Pt(II) Drug-Loaded Nanoparticles Imaged by Nanoscale Secondary Ion Mass Spectrometry and Fluorescence Microscopy. ACS Central Science, 2018, 4, 1477-1484.	11.3	39
56	Delivery of MicroRNA-10b with Polylysine Nanoparticles for Inhibition of Breast Cancer Cell Wound Healing. Breast Cancer: Basic and Clinical Research, 2012, 6, BCBCR.S8513.	1.1	37
57	Electrocatalytic properties of poly(3,4-ethylenedioxythiophene) (PEDOT) in Li-O2 battery. Electrochemistry Communications, 2013, 29, 63-66.	4.7	36
58	Cellular Delivery of Nanoparticles Revealed with Combined Optical and Isotopic Nanoscopy. ACS Nano, 2016, 10, 4046-4054.	14.6	36
59	Placing Single-Molecule T4 Lysozyme Enzymes on a Bacterial Cell Surface: Toward Probing Single-Molecule Enzymatic Reaction in Living Cells. Biophysical Journal, 2004, 87, 656-661.	0.5	33
60	Photoswitchable Nanoprobes Offer Unlimited Brightness in Frequency-Domain Imaging. Journal of the American Chemical Society, 2011, 133, 7628-7631.	13.7	33
61	Stability of polymeric separators in lithium metal batteries in a low voltage environment. Journal of Materials Chemistry A, 2018, 6, 5006-5015.	10.3	31
62	Fluctuation localization imaging-based fluorescence in situ hybridization (fliFISH) for accurate detection and counting of RNA copies in single cells. Nucleic Acids Research, 2018, 46, e7-e7.	14.5	31
63	Tip-enhanced near-field Raman spectroscopy probing single dye-sensitized TiO2 nanoparticles. Applied Physics Letters, 2006, 88, 093121.	3.3	30
64	Probing nanosecond protein motions of calmodulin by single-molecule fluorescence anisotropy. Applied Physics Letters, 2004, 85, 2420-2422.	3.3	29
65	Probing Inhomogeneous Vibrational Reorganization Energy Barriers of Interfacial Electron Transfer. Journal of Physical Chemistry B, 2005, 109, 16390-16395.	2.6	29
66	A Polymer-in-Salt Electrolyte with Enhanced Oxidative Stability for Lithium Metal Polymer Batteries. ACS Applied Materials & Interfaces, 2021, 13, 31583-31593.	8.0	28
67	Multiple-targeted graphene-based nanocarrier for intracellular imaging of mRNAs. Analytica Chimica Acta, 2017, 983, 1-8.	5.4	27
68	Tip-Enhanced Raman Nanographs: Mapping Topography and Local Electric Fields. Nano Letters, 2015, 15, 2385-2390.	9.1	26
69	Quantitative Mapping of Oxidative Stress Response to Lithium Cobalt Oxide Nanoparticles in Single Cells Using Multiplexed in Situ Gene Expression Analysis. Nano Letters, 2019, 19, 1990-1997.	9.1	25
70	Argon Cluster Sputtering Source for ToF-SIMS Depth Profiling of Insulating Materials: High Sputter Rate and Accurate Interfacial Information. Journal of the American Society for Mass Spectrometry, 2015, 26, 1283-1290.	2.8	24
71	Organismal and spatial partitioning of energy and macronutrient transformations within a hypersaline mat. FEMS Microbiology Ecology, 2017, 93, .	2.7	23
72	Junction Plasmon-Induced Molecular Reorientation. Journal of Physical Chemistry Letters, 2013, 4, 3435-3439.	4.6	22

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73	Cells Respond to Distinct Nanoparticle Properties with Multiple Strategies As Revealed by Single-Cell RNA-Seq. ACS Nano, 2016, 10, 10173-10185.	14.6	21
74	Electric field enhancement in a self-assembled 2D array of silver nanospheres. Journal of Chemical Physics, 2014, 141, 214308.	3.0	20
75	Facile method to stain the bacterial cell surface for super-resolution fluorescence microscopy. Analyst, The, 2014, 139, 3174-3178.	3.5	20
76	Chemical plasticity in the fine root construct of Quercus spp. varies with root order and drought. New Phytologist, 2020, 228, 1835-1851.	7.3	20
77	Coupled Lattice Polarization and Ferromagnetism in Multiferroic NiTiO₃ Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 21879-21890.	8.0	18
78	Single-Molecule Triplet-State Photon Antibunching at Room Temperature. Journal of Physical Chemistry B, 2005, 109, 9861-9864.	2.6	17
79	Role of Collector Alternating Charged Patches on Transport of Cryptosporidium parvum Oocysts in a Patchwise Charged Heterogeneous Micromodel. Environmental Science & Technology, 2013, 47, 2670-2678.	10.0	17
80	Coexistence of weak ferromagnetism and polar lattice distortion in epitaxial NiTiO3 thin films of the LiNbO3-type structure. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 030603.	1.2	17
81	High throughputoperandostudies using Fourier transform infrared imaging and Raman spectroscopy. Review of Scientific Instruments, 2008, 79, 074101.	1.3	16
82	Correlated topographic and spectroscopic imaging by combined atomic force microscopy and optical microscopy. Journal of Luminescence, 2004, 107, 4-12.	3.1	15
83	Spatial and temporal variation of surface-enhanced Raman scattering at Ag nanowires in aqueous solution. Physical Chemistry Chemical Physics, 2013, 15, 850-859.	2.8	15
84	Antigen Binding and Site-Directed Labeling of Biosilica-Immobilized Fusion Proteins Expressed in Diatoms. ACS Synthetic Biology, 2016, 5, 193-199.	3.8	15
85	Correlative surface imaging reveals chemical signatures for bacterial hotspots on plant roots. Analyst, The, 2020, 145, 393-401.	3.5	15
86	Fluctuating Two-State Light Harvesting in a Photosynthetic Membraneâ€. Journal of Physical Chemistry C, 2007, 111, 8948-8956.	3.1	14
87	Methanol Partial Oxidation on MoO3/SiO2 Catalysts: Application of Vibrational Spectroscopic Imaging Techniques in a High Throughput Operando Reactor. Topics in Catalysis, 2009, 52, 1381-1387.	2.8	14
88	Metabolic Interactions between Brachypodium and Pseudomonas fluorescens under Controlled Iron-Limited Conditions. MSystems, 2021, 6, .	3.8	13
89	Preferential interactions of primary amine-terminated quantum dots with membrane domain boundaries and lipid rafts revealed with nanometer resolution. Environmental Science: Nano, 2020, 7, 149-161.	4.3	12
90	Microbe-Encapsulated Silica Gel Biosorbents for Selective Extraction of Scandium from Coal Byproducts. Environmental Science & Technology, 2021, 55, 6320-6328.	10.0	12

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91	Mutations That Alter the Bacterial Cell Envelope Increase Lipid Production. MBio, 2017, 8, .	4.1	10
92	Hydroporphyrin-Doped Near-Infrared-Emitting Polymer Dots for Cellular Fluorescence Imaging. ACS Applied Materials & Interfaces, 2022, 14, 20790-20801.	8.0	10
93	Frequency-Resolved Nanoscale Chemical Imaging of 4,4â€²-Dimercaptostilbene on Silver. Journal of Physical Chemistry C, 2014, 118, 27525-27530.	3.1	9
94	Fluorescence Based Characterization of Calcium Sensitizer Action on the Troponin Complex. Chemical Biology and Drug Design, 2016, 87, 171-181.	3.2	9
95	The Origin of Surface-Enhanced Raman Scattering of 4,4â€²-Biphenyldicarboxylate on Silver Substrates. Journal of Physical Chemistry C, 2013, 117, 7260-7268.	3.1	8
96	The information content in single-molecule Raman nanoscopy. Advances in Physics: X, 2016, 1, 35-54.	4.1	8
97	Strain-Dependence of the Structure and Ferroic Properties of Epitaxial NiTiO₃Thin Films Grown on Different Substrates. Advances in Condensed Matter Physics, 2015, 2015, 1-9.	1.1	7
98	Strain-dependence of the structure and ferroic properties of epitaxial Ni1â˜'xTi1â˜'yO3 thin films grown on sapphire substrates. Thin Solid Films, 2015, 578, 113-123.	1.8	7
99	Multimodal hyperspectral optical microscopy. Chemical Physics, 2017, 498-499, 25-32.	1.9	7
100	Understanding super-resolution nanoscopy and its biological applications in cell imaging. Physical Chemistry Chemical Physics, 2013, 15, 14856.	2.8	6
101	Swimming Motility ReducesAzotobacter vinelandiiDeposition to Silica Surfaces. Journal of Environmental Quality, 2015, 44, 1366-1375.	2.0	6
102	Single Moleculeâ€“Based fliFISH Validates Radial and Heterogeneous Gene Expression Patterns in Pancreatic Islet Î²-Cells. Diabetes, 2021, 70, 1117-1122.	0.6	6
103	High Throughput Mapping of Single Moleculesâ€™ Redox Potentials on Electrode. Analytical Chemistry, 2021, 93, 8864-8871.	6.5	5
104	Catalyst Structure-Performance Relationship Identified by High-Throughput Operando Method: New Insight for Silica-Supported Vanadium Oxide for Methanol Oxidation. Topics in Catalysis, 2010, 53, 40-48.	2.8	4
105	Stable Acinar Progenitor Cell Model Identifies Treacle-Dependent Radioresistance. Radiation Research, 2019, 192, 135.	1.5	4
106	Grain growth of nanocrystalline 3C-SiC under Au ion irradiation at elevated temperatures. Journal Physics D: Applied Physics, 2016, 49, 035304.	2.8	3
107	Controlling the structure and ferroic properties of strained epitaxial NiTiO3 thin films on sapphire by post-deposition annealing. Thin Solid Films, 2018, 662, 47-53.	1.8	3
108	Counting mRNA Copies in Intact Bacterial Cells by Fluctuation Localization Imaging-Based Fluorescence In Situ Hybridization (fliFISH). Methods in Molecular Biology, 2021, 2246, 237-247.	0.9	3

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109	Expression Patterns of Energy-Related Genes in Single Cells Uncover Key Isoforms and Enzymes That Gain Priority Under Nanoparticle-Induced Stress. ACS Nano, 2022, 16, 7197-7209.	14.6	3
110	Nanometer resolution imaging by single molecule switching. Nano Reviews, 2010, 1, 5122.	3.7	2
111	Fluorescence in situ mRNA hybridization for gene expression detection in a wood decay fungus. International Biodeterioration and Biodegradation, 2019, 143, 104731.	3.9	2
112	On Modeling Ensemble Transport of Metal Reducing Motile Bacteria. Scientific Reports, 2019, 9, 14638.	3.3	2
113	Impacts of The Wetland Sedge Carex aquatilis on Microbial Community and Methane Metabolisms. Plant and Soil, 2022, 471, 491.	3.7	2
114	A Protocol for Electrochemical Evaluations and State of Charge Diagnostics of a Symmetric Organic Redox Flow Battery. Journal of Visualized Experiments, 2017, , .	0.3	1
115	FRET measurements between small numbers of molecules identifies subtle changes in receptor interactions. , 2004, , .		0
116	Single molecule electron transfer process of ruthenium complexes. , 2006, , .		0
117	Single-Molecule Electron Transfer Reaction in Nanomaterials. Microscopy and Microanalysis, 2009, 15, 1138-1139.	0.4	0
118	Colloidal immobilized protein based on stable colloid of TiO nanoparticles at neutral pH for protein microarray. Colloids and Interface Science Communications, 2021, 43, 100440.	4.1	0