Shaopeng Wang

List of Publications by Year
in descending order

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		57758	64796
124	6,793	44	79
papers	citations	h-index	g-index

136	136	136	7333
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Charge Sensitive Optical Detection for Measurement of Small-Molecule Binding Kinetics. Methods in Molecular Biology, 2022, 2393, 315-328.	0.9	0
2	Evanescent scattering imaging of single protein binding kinetics and DNA conformation changes. Nature Communications, 2022, 13, 2298.	12.8	19
3	Magnetic Nanoparticle Tracking for One-Step Protein Separation and Binding Kinetics Analysis. Journal of the Electrochemical Society, 2022, 169, 057509.	2.9	2
4	Charge-Sensitive Optical Detection of Binding Kinetics between Phage-Displayed Peptide Ligands and Protein Targets. Biosensors, 2022, 12, 394.	4.7	0
5	Imaging Single Bacterial Cells with Electro-optical Impedance Microscopy. ACS Sensors, 2021, 6, 348-354.	7.8	6
6	Gradient-Based Rapid Digital Immunoassay for High-Sensitivity Cardiac Troponin T (hs-cTnT) Detection in 1 Î¼L Plasma. ACS Sensors, 2021, 6, 399-407.	7.8	12
7	Optical Imaging of Electrical and Mechanical Couplings between Cells. ACS Sensors, 2021, 6, 508-512.	7.8	3
8	Charge-Sensitive Optical Detection of Small Molecule Binding Kinetics in Normal Ionic Strength Buffer. ACS Sensors, 2021, 6, 364-370.	7.8	2
9	Real-Time analysis of exosome secretion of single cells with single molecule imaging. Biocell, 2021, 45, 1449-1451.	0.7	12
10	Simultaneous Imaging of Single Protein Size, Charge, and Binding Using A Protein Oscillation Approach. Bio-protocol, 2021, 11, e3934.	0.4	0
11	The NJ Tao We Knew. ACS Sensors, 2021, 6, 285-289.	7.8	0
12	Quantification of Single-Molecule Protein Binding Kinetics in Complex Media with Prism-Coupled Plasmonic Scattering Imaging. ACS Sensors, 2021, 6, 1357-1366.	7.8	30
13	Rapid Antimicrobial Susceptibility Testing on Clinical Urine Samples by Video-Based Object Scattering Intensity Detection. Analytical Chemistry, 2021, 93, 7011-7021.	6.5	14
14	Critical angle reflection imaging for quantification of molecular interactions on glass surface. Nature Communications, 2021, 12, 3365.	12.8	21
15	Plasmonic Imaging of Electrochemical Reactions at Individual Prussian Blue Nanoparticles. Frontiers in Chemistry, 2021, 9, 718666.	3.6	1
16	Plasmonic Imaging of Oxidation and Reduction of Single Gold Nanoparticles and Their Surface Structural Dynamics. ACS Sensors, 2021, 6, 502-507.	7.8	11
17	Label-Free Imaging of Nanoscale Displacements and Free-Energy Profiles of Focal Adhesions with Plasmonic Scattering Microscopy. ACS Sensors, 2021, 6, 4244-4254.	7.8	21
18	(Invited) Measure Single Protein Size and Binding Kinetics with Plasmonic Scattering Imaging. ECS Meeting Abstracts, 2021, MA2021-02, 1643-1643.	0.0	0

#	Article	IF	Citations
19	Three-Dimensional Tracking of Tethered Particles for Probing Nanometer-Scale Single-Molecule Dynamics Using a Plasmonic Microscope. ACS Sensors, 2021, 6, 4234-4243.	7.8	7
20	Surface Plasmon Resonance Microscopy: From Singleâ€Molecule Sensing to Singleâ€Cell Imaging. Angewandte Chemie, 2020, 132, 1792-1801.	2.0	9
21	Surface Plasmon Resonance Microscopy: From Singleâ€Molecule Sensing to Singleâ€Cell Imaging. Angewandte Chemie - International Edition, 2020, 59, 1776-1785.	13.8	103
22	Simultaneous Quantification of Protein Binding Kinetics in Whole Cells with Surface Plasmon Resonance Imaging and Edge Deformation Tracking. Membranes, 2020, 10, 247.	3.0	8
23	Optical imaging of single-protein size, charge, mobility, and binding. Nature Communications, 2020, 11, 4768.	12.8	30
24	Direct Antimicrobial Susceptibility Testing on Clinical Urine Samples by Optical Tracking of Single Cell Division Events. Small, 2020, 16, e2004148.	10.0	14
25	Plasmonic scattering imaging of single proteins and binding kinetics. Nature Methods, 2020, 17, 1010-1017.	19.0	88
26	Moving Electrons Purposefully through Single Molecules and Nanostructures: A Tribute to the Science of Professor Nongjian Tao (1963â€“2020). ACS Nano, 2020, 14, 12291-12312.	14.6	2
27	One-Step Digital Immunoassay for Rapid and Sensitive Detection of Cardiac Troponin I. ACS Sensors, 2020, 5, 1126-1131.	7.8	35
28	Rapid Antibiotic Susceptibility Testing Based on Bacterial Motion Patterns With Long Short- Term Memory Neural Networks. IEEE Sensors Journal, 2020, 20, 4940-4950.	4.7	14
29	Time-Resolved Digital Immunoassay for Rapid and Sensitive Quantitation of Procalcitonin with Plasmonic Imaging. ACS Nano, 2019, 13, 8609-8617.	14.6	61
30	Optical Tracking of Nanometer-Scale Cellular Membrane Deformation Associated with Single Vesicle Release. ACS Sensors, 2019, 4, 2205-2212.	7.8	8
31	Rapid Antimicrobial Susceptibility Testing of Patient Urine Samples Using Large Volume Free-Solution Light Scattering Microscopy. Analytical Chemistry, 2019, 91, 10164-10171.	6.5	29
32	Quantifying Ligandâ€“Protein Binding Kinetics with Self-Assembled Nano-oscillators. Analytical Chemistry, 2019, 91, 14149-14156.	6.5	11
33	Development and application of a high-content virion display human GPCR array. Nature Communications, 2019, 10, 1997.	12.8	13
34	Plasmonic imaging of subcellular electromechanical deformation in mammalian cells. Journal of Biomedical Optics, 2019, 24, 1.	2.6	8
35	Phenotypic Antimicrobial Susceptibility Testing with Deep Learning Video Microscopy. Analytical Chemistry, 2018, 90, 6314-6322.	6.5	61
36	Tracking fast cellular membrane dynamics with sub-nm accuracy in the normal direction. Nanoscale, 2018, 10, 5133-5139.	5.6	13

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37	Label-Free Quantification of Small-Molecule Binding to Membrane Proteins on Single Cells by Tracking Nanometer-Scale Cellular Membrane Deformation. ACS Nano, 2018, 12, 2056-2064.	14.6	16
38	Imaging Action Potential in Single Mammalian Neurons by Tracking the Accompanying Sub-Nanometer Mechanical Motion. ACS Nano, 2018, 12, 4186-4193.	14.6	45
39	Measuring Ligand Binding Kinetics to Membrane Proteins Using Virion Nano-oscillators. Journal of the American Chemical Society, 2018, 140, 11495-11501.	13.7	17
40	Plasmonic Imaging of Surface Electrochemical Reactions of Single Gold Nanowires. Journal of the American Chemical Society, 2017, 139, 1376-1379.	13.7	70
41	Achieving High Spatial Resolution Surface Plasmon Resonance Microscopy with Image Reconstruction. Analytical Chemistry, 2017, 89, 2704-2707.	6.5	64
42	Plasmonicâ€Based Electrochemical Impedance Imaging of Electrical Activities in Single Cells. Angewandte Chemie - International Edition, 2017, 56, 8855-8859.	13.8	59
43	Plasmonicâ€Based Electrochemical Impedance Imaging of Electrical Activities in Single Cells. Angewandte Chemie, 2017, 129, 8981-8985.	2.0	6
44	Rapid Antibiotic Susceptibility Testing of Uropathogenic E. coli by Tracking Submicron Scale Motion of Single Bacterial Cells. ACS Sensors, 2017, 2, 1231-1239.	7.8	33
45	Current and emerging techniques for antibiotic susceptibility tests. Theranostics, 2017, 7, 1795-1805.	10.0	143
46	Real-time detection of antibiotic activity by measuring nanometer-scale bacterial deformation. Journal of Biomedical Optics, 2017, 22, 1.	2.6	3
47	InnenrÃ¼cktitelbild: Plasmonicâ€Based Electrochemical Impedance Imaging of Electrical Activities in Single Cells (Angew. Chem. 30/2017). Angewandte Chemie, 2017, 129, 9029-9029.	2.0	0
48	Study of Small-Moleculeâ€“Membrane Protein Binding Kinetics with Nanodisc and Charge-Sensitive Optical Detection. Analytical Chemistry, 2016, 88, 2375-2379.	6.5	13
49	Label-Free Imaging of Histamine Mediated G Protein-Coupled Receptors Activation in Live Cells. Analytical Chemistry, 2016, 88, 11498-11503.	6.5	10
50	Antimicrobial Susceptibility Test with Plasmonic Imaging and Tracking of Single Bacterial Motions on Nanometer Scale. ACS Nano, 2016, 10, 845-852.	14.6	123
51	Imaging Local Electric Field Distribution by Plasmonic Impedance Microscopy. Analytical Chemistry, 2016, 88, 1547-1552.	6.5	29
52	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
53	Quantification of protein interaction kinetics in a micro droplet. Review of Scientific Instruments, 2015, 86, 114101.	1.3	9
54	Note: An automated image analysis method for high-throughput classification of surface-bound bacterial cell motions. Review of Scientific Instruments, 2015, 86, 126104.	1.3	4

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55	Mapping Local Quantum Capacitance and Charged Impurities in Graphene via Plasmonic Impedance Imaging. Advanced Materials, 2015, 27, 6213-6219.	21.0	38
56	Measuring Binding Kinetics of Antibodyâ€Conjugated Gold Nanoparticles with Intact Cells. Small, 2015, 11, 3782-3788.	10.0	27
57	Electrochemical Reactions in Subfemtoliter-Droplets Studied with Plasmonics-Based Electrochemical Current Microscopy. Analytical Chemistry, 2015, 87, 494-498.	6.5	15
58	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
59	Kinetics of small molecule interactions with membrane proteins in single cells measured with mechanical amplification. Science Advances, 2015, 1, e1500633.	10.3	39
60	Imaging Local Heating and Thermal Diffusion of Nanomaterials with Plasmonic Thermal Microscopy. ACS Nano, 2015, 9, 11574-11581.	14.6	63
61	Quantification of Epidermal Growth Factor Receptor Expression Level and Binding Kinetics on Cell Surfaces by Surface Plasmon Resonance Imaging. Analytical Chemistry, 2015, 87, 9960-9965.	6.5	161
62	How does fluorescent labeling affect the binding kinetics of proteins with intact cells?. Biosensors and Bioelectronics, 2015, 66, 412-416.	10.1	56
63	Plasmonic imaging of protein interactions with single bacterial cells. Biosensors and Bioelectronics, 2015, 63, 131-137.	10.1	52
64	Detection of Charges and Molecules with Self-Assembled Nano-Oscillators. Nano Letters, 2014, 14, 4151-4157.	9.1	51
65	Detection of molecular binding via charge-induced mechanical response of optical fibers. Chemical Science, 2014, 5, 4375-4381.	7.4	20
66	Molecular Scale Origin of Surface Plasmon Resonance Biosensors. Analytical Chemistry, 2014, 86, 8992-8997.	6.5	75
67	Measurement of Small Molecule Binding Kinetics on a Protein Microarray by Plasmonic-Based Electrochemical Impedance Imaging. Analytical Chemistry, 2014, 86, 9860-9865.	6.5	43
68	Plasmonic Imaging and Detection of Single DNA Molecules. ACS Nano, 2014, 8, 3427-3433.	14.6	91
69	In situ drug-receptor binding kinetics in single cells: a quantitative label-free study of anti-tumor drug resistance. Scientific Reports, 2014, 4, 6609.	3.3	38
70	Charge-Based Detection of Small Molecules by Plasmonic-Based Electrochemical Impedance Microscopy. Analytical Chemistry, 2013, 85, 6682-6687.	6.5	30
71	Note: Four-port microfluidic flow-cell with instant sample switching. Review of Scientific Instruments, 2013, 84, 106110.	1.3	2
72	Plasmonic-Based Electrochemical Impedance Spectroscopy: Application to Molecular Binding. Analytical Chemistry, 2012, 84, 327-333.	6.5	73

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73	Mapping Single-Cellâ€“Substrate Interactions by Surface Plasmon Resonance Microscopy. Langmuir, 2012, 28, 13373-13379.	3.5	83
74	Label-free measuring and mapping of binding kinetics of membrane proteins in single living cells. Nature Chemistry, 2012, 4, 846-853.	13.6	193
75	Imaging the electrocatalytic activity of single nanoparticles. Nature Nanotechnology, 2012, 7, 668-672.	31.5	273
76	Plasmonic-Based Imaging of Local Square Wave Voltammetry. Analytical Chemistry, 2011, 83, 7394-7399.	6.5	28
77	Single cells and intracellular processes studied by a plasmonic-based electrochemical impedance microscopy. Nature Chemistry, 2011, 3, 249-255.	13.6	179
78	Bi-cell surface plasmon resonance detection of aptamer mediated thrombin capture in serum. Biosensors and Bioelectronics, 2011, 26, 4832-4836.	10.1	28
79	Flow-through Electrochemical Surface Plasmon Resonance: Detection of intermediate reaction products. Journal of Electroanalytical Chemistry, 2010, 649, 37-41.	3.8	21
80	Study of single particle charge and Brownian motions with surface plasmon resonance. Applied Physics Letters, 2010, 97, 223703.	3.3	20
81	Electrochemical Surface Plasmon Resonance: Basic Formalism and Experimental Validation. Analytical Chemistry, 2010, 82, 935-941.	6.5	110
82	Measuring Surface Charge Density and Particle Height Using Surface Plasmon Resonance Technique. Analytical Chemistry, 2010, 82, 234-240.	6.5	60
83	Imaging Local Electrochemical Current via Surface Plasmon Resonance. Science, 2010, 327, 1363-1366.	12.6	309
84	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
85	In vitro analog of human bone marrow from 3D scaffolds with biomimetic inverted colloidal crystal geometry. Biomaterials, 2009, 30, 1071-1079.	11.4	127
86	Integrated microring resonator biosensors for monitoring cell growth and detection of toxic chemicals in water. Biosensors and Bioelectronics, 2009, 24, 3061-3066.	10.1	25
87	A universal biosensing platform based on optical micro-ring resonators. Biosensors and Bioelectronics, 2008, 23, 939-944.	10.1	205
88	Dose dependent x-ray luminescence in MgF2:Eu2+, Mn2+ phosphors. Journal of Applied Physics, 2008, 103, 113103.	2.5	25
89	Investigation of water-soluble x-ray luminescence nanoparticles for photodynamic activation. Applied Physics Letters, 2008, 92, .	3.3	162
90	Optical behaviors of ZnO-porphyrin conjugates and their potential applications for cancer treatment. Applied Physics Letters, 2008, 92, .	3.3	71

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91	Phototoxicity of Zinc Oxide Nanoparticle Conjugatesin Human Ovarian Cancer NIH: OVCAR-3 Cells. Journal of Biomedical Nanotechnology, 2008, 4, 432-438.	1.1	71
92	X-ray luminescence of LaF3:Tb3+ and LaF3:Ce3+,Tb3+ water-soluble nanoparticles. Journal of Applied Physics, 2008, 103, .	2.5	70
93	Detection of Heavy Metal Ions in Water by High-Resolution Surface Plasmon Resonance Spectroscopy Combined with Anodic Stripping Voltammetry. Analytical Chemistry, 2007, 79, 4427-4432.	6.5	199
94	Rapid aqueous photo-polymerization route to polymer and polymer-composite hydrogel 3D inverted colloidal crystal scaffolds. Journal of Biomedical Materials Research - Part A, 2007, 83A, 1-9.	4.0	15
95	3D inverted opal hydrogel scaffolds with oxygen sensing capability. Colloids and Surfaces B: Biointerfaces, 2007, 58, 8-13.	5.0	13
96	Electronic energy relaxation and luminescence decay dynamics of Eu3+ in Zn2SiO4:Eu3+ phosphors. Journal of Luminescence, 2007, 126, 491-496.	3.1	37
97	Luminescence temperature and pressure studies of Zn2SiO4 phosphors doped with Mn2+ and Eu3+ ions. Journal of Luminescence, 2006, 116, 117-126.	3.1	62
98	Inverted-Colloidal-Crystal Hydrogel Matrices as Three-Dimensional Cell Scaffolds. Advanced Functional Materials, 2005, 15, 725-731.	14.9	117
99	Cell Distribution Profiles in Three-Dimensional Scaffolds with Inverted-Colloidal-Crystal Geometry: Modeling and Experimental Investigations. Small, 2005, 1, 1208-1214.	10.0	27
100	Fabrication and Luminescence of ZnS:Mn²⁺ Nanoflowers. Journal of Nanoscience and Nanotechnology, 2005, 5, 1309-1322.	0.9	14
101	A Floating Self-Assembly Route to Colloidal Crystal Templates for 3D Cell Scaffolds. Chemistry of Materials, 2005, 17, 4918-4924.	6.7	88
102	Structure and luminescence of BaFBr:Eu2+ and BaFBr:Eu2+, Tb3+ phosphors and thin films. Journal of Applied Physics, 2005, 97, 083506.	2.5	15
103	Full-Color Emission from In2S3 and In2S3:Eu3+ Nanoparticles.. ChemInform, 2004, 35, no.	0.0	1
104	Inverted Colloidal Crystals as Three-Dimensional Cell Scaffolds. Langmuir, 2004, 20, 7887-7892.	3.5	141
105	Full-Color Emission from In2S3 and In2S3:Eu3+ Nanoparticles. Journal of Physical Chemistry B, 2004, 108, 11927-11934.	2.6	127
106	Full-Color Emission and Temperature Dependence of the Luminescence in Poly-P-phenylene ethynyleneâ˜ZnS/Mn2+Composite Particles. Journal of Physical Chemistry B, 2003, 107, 6544-6551.	2.6	40
107	Antigen/Antibody Immunocomplex from CdTe Nanoparticle Bioconjugates. Nano Letters, 2002, 2, 817-822.	9.1	501
108	Nanoparticle Luminescence Thermometry. Journal of Physical Chemistry B, 2002, 106, 11203-11209.	2.6	227

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109	Surface plasmon resonance enhanced optical absorption spectroscopy for studying molecular adsorbates. Review of Scientific Instruments, 2001, 72, 3055-3060.	1.3	62
110	High-Sensitivity Stark Spectroscopy Obtained by Surface Plasmon Resonance Measurement. Analytical Chemistry, 2000, 72, 4003-4008.	6.5	50
111	Amphiphilic Anthracyl Crown Ether. A Langmuir and Langmuirâ˜Schaefer Films Study. Langmuir, 2000, 16, 4607-4612.	3.5	9
112	One and a Half Layers? Mixed Langmuir Monolayer of 10,12-Pentacosadiynoic Acid and a Semifluorinated Tetracosane. Langmuir, 2000, 16, 2882-2886.	3.5	43
113	Anthracylmethyl crown ethers as fluorescence sensors of saxitoxin. Tetrahedron Letters, 1999, 40, 5461-5465.	1.4	16
114	Unusual chromatic properties observed from polymerized dipeptide diacetylenes. Chemical Communications, 1999, , 1601-1602.	4.1	22
115	Molecular recognition of concanavalin A on mannoside diacetylene lipid monolayer at the airâ€“water interface. Biochimica Et Biophysica Acta - Biomembranes, 1999, 1419, 307-312.	2.6	12
116	Surface Chemistry, Topography, and Spectroscopy of a Mixed Monolayer of 10,12-Pentacosadiynoic Acid and Its Mannoside Derivative at the Airâ˜Water Interface. Langmuir, 1999, 15, 5623-5629.	3.5	17
117	Study of Langmuir monolayers of crown-ether C60 derivatives and their interaction with different subphase ions. Thin Solid Films, 1998, 327-329, 141-144.	1.8	7
118	Chemical and Photochemical Dual Polymerization in a Mixed Langmuir Monolayer of Diacetylene Derivatives and Octadecyltrimethoxysilane. Journal of Colloid and Interface Science, 1998, 207, 303-308.	9.4	8
119	Stable Langmuir and Langmuirâ˜Blodgett Films of Fullereneâ˜Glycodendron Conjugates. Langmuir, 1998, 14, 1955-1959.	3.5	158
120	Surface Topography of Acetylcholinesterase in Langmuir and Langmuirâ˜Blodgett Films. Journal of Physical Chemistry B, 1997, 101, 6741-6748.	2.6	17
121	Excess Free Energies of Interaction between 10,12-Pentacosadiynoic Acid (PDA) and Its Mannoside Derivative (MPDA). A Mixed-Monolayer Study. Langmuir, 1997, 13, 1677-1681.	3.5	17
122	Surface and Optical Properties of Langmuir and LB Films of a Crown-Ether C60Derivative. Langmuir, 1997, 13, 1672-1676.	3.5	47
123	Specific binding of avidin to biotin containing lipid lamella surfaces studied with monolayers and liposomes. European Biophysics Journal, 1995, 24, 31-38.	2.2	35
124	Labelâ€Free Quantification of Molecular Interaction in Live Red Blood Cells by Tracking Nanometer Scale Membrane Fluctuations. Small, 0, , 2201623.	10.0	5