Katherine A Willets

List of Publications by Year
in descending order

92	10,877	126708	49773
papers	citations	33 h-index	87 g-index

96	96	96	13485
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Localized Surface Plasmon Resonance Spectroscopy and Sensing. Annual Review of Physical Chemistry, 2007, 58, 267-297.	4.8	5,205
2	Present and Future of Surface-Enhanced Raman Scattering. ACS Nano, 2020, 14, 28-117.	7.3	2,153
3	Super-resolution Optical Imaging of Single-Molecule SERS Hot Spots. Nano Letters, 2010, 10, 3777-3784.	4.5	294
4	Super-Resolution Imaging and Plasmonics. Chemical Reviews, 2017, 117, 7538-7582.	23.0	237
5	Super-resolution imaging of SERS hot spots. Chemical Society Reviews, 2014, 43, 3854-3864.	18.7	152
6	Hot Carriers versus Thermal Effects: Resolving the Enhancement Mechanisms for Plasmon-Mediated Photoelectrochemical Reactions. Journal of Physical Chemistry C, 2018, 122, 5040-5048.	1.5	135
7	Surface-enhanced Raman scattering (SERS) for probing internal cellular structure and dynamics. Analytical and Bioanalytical Chemistry, 2009, 394, 85-94.	1.9	128
8	Novel Fluorophores for Single-Molecule Imaging. Journal of the American Chemical Society, 2003, 125, 1174-1175.	6.6	104
9	Investigating Nanoscale Electrochemistry with Surface- and Tip-Enhanced Raman Spectroscopy. Accounts of Chemical Research, 2016, 49, 2023-2030.	7.6	101
10	Visualizing Site-Specific Redox Potentials on the Surface of Plasmonic Nanoparticle Aggregates with Superlocalization SERS Microscopy. Nano Letters, 2014, 14, 939-945.	4.5	97
11	Imaging Electrogenerated Chemiluminescence at Single Gold Nanowire Electrodes. Nano Letters, 2015, 15, 6110-6115.	4.5	97
12	DCDHF Fluorophores for Singleâ€Molecule Imaging in Cells. ChemPhysChem, 2009, 10, 55-65.	1.0	93
13	Localized Surface Plasmon Resonance Imaging: Simultaneous Single Nanoparticle Spectroscopy and Diffusional Dynamics. Journal of Physical Chemistry C, 2009, 113, 16839-16842.	1.5	83
14	Correlated Super-Resolution Optical and Structural Studies of Surface-Enhanced Raman Scattering Hot Spots in Silver Colloid Aggregates. Journal of Physical Chemistry Letters, 2011, 2, 1766-1770.	2.1	82
15	Nonlinear Optical Chromophores as Nanoscale Emitters for Single-Molecule Spectroscopy. Accounts of Chemical Research, 2005, 38, 549-556.	7.6	80
16	Shedding Light on Surface-Enhanced Raman Scattering Hot Spots through Single-Molecule Super-Resolution Imaging. Journal of Physical Chemistry Letters, 2012, 3, 1286-1294.	2.1	80
17	Visualizing the Effect of Partial Oxide Formation on Single Silver Nanoparticle Electrodissolution. Journal of Physical Chemistry C, 2018, 122, 3138-3145.	1.5	80
18	Quantifying Wavelength-Dependent Plasmonic Hot Carrier Energy Distributions at Metal/Semiconductor Interfaces. ACS Nano, 2019, 13, 3629-3637.	7.3	79

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19	Experimental and Theoretical Investigations of Environmentally Sensitive Single-Molecule Fluorophoresâ€. Journal of Physical Chemistry B, 2004, 108, 10465-10473.	1.2	76
20	Super-Resolution Imaging Reveals a Difference between SERS and Luminescence Centroids. ACS Nano, 2012, 6, 1839-1848.	7.3	75
21	Photophysical Properties of Acene DCDHF Fluorophores:Â Long-Wavelength Single-Molecule Emitters Designed for Cellular Imaging. Journal of Physical Chemistry A, 2007, 111, 8934-8941.	1.1	70
22	Localized surface plasmons and hot electrons. Chemical Physics, 2014, 445, 95-104.	0.9	68
23	Super-Resolution SERS Imaging beyond the Single-Molecule Limit: An Isotope-Edited Approach. Nano Letters, 2012, 12, 5103-5110.	4.5	66
24	Diffusion of Lipid-like Single-Molecule Fluorophores in the Cell Membrane. Journal of Physical Chemistry B, 2006, 110, 8151-8157.	1.2	54
25	Toward Monitoring Electrochemical Reactions with Dual-Wavelength SERS: Characterization of Rhodamine 6G (R6G) Neutral Radical Species and Covalent Tethering of R6G to Silver Nanoparticles. Journal of Physical Chemistry C, 2016, 120, 24982-24991.	1.5	52
26	The influence of tetrahydroquinoline rings in dicyanomethylenedihydrofuran (DCDHF) single-molecule fluorophores. Tetrahedron, 2007, 63, 103-114.	1.0	47
27	Silverâ€“Polymer Composite Stars: Synthesis and Applications. Advanced Functional Materials, 2011, 21, 1673-1680.	7.8	44
28	Tunable electroresistance and electro-optic effects of transparent molecular ferroelectrics. Science Advances, 2017, 3, e1701008.	4.7	44
29	SERS Orientational Imaging of Silver Nanoparticle Dimers. Journal of Physical Chemistry Letters, 2011, 2, 2711-2715.	2.1	43
30	Characterizing the Spatial Dependence of Redox Chemistry on Plasmonic Nanoparticle Electrodes Using Correlated Super-Resolution Surface-Enhanced Raman Scattering Imaging and Electron Microscopy. Journal of Physical Chemistry C, 2015, 119, 18591-18601.	1.5	43
31	Synthesis of Fluorescently Labeled Polymers and Their Use in Single-Molecule Imaging. Macromolecules, 2002, 35, 8122-8125.	2.2	41
32	Modification of the Electrochemical Properties of Nile Blue through Covalent Attachment to Gold As Revealed by Electrochemistry and SERS. Journal of Physical Chemistry C, 2016, 120, 21091-21098.	1.5	38
33	Accuracy of Superlocalization Imaging Using Gaussian and Dipole Emission Point-Spread Functions for Modeling Gold Nanorod Luminescence. ACS Nano, 2013, 7, 6258-6267.	7.3	35
34	Super-Resolution Imaging of Fluorophore-Labeled DNA Bound to Gold Nanoparticles: A Single-Molecule, Single-Particle Approach. Journal of Physical Chemistry C, 2016, 120, 803-815.	1.5	32
35	Surfaceâ€enhanced Raman scattering imaging using noble metal nanoparticles. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2013, 5, 180-189.	3.3	30
36	Super-resolution imaging of interactions between molecules and plasmonic nanostructures. Physical Chemistry Chemical Physics, 2013, 15, 5345.	1.3	30

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37	Molecular Plasmonics. Annual Review of Analytical Chemistry, 2016, 9, 27-43.	2.8	30
38	Unforeseen distance-dependent SERS spectroelectrochemistry from surface-tethered Nile Blue: the role of molecular orientation. Analyst, The, 2016, 141, 5144-5151.	1.7	30
39	Three-Dimensional Super-resolution Imaging of Single Nanoparticles Delivered by Pipettes. ACS Nano, 2017, 11, 10529-10538.	7.3	30
40	Discriminating Nanoparticle Dimers from Higher Order Aggregates through Wavelength-Dependent SERS Orientational Imaging. ACS Nano, 2012, 6, 1806-1813.	7.3	29
41	Introduction: Super-Resolution and Single-Molecule Imaging. Chemical Reviews, 2017, 117, 7241-7243.	23.0	29
42	Ground state depletion microscopy for imaging interactions between gold nanowires and fluorophore-labeled ligands. Physical Chemistry Chemical Physics, 2013, 15, 4136-4145.	1.3	28
43	Tripletâ€Stateâ€Mediated Superâ€Resolution Imaging of Fluorophoreâ€Labeled Gold Nanorods. ChemPhysChem, 2014, 15, 784-793.	1.0	27
44	Quantifying photothermal heating at plasmonic nanoparticles by scanning electrochemical microscopy. Faraday Discussions, 2018, 210, 29-39.	1.6	26
45	Probing nanoscale interfaces with electrochemical surface-enhanced Raman scattering. Current Opinion in Electrochemistry, 2019, 13, 18-24.	2.5	26
46	Active Far-Field Control of the Thermal Near-Field via Plasmon Hybridization. ACS Nano, 2019, 13, 9655-9663.	7.3	23
47	Correlations between the Effects of Pressure and Molecular Weight on Polymer Blend Miscibility. Macromolecules, 2003, 36, 2977-2984.	2.2	21
48	Multifunctional Chargeâ€Transfer Single Crystals through Supramolecular Assembly. Advanced Materials, 2016, 28, 5322-5329.	11.1	21
49	Monitoring Simultaneous Electrochemical Reactions with Single Particle Imaging. ChemElectroChem, 2018, 5, 3052-3058.	1.7	20
50	Investigating Tipâ^'Nanoparticle Interactions in Spatially Correlated Total Internal Reflection Plasmon Spectroscopy and Atomic Force Microscopy. Journal of Physical Chemistry C, 2008, 112, 11696-11701.	1.5	19
51	Zeptomole detection of DNA nanoparticles by single-molecule fluorescence with magnetic field-directed localization. Analytical Biochemistry, 2012, 431, 40-47.	1.1	18
52	Superlocalization Surface-Enhanced Raman Scattering Microscopy: Comparing Point Spread Function Models in the Ensemble and Single-Molecule Limits. ACS Nano, 2013, 7, 8284-8294.	7.3	18
53	Plasmon Heating Promotes Ligand Reorganization on Single Gold Nanorods. Journal of Physical Chemistry Letters, 2019, 10, 1394-1401.	2.1	18
54	Kirigamiâ€Inspired Stretchable Conjugated Electronics. Advanced Electronic Materials, 2020, 6, 1900929.	2.6	18

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55	Comparing the Accuracy of Reconstructed Image Size in Super-Resolution Imaging of Fluorophore-Labeled Gold Nanorods Using Different Fit Models. Journal of Physical Chemistry C, 2015, 119, 19333-19343.	1.5	17
56	Nanoscale studies of plasmonic hot spots using super-resolution optical imaging. MRS Bulletin, 2012, 37, 745-751.	1.7	16
57	New Tools for Investigating Electromagnetic Hot Spots in Singleâ€Molecule Surfaceâ€Enhanced Raman Scattering. ChemPhysChem, 2013, 14, 3186-3195.	1.0	15
58	Visualizing and Calculating Tipâ€“Substrate Distance in Nanoscale Scanning Electrochemical Microscopy Using 3-Dimensional Super-Resolution Optical Imaging. Analytical Chemistry, 2017, 89, 922-928.	3.2	15
59	Probing local electromagnetic field enhancements on the surface of plasmonic nanoparticles. Progress in Surface Science, 2012, 87, 209-220.	3.8	14
60	Chemically Driven Interfacial Coupling in Charge-Transfer Mediated Functional Superstructures. Nano Letters, 2016, 16, 2851-2859.	4.5	14
61	Observation of Nanometer-Sized Electro-Active Defects in Insulating Layers by Fluorescence Microscopy and Electrochemistry. Analytical Chemistry, 2015, 87, 5730-5737.	3.2	13
62	Supercharging Superlocalization Microscopy: How Electrochemical Charging of Plasmonic Nanostructures Uncovers Hidden Heterogeneity. ACS Nano, 2019, 13, 6145-6150.	7.3	13
63	Polarized Raman Spectroscopy of Oligothiophene Crystals To Determine Unit Cell Orientation. Journal of Physical Chemistry A, 2012, 116, 6804-6816.	1.1	12
64	Spectrally-Resolved Polarization Anisotropy of Single Plasmonic Nanoparticles Excited by Total Internal Reflection. Journal of Physical Chemistry C, 2012, 116, 16198-16206.	1.5	12
65	Effects of Tuning Fluorophore Density, Identity, and Spacing on Reconstructed Images in Super-Resolution Imaging of Fluorophore-Labeled Gold Nanorods. Journal of Physical Chemistry C, 2015, 119, 28099-28110.	1.5	12
66	Objective-Induced Point Spread Function Aberrations and Their Impact on Super-Resolution Microscopy. Analytical Chemistry, 2015, 87, 6419-6424.	3.2	12
67	Ultrasensitive and towards single molecule SERS: general discussion. Faraday Discussions, 2017, 205, 291-330.	1.6	11
68	Solution-Processed Molecular Opto-Ferroic Crystals. Chemistry of Materials, 2016, 28, 2441-2448.	3.2	10
69	Wavelength-Dependent Photothermal Imaging Probes Nanoscale Temperature Differences among Subdiffraction Coupled Plasmonic Nanorods. Nano Letters, 2021, 21, 5386-5393.	4.5	9
70	Subdiffraction-Limited Far-Field Raman Spectroscopy of Single Carbon Nanotubes: An Unenhanced Approach. ACS Nano, 2011, 5, 1033-1041.	7.3	8
71	Plasmon point spread functions: How do we model plasmon-mediated emission processes?. Frontiers of Physics, 2014, 9, 3-16.	2.4	8
72	Special topic on emerging directions in plasmonics. Journal of Chemical Physics, 2020, 153, 010401.	1.2	8

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73	Toward Quantitative Nanothermometry Using Single-Molecule Counting. Journal of Physical Chemistry B, 2021, 125, 12197-12205.	1.2	7
74	The Hidden Role of the Supporting Electrode for Creating Heterogeneity in Single Entity Electrochemistry. ChemElectroChem, 2022, 9, .	1.7	7
75	Potential dependent spectroelectrochemistry of electrofluorogenic dyes on indiumâ€tin oxide. Electrochemical Science Advances, 2022, 2, e2100094.	1.2	5
76	Super-resolution imaging of diffusing analyte in surface-enhanced Raman scattering hot-spots. Proceedings of SPIE, 2012, , .	0.8	4
77	Super-resolution imaging of surface-enhanced Raman scattering hot spots under electrochemical control. Proceedings of SPIE, 2015, , .	0.8	4
78	Imaging out-of-plane polarized emission patterns on gap mode SERS substrates: from high molecular coverage to the single molecule regime. Faraday Discussions, 2017, 205, 245-259.	1.6	4
79	Dynamics of nanointerfaces: general discussion. Faraday Discussions, 2018, 210, 451-479.	1.6	4
80	Nanophotonics and Single Molecules. Springer Series in Biophysics, 2008, , 1-23.	0.4	4
81	Novel fluorophores for single-molecule imaging. , 2003, 5222, 150.		3
82	Processes at nanopores and bio-nanointerfaces: general discussion. Faraday Discussions, 2018, 210, 145-171.	1.6	3
83	Monte Carlo simulations of triplet-state photophysics for super-resolution imaging of fluorophore-labeled gold nanorods. Proceedings of SPIE, 2015, , .	0.8	2
84	Synthesis and Properties ofN-Arylpyrrole-Functionalized Poly(1-hexene-alt-CO). Macromolecules, 2018, 51, 9323-9332.	2.2	2
85	Surface-enhanced Raman scattering (SERS) as a characterization method for metal-organic interactions. , 2019, , 529-549.		2
86	Emerging Trends in Super-resolution Imaging: How Lasers Light the Way. ACS Symposium Series, 0, , 255-276.	0.5	2
87	Nanoscale Localized Surface Plasmon Resonance Biosensors. , 0, , 159-173.		1
88	A first-principles polarized Raman method for determining whether a uniform region of a sample is crystalline or isotropic. Journal of Chemical Physics, 2014, 141, 224702.	1.2	1
89	Preface of Richard P. Van Duyne Festschrift. Journal of Physical Chemistry C, 2016, 120, 20483-20485.	1.5	1
90	Nonlinear Optical Chromophores as Nanoscale Emitters for Single-Molecule Spectroscopy. ChemInform, 2005, 36, no.	0.1	0

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91	In Situ Chemical Functionalization of a Single Carbon Nanotube Functionalized AFM Tip using a Correlated Optical and Atomic Force Microscope. Materials Research Society Symposia Proceedings, 2011, 1318, 1.	0.1	0
92	Tribute to W. E. Moerner. Journal of Physical Chemistry B, 2022, 126, 1157-1158.	1.2	0