

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
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56
all docs

56
docs citations

56
times ranked

2686
citing authors

#	ARTICLE	IF	CITATIONS
1	Probe the Localized Electrochemical Environment Effects and Electrode Reaction Dynamics for Metal Batteries using In Situ 3D Microscopy. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	14
2	Reflection Optical Imaging to Study Oxygen Evolution Reactions. <i>Journal of the Electrochemical Society</i> , 2022, 169, 057507.	2.9	1
3	Imaging the Electrochemical Impedance of Single Cells via Conductive Polymer Thin Film. <i>ACS Sensors</i> , 2021, 6, 485-492.	7.8	4
4	Correlation of Impedance and Compressive Stress of Carbon Nanofiber Aggregates for Structural Health Monitoring. , 2021, , .		0
5	Electrochemical Impedance Imaging on Conductive Surfaces. <i>Analytical Chemistry</i> , 2021, 93, 12320-12328.	6.5	6
6	SERS-Based Ultrasensitive Lateral Flow Assay for Quantitative Sensing of Protein Biomarkers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021, 27, 1-8.	2.9	5
7	Effects of fiber dosage, loading orientation and stress on frequency response of enhanced Carbon Nano-Fiber Aggregates. <i>Composites Part B: Engineering</i> , 2021, 225, 109257.	12.0	6
8	Stable, high-performance, dendrite-free, seawater-based aqueous batteries. <i>Nature Communications</i> , 2021, 12, 237.	12.8	174
9	Plasmonic Imaging of Oxidation and Reduction of Single Gold Nanoparticles and Their Surface Structural Dynamics. <i>ACS Sensors</i> , 2021, 6, 502-507.	7.8	11
10	Phase imaging of transition from classical to quantum plasmonic couplings between a metal nanoparticle and a metal surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 17564-17570.	7.1	16
11	A Paper Based Milli-Cantilever Sensor for Detecting Hydrocarbon Gases via Smartphone Camera. <i>Analytical Chemistry</i> , 2020, 92, 8480-8486.	6.5	12
12	Large graphene-induced shift of surface-plasmon resonances of gold films: Effective-medium theory for atomically thin materials. <i>Physical Review Research</i> , 2020, 2, .	3.6	4
13	Plasmonic Measurement of Electron Transfer between a Single Metal Nanoparticle and an Electrode through a Molecular Layer. <i>Journal of the American Chemical Society</i> , 2019, 141, 11694-11699.	13.7	21
14	Quantifying Ligand-Protein Binding Kinetics with Self-Assembled Nano-oscillators. <i>Analytical Chemistry</i> , 2019, 91, 14149-14156.	6.5	11
15	Gold-implanted plasmonic quartz plate as a launch pad for laser-driven photoacoustic microfluidic pumps. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6580-6585.	7.1	27
16	Smartphone Nanocolorimetry for On-Demand Lead Detection and Quantitation in Drinking Water. <i>Analytical Chemistry</i> , 2018, 90, 11517-11522.	6.5	45
17	Measuring Ligand Binding Kinetics to Membrane Proteins Using Virion Nano-oscillators. <i>Journal of the American Chemical Society</i> , 2018, 140, 11495-11501.	13.7	17
18	Modeling the surface of fast-cured polymer droplet lenses for precision fabrication. <i>Applied Optics</i> , 2018, 57, 10342.	1.8	4

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19	Plasmonic Imaging of Surface Electrochemical Reactions of Single Gold Nanowires. <i>Journal of the American Chemical Society</i> , 2017, 139, 1376-1379.	13.7	70
20	Achieving High Spatial Resolution Surface Plasmon Resonance Microscopy with Image Reconstruction. <i>Analytical Chemistry</i> , 2017, 89, 2704-2707.	6.5	64
21	Fast Electrochemical and Plasmonic Detection Reveals Multitime Scale Conformational Gating of Electron Transfer in Cytochrome <i>c</i> . <i>Journal of the American Chemical Society</i> , 2017, 139, 7244-7249.	13.7	29
22	Pauli Repulsion-Induced Expansion and Electromechanical Properties of Graphene. <i>Nano Letters</i> , 2017, 17, 236-241.	9.1	12
23	Emerging tools for studying single entity electrochemistry. <i>Faraday Discussions</i> , 2016, 193, 9-39.	3.2	86
24	Imaging Local Electric Field Distribution by Plasmonic Impedance Microscopy. <i>Analytical Chemistry</i> , 2016, 88, 1547-1552.	6.5	29
25	Single-Cell Tracking: Label-Free Tracking of Single Organelle Transportation in Cells with Nanometer Precision Using a Plasmonic Imaging Technique (Small 24/2015). <i>Small</i> , 2015, 11, 2877-2877.	10.0	0
26	Mapping Local Quantum Capacitance and Charged Impurities in Graphene via Plasmonic Impedance Imaging. <i>Advanced Materials</i> , 2015, 27, 6213-6219.	21.0	38
27	Real-Time Monitoring of Phosphorylation Kinetics with Self-Assembled Nano-Oscillators. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2538-2542.	13.8	43
28	Electrochemical Reactions in Subfemtoliter-Droplets Studied with Plasmonics-Based Electrochemical Current Microscopy. <i>Analytical Chemistry</i> , 2015, 87, 494-498.	6.5	15
29	Label-Free Tracking of Single Organelle Transportation in Cells with Nanometer Precision Using a Plasmonic Imaging Technique. <i>Small</i> , 2015, 11, 2878-2884.	10.0	84
30	Kinetics of small molecule interactions with membrane proteins in single cells measured with mechanical amplification. <i>Science Advances</i> , 2015, 1, e1500633.	10.3	39
31	Imaging Local Heating and Thermal Diffusion of Nanomaterials with Plasmonic Thermal Microscopy. <i>ACS Nano</i> , 2015, 9, 11574-11581.	14.6	63
32	Plasmonic imaging of protein interactions with single bacterial cells. <i>Biosensors and Bioelectronics</i> , 2015, 63, 131-137.	10.1	52
33	Plasmonic Imaging of Electrochemical Oxidation of Single Nanoparticles. <i>Journal of the American Chemical Society</i> , 2014, 136, 12584-12587.	13.7	133
34	Detection of Charges and Molecules with Self-Assembled Nano-Oscillators. <i>Nano Letters</i> , 2014, 14, 4151-4157.	9.1	51
35	Detection of molecular binding via charge-induced mechanical response of optical fibers. <i>Chemical Science</i> , 2014, 5, 4375-4381.	7.4	20
36	Molecular Scale Origin of Surface Plasmon Resonance Biosensors. <i>Analytical Chemistry</i> , 2014, 86, 8992-8997.	6.5	75

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37	Plasmonic Imaging and Detection of Single DNA Molecules. ACS Nano, 2014, 8, 3427-3433.	14.6	91
38	Charge-Based Detection of Small Molecules by Plasmonic-Based Electrochemical Impedance Microscopy. Analytical Chemistry, 2013, 85, 6682-6687.	6.5	30
39	Plasmonic-Based Electrochemical Impedance Spectroscopy: Application to Molecular Binding. Analytical Chemistry, 2012, 84, 327-333.	6.5	73
40	Online Sample Conditioning for Portable Breath Analyzers. Analytical Chemistry, 2012, 84, 7172-7178.	6.5	22
41	Imaging the electrocatalytic activity of single nanoparticles. Nature Nanotechnology, 2012, 7, 668-672.	31.5	273
42	Plasmonic-Based Imaging of Local Square Wave Voltammetry. Analytical Chemistry, 2011, 83, 7394-7399.	6.5	28
43	Single cells and intracellular processes studied by a plasmonic-based electrochemical impedance microscopy. Nature Chemistry, 2011, 3, 249-255.	13.6	179
44	Study of single particle charge and Brownian motions with surface plasmon resonance. Applied Physics Letters, 2010, 97, 223703.	3.3	20
45	Electrochemical Surface Plasmon Resonance: Basic Formalism and Experimental Validation. Analytical Chemistry, 2010, 82, 935-941.	6.5	110
46	Measuring Surface Charge Density and Particle Height Using Surface Plasmon Resonance Technique. Analytical Chemistry, 2010, 82, 234-240.	6.5	60
47	Imaging Local Electrochemical Current via Surface Plasmon Resonance. Science, 2010, 327, 1363-1366.	12.6	309
48	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
49	Detecting molecules using a surface impedance imaging technique. , 2009, , .		1
50	Surface Impedance Imaging Technique. Analytical Chemistry, 2008, 80, 5146-5151.	6.5	88
51	A label-free optical detection method for biosensors and microfluidics. Applied Physics Letters, 2008, 92, .	3.3	16
52	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
53	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
54	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

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55	LaAlO ₃ as tunnel dielectric for low-voltage and low-power p-channel flash memory free of drain disturb. <i>Solid-State Electronics</i> , 2006, 50, 276-281.	1.4	2