

Erdmann Rapp

List of Publications by Year in descending order

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120
papers

5,019
citations

71102

41
h-index

110387

64
g-index

130
all docs

130
docs citations

130
times ranked

5287
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthetic glycans control gut microbiome structure and mitigate colitis in mice. <i>Nature Communications</i> , 2022, 13, 1244.	12.8	25
2	The minimum information required for a glycomics experiment (MIRAGE): reporting guidelines for capillary electrophoresis. <i>Glycobiology</i> , 2022, 32, 580-587.	2.5	2
3	A Bacterial Mannose Binding Lectin as a Tool for the Enrichment of C- and O-Mannosylated Peptides. <i>Analytical Chemistry</i> , 2022, 94, 7329-7338.	6.5	8
4	Glycosyltransferase POMGNT1 deficiency strengthens N-cadherin-mediated cell-cell adhesion. <i>Journal of Biological Chemistry</i> , 2021, 296, 100433.	3.4	5
5	Tracking changes in adaptation to suspension growth for MDCK cells: cell growth correlates with levels of metabolites, enzymes and proteins. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 1861-1874.	3.6	2
6	Comprehensive N-glycosylation analysis of the influenza A virus proteins HA and NA from adherent and suspension MDCK cells. <i>FEBS Journal</i> , 2021, 288, 4869-4891.	4.7	6
7	Site-specific N-glycosylation analysis of animal cell culture-derived Zika virus proteins. <i>Scientific Reports</i> , 2021, 11, 5147.	3.3	5
8	A patient-based medaka <i>alg2</i> mutant as a model for hypo-N-glycosylation. <i>Development (Cambridge)</i> , 2021, 148, .	2.5	2
9	Presence and Levels of Galactosyllactoses and Other Oligosaccharides in Human Milk and Their Variation during Lactation and According to Maternal Phenotype. <i>Nutrients</i> , 2021, 13, 2324.	4.1	15
10	FUT6 deficiency compromises basophil function by selectively abrogating their sialyl-Lewis x expression. <i>Communications Biology</i> , 2021, 4, 832.	4.4	7
11	Simultaneous Monitoring of Monoclonal Antibody Variants by Strong Cation-Exchange Chromatography Hyphenated to Mass Spectrometry to Assess Quality Attributes of Rituximab-Based Biotherapeutics. <i>International Journal of Molecular Sciences</i> , 2021, 22, 9072.	4.1	9
12	Combining functional metagenomics and glycoanalytics to identify enzymes that facilitate structural characterization of sulfated N-glycans. <i>Microbial Cell Factories</i> , 2021, 20, 162.	4.0	10
13	Cell-Free Glycoengineering of the Recombinant SARS-CoV-2 Spike Glycoprotein. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 699025.	4.1	5
14	A spoonful of L-fucose—an efficient therapy for GFUS-CDG, a new glycosylation disorder. <i>EMBO Molecular Medicine</i> , 2021, 13, e14332.	6.9	13
15	Capillary (Gel) Electrophoresis-Based Methods for Immunoglobulin (G) Glycosylation Analysis. <i>Experientia Supplementum (2012)</i> , 2021, 112, 137-172.	0.9	8
16	Community evaluation of glycoproteomics informatics solutions reveals high-performance search strategies for serum glycopeptide analysis. <i>Nature Methods</i> , 2021, 18, 1304-1316.	19.0	74
17	NIST Interlaboratory Study on Glycosylation Analysis of Monoclonal Antibodies: Comparison of Results from Diverse Analytical Methods. <i>Molecular and Cellular Proteomics</i> , 2020, 19, 11-30.	3.8	87
18	Enzymatic Synthesis of Glycans and Glycoconjugates. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2020, 175, 231-280.	1.1	11

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19	N-glycosylation analysis of mouse immunoglobulin G isolated from dried blood spots. <i>Electrophoresis</i> , 2020, 42, 2615-2618.	2.4	4
20	State-of-the-Art Glycomics Technologies in Glycobiotechnology. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2020, 175, 379-411.	1.1	5
21	Glycoproteomics Technologies in Glycobiotechnology. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2020, 175, 413-434.	1.1	3
22	High-resolution longitudinal N- and O-glycoprofiling of human monocyte-to-macrophage transition. <i>Glycobiology</i> , 2020, 30, 679-694.	2.5	26
23	Synthesis of lipid-linked oligosaccharides by a compartmentalized multi-enzyme cascade for the in vitro N-glycosylation of peptides. <i>Journal of Biotechnology</i> , 2020, 322, 54-65.	3.8	8
24	Enzymatic Cascade Synthesis Provides Novel Linear Human Milk Oligosaccharides as Reference Standards for xCGE-LIF Based High-Throughput Analysis. <i>Biotechnology Journal</i> , 2019, 14, 1800305.	3.5	15
25	Inverting family GH156 sialidases define an unusual catalytic motif for glycosidase action. <i>Nature Communications</i> , 2019, 10, 4816.	12.8	13
26	Enzymatic Cascades for Tailored 13C6 and 15N Enriched Human Milk Oligosaccharides. <i>Molecules</i> , 2019, 24, 3482.	3.8	8
27	Efficient influenza A virus production in high cell density using the novel porcine suspension cell line PBG.PK2.1. <i>Vaccine</i> , 2019, 37, 7019-7028.	3.8	18
28	Approach for Profiling of Glycosphingolipid Glycosylation by Multiplexed Capillary Gel Electrophoresis Coupled to Laser-Induced Fluorescence Detection To Identify Cell-Surface Markers of Human Pluripotent Stem Cells and Derived Cardiomyocytes. <i>Analytical Chemistry</i> , 2019, 91, 6413-6418.	6.5	28
29	The minimum information required for a glycomics experiment (MIRAGE) project: LC guidelines. <i>Glycobiology</i> , 2019, 29, 349-354.	2.5	30
30	Post-Column Make-Up Flow (PCMF) Enhances the Performance of Capillary-Flow PGC-LC-MS/MS-Based Glycomics. <i>Analytical Chemistry</i> , 2019, 91, 4559-4567.	6.5	42
31	The subcommissural organ and the Reissner fiber: old friends revisited. <i>Cell and Tissue Research</i> , 2019, 375, 507-529.	2.9	26
32	High-throughput Serum N-Glycomics: Method Comparison and Application to Study Rheumatoid Arthritis and Pregnancy-associated Changes. <i>Molecular and Cellular Proteomics</i> , 2019, 18, 3-15.	3.8	69
33	Minimal B Cell Extrinsic IgG Glycan Modifications of Pro- and Anti-Inflammatory IgG Preparations in vivo. <i>Frontiers in Immunology</i> , 2019, 10, 3024.	4.8	23
34	One pot synthesis of GDP-mannose by a multi-enzyme cascade for enzymatic assembly of lipid-linked oligosaccharides. <i>Biotechnology and Bioengineering</i> , 2018, 115, 192-205.	3.3	35
35	MPA Portable: A Stand-Alone Software Package for Analyzing Metaproteome Samples on the Go. <i>Analytical Chemistry</i> , 2018, 90, 685-689.	6.5	65
36	Improvement of electrospray stability in negative ion mode for nano-PGC-LC-MS glycoanalysis via post-column make-up flow. <i>Glycoconjugate Journal</i> , 2018, 35, 499-509.	2.7	11

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37	The Fine Art of Destruction: A Guide to In-Depth Glycoproteomic Analyses—Exploiting the Diagnostic Potential of Fragment Ions. <i>Proteomics</i> , 2018, 18, e1800282.	2.2	36
38	glyXtool^{MS}: An Open-Source Pipeline for Semiautomated Analysis of Glycopeptide Mass Spectrometry Data. <i>Analytical Chemistry</i> , 2018, 90, 11908-11916.	6.5	35
39	Functional metagenomics identifies an exosialidase with an inverting catalytic mechanism that defines a new glycoside hydrolase family (GH156). <i>Journal of Biological Chemistry</i> , 2018, 293, 18138-18150.	3.4	30
40	Establishment of a five-enzyme cell-free cascade for the synthesis of uridine diphosphate N-acetylglucosamine. <i>Journal of Biotechnology</i> , 2018, 283, 120-129.	3.8	26
41	Plasma N-Glycan Signatures Are Associated With Features of Inflammatory Bowel Diseases. <i>Gastroenterology</i> , 2018, 155, 829-843.	1.3	80
42	Alterations of the Human Skin N- and O-Glycome in Basal Cell Carcinoma and Squamous Cell Carcinoma. <i>Frontiers in Oncology</i> , 2018, 8, 70.	2.8	42
43	The minimum information required for a glycomics experiment (MIRAGE) project: improving the standards for reporting glycan microarray-based data. <i>Glycobiology</i> , 2017, 27, 280-284.	2.5	69
44	Proteotyping of laboratory-scale biogas plants reveals multiple steady-states in community composition. <i>Anaerobe</i> , 2017, 46, 56-68.	2.1	33
45	Quantitative Assessment of Sialo-Glycoproteins and N-Glycans during Cardiomyogenic Differentiation of Human Induced Pluripotent Stem Cells. <i>ChemBioChem</i> , 2017, 18, 1317-1331.	2.6	44
46	Influence of the production system on the surface properties of influenza A virus particles. <i>Engineering in Life Sciences</i> , 2017, 17, 1071-1077.	3.6	3
47	Sialylation Is Dispensable for Early Murine Embryonic Development in Vitro. <i>ChemBioChem</i> , 2017, 18, 1305-1316.	2.6	27
48	Improvement of the glycoproteomic toolbox with the discovery of a unique C-terminal cleavage specificity of flavastacin for N-glycosylated asparagine. <i>Scientific Reports</i> , 2017, 7, 11419.	3.3	9
49	Proteotyping of biogas plant microbiomes separates biogas plants according to process temperature and reactor type. <i>Biotechnology for Biofuels</i> , 2016, 9, 155.	6.2	80
50	The impact of sequence database choice on metaproteomic results in gut microbiota studies. <i>Microbiome</i> , 2016, 4, 51.	11.1	124
51	Tandem Mass Spectrum Sequencing: An Alternative to Database Search Engines in Shotgun Proteomics. <i>Advances in Experimental Medicine and Biology</i> , 2016, 919, 217-226.	1.6	2
52	Towards personalized diagnostics via longitudinal study of the human plasma N-glycome. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2016, 1860, 1728-1738.	2.4	72
53	Ezrin and HNRNP expression correlate with increased virus release rate and early onset of virus-induced apoptosis of MDCK suspension cells. <i>Biotechnology Journal</i> , 2016, 11, 1332-1342.	3.5	2
54	The minimum information required for a glycomics experiment (MIRAGE) project: sample preparation guidelines for reliable reporting of glycomics datasets. <i>Glycobiology</i> , 2016, 26, 907-910.	2.5	62

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55	Glycomic Characterization of Induced Pluripotent Stem Cells Derived from a Patient Suffering from Phosphomannomutase 2 Congenital Disorder of Glycosylation (PMM2-CDG). <i>Molecular and Cellular Proteomics</i> , 2016, 15, 1435-1452.	3.8	51
56	Sialic acid-specific affinity chromatography for the separation of erythropoietin glycoforms using serotonin as a ligand. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2016, 1012-1013, 193-203.	2.3	20
57	Site-specific O-Glycosylation Analysis of Human Blood Plasma Proteins. <i>Molecular and Cellular Proteomics</i> , 2016, 15, 624-641.	3.8	67
58	Fractionation of biogas plant sludge material improves metaproteomic characterization to investigate metabolic activity of microbial communities. <i>Proteomics</i> , 2015, 15, 3585-3589.	2.2	14
59	Metaproteomics of activated sludge from a wastewater treatment plant – A pilot study. <i>Proteomics</i> , 2015, 15, 3596-3601.	2.2	52
60	Exclusive Decoration of Simian Immunodeficiency Virus Env with High-Mannose Type N-Glycans Is Not Compatible with Mucosal Transmission in Rhesus Macaques. <i>Journal of Virology</i> , 2015, 89, 11727-11733.	3.4	5
61	Colonic metaproteomic signatures of active bacteria and the host in obesity. <i>Proteomics</i> , 2015, 15, 3544-3552.	2.2	70
62	Monitoring changes in proteome during stepwise adaptation of a MDCK cell line from adherence to growth in suspension. <i>Vaccine</i> , 2015, 33, 4269-4280.	3.8	19
63	The MetaProteomeAnalyzer: A Powerful Open-Source Software Suite for Metaproteomics Data Analysis and Interpretation. <i>Journal of Proteome Research</i> , 2015, 14, 1557-1565.	3.7	169
64	Navigating through metaproteomics data: A logbook of database searching. <i>Proteomics</i> , 2015, 15, 3439-3453.	2.2	128
65	Community shifts in a well-operating agricultural biogas plant: how process variations are handled by the microbiome. <i>Applied Microbiology and Biotechnology</i> , 2015, 99, 7791-7803.	3.6	64
66	Comparison of Influenza Virus Particle Purification Using Magnetic Sulfated Cellulose Particles with an Established Centrifugation Method for Analytics. <i>Analytical Chemistry</i> , 2015, 87, 10708-10711.	6.5	4
67	N-Glycosylation Fingerprinting of Viral Glycoproteins by xCGE-LIF. <i>Methods in Molecular Biology</i> , 2015, 1331, 123-143.	0.9	39
68	Viewing the proteome: How to visualize proteomics data?. <i>Proteomics</i> , 2015, 15, 1341-1355.	2.2	32
69	MIRAGE: The minimum information required for a glycomics experiment. <i>Glycobiology</i> , 2014, 24, 402-406.	2.5	116
70	Comparative Performance of Four Methods for High-throughput Glycosylation Analysis of Immunoglobulin G in Genetic and Epidemiological Research. <i>Molecular and Cellular Proteomics</i> , 2014, 13, 1598-1610.	3.8	169
71	Prozessüberwachung von Biogasanlagen mittels Metaproteomanalyse. <i>Chemie-Ingenieur-Technik</i> , 2014, 86, 1415-1415.	0.8	0
72	DeNovoGUI: An Open Source Graphical User Interface for <i>de Novo</i> Sequencing of Tandem Mass Spectra. <i>Journal of Proteome Research</i> , 2014, 13, 1143-1146.	3.7	73

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73	Sample prefractionation with liquid isoelectric focusing enables in depth microbial metaproteome analysis of mesophilic and thermophilic biogas plants. <i>Anaerobe</i> , 2014, 29, 59-67.	2.1	68
74	Vaccine Production: Upstream Processing with Adherent or Suspension Cell Lines. <i>Methods in Molecular Biology</i> , 2014, 1104, 371-393.	0.9	23
75	CAP, a new human suspension cell line for influenza virus production. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 111-122.	3.6	38
76	Proteome analysis of virus-host cell interaction: rabies virus replication in Vero cells in two different media. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 5493-5506.	3.6	15
77	Metaproteome analysis of the microbial communities in agricultural biogas plants. <i>New Biotechnology</i> , 2013, 30, 614-622.	4.4	92
78	Toward Animal Cell Culture-Based Influenza Vaccine Design: Viral Hemagglutinin N-Glycosylation Markedly Impacts Immunogenicity. <i>Journal of Immunology</i> , 2013, 190, 220-230.	0.8	59
79	Capillary Electrophoresis/Mass Spectrometry of APTS-Labeled Glycans for the Identification of Unknown Glycan Species in Capillary Electrophoresis/Laser-Induced Fluorescence Systems. <i>Analytical Chemistry</i> , 2013, 85, 10218-10224.	6.5	68
80	Development of a high-throughput glycoanalysis method for the characterization of oligosaccharides in human milk utilizing multiplexed capillary gel electrophoresis with laser-induced fluorescence detection. <i>Electrophoresis</i> , 2013, 34, 2323-2336.	2.4	43
81	Searching for a needle in a stack of needles: challenges in metaproteomics data analysis. <i>Molecular BioSystems</i> , 2013, 9, 578-585.	2.9	93
82	ProteoCloud: A full-featured open source proteomics cloud computing pipeline. <i>Journal of Proteomics</i> , 2013, 88, 104-108.	2.4	34
83	Impact of cultivation conditions on N-glycosylation of influenza virus a hemagglutinin produced in MDCK cell culture. <i>Biotechnology and Bioengineering</i> , 2013, 110, 1691-1703.	3.3	23
84	Metagenome and metaproteome analyses of microbial communities in mesophilic biogas-producing anaerobic batch fermentations indicate concerted plant carbohydrate degradation. <i>Systematic and Applied Microbiology</i> , 2013, 36, 330-338.	2.8	182
85	Quantitative mapping of glycoprotein micro-heterogeneity and macro-heterogeneity: an evaluation of mass spectrometry signal strengths using synthetic peptides and glycopeptides. <i>Journal of Mass Spectrometry</i> , 2013, 48, 627-639.	1.6	130
86	The Minimum Information Required for a Glycomics Experiment (MIRAGE) Project: Improving the Standards for Reporting Mass-spectrometry-based Glycoanalytic Data. <i>Molecular and Cellular Proteomics</i> , 2013, 12, 991-995.	3.8	109
87	glyXalign: High-throughput migration time alignment preprocessing of electrophoretic data retrieved via multiplexed capillary gel electrophoresis with laser-induced fluorescence detection-based glycoprofiling. <i>Electrophoresis</i> , 2013, 34, 2311-2315.	2.4	14
88	Glycoproteomic Analysis of Human Fibrinogen Reveals Novel Regions of O-Glycosylation. <i>Journal of Proteome Research</i> , 2012, 11, 5804-5814.	3.7	41
89	Red-Emitting Rhodamines with Hydroxylated, Sulfonated, and Phosphorylated Dye Residues and Their Use in Fluorescence Nanoscopy. <i>Chemistry - A European Journal</i> , 2012, 18, 12986-12998.	3.3	48
90	Metaproteome analysis to determine the metabolically active part of a thermophilic microbial community producing biogas from agricultural biomass. <i>Canadian Journal of Microbiology</i> , 2012, 58, 917-922.	1.7	40

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91	Proteomic tracking and analysis of a bacterial mixed culture. <i>Proteomics</i> , 2012, 12, 1893-1901.	2.2	21
92	MALDI-TOF-MS analysis of sialylated glycans and glycopeptides using 4-chloro-3-cyanocinnamic acid matrix. <i>Proteomics</i> , 2012, 12, 1337-1348.	2.2	52
93	Limonade durch Fermentation. <i>Chemie in Unserer Zeit</i> , 2012, 46, 60-61.	0.1	0
94	Optimized CGE-LIF-Based Glycan Analysis for High-Throughput Applications. , 2012, , 599-603.		3
95	Impact of Host Cell Line Adaptation on Quasispecies Composition and Glycosylation of Influenza A Virus Hemagglutinin. <i>PLoS ONE</i> , 2011, 6, e27989.	2.5	39
96	Animal-Human Health Interface and community based surveillance in Vietnam-a strategy under Mekong Basin Disease Surveillance Cooperation (MBDS). <i>BMC Proceedings</i> , 2011, 5, P113.	1.6	1
97	Impact of different influenza cultivation conditions on HA N-Glycosylation. <i>BMC Proceedings</i> , 2011, 5, P113.	1.6	4
98	Purification and characterization of hydroquinone dioxygenase from <i>Sphingomonas</i> sp. strain TTNP3. <i>AMB Express</i> , 2011, 1, 8.	3.0	27
99	Metaproteome analysis of sewage sludge from membrane bioreactors. <i>Proteomics</i> , 2011, 11, 2738-2744.	2.2	40
100	High-density microcarrier cell cultures for influenza virus production. <i>Biotechnology Progress</i> , 2011, 27, 241-250.	2.6	28
101	Impact of Influenza Virus Adaptation Status on HA N-Glycosylation Patterns in Cell Culture-Based Vaccine Production. <i>Journal of Carbohydrate Chemistry</i> , 2011, 30, 281-290.	1.1	6
102	MDCK and Vero cells for influenza virus vaccine production: a one-to-one comparison up to lab-scale bioreactor cultivation. <i>Applied Microbiology and Biotechnology</i> , 2010, 88, 461-475.	3.6	79
103	Response of <i>Pseudomonas putida</i> KT2440 to phenol at the level of membrane proteome. <i>Journal of Proteomics</i> , 2010, 73, 1461-1478.	2.4	54
104	Virus-host cell interactions in vaccine production cell lines infected with different human influenza A virus variants: A proteomic approach. <i>Journal of Proteomics</i> , 2010, 73, 1656-1669.	2.4	29
105	Guidelines for reporting the use of capillary electrophoresis in proteomics. <i>Nature Biotechnology</i> , 2010, 28, 654-655.	17.5	24
106	Optimized Workflow for Preparation of APTS-Labeled N-Glycans Allowing High-Throughput Analysis of Human Plasma Glycomes using 48-Channel Multiplexed CGE-LIF. <i>Journal of Proteome Research</i> , 2010, 9, 6655-6664.	3.7	140
107	Quantitative analysis of cellular proteome alterations in human influenza A virus-infected mammalian cell lines. <i>Proteomics</i> , 2009, 9, 3316-3327.	2.2	97
108	Atmospheric Pressure Free Liquid Infrared MALDI Mass Spectrometry: Toward a combined ESI/MALDI-Liquid Chromatography Interface. <i>Analytical Chemistry</i> , 2009, 81, 443-452.	6.5	24

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109	Glycan analysis in cell culture-based influenza vaccine production: Influence of host cell line and virus strain on the glycosylation pattern of viral hemagglutinin. <i>Vaccine</i> , 2009, 27, 4325-4336.	3.8	76
110	Glycan analysis by CGE-LIF: Profiling influenza A virus hemagglutinin glycosylation during vaccine production. <i>Electrophoresis</i> , 2008, 29, 4203-4214.	2.4	86
111	Splitless on-line coupling of capillary high-performance liquid chromatography, capillary electrochromatography and pressurized capillary electrochromatography with nuclear magnetic resonance spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2003, 376, 1053-1061.	3.7	28
112	Perfusive flow and intraparticle distribution of a neutral analyte in capillary electrochromatography. <i>Electrophoresis</i> , 2003, 24, 4241-4253.	2.4	35
113	Liquid flow in capillary (electro)chromatography: Generation and control of micro- and nanoliter volumes. <i>Journal of Separation Science</i> , 2003, 26, 453-470.	2.5	24
114	Quantitative Study of Electrokinetic Transport in Porous Media by Confocal Laser Scanning Microscopy. <i>Langmuir</i> , 2003, 19, 4527-4531.	3.5	30
115	Electroosmotic Flow Phenomena in Packed Capillaries: From the Interstitial Velocities to Intraparticle and Boundary Layer Mass Transfer. <i>Journal of Physical Chemistry B</i> , 2002, 106, 12709-12721.	2.6	28
116	Influence of Pressure upon Coupling Pressurized Capillary Electrochromatography with Nuclear Magnetic Resonance Spectroscopy. <i>Analytical Chemistry</i> , 2001, 73, 3234-3239.	6.5	60
117	Electrokinetics in Fixed Beds: Experimental Demonstration of Electroosmotic Perfusion. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 1684-1687.	13.8	24
118	Improved column preparation and performance in capillary electrochromatography. <i>Journal of Chromatography A</i> , 2000, 887, 367-378.	3.7	49
119	Electroosmotic and Pressure-Driven Flow in Open and Packed Capillaries: Velocity Distributions and Fluid Dispersion. <i>Analytical Chemistry</i> , 2000, 72, 2292-2301.	6.5	118
120	Fritless capillary electrochromatography. <i>Electrophoresis</i> , 1999, 20, 43-49.	2.4	69