Xiaonan Shan

List of Publications by Year
in descending order

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55 papers	2,913 citations	201674 27 h-index	168389 53 g-index
56 all docs	56 docs citations	56 times ranked	2686 citing authors

#	Article	IF	Citations
1	Label-free imaging, detection, and mass measurement of single viruses by surface plasmon resonance. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16028-16032.	7.1	310
2	Imaging Local Electrochemical Current via Surface Plasmon Resonance. Science, 2010, 327, 1363-1366.	12.6	309
3	Imaging the electrocatalytic activity of single nanoparticles. Nature Nanotechnology, 2012, 7, 668-672.	31.5	273
4	Single cells and intracellular processes studied by a plasmonic-based electrochemical impedance microscopy. Nature Chemistry, 2011, 3, 249-255.	13.6	179
5	Stable, high-performance, dendrite-free, seawater-based aqueous batteries. Nature Communications, 2021, 12, 237.	12.8	174
6	Plasmonic Imaging of Electrochemical Oxidation of Single Nanoparticles. Journal of the American Chemical Society, 2014, 136, 12584-12587.	13.7	133
7	Electrochemical Surface Plasmon Resonance: Basic Formalism and Experimental Validation. Analytical Chemistry, 2010, 82, 935-941.	6.5	110
8	Plasmonic Imaging and Detection of Single DNA Molecules. ACS Nano, 2014, 8, 3427-3433.	14.6	91
9	Surface Impedance Imaging Technique. Analytical Chemistry, 2008, 80, 5146-5151.	6.5	88
10	Emerging tools for studying single entity electrochemistry. Faraday Discussions, 2016, 193, 9-39.	3.2	86
11	Labelâ€Free Tracking of Single Organelle Transportation in Cells with Nanometer Precision Using a Plasmonic Imaging Technique. Small, 2015, 11, 2878-2884.	10.0	84
12	Molecular Scale Origin of Surface Plasmon Resonance Biosensors. Analytical Chemistry, 2014, 86, 8992-8997.	6.5	75
13	Plasmonic-Based Electrochemical Impedance Spectroscopy: Application to Molecular Binding. Analytical Chemistry, 2012, 84, 327-333.	6.5	73
14	Plasmonic Imaging of Surface Electrochemical Reactions of Single Gold Nanowires. Journal of the American Chemical Society, 2017, 139, 1376-1379.	13.7	70
15	Achieving High Spatial Resolution Surface Plasmon Resonance Microscopy with Image Reconstruction. Analytical Chemistry, 2017, 89, 2704-2707.	6.5	64
16	Imaging Local Heating and Thermal Diffusion of Nanomaterials with Plasmonic Thermal Microscopy. ACS Nano, 2015, 9, 11574-11581.	14.6	63
17	Measuring Surface Charge Density and Particle Height Using Surface Plasmon Resonance Technique. Analytical Chemistry, 2010, 82, 234-240.	6.5	60
18	Plasmonic imaging of protein interactions with single bacterial cells. Biosensors and Bioelectronics, 2015, 63, 131-137.	10.1	52

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19	Detection of Charges and Molecules with Self-Assembled Nano-Oscillators. Nano Letters, 2014, 14, 4151-4157.	9.1	51
20	Smartphone Nanocolorimetry for On-Demand Lead Detection and Quantitation in Drinking Water. Analytical Chemistry, 2018, 90, 11517-11522.	6.5	45
21	Realâ€Time Monitoring of Phosphorylation Kinetics with Selfâ€Assembled Nanoâ€oscillators. Angewandte Chemie - International Edition, 2015, 54, 2538-2542.	13.8	43
22	Kinetics of small molecule interactions with membrane proteins in single cells measured with mechanical amplification. Science Advances, 2015, 1, e1500633.	10.3	39
23	Mapping Local Quantum Capacitance and Charged Impurities in Graphene via Plasmonic Impedance Imaging. Advanced Materials, 2015, 27, 6213-6219.	21.0	38
24	Charge-Based Detection of Small Molecules by Plasmonic-Based Electrochemical Impedance Microscopy. Analytical Chemistry, 2013, 85, 6682-6687.	6.5	30
25	Imaging Local Electric Field Distribution by Plasmonic Impedance Microscopy. Analytical Chemistry, 2016, 88, 1547-1552.	6.5	29
26	Fast Electrochemical and Plasmonic Detection Reveals Multitime Scale Conformational Gating of Electron Transfer in Cytochrome c. Journal of the American Chemical Society, 2017, 139, 7244-7249.	13.7	29
27	Plasmonic-Based Imaging of Local Square Wave Voltammetry. Analytical Chemistry, 2011, 83, 7394-7399.	6.5	28
28	Gold-implanted plasmonic quartz plate as a launch pad for laser-driven photoacoustic microfluidic pumps. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6580-6585.	7.1	27
29	Online Sample Conditioning for Portable Breath Analyzers. Analytical Chemistry, 2012, 84, 7172-7178.	6.5	22
30	Plasmonic Measurement of Electron Transfer between a Single Metal Nanoparticle and an Electrode through a Molecular Layer. Journal of the American Chemical Society, 2019, 141, 11694-11699.	13.7	21
31	Study of single particle charge and Brownian motions with surface plasmon resonance. Applied Physics Letters, 2010, 97, 223703.	3.3	20
32	Detection of molecular binding via charge-induced mechanical response of optical fibers. Chemical Science, 2014, 5, 4375-4381.	7.4	20
33	Measuring Ligand Binding Kinetics to Membrane Proteins Using Virion Nano-oscillators. Journal of the American Chemical Society, 2018, 140, 11495-11501.	13.7	17
34	A label-free optical detection method for biosensors and microfluidics. Applied Physics Letters, 2008, 92, .	3.3	16
35	Phase imaging of transition from classical to quantum plasmonic couplings between a metal nanoparticle and a metal surface. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17564-17570.	7.1	16
36	Electrochemical Reactions in Subfemtoliter-Droplets Studied with Plasmonics-Based Electrochemical Current Microscopy. Analytical Chemistry, 2015, 87, 494-498.	6.5	15

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37	Probe the Localized Electrochemical Environment Effects and Electrode Reaction Dynamics for Metal Batteries using In Situ 3D Microscopy. Advanced Energy Materials, 2022, 12, .	19.5	14
38	Pauli Repulsion-Induced Expansion and Electromechanical Properties of Graphene. Nano Letters, 2017, 17, 236-241.	9.1	12
39	A Paper Based Milli-Cantilever Sensor for Detecting Hydrocarbon Gases via Smartphone Camera. Analytical Chemistry, 2020, 92, 8480-8486.	6.5	12
40	Quantifying Ligandâ€“Protein Binding Kinetics with Self-Assembled Nano-oscillators. Analytical Chemistry, 2019, 91, 14149-14156.	6.5	11
41	Plasmonic Imaging of Oxidation and Reduction of Single Gold Nanoparticles and Their Surface Structural Dynamics. ACS Sensors, 2021, 6, 502-507.	7.8	11
42	Program/erase injection current characteristics of a low-voltage low-power NROM using high-K materials as the tunnel dielectric. Semiconductor Science and Technology, 2006, 21, 507-512.	2.0	9
43	A Novel Dual-Doping Floating-Gate (DDFG) Flash Memory Featuring Low Power and High Reliability Application. IEEE Electron Device Letters, 2007, 28, 622-624.	3.9	7
44	Electrochemical Impedance Imaging on Conductive Surfaces. Analytical Chemistry, 2021, 93, 12320-12328.	6.5	6
45	Effects of fiber dosage, loading orientation and stress on frequency response of enhanced Carbon Nano-Fiber Aggregates. Composites Part B: Engineering, 2021, 225, 109257.	12.0	6
46	SERS-Based Ultrasensitive Lateral Flow Assay for Quantitative Sensing of Protein Biomarkers. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-8.	2.9	5
47	Imaging the Electrochemical Impedance of Single Cells via Conductive Polymer Thin Film. ACS Sensors, 2021, 6, 485-492.	7.8	4
48	Large graphene-induced shift of surface-plasmon resonances of gold films: Effective-medium theory for atomically thin materials. Physical Review Research, 2020, 2, .	3.6	4
49	Modeling the surface of fast-cured polymer droplet lenses for precision fabrication. Applied Optics, 2018, 57, 10342.	1.8	4
50	LaAlO3 as tunnel dielectric for low-voltage and low-power p-channel flash memory free of drain disturb. Solid-State Electronics, 2006, 50, 276-281.	1.4	2
51	VDNROM: A novel four-physical-bits/cell vertical channel dual-nitride-trapping-layers ROM for high density flash memory applications. Solid-State Electronics, 2007, 51, 1547-1551.	1.4	2
52	Detecting molecules using a surface impedance imaging technique. , 2009, , .		1
53	Reflection Optical Imaging to Study Oxygen Evolution Reactions. Journal of the Electrochemical Society, 2022, 169, 057507.	2.9	1
54	Single-Cell Tracking: Label-Free Tracking of Single Organelle Transportation in Cells with Nanometer Precision Using a Plasmonic Imaging Technique (Small 24/2015). Small, 2015, 11, 2877-2877.	10.0	0

#	Article	IF	Citations
55	Correlation of Impedance and Compressive Stress of Carbon Nanofiber Aggregates for Structural Health Monitoring. , 2021, , .		0