Amy E Herr

List of Publications by Year
in descending order

120 papers	4,978 citations	117625 34 h-index	98798 67 g-index
129 all docs	129 docs citations	129 times ranked	5227 citing authors

#	Article	IF	Citations
1	Electrotransfer of Immunoprobes through Thin-Layer Polyacrylamide Gels. Analytical Chemistry, 2022, 94, 2706-2712.	6.5	3
2	New Views of Old Proteins: Clarifying the Enigmatic Proteome. Molecular and Cellular Proteomics, 2022, 21, 100254.	3.8	16
3	Quantitative UV-C dose validation with photochromic indicators for informed N95 emergency decontamination. PLoS ONE, 2021, 16, e0243554.	2.5	11
4	Multimodal detection of protein isoforms and nucleic acids from mouse pre-implantation embryos. Nature Protocols, 2021, 16, 1062-1088.	12.0	5
5	Multimodal detection of protein isoforms and nucleic acids from low starting cell numbers. Lab on A Chip, 2021, 21, 2427-2436.	6.0	2
6	Current Understanding of Ultraviolet-C Decontamination of N95 Filtering Facepiece Respirators. Applied Biosafety, 2021, 26, 90-102.	0.5	11
7	Multiplexed Ion Beam Imaging Readout of Single-Cell Immunoblotting. Analytical Chemistry, 2021, 93, 8517-8525.	6.5	9
8	Single-cell immunoblotting resolves estrogen receptor-Î± isoforms in breast cancer. PLoS ONE, 2021, 16, e0254783.	2.5	5
9	Programmed Cell-Death Mechanism Analysis Using Same-Cell, Multimode DNA and Proteoform Electrophoresis. ACS Measurement Science Au, 2021, 1, 139-146.	4.4	2
10	Measuring expression heterogeneity of single-cell cytoskeletal protein complexes. Nature Communications, 2021, 12, 4969.	12.8	6
11	Summit: Automated Analysis of Arrayed Single-Cell Gel Electrophoresis. SLAS Technology, 2021, 26, 637-649.	1.9	3
12	Segmentationâ€based analysis of singleâ€cell immunoblots. Electrophoresis, 2021, 42, 2070-2080.	2.4	2
13	Optical Attenuators Extend Dynamic Range but Alter Angular Response of Planar Ultravioletâ€C Dosimeters. Photochemistry and Photobiology, 2021, , .	2.5	0
14	Something Old and Something New: The Time Is Right for Geriatric Engineering Programs. Journal of the American Geriatrics Society, 2021, 69, 613-615.	2.6	0
15	Comparison of photoactivatable crosslinkers for in-gel immunoassays. Analyst, The, 2021, 146, 6621-6630.	3.5	4
16	Mapping of UV-C dose and SARS-CoV-2 viral inactivation across N95 respirators during decontamination. Scientific Reports, 2021, 11, 20341.	3.3	4
17	Separation-encoded microparticles for single-cell western blotting. Lab on A Chip, 2020, 20, 64-73.	6.0	9
18	In Situ Measurement of Thermodynamic Partitioning in Open Hydrogels. Analytical Chemistry, 2020, 92, 875-883.	6.5	17

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19	Probe-target hybridization depends on spatial uniformity of initial concentration condition across large-format chips. Scientific Reports, 2020, 10, 8768.	3.3	6
20	Reversible Functionalization of Clickable Polyacrylamide Gels with Protein and Graft Copolymers. Advanced Functional Materials, 2020, 30, 2005010.	14.9	7
21	Rapid electrotransfer probing for improved detection sensitivity in in-gel immunoassays. Analytical Methods, 2020, 12, 4638-4648.	2.7	6
22	3D projection electrophoresis for single-cell immunoblotting. Nature Communications, 2020, 11, 6237.	12.8	15
23	Ferguson analysis of protein electromigration during single-cell electrophoresis in an open microfluidic device. Analyst, The, 2020, 145, 3732-3741.	3.5	9
24	Assessing heterogeneity among single embryos and single blastomeres using open microfluidic design. Science Advances, 2020, 6, eaay1751.	10.3	16
25	Laterally Aggregated Polyacrylamide Gels for Immunoprobed Isoelectric Focusing. Analytical Chemistry, 2020, 92, 3180-3188.	6.5	8
26	In-gel fluorescence detection by DNA polymerase elongation. APL Bioengineering, 2020, 4, 046104.	6.2	0
27	In Situ Singleâ€Cell Western Blot on Adherent Cell Culture. Angewandte Chemie - International Edition, 2019, 58, 13929-13934.	13.8	31
28	Barcodes for subcellular protein localization. Nature Biomedical Engineering, 2019, 3, 673-675.	22.5	2
29	In Situ Singleâ€Cell Western Blot on Adherent Cell Culture. Angewandte Chemie, 2019, 131, 14067-14072.	2.0	6
30	Multiplexed in-gel microfluidic immunoassays: characterizing protein target loss during reprobing of benzophenone-modified hydrogels. Scientific Reports, 2019, 9, 15389.	3.3	10
31	Next wave advances in single-cell analyses. Analyst, The, 2019, 144, 735-737.	3.5	1
32	Protein diffusion from microwells with contrasting hydrogel domains. APL Bioengineering, 2019, 3, 026101.	6.2	4
33	Single-cell mobility shift electrophoresis reports protein localization to the cell membrane. Analyst, The, 2019, 144, 972-979.	3.5	7
34	Arrayed isoelectric focusing using photopatterned multiâ€domain hydrogels. Electrophoresis, 2018, 39, 1040-1047.	2.4	9
35	Linking invasive motility to protein expression in single tumor cells. Lab on A Chip, 2018, 18, 371-384.	6.0	23
36	Rapid Capture and Release of Nucleic Acids through a Reversible Photoâ€Cycloaddition Reaction in a Psoralenâ€Functionalized Hydrogel. Angewandte Chemie - International Edition, 2018, 57, 2357-2361.	13.8	14

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37	Rapid Capture and Release of Nucleic Acids through a Reversible Photoâ€Cycloaddition Reaction in a Psoralenâ€Functionalized Hydrogel. Angewandte Chemie, 2018, 130, 2381-2385.	2.0	3
38	Electrophoretic cytopathology resolves ERBB2 forms with single-cell resolution. Npj Precision Oncology, 2018, 2, 10.	5.4	11
39	Geometry-induced injection dispersion in single-cell protein electrophoresis. Analytica Chimica Acta, 2018, 1000, 214-222.	5.4	6
40	Controlling Dispersion during Single-Cell Polyacrylamide-Gel Electrophoresis in Open Microfluidic Devices. Analytical Chemistry, 2018, 90, 13419-13426.	6.5	25
41	Microparticle Delivery of Protein Markers for Singleâ€Cell Western Blotting from Microwells. Small, 2018, 14, e1802865.	10.0	12
42	Mouse-to-mouse variation in maturation heterogeneity of smooth muscle cells. Lab on A Chip, 2018, 18, 1875-1883.	6.0	12
43	High-selectivity cytology via lab-on-a-disc western blotting of individual cells. Lab on A Chip, 2017, 17, 855-863.	6.0	18
44	Subcellular western blotting of single cells. Microsystems and Nanoengineering, 2017, 3, .	7.0	46
45	Profiling protein expression in circulating tumour cells using microfluidic western blotting. Nature Communications, 2017, 8, 14622.	12.8	201
46	Fabrication of an Open Microfluidic Device for Immunoblotting. Analytical Chemistry, 2017, 89, 9643-9648.	6.5	12
47	Kinetic Analysis of Enzymes Immobilized in Porous Film Arrays. Analytical Chemistry, 2017, 89, 10311-10320.	6.5	22
48	Joule Heating-Induced Dispersion in Open Microfluidic Electrophoretic Cytometry. Analytical Chemistry, 2017, 89, 12787-12796.	6.5	27
49	Electrophoretic cytometry of adherent cells. Lab on A Chip, 2017, 17, 4312-4323.	6.0	8
50	Hydrogel Poreâ€Size Modulation for Enhanced Singleâ€Cell Western Blotting. Advanced Materials, 2016, 28, 327-334.	21.0	57
51	Determination of equilibrium dissociation constants for recombinant antibodies by high-throughput affinity electrophoresis. Scientific Reports, 2016, 6, 39774.	3.3	22
52	Detection of Isoforms Differing by a Single Charge Unit in Individual Cells. Angewandte Chemie - International Edition, 2016, 55, 12431-12435.	13.8	39
53	Detection of Isoforms Differing by a Single Charge Unit in Individual Cells. Angewandte Chemie, 2016, 128, 12619-12623.	2.0	6
54	Single cellâ€“resolution western blotting. Nature Protocols, 2016, 11, 1508-1530.	12.0	141

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55	Kinetic Rate Determination via Electrophoresis along a Varying Cross-Section Microchannel. Analytical Chemistry, 2016, 88, 3669-3676.	6.5	3
56	Photo-patterned free-standing hydrogel microarrays for massively parallel protein analysis. , 2015, , .		1
57	Microfluidics: reframing biological enquiry. Nature Reviews Molecular Cell Biology, 2015, 16, 554-567.	37.0	258
58	A lateral electrophoretic flow diagnostic assay. Lab on A Chip, 2015, 15, 1488-1496.	6.0	28
59	A minimalist biosensor: Quantitation of cyclic di-GMP using the conformational change of a riboswitch aptamer. RNA Biology, 2015, 12, 1189-1197.	3.1	29
60	Effect of Polymer Hydration State on In-Gel Immunoassays. Analytical Chemistry, 2015, 87, 11030-11038.	6.5	20
61	Single-Cell Western Blotting. Methods in Molecular Biology, 2015, 1346, 1-9.	0.9	6
62	Rapid microfluidic prototyping of sophisticated protein analysis platforms using grayscale photopatterning. , 2014, , .		2
63	Single-Cell Western Blotting after Whole-Cell Imaging to Assess Cancer Chemotherapeutic Response. Analytical Chemistry, 2014, 86, 10429-10436.	6.5	88
64	Microfluidic electrophoretic mobility shift assays for quantitative biochemical analysis. Electrophoresis, 2014, 35, 2078-2090.	2.4	21
65	Performance implications of chemical mobilization after microchannel <scp>IEF</scp>. Electrophoresis, 2014, 35, 1453-1460.	2.4	5
66	Polymer sieving matrices in microanalytical electrophoresis. Analyst, The, 2014, 139, 5635-5654.	3.5	34
67	Binding Kinetic Rates Measured via Electrophoretic Band Crossing in a Pseudohomogeneous Format. Analytical Chemistry, 2014, 86, 2601-2609.	6.5	16
68	High-Throughput Electrophoretic Mobility Shift Assays for Quantitative Analysis of Molecular Binding Reactions. Analytical Chemistry, 2014, 86, 10357-10364.	6.5	16
69	Microfluidic Western Blotting of Low-Molecular-Mass Proteins. Analytical Chemistry, 2014, 86, 10625-10632.	6.5	23
70	Single-cell western blotting. Nature Methods, 2014, 11, 749-755.	19.0	372
71	Next-generation confirmatory disease diagnostics. , 2014, , .		0
72	Microfluidic barcode assay for antibody-based confirmatory diagnostics. Lab on A Chip, 2013, 13, 3910.	6.0	8

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73	Protein immobilization techniques for microfluidic assays. Biomicrofluidics, 2013, 7, 41501.	2.4	310
74	Microfluidic integration of Western blotting is enabled by electrotransfer-assisted sodium dodecyl sulfate dilution. Analyst, The, 2013, 138, 158-163.	3.5	13
75	Microfluidic Multiplexing in Bioanalyses. Journal of the Association for Laboratory Automation, 2013, 18, 350-366.	2.8	27
76	Photopatterned free-standing polyacrylamide gels for microfluidic protein electrophoresis. Lab on A Chip, 2013, 13, 2115.	6.0	39
77	Microchamber Integration Unifies Distinct Separation Modes for Two-Dimensional Electrophoresis. Analytical Chemistry, 2013, 85, 4538-4545.	6.5	22
78	Microfluidic Validation of Diagnostic Protein Markers for Spontaneous Cerebrospinal Fluid Rhinorrhea. Journal of Proteome Research, 2013, 12, 1254-1265.	3.7	8
79	Disruptive by Design: A Perspective on Engineering in Analytical Chemistry. Analytical Chemistry, 2013, 85, 7622-7628.	6.5	5
80	Protein Post-Translational Modification Analyses Using On-Chip Immunoprobed Isoelectric Focusing. Analytical Chemistry, 2013, 85, 2882-2890.	6.5	7
81	Microchamber Western Blotting Using Poly-<scp>l</scp>-Lysine Conjugated Polyacrylamide Gel for Blotting of Sodium Dodecyl Sulfate Coated Proteins. Analytical Chemistry, 2013, 85, 7753-7761.	6.5	10
82	Microfluidic Screening of Electrophoretic Mobility Shifts Elucidates Riboswitch Binding Function. Journal of the American Chemical Society, 2013, 135, 3136-3143.	13.7	24
83	Chip-Based Immunoassays. Methods in Molecular Biology, 2013, 919, 233-248.	0.9	1
84	Microfluidic Western blotting. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 21450-21455.	7.1	127
85	Microfluidic integration for automated targeted proteomic assays. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5972-5977.	7.1	102
86	Post-collection processing of Schirmer strip-collected human tear fluid impacts protein content. Analyst, The, 2012, 137, 5088.	3.5	44
87	Use of Polyacrylamide Gel Moving Boundary Electrophoresis to Enable Low-Power Protein Analysis in a Compact Microdevice. Analytical Chemistry, 2012, 84, 8740-8747.	6.5	15
88	Bistable Isoelectric Point Photoswitching in Green Fluorescent Proteins Observed by Dynamic Immunoprobed Isoelectric Focusing. Journal of the American Chemical Society, 2012, 134, 17582-17591.	13.7	23
89	Electrostatic Protein Immobilization Using Charged Polyacrylamide Gels and Cationic Detergent Microfluidic Western Blotting. Analytical Chemistry, 2012, 84, 2533-2540.	6.5	32
90	Single-Microchannel, Multistep Assay Reports Protein Size and Immunoaffinity. Analytical Chemistry, 2011, 83, 6573-6579.	6.5	10

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91	Human Tear Protein Analysis Enabled by an Alkaline Microfluidic Homogeneous Immunoassay. Analytical Chemistry, 2011, 83, 8115-8122.	6.5	72
92	Homogeneous Immunosubtraction Integrated with Sample Preparation Enabled by a Microfluidic Format. Analytical Chemistry, 2011, 83, 2691-2698.	6.5	24
93	Multianalyte On-Chip Native Western Blotting. Analytical Chemistry, 2011, 83, 3581-3588.	6.5	45
94	Membrane-Assisted Online Renaturation for Automated Microfluidic Lectin Blotting. Journal of the American Chemical Society, 2011, 133, 19610-19613.	13.7	31
95	Microfluidic homo- and hetero-geneous immunoassays: a tool to accelerate protein biomarker development. Bioanalysis, 2011, 3, 2161-2165.	1.5	4
96	Towards Next-Generation Proteomic Assays: Functional Materials as Sieving Matrices and Binding Scaffolds. Materials Research Society Symposia Proceedings, 2011, 1415, 7.	0.1	0
97	Photopatterned materials in bioanalytical microfluidic technology. Journal of Micromechanics and Microengineering, 2011, 21, 054001.	2.6	11
98	Automated microfluidic protein immunoblotting. Nature Protocols, 2010, 5, 1844-1856.	12.0	83
99	Polyacrylamide Gel Photopatterning Enables Automated Protein Immunoblotting in a Two-Dimensional Microdevice. Journal of the American Chemical Society, 2010, 132, 2512-2513.	13.7	47
100	Quantitative Enzyme Activity Determination with Zeptomole Sensitivity by Microfluidic Gradient-Gel Zymography. Analytical Chemistry, 2010, 82, 3803-3811.	6.5	34
101	Ultrashort Separation Length Homogeneous Electrophoretic Immunoassays Using On-Chip Discontinuous Polyacrylamide Gels. Analytical Chemistry, 2010, 82, 3343-3351.	6.5	59
102	Fully Integrated Microfluidic Platform Enabling Automated Phosphoprofiling of Macrophage Response. Analytical Chemistry, 2009, 81, 3261-3269.	6.5	35
103	Microfluidic Polyacrylamide Gel Electrophoresis with in Situ Immunoblotting for Native Protein Analysis. Analytical Chemistry, 2009, 81, 8177-8184.	6.5	64
104	Identification of Pathogen and Hostâ€Response Markers Correlated With Periodontal Disease. Journal of Periodontology, 2009, 80, 436-446.	3.4	302
105	Multiplexed analysis of inflammation biomarkers using spectrally-encoded on-chip electrophoresis. , 2009, , .		1
106	On-chip technologies for multidimensional separations. Lab on A Chip, 2009, 9, 2524.	6.0	44
107	Clinically relevant advances in onâ€chip affinityâ€based electrophoresis and electrochromatography. Electrophoresis, 2008, 29, 3306-3319.	2.4	29
108	Photopolymerized diffusion-defined polyacrylamide gradient gels for on-chip protein sizing. Lab on A Chip, 2008, 8, 1273.	6.0	46

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109	Nanosieving for rapid, solutionâ€phase immunoassays. FASEB Journal, 2008, 22, 564-564.	0.5	0
110	Microfluidic immunoassays as rapid saliva-based clinical diagnostics. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5268-5273.	7.1	351
111	The biomarker pipeline: Novel microfluidic instrumentation for advancing proteomic discovery to clinical diagnostics. , 2007, , .		0
112	Integrated Microfluidic Platform for Oral Diagnostics. Annals of the New York Academy of Sciences, 2007, 1098, 362-374.	3.8	69
113	Integrated Preconcentration SDSâ^'PAGE of Proteins in Microchips Using Photopatterned Cross-Linked Polyacrylamide Gels. Analytical Chemistry, 2006, 78, 4976-4984.	6.5	159
114	Antibody microarrays for native toxin detection. Analytical Biochemistry, 2005, 339, 262-270.	2.4	99
115	On-Chip Native Gel Electrophoresis-Based Immunoassays for Tetanus Antibody and Toxin. Analytical Chemistry, 2005, 77, 585-590.	6.5	84
116	Functional Antibody Immobilization on 3-Dimensional Polymeric Surfaces Generated by Reactive Ion Etching. Langmuir, 2005, 21, 7621-7625.	3.5	50
117	Photopolymerized Cross-Linked Polyacrylamide Gels for On-Chip Protein Sizing. Analytical Chemistry, 2004, 76, 4727-4733.	6.5	92
118	On-Chip Coupling of Isoelectric Focusing and Free Solution Electrophoresis for Multidimensional Separations. Analytical Chemistry, 2003, 75, 1180-1187.	6.5	193
119	Optimization of Turn Geometries for Microchip Electrophoresis. Analytical Chemistry, 2001, 73, 1350-1360.	6.5	192
120	Microchip isoelectric focusing using a miniature scanning detection system. Electrophoresis, 2001, 22, 2291-2295.	2.4	46