

# Xiayan Wang

## List of Publications by Year in descending order

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103  
papers

3,060  
citations

172457

29  
h-index

182427

51  
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105  
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105  
docs citations

105  
times ranked

3846  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electroosmotic pumps and their applications in microfluidic systems. <i>Microfluidics and Nanofluidics</i> , 2009, 6, 145-162.	2.2	274
2	Proton Conductivities in Functionalized UiO-66: Tuned Properties, Thermogravimetry Mass, and Molecular Simulation Analyses. <i>Crystal Growth and Design</i> , 2015, 15, 5827-5833.	3.0	191
3	Ruthenium Oxide-Coated Sodium Vanadium Fluorophosphate Nanowires as High-Power Cathode Materials for Sodium-Ion Batteries. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 6452-6456.	13.8	132
4	Photocatalyst for High-Performance H <sub>2</sub> Production: Ga-Doped Polymeric Carbon Nitride. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 6124-6129.	13.8	108
5	One-Step, Facile and Ultrafast Synthesis of Phase- and Size-Controlled Pt-Bi Intermetallic Nanocatalysts through Continuous-Flow Microfluidics. <i>Journal of the American Chemical Society</i> , 2015, 137, 6263-6269.	13.7	90
6	Deliberate construction of direct Z-scheme photocatalysts through photodeposition. <i>Journal of Materials Chemistry A</i> , 2019, 7, 18348-18356.	10.3	85
7	Substitutionally Dispersed High-Oxidation CoO <sub>x</sub> Clusters in the Lattice of Rutile TiO <sub>2</sub> Triggering Efficient Co $\delta$ /Ti Cooperative Catalytic Centers for Oxygen Evolution Reactions. <i>Advanced Functional Materials</i> , 2021, 31, 2009610.	14.9	82
8	Electroosmotic pumps for microflow analysis. <i>TrAC - Trends in Analytical Chemistry</i> , 2009, 28, 64-74.	11.4	74
9	Microfluidic Synthesis Enables Dense and Uniform Loading of Surfactant-Free PtSn Nanocrystals on Carbon Supports for Enhanced Ethanol Oxidation. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 4952-4956.	13.8	73
10	Supported sub-5nm Pt-Fe intermetallic compounds for electrocatalytic application. <i>Journal of Materials Chemistry</i> , 2012, 22, 6047.	6.7	70
11	Advancement of electroosmotic pump in microflow analysis: A review. <i>Analytica Chimica Acta</i> , 2019, 1060, 1-16.	5.4	67
12	Inhibition of oxygen dimerization by local symmetry tuning in Li-rich layered oxides for improved stability. <i>Nature Communications</i> , 2020, 11, 4973.	12.8	66
13	Separations of substituted benzenes and polycyclic aromatic hydrocarbons using normal- and reverse-phase high performance liquid chromatography with UiO-66 as the stationary phase. <i>Journal of Chromatography A</i> , 2014, 1370, 121-128.	3.7	64
14	An artificial metalloenzyme for catalytic cancer-specific DNA cleavage and operando imaging. <i>Science Advances</i> , 2020, 6, eabb1421.	10.3	56
15	Recent advances of carbon dots as new antimicrobial agents. <i>SmartMat</i> , 2022, 3, 226-248.	10.7	56
16	White Emissive Carbon Dots Actuated by the H <sub>2</sub> -I <sub>2</sub> -Aggregates and Förster Resonance Energy Transfer. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 3849-3857.	4.6	53
17	Nanocapillaries for Open Tubular Chromatographic Separations of Proteins in Femtoliter to Picoliter Samples. <i>Analytical Chemistry</i> , 2009, 81, 7428-7435.	6.5	52
18	A disposable electrochemical aptasensor using single-stranded DNA-methylene blue complex as signal-amplification platform for sensitive sensing of bisphenol A. <i>Sensors and Actuators B: Chemical</i> , 2019, 284, 73-80.	7.8	51

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19	Free Solution Hydrodynamic Separation of DNA Fragments from 75 to 106â€‰%000 Base Pairs in A Single Run. <i>Journal of the American Chemical Society</i> , 2010, 132, 40-41.	13.7	50
20	Bare Nanocapillary for DNA Separation and Genotyping Analysis in Gel-Free Solutions without Application of External Electric Field. <i>Analytical Chemistry</i> , 2008, 80, 5583-5589.	6.5	46
21	Highly fluorescent polymeric nanoparticles based on melamine for facile detection of TNT in soil. <i>Journal of Materials Chemistry A</i> , 2015, 3, 10069-10076.	10.3	46
22	Electrogenerated Chemiluminescence Biosensor with a Tripod Probe for the Highly Sensitive Detection of MicroRNA. <i>Analytical Chemistry</i> , 2019, 91, 1452-1459.	6.5	43
23	Anomalous enhancement of fluorescence of carbon dots through lanthanum doping and potential application in intracellular imaging of ferric ion. <i>Nano Research</i> , 2018, 11, 1369-1378.	10.4	40
24	Chromatographic separations in a nanocapillary under pressure-driven conditions. <i>Journal of Chromatography A</i> , 2008, 1200, 108-113.	3.7	39
25	DFT Study of Polyaniline and Metal Composites as Nonprecious Metal Catalysts for Oxygen Reduction in Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2012, 116, 22737-22742.	3.1	39
26	Pressure-Induced Transport of DNA Confined in Narrow Capillary Channels. <i>Journal of the American Chemical Society</i> , 2012, 134, 7400-7405.	13.7	35
27	Water management by hierarchical structures for highly efficient solar water evaporation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 7122-7128.	10.3	34
28	A DNAzyme-Based Dual-Stimuli Responsive Electrochemiluminescence Resonance Energy Transfer Platform for Ultrasensitive Anatoxin-a Detection. <i>Analytical Chemistry</i> , 2021, 93, 11284-11290.	6.5	34
29	A carbon-supported BiSn nanoparticles based novel sensor for sensitive electrochemical determination of Cd (II) ions. <i>Talanta</i> , 2019, 202, 27-33.	5.5	30
30	Photocontrolled Thermosensitive Electrochemiluminescence Hydrogel for Isocarboxiphos Detection. <i>Analytical Chemistry</i> , 2020, 92, 6136-6143.	6.5	30
31	Pico-HPLC system integrating an equal inner diameter femtopipette into a 900 nm I.D. porous layer open tubular column. <i>Chemical Communications</i> , 2017, 53, 4104-4107.	4.1	29
32	Autonomous operation of 3D DNA walkers in living cells for microRNA imaging. <i>Nanoscale</i> , 2021, 13, 1863-1868.	5.6	29
33	Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations Promoted by Atomically Dispersed Rhodium on TiO <sub>2</sub> . <i>Angewandte Chemie - International Edition</i> , 2022, 61, e202201540.	13.8	29
34	Plasma-assisted alignment in the fabrication of microchannel-array-based in-tube solid-phase microextraction microchips packed with TiO <sub>2</sub> nanoparticles for phosphopeptide analysis. <i>Analytica Chimica Acta</i> , 2018, 1018, 70-77.	5.4	28
35	Aggregation-Induced Electrochemiluminescence of the Dichlorobis(1,10-phenanthroline)ruthenium(II) (Ru(phen) <sub>2</sub> Cl <sub>2</sub> )/Tri- <i>n</i> -propylamine (TPrA) System in H <sub>2</sub> Oâ€‰MeCN Mixtures for Identification of Nucleic Acids. <i>Analytical Chemistry</i> , 2020, 92, 9613-9619.	6.5	27
36	Electroosmosis-Based Nanopipettor. <i>Analytical Chemistry</i> , 2007, 79, 3862-3866.	6.5	26

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37	High-Resolution Hydrodynamic Chromatographic Separation of Large DNA Using Narrow, Bare Open Capillaries: A Rapid and Economical Alternative Technology to Pulsed-Field Gel Electrophoresis?. <i>Analytical Chemistry</i> , 2014, 86, 729-736.	6.5	26
38	GO-META-TiO <sub>2</sub> composite monolithic columns for in-tube solid-phase microextraction of phosphopeptides. <i>Talanta</i> , 2019, 192, 360-367.	5.5	26
39	Recent Advances of Ceria-Based Materials in the Oxidation of Carbon Monoxide. <i>Small Structures</i> , 2021, 2, 2000081.	12.0	26
40	Single-cell metabolite analysis by electrospray ionization mass spectrometry. <i>TrAC - Trends in Analytical Chemistry</i> , 2021, 143, 116351.	11.4	25
41	Flow Batteries for Microfluidic Networks: Configuring An Electroosmotic Pump for Nonterminal Positions. <i>Analytical Chemistry</i> , 2011, 83, 2430-2433.	6.5	24
42	Study of Lithium Migration Pathways in the Organic Electrode Materials of Li-Battery by Dispersion-Corrected Density Functional Theory. <i>Journal of Physical Chemistry C</i> , 2015, 119, 25719-25725.	3.1	24
43	Pair of Stereodynamic Chiral Benzylaldehyde Probes for Determination of Absolute Configuration of Amino Acid Residues in Peptides by Mass Spectrometry. <i>Analytical Chemistry</i> , 2017, 89, 11902-11907.	6.5	24
44	Solid-phase microextraction integrated nanobiosensors for the serial detection of cytoplasmic dopamine in a single living cell. <i>Biosensors and Bioelectronics</i> , 2021, 175, 112915.	10.1	22
45	Photocatalyst for High-Performance H <sub>2</sub> Production: Ga-Doped Polymeric Carbon Nitride. <i>Angewandte Chemie</i> , 2021, 133, 6189-6194.	2.0	21
46	Electrocatalytic Dechlorination of Atrazine Using Binuclear Iron Phthalocyanine as Electrocatalysts. <i>Electrocatalysis</i> , 2014, 5, 68-74.	3.0	20
47	CoNi Alloy Nanoparticles Encapsulated in N-Doped Graphite Carbon Nanotubes as an Efficient Electrocatalyst for Oxygen Reduction Reaction in an Alkaline Medium. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8207-8213.	6.7	20
48	Development and Validation of an HPLC Method for Simultaneous Determination of Ibuprofen and 17 Related Compounds. <i>Chromatographia</i> , 2017, 80, 1353-1360.	1.3	19
49	In situ enhanced electrochemiluminescence based on co-reactant self-generated for sensitive detection of microRNA. <i>Sensors and Actuators B: Chemical</i> , 2018, 255, 35-41.	7.8	19
50	Low-cost devices with fluorescence spots brightness and size dual-mode readout for the rapid detection of Cr(VI) based on smartphones. <i>Journal of Hazardous Materials</i> , 2021, 417, 125986.	12.4	19
51	Single-atom Au catalyst loaded on CeO <sub>2</sub> : A novel single-atom nanozyme electrochemical H <sub>2</sub> O <sub>2</sub> sensor. <i>Talanta Open</i> , 2021, 4, 100075.	3.7	19
52	Three-electron reversible redox for a high-energy fluorophosphate cathode: Na <sub>3</sub> V <sub>2</sub> O <sub>2</sub> (PO <sub>4</sub> ) <sub>2</sub> F. <i>Chemical Communications</i> , 2019, 55, 3979-3982.	4.1	18
53	Facile one-step photochemical synthesis of water soluble CdTe(S) nanocrystals with high quantum yields. <i>Journal of Materials Chemistry</i> , 2012, 22, 6367.	6.7	17
54	Resolving DNA in free solution. <i>TrAC - Trends in Analytical Chemistry</i> , 2012, 35, 122-134.	11.4	13

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55	Resolving DNA at efficiencies of more than a million plates per meter using bare narrow open capillaries without sieving matrices. <i>Chemical Communications</i> , 2013, 49, 2897.	4.1	13
56	Ultrasensitive detection of miRNA based on efficient immobilization of probe and electrochemiluminescent quenching of Ru(bpy) <sub>3</sub> <sup>2+</sup> by methylene blue. <i>Analytica Chimica Acta</i> , 2020, 1093, 52-60.	5.4	13
57	Microfluidics revealing formation mechanism of intermetallic nanocrystals. <i>Nano Energy</i> , 2020, 70, 104565.	16.0	12
58	Visual and real-time imaging focusing for highly sensitive laser-induced fluorescence detection at yoctomole levels in nanocapillaries. <i>Chemical Communications</i> , 2020, 56, 2423-2426.	4.1	12
59	Analytical methods for obtaining binding parameters of drug-protein interactions: A review. <i>Analytica Chimica Acta</i> , 2022, 1219, 340012.	5.4	12
60	Intact living-cell electrolaunching ionization mass spectrometry for single-cell metabolomics. <i>Chemical Science</i> , 2022, 13, 8065-8073.	7.4	12
61	Complexation and intercalation modes: a novel interaction of DNA and graphene quantum dots. <i>RSC Advances</i> , 2016, 6, 33072-33075.	3.6	11
62	A scalable synthesis of ternary nanocatalysts for a high-efficiency electrooxidation catalysis by microfluidics. <i>Nanoscale</i> , 2020, 12, 12647-12654.	5.6	11
63	Continuous-flow rapid and controllable microfluidic synthesis of sodium vanadium fluorophosphate as a cathode material. <i>Applied Materials Today</i> , 2021, 23, 101032.	4.3	11
64	Electrochemical sensor based on the Mn <sub>3</sub> O <sub>4</sub> /CeO <sub>2</sub> nanocomposite with abundant oxygen vacancies for highly sensitive detection of hydrogen peroxide released from living cells. <i>Analytical Methods</i> , 2021, 13, 1672-1680.	2.7	11
65	High-performance self-organized Si nanocomposite anode for lithium-ion batteries. <i>Journal of Energy Chemistry</i> , 2014, 23, 291-300.	12.9	10
66	Determination of Nanoplastics Using a Novel Contactless Conductivity Detector with Controllable Geometric Parameters. <i>Analytical Chemistry</i> , 2022, 94, 1552-1558.	6.5	10
67	Direct Electrochemistry of Glucose Oxidase on a Three-Dimensional Porous Zirconium Phosphate-Carbon Aerogel Composite. <i>Electrocatalysis</i> , 2015, 6, 341-347.	3.0	9
68	Double-helix micro-channels on microfluidic chips for enhanced continuous on-chip derivatization followed by electrophoretic separation. <i>Biosensors and Bioelectronics</i> , 2015, 72, 376-382.	10.1	9
69	Synthesis of PtAu Alloy Nanocrystals in Micelle Nanoreactors Enabled by Flash Heating and Cooling. <i>Particle and Particle Systems Characterization</i> , 2018, 35, 1700413.	2.3	9
70	A pico-HPLC-LIF system for the amplification-free determination of multiple miRNAs in cells. <i>Chinese Chemical Letters</i> , 2021, 32, 2183-2186.	9.0	9
71	In-tube solid-phase microextraction capillary column packed with mesoporous TiO <sub>2</sub> nanoparticles for phosphopeptide analysis. <i>Electrophoresis</i> , 2019, 40, 2142-2148.	2.4	8
72	Highly efficient wurtzite/zinc blende CdS visible light photocatalyst with high charge separation efficiency and stability. <i>Journal of Chemical Physics</i> , 2020, 152, 244703.	3.0	8

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73	Single-particle-frit-based packed columns for microchip chromatographic analysis of neurotransmitters. <i>Talanta</i> , 2020, 215, 120896.	5.5	8
74	Ultra-thin temperature controllable microwell array chip for continuous real-time high-resolution imaging of living single cells. <i>Chinese Chemical Letters</i> , 2021, 32, 3446-3449.	9.0	8
75	Controlled synthesis of fluorescent carbon materials with the assistance of capillary electrophoresis. <i>Talanta</i> , 2021, 228, 122224.	5.5	8
76	Visually precise, low-damage, single-cell spatial manipulation with single-pixel resolution. <i>Chemical Science</i> , 2021, 12, 4111-4118.	7.4	7
77	Metal Cluster-Based Electrochemical Biosensing System for Detecting Epithelial-to-Mesenchymal Transition. <i>ACS Sensors</i> , 2021, 6, 2290-2298.	7.8	7
78	Distinct correlation between (CN <sub>2</sub> ) <sub>x</sub> units and pores: a low-cost method for predesigned wide range control of micropore size of porous carbon. <i>Chemical Communications</i> , 2019, 55, 3963-3966.	4.1	6
79	Real-time effects of Cd(II) on the cellular membrane permeability. <i>Analyst</i> , 2021, 146, 5973-5979.	3.5	6
80	Robust and easy-to-use microchip electrophoresis within sub-millimeter channels for fast and highly efficient separation. <i>Talanta</i> , 2021, 235, 122747.	5.5	6
81	Effect of Temperature on DNA Chromatographic Separation in Free Solution. <i>Chemistry Letters</i> , 2012, 41, 1506-1508.	1.3	5
82	Influence of elution conditions on DNA transport behavior in free solution by hydrodynamic chromatography. <i>Science China Chemistry</i> , 2015, 58, 1605-1611.	8.2	5
83	Controllable fabrication of pico/femtoliter pipette sampling probes and visual sample volume determination. <i>Talanta</i> , 2020, 218, 121096.	5.5	5
84	Synthesis of nano-Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>2</sub> F <sub>3</sub> cathodes with excess Na <sup>+</sup> intercalation for enhanced capacity. <i>Applied Materials Today</i> , 2020, 19, 100554.	4.3	5
85	Investigation of the molecular structure complexity of dissolved organic matter by UPLC-orbitrap MS/MS. <i>Talanta</i> , 2021, 230, 122320.	5.5	5
86	A strategy to modulate the electrophoretic behavior in plastic microchips using sodium polystyrene sulfonate. <i>Journal of Chromatography A</i> , 2016, 1477, 132-140.	3.7	4
87	Facile Evaluation of Nanoparticle-Protein Interaction Based on Charge Neutralization with Pulsed Streaming Potential Measurement. <i>Analytical Chemistry</i> , 2019, 91, 15670-15677.	6.5	4
88	Silica-Based Nanopipettes for Rapid Living Single-Cell Transfection. <i>ACS Applied Nano Materials</i> , 2021, 4, 6956-6963.	5.0	4
89	Microfluidic Synthesis Enables Dense and Uniform Loading of Surfactant-Free PtSn Nanocrystals on Carbon Supports for Enhanced Ethanol Oxidation. <i>Angewandte Chemie</i> , 2016, 128, 5036-5040.	2.0	3
90	Electric Field-Driven On-Request Instant in Situ Formation/Removal of Solid Hydrogel within Microchannels for Efficient Electrophoretic Separation. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 8773-8779.	8.0	3

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91	Transparent Coating with TiO <sub>2</sub> Nanorods for High-performance Photocatalytic Self-cleaning and Environmental Remediation. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 1097-1101.	2.6	3
92	Development of Ultranarrow-Bore Open Tubular High Efficiency Liquid Chromatography. <i>Chinese Journal of Chemistry</i> , 2022, 40, 137-152.	4.9	3
93	Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations Promoted by Atomically Dispersed Rhodium on TiO <sub>2</sub> . <i>Angewandte Chemie</i> , 0, , .	2.0	3
94	Use of Pulsed Streaming Potential with a Prepared Cationic Polyelectrolyte Layer to Detect Deposition Kinetics of Graphene Oxide and Consequences of Particle Size Differences. <i>Analytical Chemistry</i> , 2016, 88, 10437-10444.	6.5	2
95	Gas phase reaction between chromones and solvent in an electrospray ionization source. <i>Journal of Mass Spectrometry</i> , 2019, 54, 66-72.	1.6	2
96	Extension of hydrodynamic chromatography to DNA fragment sizing and quantitation. <i>Heliyon</i> , 2021, 7, e07904.	3.2	2
97	Investigation of metformin hydrochloride-bovine serum albumin interaction by narrow-bore capillary zone electrophoresis. <i>Chemical Communications</i> , 2022, 58, 2926-2929.	4.1	2
98	Controllable Fabrication of Small-Size Holding Pipets for the Nondestructive Manipulation of Suspended Living Single Cells. <i>Analytical Chemistry</i> , 2022, 94, 4924-4929.	6.5	2
99	Displacement Reaction-Assisted Synthesis of Sub-Nanometer Pt/Bi Boost Methanol-Tolerant Fuel Cells. <i>Nanomaterials</i> , 2022, 12, 1301.	4.1	2
100	Evaluation of the effect of nitrate and chloride on Cd(II)-induced cell oxidative stress by scanning electrochemical microscopy. <i>Analytical Methods</i> , 2022, 14, 2673-2681.	2.7	2
101	Wavelength selective photoactivated autocatalytic oxidation of 5,12-dihydrobenzo[ <i>b</i> ]phenazine and its application in metal-free synthesis. <i>RSC Advances</i> , 2020, 10, 9949-9954.	3.6	1
102	An integrated strategy for the construction of a species-specific glycan library for mass spectrometry-based intact glycopeptide analyses. <i>Talanta</i> , 2021, 234, 122626.	5.5	1
103	Inhibitory effects of zinc chloride (ZnCl <sub>2</sub> ), n-acetyl-L-cysteine (NAC), and calcium/calmodulin dependent protein kinase II inhibitor (KN93) on Cd <sup>2+</sup> -induced abnormal cell morphology and membrane permeability. <i>Science of the Total Environment</i> , 2022, 833, 155208.	8.0	1