Lane A Baker

List of Publications by Year
in descending order

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135 papers	6,376 citations	76294 40 h-index	69214 77 g-index
138 all docs	138 docs citations	138 times ranked	5744 citing authors

#	Article	IF	Citations
1	Synthetic hydrogel mimics of the nuclear pore complex for the study of nucleocytoplasmic transport defects in C9orf72 ALS/FTD. Analytical and Bioanalytical Chemistry, 2022, 414, 525-532.	1.9	3
2	Versatile Tools for Understanding Electrosynthetic Mechanisms. Chemical Reviews, 2022, 122, 3292-3335.	23.0	59
3	Controlling Non-Native Cobalamin Reactivity and Catalysis in the Transcription Factor CarH. ACS Catalysis, 2022, 12, 935-942.	5.5	9
4	Cobalamin-Mediated Electrocatalytic Reduction of Ethyl Chloroacetate in Dimethylformamide. Journal of the Electrochemical Society, 2022, 169, 055501.	1.3	3
5	Scanning Ion Conductance Microscopy. Chemical Reviews, 2021, 121, 11726-11768.	23.0	67
6	Electrospray deposition for single nanoparticle studies. Analytical Methods, 2021, 13, 4105-4113.	1.3	5
7	Imaging with Ion Channels. Analytical Chemistry, 2021, 93, 5355-5359.	3.2	8
8	Characterization of Ligand Adsorption at Individual Gold Nanocubes. Langmuir, 2021, 37, 7701-7711.	1.6	4
9	Electroreduction of Acetochlor at Silver Cathodes in Aqueous Media. Journal of the Electrochemical Society, 2021, 168, 075502.	1.3	1
10	Surface Charge Measurements with Scanning Ion Conductance Microscopy Provide Insights into Nitrous Acid Speciation at the Kaolin Mineralâ€“Air Interface. Environmental Science & Technology, 2021, 55, 12233-12242.	4.6	6
11	A Hybrid Nanofiber/Paper Cell Culture Platform for Building a 3D Bloodâ€“Brain Barrier Model. Small Methods, 2021, 5, 2100592.	4.6	9
12	Ketoconazole resistant Candida albicans is sensitive to a wireless electroceutical wound care dressing. Bioelectrochemistry, 2021, 142, 107921.	2.4	12
13	Electroceutical fabric lowers zeta potential and eradicates coronavirus infectivity upon contact. Scientific Reports, 2021, 11, 21723.	1.6	30
14	Analytical Applications of Scanning Ion Conductance Microscopy: Measuring Ions and Electrons. Bioanalytical Reviews, 2021, , .	0.1	1
15	Single-Entity Electrocatalysis at Electrode Ensembles Prepared by Template Synthesis. Journal of the Electrochemical Society, 2021, 168, 126526.	1.3	6
16	Array Microcell Method (AMCM) for Serial Electroanalysis. ChemElectroChem, 2020, 7, 1084-1091.	1.7	7
17	Probing Single-Particle Electrocatalytic Activity at Facet-Controlled Gold Nanocrystals. Nano Letters, 2020, 20, 1233-1239.	4.5	103
18	Imaging effects of hyperosmolality on individual tricellular junctions. Chemical Science, 2020, 11, 1307-1315.	3.7	12

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19	A Tribute to Richardâ€...M. Crooks on the Occasion of His 65th Birthday. ChemElectroChem, 2020, 7, 1062-1066.	1.7	0
20	Teaching Analytical Chemistry in the Time of COVID-19. Analytical Chemistry, 2020, 92, 10185-10186.	3.2	11
21	Ionic amplifying circuits inspired by electronics and biology. Nature Communications, 2020, 11, 1568.	5.8	45
22	Array Microcell Method (AMCM) for Serial Electroanalysis. ChemElectroChem, 2020, 7, 1061-1061.	1.7	1
23	Ion Mobility and Surface Collisions: Submicrometer Capillaries Can Produce Native-like Protein Complexes. Analytical Chemistry, 2020, 92, 2460-2467.	3.2	12
24	Direct Electrochemical Reduction of Acetochlor at Carbon and Silver Cathodes in Dimethylformamide. Journal of the Electrochemical Society, 2020, 167, 155517.	1.3	7
25	On the intersection of electrochemistry and mass spectrometry. Current Opinion in Electrochemistry, 2019, 13, 140-146.	2.5	13
26	(Invited) Sensing, Measuring and Imaging Surface Charge with Nanoscale Pipettes. ECS Meeting Abstracts, 2019, , .	0.0	0
27	Development of Pipettes as Mobile Nanofluidic Devices for Mass Spectrometric Analysis. , 2018, , 273-293.		0
28	Monitoring dynamic spiculation in red blood cells with scanning ion conductance microscopy. Analyst, The, 2018, 143, 1087-1093.	1.7	18
29	Ion concentration in micro and nanoscale electrospray emitters. Analytical and Bioanalytical Chemistry, 2018, 410, 3639-3648.	1.9	3
30	Probing ion current in solid-electrolytes at the meso- and nanoscale. Faraday Discussions, 2018, 210, 55-67.	1.6	4
31	Probe-Substrate Distance Control in Desorption Electrospray Ionization. Journal of the American Society for Mass Spectrometry, 2018, 29, 558-565.	1.2	4
32	Characterization of Membrane Patchâ€Ion Channel Probes for Scanning Ion Conductance Microscopy. Small, 2018, 14, e1702945.	5.2	23
33	Processes at nanoelectrodes: general discussion. Faraday Discussions, 2018, 210, 235-265.	1.6	1
34	Biphasic-Scanning Ion Conductance Microscopy. Analytical Chemistry, 2018, 90, 11797-11801.	3.2	8
35	Perspective and Prospectus on Single-Entity Electrochemistry. Journal of the American Chemical Society, 2018, 140, 15549-15559.	6.6	179
36	Processes at nanopores and bio-nanointerfaces: general discussion. Faraday Discussions, 2018, 210, 145-171.	1.6	3

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37	Singleâ€Entity Electrochemistry: Fundamentals and Applications. ChemElectroChem, 2018, 5, 2918-2919.	1.7	21
38	Mapping Microscale Chemical Heterogeneity in Nafion Membranes with X-ray Photoelectron Spectroscopy. Journal of the Electrochemical Society, 2018, 165, H733-H741.	1.3	90
39	Mapping Surface Charge of Individual Microdomains with Scanning Ion Conductance Microscopy. ChemElectroChem, 2018, 5, 2986-2990.	1.7	28
40	Local collection, reaction and analysis with theta pipette emitters. Analyst, The, 2017, 142, 1512-1518.	1.7	15
41	Electrochemical Aspects of Mass Spectrometry: Atmospheric Pressure Ionization and Ambient Ionization for Bioanalysis. ChemElectroChem, 2017, 4, 806-821.	1.7	11
42	Longitudinally Controlled Modification of Cylindrical and Conical Track-Etched Poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 11998-12006.	1.6	5
43	Quantitative Visualization of Nanoscale Ion Transport. Analytical Chemistry, 2017, 89, 13603-13609.	3.2	28
44	Nanopore Sensing. Analytical Chemistry, 2017, 89, 157-188.	3.2	344
45	Nanotube-Based Membrane Systems. , 2017, , 97-126.		0
46	From single cells to single molecules: general discussion. Faraday Discussions, 2016, 193, 141-170.	1.6	4
47	Nanopores: general discussion. Faraday Discussions, 2016, 193, 507-531.	1.6	1
48	Membrane patches as ion channel probes for scanning ion conductance microscopy. Faraday Discussions, 2016, 193, 81-97.	1.6	22
49	Capturing Rare Conductance in Epithelia with Potentiometric-Scanning Ion Conductance Microscopy. Analytical Chemistry, 2016, 88, 9630-9637.	3.2	26
50	Probing Electronâ€Transfer and Ionâ€Transfer Coupling Processes at Liquid/Liquid Interfaces with Pipette Electrodes. ChemElectroChem, 2016, 3, 2153-2159.	1.7	3
51	Synthetic hydrogel mimics of the nuclear pore complex display selectivity dependent on FG-repeat concentration and electrostatics. Soft Matter, 2016, 12, 9477-9484.	1.2	8
52	Role of Chloride for a Simple, Non-Grignard Mg Electrolyte in Ether-Based Solvents. ACS Applied Materials & Interfaces, 2016, 8, 16002-16008.	4.0	108
53	Viral interactions with the blood-brain barrier: old dog, new tricks. Tissue Barriers, 2016, 4, e1142492.	1.6	20
54	Segmented flow sampling with pushâ€“pull theta pipettes. Analyst, The, 2016, 141, 1958-1965.	1.7	30

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55	Alternating Current Potentiometric Scanning Ion Conductance Microscopy (AC-PSICM). Journal of Physical Chemistry C, 2015, 119, 14392-14399.	1.5	7
56	Nanopipettes: probes for local sample analysis. Chemical Science, 2015, 6, 3334-3341.	3.7	50
57	Biochemical and biophysical analyses of tight junction permeability made of claudin-16 and claudin-19 dimerization. Molecular Biology of the Cell, 2015, 26, 4333-4346.	0.9	57
58	Imaging heterogeneity and transport of degraded Nafion membranes. RSC Advances, 2015, 5, 99284-99290.	1.7	30
59	A proposed route to independent measurements of tight junction conductance at discrete cell junctions. Tissue Barriers, 2015, 3, e1105907.	1.6	8
60	Scanning Electrospray Microscopy with Nanopipets. Analytical Chemistry, 2015, 87, 11182-11186.	3.2	13
61	Nanopipette delivery: influence of surface charge. Analyst, The, 2015, 140, 4835-4842.	1.7	33
62	Modulated fluorescence detection with microelectromagnetic traps. Analytical Methods, 2015, 7, 2273-2277.	1.3	0
63	Electron Propagation within Redox-Active Microdomains in Thin Films of Ferrocene-Containing Diblock Copolymers. Langmuir, 2015, 31, 12307-12314.	1.6	18
64	Rectification of nanopores in aprotic solvents â€“ transport properties of nanopores with surface dipoles. Nanoscale, 2015, 7, 19080-19091.	2.8	40
65	Emerging investigators 2015. Analytical Methods, 2015, 7, 6936-6936.	1.3	1
66	Fundamental Studies of Nanofluidics: Nanopores, Nanochannels, and Nanopipets. Analytical Chemistry, 2015, 87, 172-187.	3.2	213
67	Electrochemical Applications of Scanning Ion Conductance Microscopy. Electroanalytical Chemistry, A Series of Advances, 2015, , 73-114.	1.7	2
68	Ion Channel Probes for Scanning Ion Conductance Microscopy. Langmuir, 2014, 30, 15351-15355.	1.6	24
69	Experimental Studies of Resolution in Scanning Ion Conductance Microscopy. Journal of the Electrochemical Society, 2014, 161, H924-H929.	1.3	25
70	Cottrell Scholars Collaborative New Faculty Workshop: Professional Development for New Chemistry Faculty and Initial Assessment of Its Efficacy. Journal of Chemical Education, 2014, 91, 1874-1881.	1.1	38
71	Atomic force microscopy-based bioanalysis for the study of disease. Analytical Methods, 2014, 6, 4932-4955.	1.3	18
72	Potentiometric-Scanning Ion Conductance Microscopy. Langmuir, 2014, 30, 5669-5675.	1.6	33

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73	Electrospray Ionization from Nanopipette Emitters with Tip Diameters of Less than 100 nm. Analytical Chemistry, 2013, 85, 8498-8502.	3.2	75
74	Multifunctional carbon nanoelectrodes fabricated by focused ion beam milling. Analyst, The, 2013, 138, 5973.	1.7	36
75	Solid polymer electrolytes which contain tricoordinate boron for enhanced conductivity and transference numbers. Journal of Materials Chemistry A, 2013, 1, 1108-1116.	5.2	84
76	Scanning Ion Conductance Microscopy Measurement of Paracellular Channel Conductance in Tight Junctions. Analytical Chemistry, 2013, 85, 3621-3628.	3.2	59
77	Pyrolyzed Carbon Film Diodes. ACS Applied Materials & Interfaces, 2013, 5, 10673-10681.	4.0	5
78	Rectification of Ion Current in Nanopipettes by External Substrates. ACS Nano, 2013, 7, 11272-11282.	7.3	111
79	Potentiometric-scanning ion conductance microscopy for measurement at tight junctions. Tissue Barriers, 2013, 1, e25585.	1.6	16
80	Local pH Measurement with Scanning Ion Conductance Microscopy. Journal of the Electrochemical Society, 2013, 160, H430-H435.	1.3	33
81	Experiment and Simulation of Ion Transport through Nanopipettes of Well-Defined Conical Geometry. Journal of the Electrochemical Society, 2013, 160, H376-H381.	1.3	35
82	Transport of redox probes through single pores measured by scanning electrochemical-scanning ion conductance microscopy (SECM-SICM). Analyst, The, 2012, 137, 2933.	1.7	63
83	Conductive Atomic Force Microscopy Probes from Pyrolyzed Parylene. Journal of the Electrochemical Society, 2012, 159, H662-H667.	1.3	5
84	Rapid fabrication of nanoporous membrane arrays and single-pore membranes from parylene C. Analytical Methods, 2012, 4, 4353.	1.3	9
85	Magnetically gated microelectrodes. Chemical Communications, 2012, 48, 1009-1011.	2.2	9
86	Scanning Ion Conductance Microscopy. Annual Review of Analytical Chemistry, 2012, 5, 207-228.	2.8	179
87	Heterogeneity of Multiple-Pore Membranes Investigated with Ion Conductance Microscopy. Analytical Chemistry, 2012, 84, 3003-3009.	3.2	34
88	Applications of microelectromagnetic traps. Analytical and Bioanalytical Chemistry, 2012, 403, 2077-2088.	1.9	17
89	Effects of pipette modulation and imaging distances on ion currents measured with Scanning Ion Conductance Microscopy (SICM). Analyst, The, 2011, 136, 90-97.	1.7	43
90	Rectification of Nanopores at Surfaces. Journal of the American Chemical Society, 2011, 133, 10398-10401.	6.6	80

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91	Parylene Insulated Probes for Scanning Electrochemical-Atomic Force Microscopy. Langmuir, 2011, 27, 13925-13930.	1.6	39
92	An Abiotic Analogue of the Nuclear Pore Complex Hydrogel. Biomacromolecules, 2011, 12, 3119-3123.	2.6	7
93	Biologically modified hydrogels for chemical and biochemical analysis. Analyst, The, 2011, 136, 3410.	1.7	11
94	Noise Properties of Rectifying Nanopores. Journal of Physical Chemistry C, 2011, 115, 8775-8783.	1.5	33
95	Carbon Electrode Fabrication from Pyrolyzed Parylene C. Analytical Chemistry, 2011, 83, 5447-5452.	3.2	35
96	Single-Nanopore Investigations with Ion Conductance Microscopy. ACS Nano, 2011, 5, 8404-8411.	7.3	43
97	Waves in microscopy. Nature Chemistry, 2011, 3, 191-192.	6.6	2
98	Studies of Edge Effects with Shroudâ€Modified Electrodes. Electroanalysis, 2011, 23, 1543-1547.	1.5	5
99	Singleâ€Pore Membranes Gated by Microelectromagnetic Traps. Advanced Materials, 2010, 22, 2759-2763.	11.1	12
100	Electromagnetic Micropores: Fabrication and Operation. Langmuir, 2010, 26, 19239-19244.	1.6	6
101	Reversible Cobalt Ion Binding to Imidazole-Modified Nanopipettes. Analytical Chemistry, 2010, 82, 9963-9966.	3.2	61
102	Lithography-free production of stamps for microcontact printing of arrays. Analytical Methods, 2010, 2, 1180.	1.3	6
103	Applications of nanopipettes in the analytical sciences. Analyst, The, 2010, 135, 2190.	1.7	104
104	Efficient Biosensor Interfaces Based on Space-Controlled Self-Assembled Monolayers. Langmuir, 2009, 25, 1633-1637.	1.6	26
105	Measurement of Ion Currents through Porous Membranes with Scanning Ion Conductance Microscopy. Analytical Chemistry, 2009, 81, 4742-4751.	3.2	56
106	Self-Assembled Monolayers of Alkanethiols on InAs. Langmuir, 2009, 25, 12185-12194.	1.6	32
107	Nanopore DNA sensors based on dendrimer-modified nanopipettes. Chemical Communications, 2009, , 4877.	2.2	105
108	Investigating Self-Assembly with Macaroni. Journal of Chemical Education, 2009, 86, 704A.	1.1	2

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109	Ion Conductance Microscopy of Nanometer Pores. , 2009, , .		0
110	A makeover for membranes. Nature Nanotechnology, 2008, 3, 73-74.	15.6	63
111	Nanotube Membranes for Biotechnology. , 2008, , 397-431.		0
112	Resistive-Pulse Studies of Proteins and Protein/Antibody Complexes Using a Conical Nanotube Sensor. Journal of the American Chemical Society, 2007, 129, 13144-13152.	6.6	216
113	Nanotube-Based Membrane Systems. , 2007, , .		0
114	Conical nanopore membranes: solvent shaping of nanopores. Nanotechnology, 2006, 17, 3951-3956.	1.3	81
115	Biosensing with conically shaped nanopores and nanotubes. Physical Chemistry Chemical Physics, 2006, 8, 4976.	1.3	102
116	Resistive-Pulse DNA Detection with a Conical Nanopore Sensor. Langmuir, 2006, 22, 10837-10843.	1.6	193
117	Alternating Current Impedance Imaging of High-Resistance Membrane Pores Using a Scanning Electrochemical Microscope. Application of Membrane Electrical Shunts To Increase Measurement Sensitivity and Image Contrast. Analytical Chemistry, 2006, 78, 6535-6541.	3.2	40
118	Nanopore Membranes for Biomaterials Synthesis, Biosensing and Bioseparations. Current Nanoscience, 2006, 2, 243-255.	0.7	37
119	MATERIALS SCIENCE: Expanding the Molecular Electronics Toolbox. Science, 2005, 309, 67-68.	6.0	22
120	Biomaterials and Biotechnologies Based on Nanotube Membranes. Critical Reviews in Solid State and Materials Sciences, 2005, 30, 183-205.	6.8	73
121	Solvent-Extraction and Langmuir-Adsorption-Based Transport in Chemically Functionalized Nanopore Membranes. Journal of Physical Chemistry B, 2005, 109, 20887-20894.	1.2	26
122	Effect of Crown Ether on Ion Currents through Synthetic Membranes Containing a Single Conically Shaped Nanopore. Journal of Physical Chemistry B, 2005, 109, 18400-18407.	1.2	44
123	Alternating Current Impedance Imaging of Membrane Pores Using Scanning Electrochemical Microscopy. Analytical Chemistry, 2005, 77, 5564-5569.	3.2	64
124	Detecting Single Porphyrin Molecules in a Conically Shaped Synthetic Nanopore. Nano Letters, 2005, 5, 1824-1829.	4.5	252
125	Protein Biosensors Based on Biofunctionalized Conical Gold Nanotubes. Journal of the American Chemical Society, 2005, 127, 5000-5001.	6.6	491
126	Dip-Pen Nanolithography of Chemical Templates on Silicon Oxide. Advanced Materials, 2004, 16, 1013-1016.	11.1	37

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127	Electrochemical Rectification Using Mixed Monolayers of Redox-Active Ferrocenyl Dendrimers andn-Alkanethiols. Langmuir, 2002, 18, 6981-6987.	1.6	64
128	Synthesis and Catalytic Properties of Imidazole-Functionalized Poly(propylene imine)Dendrimers. Bulletin of the Korean Chemical Society, 2002, 23, 647-654.	1.0	35
129	Photophysical Properties of Pyrene-Functionalized Poly(propylene imine) Dendrimers. Macromolecules, 2000, 33, 9034-9039.	2.2	84
130	z-scan measurement of the nonlinear absorption of a thin gold film. Journal of Applied Physics, 1999, 86, 6200-6205.	1.1	149
131	Preparation and Characterization of Dendrimerâ^'Gold Colloid Nanocomposites. Analytical Chemistry, 1999, 71, 256-258.	3.2	265
132	Dendrimer-Mediated Adhesion between Vapor-Deposited Au and Glass or Si Wafers. Analytical Chemistry, 1999, 71, 4403-4406.	3.2	64
133	An ab initio molecular orbital study of the reaction NH2+NOâ€ˆâ†'â€ˆH2+N2O. Chemical Physics, 1998, 228, 9-16.	0.9	13
134	Structural Distortion of Dendrimers on Gold Surfaces:Â A Tapping-Mode AFM Investigation. Journal of the American Chemical Society, 1998, 120, 5323-5324.	6.6	205
135	Preparation and Characterization of Dendrimer Monolayers and Dendrimerâ^'Alkanethiol Mixed Monolayers Adsorbed to Gold. Journal of the American Chemical Society, 1998, 120, 4492-4501.	6.6	227