Erdmann Rapp

List of Publications by Year
in descending order

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	Metagenome and metaproteome analyses of microbial communities in mesophilic biogas-producing anaerobic batch fermentations indicate concerted plant carbohydrate degradation. Systematic and Applied Microbiology, 2013, 36, 330-338.	2.8	182
2	Comparative Performance of Four Methods for High-throughput Glycosylation Analysis of Immunoglobulin G in Genetic and Epidemiological Research. Molecular and Cellular Proteomics, 2014, 13, 1598-1610.	3.8	169
3	The MetaProteomeAnalyzer: A Powerful Open-Source Software Suite for Metaproteomics Data Analysis and Interpretation. Journal of Proteome Research, 2015, 14, 1557-1565.	3.7	169
4	Optimized Workflow for Preparation of APTS-Labeled N-Glycans Allowing High-Throughput Analysis of Human Plasma Glycomes using 48-Channel Multiplexed CGE-LIF. Journal of Proteome Research, 2010, 9, 6655-6664.	3.7	140
5	Quantitative mapping of glycoprotein microâ€heterogeneity and macroâ€heterogeneity: an evaluation of mass spectrometry signal strengths using synthetic peptides and glycopeptides. Journal of Mass Spectrometry, 2013, 48, 627-639.	1.6	130
6	Navigating through metaproteomics data: A logbook of database searching. Proteomics, 2015, 15, 3439-3453.	2.2	128
7	The impact of sequence database choice on metaproteomic results in gut microbiota studies. Microbiome, 2016, 4, 51.	11.1	124
8	Electroosmotic and Pressure-Driven Flow in Open and Packed Capillaries:â€‰ Velocity Distributions and Fluid Dispersion. Analytical Chemistry, 2000, 72, 2292-2301.	6.5	118
9	MIRAGE: The minimum information required for a glycomics experiment. Glycobiology, 2014, 24, 402-406.	2.5	116
10	The Minimum Information Required for a Glycomics Experiment (MIRAGE) Project: Improving the Standards for Reporting Mass-spectrometry-based Glycoanalytic Data. Molecular and Cellular Proteomics, 2013, 12, 991-995.	3.8	109
11	Quantitative analysis of cellular proteome alterations in human influenza A virusâ€infected mammalian cell lines. Proteomics, 2009, 9, 3316-3327.	2.2	97
12	Searching for a needle in a stack of needles: challenges in metaproteomics data analysis. Molecular BioSystems, 2013, 9, 578-585.	2.9	93
13	Metaproteome analysis of the microbial communities in agricultural biogas plants. New Biotechnology, 2013, 30, 614-622.	4.4	92
14	NIST Interlaboratory Study on Glycosylation Analysis of Monoclonal Antibodies: Comparison of Results from Diverse Analytical Methods. Molecular and Cellular Proteomics, 2020, 19, 11-30.	3.8	87
15	Nâ€glycan analysis by CGEâ€“LIF: Profiling influenza A virus hemagglutinin Nâ€glycosylation during vaccine production. Electrophoresis, 2008, 29, 4203-4214.	2.4	86
16	Proteotyping of biogas plant microbiomes separates biogas plants according to process temperature and reactor type. Biotechnology for Biofuels, 2016, 9, 155.	6.2	80
17	Plasma N-Glycan Signatures Are Associated With Features ofÂInflammatory Bowel Diseases. Gastroenterology, 2018, 155, 829-843.	1.3	80
18	MDCK and Vero cells for influenza virus vaccine production: a one-to-one comparison up to lab-scale bioreactor cultivation. Applied Microbiology and Biotechnology, 2010, 88, 461-475.	3.6	79

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19	Glycan analysis in cell culture-based influenza vaccine production: Influence of host cell line and virus strain on the glycosylation pattern of viral hemagglutinin. Vaccine, 2009, 27, 4325-4336.	3.8	76
20	Community evaluation of glycoproteomics informatics solutions reveals high-performance search strategies for serum glycopeptide analysis. Nature Methods, 2021, 18, 1304-1316.	19.0	74
21	DeNovoGUI: An Open Source Graphical User Interface for de Novo Sequencing of Tandem Mass Spectra. Journal of Proteome Research, 2014, 13, 1143-1146.	3.7	73
22	Towards personalized diagnostics via longitudinal study of the human plasma N-glycome. Biochimica Et Biophysica Acta - General Subjects, 2016, 1860, 1728-1738.	2.4	72
23	Colonic metaproteomic signatures of active bacteria and the host in obesity. Proteomics, 2015, 15, 3544-3552.	2.2	70
24	Fritless capillary electrochromatography. Electrophoresis, 1999, 20, 43-49.	2.4	69
25	The minimum information required for a glycomics experiment (MIRAGE) project: improving the standards for reporting glycan microarray-based data. Glycobiology, 2017, 27, 280-284.	2.5	69
26	High-throughput Serum N-Glycomics: Method Comparison and Application to Study Rheumatoid Arthritis and Pregnancy-associated Changes. Molecular and Cellular Proteomics, 2019, 18, 3-15.	3.8	69
27	Capillary Electrophoresis/Mass Spectrometry of APTS-Labeled Glycans for the Identification of Unknown Glycan Species in Capillary Electrophoresis/Laser-Induced Fluorescence Systems. Analytical Chemistry, 2013, 85, 10218-10224.	6.5	68
28	Sample prefractionation with liquid isoelectric focusing enables in depth microbial metaproteome analysis of mesophilic and thermophilic biogas plants. Anaerobe, 2014, 29, 59-67.	2.1	68
29	Site-specific O-Glycosylation Analysis of Human Blood Plasma Proteins. Molecular and Cellular Proteomics, 2016, 15, 624-641.	3.8	67
30	MPA Portable: A Stand-Alone Software Package for Analyzing Metaproteome Samples on the Go. Analytical Chemistry, 2018, 90, 685-689.	6.5	65
31	Community shifts in a well-operating agricultural biogas plant: how process variations are handled by the microbiome. Applied Microbiology and Biotechnology, 2015, 99, 7791-7803.	3.6	64
32	The minimum information required for a glycomics experiment (MIRAGE) project: sample preparation guidelines for reliable reporting of glycomics datasets. Glycobiology, 2016, 26, 907-910.	2.5	62
33	Influence of Pressure upon Coupling Pressurized Capillary Electrochromatography with Nuclear Magnetic Resonance Spectroscopy. Analytical Chemistry, 2001, 73, 3234-3239.	6.5	60
34	Toward Animal Cell Cultureâ€“Based Influenza Vaccine Design: Viral Hemagglutinin N-Glycosylation Markedly Impacts Immunogenicity. Journal of Immunology, 2013, 190, 220-230.	0.8	59
35	Response of Pseudomonas putida KT2440 to phenol at the level of membrane proteome. Journal of Proteomics, 2010, 73, 1461-1478.	2.4	54
36	MALDIâ€TOFâ€MS analysis of sialylated glycans and glycopeptides using 4â€chloroâ€Îąâ€cyanocinnamic acid matrix. Proteomics, 2012, 12, 1337-1348.	2.2	52

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37	Metaproteomics of activated sludge from a wastewater treatment plant â€“ A pilot study. Proteomics, 2015, 15, 3596-3601.	2.2	52
38	Glycomic Characterization of Induced Pluripotent Stem Cells Derived from a Patient Suffering from Phosphomannomutase 2 Congenital Disorder of Glycosylation (PMM2-CDG). Molecular and Cellular Proteomics, 2016, 15, 1435-1452.	3.8	51
39	Improved column preparation and performance in capillary electrochromatography. Journal of Chromatography A, 2000, 887, 367-378.	3.7	49
40	Redâ€Emitting Rhodamines with Hydroxylated, Sulfonated, and Phosphorylated Dye Residues and Their Use in Fluorescence Nanoscopy. Chemistry - A European Journal, 2012, 18, 12986-12998.	3.3	48
41	Quantitative Assessment of Sialoâ€Glycoproteins and Nâ€Glycans during Cardiomyogenic Differentiation of Human Induced Pluripotent Stem Cells. ChemBioChem, 2017, 18, 1317-1331.	2.6	44
42	Development of a highâ€throughput glycoanalysis method for the characterization of oligosaccharides in human milk utilizing multiplexed capillary gel electrophoresis with laserâ€induced fluorescence detection. Electrophoresis, 2013, 34, 2323-2336.	2.4	43
43	Alterations of the Human Skin N- and O-Glycome in Basal Cell Carcinoma and Squamous Cell Carcinoma. Frontiers in Oncology, 2018, 8, 70.	2.8	42
44	Post-Column Make-Up Flow (PCMF) Enhances the Performance of Capillary-Flow PGC-LC-MS/MS-Based Glycomics. Analytical Chemistry, 2019, 91, 4559-4567.	6.5	42
45	Glycoproteomic Analysis of Human Fibrinogen Reveals Novel Regions of O-Glycosylation. Journal of Proteome Research, 2012, 11, 5804-5814.	3.7	41
46	Metaproteome analysis of sewage sludge from membrane bioreactors. Proteomics, 2011, 11, 2738-2744.	2.2	40
47	Metaproteome analysis to determine the metabolically active part of a thermophilic microbial community producing biogas from agricultural biomass. Canadian Journal of Microbiology, 2012, 58, 917-922.	1.7	40
48	Impact of Host Cell Line Adaptation on Quasispecies Composition and Glycosylation of Influenza A Virus Hemagglutinin. PLoS ONE, 2011, 6, e27989.	2.5	39
49	N-Glycosylation Fingerprinting of Viral Glycoproteins by xCGE-LIF. Methods in Molecular Biology, 2015, 1331, 123-143.	0.9	39
50	CAP, a new human suspension cell line for influenza virus production. Applied Microbiology and Biotechnology, 2013, 97, 111-122.	3.6	38
51	The Fine Art of Destruction: A Guide to Inâ€Depth Glycoproteomic Analysesâ€”Exploiting the Diagnostic Potential of Fragment Ions. Proteomics, 2018, 18, e1800282.	2.2	36
52	Perfusive flow and intraparticle distribution of a neutral analyte in capillary electrochromatography. Electrophoresis, 2003, 24, 4241-4253.	2.4	35
53	One pot synthesis of GDPâ€mannose by a multiâ€enzyme cascade for enzymatic assembly of lipidâ€linked oligosaccharides. Biotechnology and Bioengineering, 2018, 115, 192-205.	3.3	35
54	glyXtool^{MS}: An Open-Source Pipeline for Semiautomated Analysis of Glycopeptide Mass Spectrometry Data. Analytical Chemistry, 2018, 90, 11908-11916.	6.5	35

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55	ProteoCloud: A full-featured open source proteomics cloud computing pipeline. Journal of Proteomics, 2013, 88, 104-108.	2.4	34
56	Proteotyping of laboratory-scale biogas plants reveals multiple steady-states in community composition. Anaerobe, 2017, 46, 56-68.	2.1	33
57	Viewing the proteome: How to visualize proteomics data?. Proteomics, 2015, 15, 1341-1355.	2.2	32
58	Quantitative Study of Electrokinetic Transport in Porous Media by Confocal Laser Scanning Microscopy. Langmuir, 2003, 19, 4527-4531.	3.5	30
59	Functional metagenomics identifies an exosialidase with an inverting catalytic mechanism that defines a new glycoside hydrolase family (GH156). Journal of Biological Chemistry, 2018, 293, 18138-18150.	3.4	30
60	The minimum information required for a glycomics experiment (MIRAGE) project: LC guidelines. Glycobiology, 2019, 29, 349-354.	2.5	30
61	Virusâ€“host cell interactions in vaccine production cell lines infected with different human influenza A virus variants: A proteomic approach. Journal of Proteomics, 2010, 73, 1656-1669.	2.4	29
62	Electroosmotic Flow Phenomena in Packed Capillaries:â€‰ From the Interstitial Velocities to Intraparticle and Boundary Layer Mass Transfer. Journal of Physical Chemistry B, 2002, 106, 12709-12721.	2.6	28
63	Splitless on-line coupling of capillary high-performance liquid chromatography, capillary electrochromatography and pressurized capillary electrochromatography with nuclear magnetic resonance spectroscopy. Analytical and Bioanalytical Chemistry, 2003, 376, 1053-1061.	3.7	28
64	Highâ€density microcarrier cell cultures for influenza virus production. Biotechnology Progress, 2011, 27, 241-250.	2.6	28
65	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. Analytical Chemistry, 2019, 91, 6413-6418.	6.5	28
66	Purification and characterization of hydroquinone dioxygenase from Sphingomonas sp. strain TTNP3. AMB Express, 2011, 1, 8.	3.0	27
67	Sialylation Is Dispensable for Early Murine Embryonic Development in Vitro. ChemBioChem, 2017, 18, 1305-1316.	2.6	27
68	Establishment of a five-enzyme cell-free cascade for the synthesis of uridine diphosphate N-acetylglucosamine. Journal of Biotechnology, 2018, 283, 120-129.	3.8	26
69	The subcommissural organ and the Reissner fiber: old friends revisited. Cell and Tissue Research, 2019, 375, 507-529.	2.9	26
70	High-resolution longitudinal N- and O-glycoprofiling of human monocyte-to-macrophage transition. Glycobiology, 2020, 30, 679-694.	2.5	26
71	Synthetic glycans control gut microbiome structure and mitigate colitis in mice. Nature Communications, 2022, 13, 1244.	12.8	25
72	Electrokinetics in Fixed Beds: Experimental Demonstration of Electroosmotic Perfusion. Angewandte Chemie - International Edition, 2001, 40, 1684-1687.	13.8	24

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73	Liquid flow in capillary (electro)chromatography: Generation and control of micro- and nanoliter volumes. Journal of Separation Science, 2003, 26, 453-470.	2.5	24
74	Atmospheric Pressure Free Liquid Infrared MALDI Mass Spectrometry: Toward a combined ESI/MALDI-Liquid Chromatography Interface. Analytical Chemistry, 2009, 81, 443-452.	6.5	24
75	Guidelines for reporting the use of capillary electrophoresis in proteomics. Nature Biotechnology, 2010, 28, 654-655.	17.5	24
76	Impact of cultivation conditions on Nâ€glycosylation of influenza virus a hemagglutinin produced in MDCK cell culture. Biotechnology and Bioengineering, 2013, 110, 1691-1703.	3.3	23
77	Minimal B Cell Extrinsic IgG Glycan Modifications of Pro- and Anti-Inflammatory IgG Preparations in vivo. Frontiers in Immunology, 2019, 10, 3024.	4.8	23
78	Vaccine Production: Upstream Processing with Adherent or Suspension Cell Lines. Methods in Molecular Biology, 2014, 1104, 371-393.	0.9	23
79	Proteomic tracking and analysis of a bacterial mixed culture. Proteomics, 2012, 12, 1893-1901.	2.2	21
80	Sialic acid-specific affinity chromatography for the separation of erythropoietin glycoforms using serotonin as a ligand. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2016, 1012-1013, 193-203.	2.3	20
81	Monitoring changes in proteome during stepwise adaptation of a MDCK cell line from adherence to growth in suspension. Vaccine, 2015, 33, 4269-4280.	3.8	19
82	Efficient influenza A virus production in high cell density using the novel porcine suspension cell line PBG.PK2.1. Vaccine, 2019, 37, 7019-7028.	3.8	18
83	Proteome analysis of virusâ€“host cell interaction: rabies virus replication in Vero cells in two different media. Applied Microbiology and Biotechnology, 2013, 97, 5493-5506.	3.6	15
84	Enzymatic Cascade Synthesis Provides Novel Linear Human Milk Oligosaccharides as Reference Standards for xCGE-LIF Based High-Throughput Analysis. Biotechnology Journal, 2019, 14, 1800305.	3.5	15
85	Presence and Levels of Galactosyllactoses and Other Oligosaccharides in Human Milk and Their Variation during Lactation and According to Maternal Phenotype. Nutrients, 2021, 13, 2324.	4.1	15
86	glyXalign: Highâ€throughput migration time alignment preprocessing of electrophoretic data retrieved via multiplexed capillary gel electrophoresis with laserâ€induced fluorescence detectionâ€based glycoprofiling. Electrophoresis, 2013, 34, 2311-2315.	2.4	14
87	Fractionation of biogas plant sludge material improves metaproteomic characterization to investigate metabolic activity of microbial communities. Proteomics, 2015, 15, 3585-3589.	2.2	14
88	Inverting family GH156 sialidases define an unusual catalytic motif for glycosidase action. Nature Communications, 2019, 10, 4816.	12.8	13
89	A spoonful of Lâ€fucoseâ€”an efficient therapy for GFUSâ€CDG, a new glycosylation disorder. EMBO Molecular Medicine, 2021, 13, e14332.	6.9	13
90	Improvement of electrospray stability in negative ion mode for nano-PGC-LC-MS glycoanalysis via post-column make-up flow. Glycoconjugate Journal, 2018, 35, 499-509.	2.7	11

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91	Enzymatic Synthesis of Glycans and Glycoconjugates. Advances in Biochemical Engineering/Biotechnology, 2020, 175, 231-280.	1.1	11
92	Combining functional metagenomics and glycoanalytics to identify enzymes that facilitate structural characterization of sulfated N-glycans. Microbial Cell Factories, 2021, 20, 162.	4.0	10
93	Improvement of the glycoproteomic toolbox with the discovery of a unique C-terminal cleavage specificity of flavastacin for N-glycosylated asparagine. Scientific Reports, 2017, 7, 11419.	3.3	9
94	Simultaneous Monitoring of Monoclonal Antibody Variants by Strong Cation-Exchange Chromatography Hyphenated to Mass Spectrometry to Assess Quality Attributes of Rituximab-Based Biotherapeutics. International Journal of Molecular Sciences, 2021, 22, 9072.	4.1	9
95	Enzymatic Cascades for Tailored 13C6 and 15N Enriched Human Milk Oligosaccharides. Molecules, 2019, 24, 3482.	3.8	8
96	Synthesis of lipid-linked oligosaccharides by a compartmentalized multi-enzyme cascade for the in vitro N-glycosylation of peptides. Journal of Biotechnology, 2020, 322, 54-65.	3.8	8
97	Capillary (Gel) Electrophoresis-Based Methods for Immunoglobulin (G) Glycosylation Analysis. Experientia Supplementum (2012), 2021, 112, 137-172.	0.9	8
98	A Bacterial Mannose Binding Lectin as a Tool for the Enrichment of C- and O-Mannosylated Peptides. Analytical Chemistry, 2022, 94, 7329-7338.	6.5	8
99	FUT6 deficiency compromises basophil function by selectively abrogating their sialyl-Lewis x expression. Communications Biology, 2021, 4, 832.	4.4	7
100	Impact of Influenza Virus Adaptation Status on HAN-Glycosylation Patterns in Cell Culture-Based Vaccine Production. Journal of Carbohydrate Chemistry, 2011, 30, 281-290.	1.1	6
101	Comprehensive Nâ€glycosylation analysis of the influenza A virus proteins HA and NA from adherent and suspension MDCK cells. FEBS Journal, 2021, 288, 4869-4891.	4.7	6
102	Exclusive Decoration of Simian Immunodeficiency Virus Env with High-Mannose Type N-Glycans Is Not Compatible with Mucosal Transmission in Rhesus Macaques. Journal of Virology, 2015, 89, 11727-11733.	3.4	5
103	State-of-the-Art Glycomics Technologies in Glycobiotechnology. Advances in Biochemical Engineering/Biotechnology, 2020, 175, 379-411.	1.1	5
104	Glycosyltransferase POMGNT1 deficiency strengthens N-cadherin-mediated cellâ€“cell adhesion. Journal of Biological Chemistry, 2021, 296, 100433.	3.4	5
105	Site-specific N-glycosylation analysis of animal cell culture-derived Zika virus proteins. Scientific Reports, 2021, 11, 5147.	3.3	5
106	Cell-Free Glycoengineering of the Recombinant SARS-CoV-2 Spike Glycoprotein. Frontiers in Bioengineering and Biotechnology, 2021, 9, 699025.	4.1	5
107	Impact of different influenza cultivation conditions on HA N-Glycosylation. BMC Proceedings, 2011, 5, P113.	1.6	4
108	Comparison of Influenza Virus Particle Purification Using Magnetic Sulfated Cellulose Particles with an Established Centrifugation Method for Analytics. Analytical Chemistry, 2015, 87, 10708-10711.	6.5	4

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109	Nâ€glycosylation analysis of mouse immunoglobulin G isolated from dried blood spots. Electrophoresis, 2020, 42, 2615-2618.	2.4	4
110	Influence of the production system on the surface properties of influenza A virus particles. Engineering in Life Sciences, 2017, 17, 1071-1077.	3.6	3
111	Glycoproteomics Technologies in Glycobiotechnology. Advances in Biochemical Engineering/Biotechnology, 2020, 175, 413-434.	1.1	3
112	Optimized CGE-LIF-Based Glycan Analysis for High-Throughput Applications. , 2012, , 599-603.		3
113	Tandem Mass Spectrum Sequencing: An Alternative to Database Search Engines in Shotgun Proteomics. Advances in Experimental Medicine and Biology, 2016, 919, 217-226.	1.6	2
114	Ezrin and HNRNP expression correlate with increased virus release rate and early onset of virusâ€induced apoptosis of MDCK suspension cells. Biotechnology Journal, 2016, 11, 1332-1342.	3.5	2
115	Tracking changes in adaptation to suspension growth for MDCK cells: cell growth correlates with levels of metabolites, enzymes and proteins. Applied Microbiology and Biotechnology, 2021, 105, 1861-1874.	3.6	2
116	A patient-based medaka alg2 mutant as a model for hypo-N-glycosylation. Development (Cambridge), 2021, 148, .	2.5	2
117	The minimum information required for a glycomics experiment (MIRAGE): reporting guidelines for capillary electrophoresis. Glycobiology, 2022, 32, 580-587.	2.5	2
118	Animal-Human Health Interface and community based surveillance in Vietnam-a strategy under Mekong Basin Disease Surveillance Cooperation (MBDS). BMC Proceedings, 2011, 5, P113.	1.6	1
119	Limonade durch Fermentation. Chemie in Unserer Zeit, 2012, 46, 60-61.	0.1	0
120	ProzessÃ¼berwachung von Biogasanlagen mittels Metaproteomanalyse. Chemie-Ingenieur-Technik, 2014, 86, 1415-1415.	0.8	0