

# Katherine A Willets

## List of Publications by Citations

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88

papers

8,413

citations

31

h-index

91

g-index

96

ext. papers

9,738

ext. citations

9.8

avg, IF

6.68

L-index

#	Paper	IF	Citations
88	Localized surface plasmon resonance spectroscopy and sensing. <i>Annual Review of Physical Chemistry</i> , <b>2007</b> , 58, 267-97	15.7	4420
87	Present and Future of Surface-Enhanced Raman Scattering. <i>ACS Nano</i> , <b>2020</b> , 14, 28-117	16.7	1000
86	Super-resolution optical imaging of single-molecule SERS hot spots. <i>Nano Letters</i> , <b>2010</b> , 10, 3777-84	11.5	262
85	Super-Resolution Imaging and Plasmonics. <i>Chemical Reviews</i> , <b>2017</b> , 117, 7538-7582	68.1	173
84	Super-resolution imaging of SERS hot spots. <i>Chemical Society Reviews</i> , <b>2014</b> , 43, 3854-64	58.5	123
83	Surface-enhanced Raman scattering (SERS) for probing internal cellular structure and dynamics. <i>Analytical and Bioanalytical Chemistry</i> , <b>2009</b> , 394, 85-94	4.4	120
82	Novel fluorophores for single-molecule imaging. <i>Journal of the American Chemical Society</i> , <b>2003</b> , 125, 1174-5	16.4	94
81	Visualizing site-specific redox potentials on the surface of plasmonic nanoparticle aggregates with superlocalization SERS microscopy. <i>Nano Letters</i> , <b>2014</b> , 14, 939-45	11.5	89
80	Investigating Nanoscale Electrochemistry with Surface- and Tip-Enhanced Raman Spectroscopy. <i>Accounts of Chemical Research</i> , <b>2016</b> , 49, 2023-30	24.3	89
79	Hot Carriers versus Thermal Effects: Resolving the Enhancement Mechanisms for Plasmon-Mediated Photoelectrochemical Reactions. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 5040-5048	2.8	87
78	DCDHF fluorophores for single-molecule imaging in cells. <i>ChemPhysChem</i> , <b>2009</b> , 10, 55-65	3.2	84
77	LSPR Imaging: Simultaneous Single Nanoparticle Spectroscopy and Diffusional Dynamics. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 16839-16842	3.8	81
76	Correlated Super-Resolution Optical and Structural Studies of Surface-Enhanced Raman Scattering Hot Spots in Silver Colloid Aggregates. <i>Journal of Physical Chemistry Letters</i> , <b>2011</b> , 2, 1766-1770	6.4	77
75	Imaging Electrogenenerated Chemiluminescence at Single Gold Nanowire Electrodes. <i>Nano Letters</i> , <b>2015</b> , 15, 6110-5	11.5	76
74	Shedding Light on Surface-Enhanced Raman Scattering Hot Spots through Single-Molecule Super-Resolution Imaging. <i>Journal of Physical Chemistry Letters</i> , <b>2012</b> , 3, 1286-94	6.4	76
73	Nonlinear optical chromophores as nanoscale emitters for single-molecule spectroscopy. <i>Accounts of Chemical Research</i> , <b>2005</b> , 38, 549-56	24.3	74
72	Experimental and Theoretical Investigations of Environmentally Sensitive Single-Molecule Fluorophores. <i>Journal of Physical Chemistry B</i> , <b>2004</b> , 108, 10465-10473	3.4	73

71	Super-resolution imaging reveals a difference between SERS and luminescence centroids. <i>ACS Nano</i> , <b>2012</b> , 6, 1839-48	16.7	71
70	Visualizing the Effect of Partial Oxide Formation on Single Silver Nanoparticle Electrodeposition. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 3138-3145	3.8	65
69	Super-resolution SERS imaging beyond the single-molecule limit: an isotope-edited approach. <i>Nano Letters</i> , <b>2012</b> , 12, 5103-10	11.5	62
68	Photophysical properties of acene DCDHF fluorophores: long-wavelength single-molecule emitters designed for cellular imaging. <i>Journal of Physical Chemistry A</i> , <b>2007</b> , 111, 8934-41	2.8	62
67	Localized surface plasmons and hot electrons. <i>Chemical Physics</i> , <b>2014</b> , 445, 95-104	2.3	60
66	Quantifying Wavelength-Dependent Plasmonic Hot Carrier Energy Distributions at Metal/Semiconductor Interfaces. <i>ACS Nano</i> , <b>2019</b> , 13, 3629-3637	16.7	53
65	Diffusion of lipid-like single-molecule fluorophores in the cell membrane. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 8151-7	3.4	49
64	Toward Monitoring Electrochemical Reactions with Dual-Wavelength SERS: Characterization of Rhodamine 6G (R6G) Neutral Radical Species and Covalent Tethering of R6G to Silver Nanoparticles. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 24982-24991	3.8	43
63	The influence of tetrahydroquinoline rings in dicyanomethylenedihydrofuran (DCDHF) single-molecule fluorophores. <i>Tetrahedron</i> , <b>2007</b> , 63, 103-114	2.4	42
62	SERS Orientational Imaging of Silver Nanoparticle Dimers. <i>Journal of Physical Chemistry Letters</i> , <b>2011</b> , 2, 2711-2715	6.4	41
61	Silver-Polymer Composite Stars: Synthesis and Applications. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 1673-1680	15.6	41
60	Synthesis of Fluorescently Labeled Polymers and Their Use in Single-Molecule Imaging. <i>Macromolecules</i> , <b>2002</b> , 35, 8122-8125	5.5	40
59	Characterizing the Spatial Dependence of Redox Chemistry on Plasmonic Nanoparticle Electrodes Using Correlated Super-Resolution Surface-Enhanced Raman Scattering Imaging and Electron Microscopy. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 18591-18601	3.8	38
58	Tunable electroresistance and electro-optic effects of transparent molecular ferroelectrics. <i>Science Advances</i> , <b>2017</b> , 3, e1701008	14.3	33
57	Accuracy of superlocalization imaging using Gaussian and dipole emission point-spread functions for modeling gold nanorod luminescence. <i>ACS Nano</i> , <b>2013</b> , 7, 6258-67	16.7	31
56	Modification of the Electrochemical Properties of Nile Blue through Covalent Attachment to Gold As Revealed by Electrochemistry and SERS. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 21091-21098	3.8	30
55	Discriminating nanoparticle dimers from higher order aggregates through wavelength-dependent SERS orientational imaging. <i>ACS Nano</i> , <b>2012</b> , 6, 1806-13	16.7	29
54	Three-Dimensional Super-resolution Imaging of Single Nanoparticles Delivered by Pipettes. <i>ACS Nano</i> , <b>2017</b> , 11, 10529-10538	16.7	28

53	Unforeseen distance-dependent SERS spectroelectrochemistry from surface-tethered Nile Blue: the role of molecular orientation. <i>Analyst, The</i> , <b>2016</b> , 141, 5144-51	5	28
52	Ground state depletion microscopy for imaging interactions between gold nanowires and fluorophore-labeled ligands. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 4136-45	3.6	27
51	Super-resolution imaging of interactions between molecules and plasmonic nanostructures. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 5345-54	3.6	27
50	Triplet-state-mediated super-resolution imaging of fluorophore-labeled gold nanorods. <i>ChemPhysChem</i> , <b>2014</b> , 15, 784-93	3.2	27
49	Super-Resolution Imaging of Fluorophore-Labeled DNA Bound to Gold Nanoparticles: A Single-Molecule, Single-Particle Approach. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 803-815	3.8	26
48	Surface-enhanced Raman scattering imaging using noble metal nanoparticles. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , <b>2013</b> , 5, 180-9	9.2	25
47	Molecular Plasmonics. <i>Annual Review of Analytical Chemistry</i> , <b>2016</b> , 9, 27-43	12.5	22
46	Correlations between the Effects of Pressure and Molecular Weight on Polymer Blend Miscibility. <i>Macromolecules</i> , <b>2003</b> , 36, 2977-2984	5.5	20
45	Probing nanoscale interfaces with electrochemical surface-enhanced Raman scattering. <i>Current Opinion in Electrochemistry</i> , <b>2019</b> , 13, 18-24	7.2	18
44	Zeptomole detection of DNA nanoparticles by single-molecule fluorescence with magnetic field-directed localization. <i>Analytical Biochemistry</i> , <b>2012</b> , 431, 40-7	3.1	17
43	Investigating Tip-Nanoparticle Interactions in Spatially Correlated Total Internal Reflection Plasmon Spectroscopy and Atomic Force Microscopy. <i>Journal of Physical Chemistry C</i> , <b>2008</b> , 112, 11696-11701	3.8	17
42	Quantifying photothermal heating at plasmonic nanoparticles by scanning electrochemical microscopy. <i>Faraday Discussions</i> , <b>2018</b> , 210, 29-39	3.6	15
41	Active Far-Field Control of the Thermal Near-Field Plasmon Hybridization. <i>ACS Nano</i> , <b>2019</b> , 13, 9655-9663	36.7	15
40	Superlocalization surface-enhanced Raman scattering microscopy: comparing point spread function models in the ensemble and single-molecule limits. <i>ACS Nano</i> , <b>2013</b> , 7, 8284-94	16.7	15
39	Comparing the Accuracy of Reconstructed Image Size in Super-Resolution Imaging of Fluorophore-Labeled Gold Nanorods Using Different Fit Models. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 19333-19343	3.8	15
38	Nanoscale studies of plasmonic hot spots using super-resolution optical imaging. <i>MRS Bulletin</i> , <b>2012</b> , 37, 745-751	3.2	14
37	Visualizing and Calculating Tip-Substrate Distance in Nanoscale Scanning Electrochemical Microscopy Using 3-Dimensional Super-Resolution Optical Imaging. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 922-928	7.8	13
36	Multifunctional Charge-Transfer Single Crystals through Supramolecular Assembly. <i>Advanced Materials</i> , <b>2016</b> , 28, 5322-9	24	13

35	Monitoring Simultaneous Electrochemical Reactions with Single Particle Imaging. <i>ChemElectroChem</i> , <b>2018</b> , 5, 3052-3058	4.3	13
34	Probing local electromagnetic field enhancements on the surface of plasmonic nanoparticles. <i>Progress in Surface Science</i> , <b>2012</b> , 87, 209-220	6.6	13
33	Supercharging Superlocalization Microscopy: How Electrochemical Charging of Plasmonic Nanostructures Uncovers Hidden Heterogeneity. <i>ACS Nano</i> , <b>2019</b> , 13, 6145-6150	16.7	12
32	Plasmon Heating Promotes Ligand Reorganization on Single Gold Nanorods. <i>Journal of Physical Chemistry Letters</i> , <b>2019</b> , 10, 1394-1401	6.4	12
31	Objective-Induced Point Spread Function Aberrations and Their Impact on Super-Resolution Microscopy. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 6419-24	7.8	12
30	Observation of nanometer-sized electro-active defects in insulating layers by fluorescence microscopy and electrochemistry. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 5730-7	7.8	12
29	New tools for investigating electromagnetic hot spots in single-molecule surface-enhanced Raman scattering. <i>ChemPhysChem</i> , <b>2013</b> , 14, 3186-95	3.2	12
28	Chemically Driven Interfacial Coupling in Charge-Transfer Mediated Functional Superstructures. <i>Nano Letters</i> , <b>2016</b> , 16, 2851-9	11.5	11
27	Effects of Tuning Fluorophore Density, Identity, and Spacing on Reconstructed Images in Super-Resolution Imaging of Fluorophore-Labeled Gold Nanorods. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 28099-28110	3.8	11
26	Polarized Raman spectroscopy of oligothiophene crystals to determine unit cell orientation. <i>Journal of Physical Chemistry A</i> , <b>2012</b> , 116, 6804-16	2.8	11
25	Solution-Processed Molecular Opto-Ferroic Crystals. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 2441-2448	9.6	10
24	Spectrally-Resolved Polarization Anisotropy of Single Plasmonic Nanoparticles Excited by Total Internal Reflection. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 16198-16206	3.8	10
23	Ultrasensitive and towards single molecule SERS: general discussion. <i>Faraday Discussions</i> , <b>2017</b> , 205, 291-330	3.6	9
22	Kirigami-Inspired Stretchable Conjugated Electronics. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1900929	6.4	9
21	Subdiffraction-limited far-field Raman spectroscopy of single carbon nanotubes: an unenhanced approach. <i>ACS Nano</i> , <b>2011</b> , 5, 1033-41	16.7	8
20	Plasmon point spread functions: How do we model plasmon-mediated emission processes?. <i>Frontiers of Physics</i> , <b>2014</b> , 9, 3-16	3.7	7
19	Super-resolution imaging of surface-enhanced Raman scattering hot spots under electrochemical control <b>2015</b> ,		4
18	Super-resolution imaging of diffusing analyte in surface-enhanced Raman scattering hot-spots <b>2012</b> ,		4

17	Nanophotonics and Single Molecules. <i>Springer Series in Biophysics</i> , <b>2008</b> , 1-23		4
16	Imaging out-of-plane polarized emission patterns on gap mode SERS substrates: from high molecular coverage to the single molecule regime. <i>Faraday Discussions</i> , <b>2017</b> , 205, 245-259	3.6	3
15	Novel fluorophores for single-molecule imaging <b>2003</b> , 5222, 150		3
14	Dynamics of nanointerfaces: general discussion. <i>Faraday Discussions</i> , <b>2018</b> , 210, 451-479	3.6	3
13	Surface-enhanced Raman scattering (SERS) as a characterization method for metal-organic interactions <b>2019</b> , 529-549		2
12	Monte Carlo simulations of triplet-state photophysics for super-resolution imaging of fluorophore-labeled gold nanorods <b>2015</b> ,		2
11	Wavelength-Dependent Photothermal Imaging Probes Nanoscale Temperature Differences among Subdiffraction Coupled Plasmonic Nanorods. <i>Nano Letters</i> , <b>2021</b> , 21, 5386-5393	11.5	2
10	Synthesis and Properties of N-Arylpyrrole-Functionalized Poly(1-hexene-alt-CO). <i>Macromolecules</i> , <b>2018</b> , 51, 9323-9332	5.5	2
9	Processes at nanopores and bio-nanointerfaces: general discussion. <i>Faraday Discussions</i> , <b>2018</b> , 210, 145-171	3.7	2
8	A first-principles polarized Raman method for determining whether a uniform region of a sample is crystalline or isotropic. <i>Journal of Chemical Physics</i> , <b>2014</b> , 141, 224702	3.9	1
7	Nanoscale Localized Surface Plasmon Resonance Biosensors 159-173		1
6	Toward Quantitative Nanothermometry Using Single-Molecule Counting. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 12197-12205	3.4	1
5	Potential dependent spectroelectrochemistry of electrofluorogenic dyes on indium-tin oxide. <i>Electrochemical Science Advances</i> , e2100094		1
4	Emerging Trends in Super-resolution Imaging: How Lasers Light the Way. <i>ACS Symposium Series</i> , 255-276	0.4	1
3	Applying Super-Resolution Imaging Techniques to Problems in Single-Molecule SERS <b>2014</b> , 193-217		
2	In Situ Chemical Functionalization of a Single Carbon Nanotube Functionalized AFM Tip using a Correlated Optical and Atomic Force Microscope. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1318, 1		
1	Tribute to W. E. Moerner.. <i>Journal of Physical Chemistry B</i> , <b>2022</b> , 126, 1157-1158	3-4	