Nongjian Tao

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4888120/publications.pdf

Version: 2024-02-01

120 papers	9,467 citations	41323 49 h-index	38368 95 g-index
127 all docs	127 docs citations	127 times ranked	11175 citing authors

#	Article	IF	Citations
1	Measurement of the quantum capacitance of graphene. Nature Nanotechnology, 2009, 4, 505-509.	15.6	1,459
2	Conductance of Single Alkanedithiols:Â Conduction Mechanism and Effect of Moleculeâ^'Electrode Contacts. Journal of the American Chemical Society, 2006, 128, 2135-2141.	6.6	484
3	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.	3.3	310
4	Imaging Local Electrochemical Current via Surface Plasmon Resonance. Science, 2010, 327, 1363-1366.	6.0	309
5	Large Gate Modulation in the Current of a Room Temperature Single Molecule Transistor. Journal of the American Chemical Society, 2005, 127, 2386-2387.	6.6	277
6	Imaging the electrocatalytic activity of single nanoparticles. Nature Nanotechnology, 2012, 7, 668-672.	15.6	273
7	Dielectric Screening Enhanced Performance in Graphene FET. Nano Letters, 2009, 9, 2571-2574.	4.5	253
8	Electrochemical Gate-Controlled Conductance of Single Oligo(phenylene ethynylene)s. Journal of the American Chemical Society, 2005, 127, 9235-9240.	6.6	238
9	Electrochemical Gate-Controlled Charge Transport in Graphene in Ionic Liquid and Aqueous Solution. Journal of the American Chemical Society, 2009, 131, 9908-9909.	6.6	238
10	Detection of Heavy Metal Ions in Drinking Water Using a High-Resolution Differential Surface Plasmon Resonance Sensor. Environmental Science & Technology, 2005, 39, 1257-1262.	4.6	213
11	Intermediate tunnellingâ€“hopping regime in DNA charge transport. Nature Chemistry, 2015, 7, 221-226.	6.6	204
12	Label-free measuring and mapping of binding kinetics of membrane proteins in single living cells. Nature Chemistry, 2012, 4, 846-853.	6.6	193
13	Measurement and Statistical Analysis of Single-Molecule Currentâ€“Voltage Characteristics, Transition Voltage Spectroscopy, and Tunneling Barrier Height. Journal of the American Chemical Society, 2011, 133, 19189-19197.	6.6	181
14	Single cells and intracellular processes studied by a plasmonic-based electrochemical impedance microscopy. Nature Chemistry, 2011, 3, 249-255.	6.6	179
15	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.	3.2	161
16	Gate controlling of quantum interference and direct observation of anti-resonances in single molecule charge transport. Nature Materials, 2019, 18, 357-363.	13.3	160
17	Conductance Titration of Single-Peptide Molecules. Journal of the American Chemical Society, 2004, 126, 5370-5371.	6.6	157
18	Single Molecule Junctions Formed via Auâ^'Thiol Contact:â€‰ Stability and Breakdown Mechanism. Journal of the American Chemical Society, 2007, 129, 13225-13231.	6.6	156

#	Article	IF	Citations
19	Observation of Electrochemically Controlled Quantum Interference in a Single Anthraquinoneâ€Based Norbornylogous Bridge Molecule. Angewandte Chemie - International Edition, 2012, 51, 3203-3206.	7.2	150
20	Ionic Screening of Charged-Impurity Scattering in Graphene. Nano Letters, 2009, 9, 1621-1625.	4.5	144
21	Current and emerging techniques for antibiotic susceptibility tests. Theranostics, 2017, 7, 1795-1805.	4.6	143
22	Interferometric plasmonic imaging and detection of single exosomes. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10275-10280.	3.3	140
23	Optical Imaging of Phase Transition and Li-Ion Diffusion Kinetics of Single LiCoO‹sub›2‹/sub› Nanoparticles During Electrochemical Cycling. Journal of the American Chemical Society, 2017, 139, 186-192.	6.6	117
24	Redox-gated electron transport in electrically wired ferrocene molecules. Chemical Physics, 2006, 326, 138-143.	0.9	109
25	Tuning the Chemical Selectivity of SWNT-FETs for Detection of Heavy-Metal Ions. Small, 2006, 2, 1283-1291.	5.2	106
26	Gate-controlled electron transport in coronenes as a bottom-up approach towards graphene transistors. Nature Communications, 2010, 1, 31.	5.8	104
27	Gate-controlled conductance switching in DNA. Nature Communications, 2017, 8, 14471.	5.8	103
28	Changes in the Conductance of Single Peptide Molecules upon Metal-Ion Binding. Angewandte Chemie - International Edition, 2004, 43, 6148-6152.	7.2	98
29	Quantification of Redox-Induced Thickness Changes of 11-Ferrocenylundecanethiol Self-Assembled Monolayers by Electrochemical Surface Plasmon Resonance. Journal of Physical Chemistry B, 2004, 108, 7206-7212.	1.2	86
30	Emerging tools for studying single entity electrochemistry. Faraday Discussions, 2016, 193, 9-39.	1.6	86
31	Thermoelectric effect and its dependence on molecular length and sequence in single DNA molecules. Nature Communications, 2016, 7, 11294.	5.8	80
32	Total Iron Measurement in Human Serum With a Novel Smartphone-Based Assay. IEEE Journal of Translational Engineering in Health and Medicine, 2020, 8, 1-9.	2.2	79
33	Measuring the inverted region of an electron transfer reaction with a scanning tunneling microscope. Electrochimica Acta, 1997, 42, 2809-2815.	2.6	75
34	Molecular Scale Origin of Surface Plasmon Resonance Biosensors. Analytical Chemistry, 2014, 86, 8992-8997.	3.2	75
35	Intermittent photocatalytic activity of single CdS nanoparticles. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10566-10571.	3.3	73
36	Electrical detection of hepatitis C virus RNA on single wall carbon nanotube-field effect transistors. Analyst, The, 2007, 132, 738.	1.7	67

#	Article	IF	Citations
37	Single Molecular Switches: Electrochemical Gating of a Single Anthraquinone-Based Norbornylogous Bridge Molecule. Journal of Physical Chemistry C, 2012, 116, 21093-21097.	1.5	66
38	Particle Pollution Estimation Based on Image Analysis. PLoS ONE, 2016, 11, e0145955.	1.1	65
39	Graphene Fieldâ€Effect Transistors: Electrochemical Gating, Interfacial Capacitance, and Biosensing Applications. Chemistry - an Asian Journal, 2010, 5, 2144-2153.	1.7	64
40	Achieving High Spatial Resolution Surface Plasmon Resonance Microscopy with Image Reconstruction. Analytical Chemistry, 2017, 89, 2704-2707.	3.2	64
41	High Performance Colorimetric Carbon Monoxide Sensor for Continuous Personal Exposure Monitoring. ACS Sensors, 2018, 3, 327-333.	4.0	64
42	Imaging Local Heating and Thermal Diffusion of Nanomaterials with Plasmonic Thermal Microscopy. ACS Nano, 2015, 9, 11574-11581.	7.3	63
43	A Wireless Hybrid Chemical Sensor for Detection of Environmental Volatile Organic Compounds. IEEE Sensors Journal, 2013, 13, 1748-1755.	2.4	61
44	Mechanical Stretching-Induced Electron-Transfer Reactions and Conductance Switching in Single Molecules. Journal of the American Chemical Society, 2017, 139, 14699-14706.	6.6	61
45	Phenotypic Antimicrobial Susceptibility Testing with Deep Learning Video Microscopy. Analytical Chemistry, 2018, 90, 6314-6322.	3.2	61
46	Non-exponential Length Dependence of Conductance in Iodide-Terminated Oligothiophene Single-Molecule Tunneling Junctions. Journal of the American Chemical Society, 2016, 138, 679-687.	6.6	59
47	How does fluorescent labeling affect the binding kinetics of proteins with intact cells?. Biosensors and Bioelectronics, 2015, 66, 412-416.	5.3	56
48	Transition from stochastic events to deterministic ensemble average in electron transfer reactions revealed by single-molecule conductance measurement. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3407-3412.	3.3	53
49	Plasmonic imaging of protein interactions with single bacterial cells. Biosensors and Bioelectronics, 2015, 63, 131-137.	5.3	52
50	Detection of Charges and Molecules with Self-Assembled Nano-Oscillators. Nano Letters, 2014, 14, 4151-4157.	4.5	51
51	Hybrid Mechanoresponsive Polymer Wires Under Force Activation. Advanced Materials, 2013, 25, 1729-1733.	11.1	49
52	A new sensor for the assessment of personal exposure to volatile organic compounds. Atmospheric Environment, 2012, 54, 679-687.	1.9	47
53	Hybrid Amperometric and Conductometric Chemical Sensor Based on Conducting Polymer Nanojunctions. Analytical Chemistry, 2007, 79, 5217-5224.	3.2	46
54	Chemical Sensor Based on Microfabricated Wristwatch Tuning Forks. Analytical Chemistry, 2005, 77, 2700-2707.	3.2	44

#	Article	IF	Citations
55	Single-molecule level control of host-guest interactions in metallocycle-C60 complexes. Nature Communications, 2019, 10, 4599.	5.8	44
56	Realâ€Time Monitoring of Phosphorylation Kinetics with Selfâ€Assembled Nanoâ€oscillators. Angewandte Chemie - International Edition, 2015, 54, 2538-2542.	7.2	43
57	Colorimetric Sensor for Online Accurate Detection of Breath Acetone. ACS Sensors, 2021, 6, 450-453.	4.0	43
58	Developing a Low-Cost Wearable Personal Exposure Monitor for Studying Respiratory Diseases Using Metalâ€“Oxide Sensors. IEEE Sensors Journal, 2019, 19, 8252-8261.	2.4	40
59	Kinetics of small molecule interactions with membrane proteins in single cells measured with mechanical amplification. Science Advances, 2015, 1, e1500633.	4.7	39
60	Probing Single Molecule Binding and Free Energy Profile with Plasmonic Imaging of Nanoparticles. Journal of the American Chemical Society, 2019, 141, 16071-16078.	6.6	39
61	In situ drug-receptor binding kinetics in single cells: a quantitative label-free study of anti-tumor drug resistance. Scientific Reports, 2014, 4, 6609.	1.6	38
62	Measurement and control of single molecule conductance. Journal of Materials Chemistry, 2005, 15, 3260.	6.7	37
63	Piezoresistivity in single DNA molecules. Nature Communications, 2015, 6, 8032.	5.8	36
64	Acetone as biomarker for ketosis buildup capability - a study in healthy individuals under combined high fat and starvation diets. Nutrition Journal, 2015, 14, 41.	1.5	36
65	One-Step Digital Immunoassay for Rapid and Sensitive Detection of Cardiac Troponin I. ACS Sensors, 2020, 5, 1126-1131.	4.0	35
66	Rapid measurement of single-molecule conductance. Nanotechnology, 2008, 19, 265204.	1.3	33
67	Motion robust remote photoplethysmography in CIELab color space. Journal of Biomedical Optics, 2016, 21, 117001.	1.4	33
68	Rapid Antibiotic Susceptibility Testing of Uropathogenic E. coli by Tracking Submicron Scale Motion of Single Bacterial Cells. ACS Sensors, 2017, 2, 1231-1239.	4.0	33
69	Novel monitor paradigm for real-time exposure assessment. Journal of Exposure Science and Environmental Epidemiology, 2011, 21, 419-426.	1.8	31
70	Plasmonic Imaging of Electrochemical Impedance. Annual Review of Analytical Chemistry, 2017, 10, 183-200.	2.8	30
71	Optical imaging of single-protein size, charge, mobility, and binding. Nature Communications, 2020, 11, 4768.	5.8	30
72	A Colorimetric Chemical Sensing Platform for Real-Time Monitoring of Indoor Formaldehyde. IEEE Sensors Journal, 2015, 15, 1545-1551.	2.4	24

#	Article	IF	Citations
73	Gradient-Based Colorimetric Sensors for Continuous Gas Monitoring. Analytical Chemistry, 2018, 90, 5375-5380.	3.2	24
74	Real-Time Ozone Detection Based on a Microfabricated Quartz Crystal Tuning Fork Sensor. Sensors, 2009, 9, 5655-5663.	2.1	23
75	Determining the Absolute Concentration of Nanoparticles without Calibration Factor by Visualizing the Dynamic Processes of Interfacial Adsorption. Analytical Chemistry, 2016, 88, 2380-2385.	3.2	22
76	The Orbital Selection Rule for Molecular Conductance as Manifested in Tetraphenyl-Based Molecular Junctions. Journal of the American Chemical Society, 2017, 139, 2989-2993.	6.6	22
77	Redoxâ€Active Catecholâ€Functionalized Molecular Rods: Suitable Protection Groups and Singleâ€Molecule Transport Investigations. European Journal of Organic Chemistry, 2008, 2008, 136-149.	1.2	21
78	A pocket-sized metabolic analyzer for assessment of resting energy expenditure. Clinical Nutrition, 2014, 33, 341-347.	2.3	21
79	Tuning the Electromechanical Properties of Single DNA Molecular Junctions. Journal of the American Chemical Society, 2015, 137, 13933-13937.	6.6	21
80	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.	6.6	21
81	A Novel Wireless Wearable Volatile Organic Compound (VOC) Monitoring Device with Disposable Sensors. Sensors, 2016, 16, 2060.	2.1	19
82	Potential Dependence of Mechanical Stability and Electronic Coupling of Single Sâ€“Au Bonds. Journal of the American Chemical Society, 2018, 140, 18074-18081.	6.6	18
83	Single-molecule calorimeter and free energy landscape. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	18
84	A Microfluidic-Colorimetric Sensor for Continuous Monitoring of Reactive Environmental Chemicals. IEEE Sensors Journal, 2012, 12, 1529-1535.	2.4	17
85	Noncontact spirometry with a webcam. Journal of Biomedical Optics, 2017, 22, 057002.	1.4	16
86	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.	7.3	16
87	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.	3.3	16
88	Ultrasensitive Detection of Nitrogen Oxides over a Nanoporous Membrane. Analytical Chemistry, 2010, 82, 9938-9940.	3.2	15
89	Oxygen Sensing Based on the Yellowing of Newspaper. ACS Sensors, 2018, 3, 160-166.	4.0	15
90	Electrochemical Fabrication of Metallic Quantum Wires. Journal of Chemical Education, 2005, 82, 720.	1.1	14

#	Article	IF	Citations
91	Rapid Antibiotic Susceptibility Testing Based on Bacterial Motion Patterns With Long Short- Term Memory Neural Networks. IEEE Sensors Journal, 2020, 20, 4940-4950.	2.4	14
92	Probing Single-Molecule Binding Event by the Dynamic Counting and Mapping of Individual Nanoparticles. ACS Sensors, 2021, 6, 523-529.	4.0	13
93	Pauli Repulsion-Induced Expansion and Electromechanical Properties of Graphene. Nano Letters, 2017, 17, 236-241.	4.5	12
94	A Paper Based Milli-Cantilever Sensor for Detecting Hydrocarbon Gases via Smartphone Camera. Analytical Chemistry, 2020, 92, 8480-8486.	3.2	12
95	Determining Electrochemical Surface Stress of Single Nanowires. Angewandte Chemie - International Edition, 2017, 56, 2132-2135.	7.2	11
96	Quantifying Ligandâ€“Protein Binding Kinetics with Self-Assembled Nano-oscillators. Analytical Chemistry, 2019, 91, 14149-14156.	3.2	11
97	Light-Controlled Configurable Colorimetric Sensing Array. Analytical Chemistry, 2019, 91, 6632-6637.	3.2	10
98	Optical Imaging of Charges with Atomically Thin Molybdenum Disulfide. ACS Nano, 2019, 13, 2298-2306.	7.3	9
99	Simultaneous Quantification of Protein Binding Kinetics in Whole Cells with Surface Plasmon Resonance Imaging and Edge Deformation Tracking. Membranes, 2020, 10, 247.	1.4	8
100	Electron correlation enhancement of the diode property of asymmetric molecules. Physical Review B, 2011, 84, .	1.1	7
101	A Microdroplet-Based Colorimetric Sensing Platform on a CMOS Imager Chip. Analytical Chemistry, 2020, 92, 9362-9369.	3.2	7
102	Determining Electrochemical Surface Stress of Single Nanowires. Angewandte Chemie, 2017, 129, 2164-2167.	1.6	6
103	Real-Time Simultaneous Separation and Detection of Chemicals Using Integrated Microcolumn and Surface Plasmon Resonance Imaging Micro-GC. IEEE Sensors Journal, 2018, 18, 1351-1357.	2.4	6
104	Tracking Personal Health-Environment Interaction with Novel Mobile Sensing Devices. Sensors, 2018, 18, 2670.	2.1	6
105	Realâ€Time Monitoring of Phosphorylation Kinetics with Selfâ€Assembled Nanoâ€oscillators. Angewandte Chemie, 2015, 127, 2568-2572.	1.6	5
106	Measuring the number concentration of arbitrarily-shaped gold nanoparticles with surface plasmon resonance microscopy. Science China Chemistry, 2016, 59, 843-847.	4.2	5
107	Chemical Sensing in Real Time with Plants Using a Webcam. Analytical Chemistry, 2018, 90, 13030-13035.	3.2	5
108	Labelâ€Free Quantification of Molecular Interaction in Live Red Blood Cells by Tracking Nanometer Scale Membrane Fluctuations. Small, 0, , 2201623.	5.2	5

#	Article	IF	Citations
109	Integrating Electrochemical and Colorimetric Sensors with a Webcam Readout for Multiple Gas Detection. Analytical Chemistry, 2020, 92, 799-805.	3.2	4
110	An Unobstructive Sensing Method for Indoor Air Quality Optimization and Metabolic Assessment within Vehicles. Sensors, 2020, 20, 7202.	2.1	3
111	Optical Imaging of Electrical and Mechanical Couplings between Cells. ACS Sensors, 2021, 6, 508-512.	4.0	3
112	Evaluation of a Thermal-Based Flow Meter for Assessment of Mobile Resting Metabolic Rate Measures. Journal of Sensors, 2018, 2018, 1-8.	0.6	2
113	Detecting molecules using a surface impedance imaging technique. , 2009, , .		1
114	Personal mobile tracking of resting and excess post-exercise oxygen consumption with a mobile indirect calorimeter. Gazzetta Medica Italiana Archivio Per Le Scienze Mediche, 2020, 178, .	0.0	1
115	Measurement of electron transport and mechanical properties of single molecules. , 0, , .		0
116	Nanosensors Based on Electrodeposited Conducting Polymers. ECS Meeting Abstracts, 2008, , .	0.0	0
117	Nanotechnology enabled sensors and wireless sensing networks. , 2009, , .		0
118	Biography of Stuart Lindsay. Journal of Physics Condensed Matter, 2012, 24, 160401.	0.7	0
119	Force Sensors: Hybrid Mechanoresponsive Polymer Wires Under Force Activation (Adv. Mater. 12/2013). Advanced Materials, 2013, 25, 1658-1658.	11.1	0
120	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.	5.2	0