

# Catherine Fenselau

## List of Publications by Year in descending order

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88

papers

6,630

citations

87886

38

h-index

64791

79

g-index

88

all docs

88

docs citations

88

times ranked

6405

citing authors

#	ARTICLE	IF	CITATIONS
1	Proteolytic <sup>18</sup> O Labeling for Comparative Proteomics: A Model Studies with Two Serotypes of Adenovirus. Analytical Chemistry, 2001, 73, 2836-2842.	6.5	807
2	Characterization of intact microorganisms by MALDI mass spectrometry. Mass Spectrometry Reviews, 2001, 20, 157-171.	5.4	750
3	How many human proteoforms are there?. Nature Chemical Biology, 2018, 14, 206-214.	8.0	580
4	Myeloid-Derived Suppressor Cells: Immune-Suppressive Cells That Impair Antitumor Immunity and Are Sculpted by Their Environment. Journal of Immunology, 2018, 200, 422-431.	0.8	404
5	Characterization of the Protein Subset Desorbed by MALDI from Whole Bacterial Cells. Analytical Chemistry, 2001, 73, 746-750.	6.5	325
6	Microorganism Identification by Mass Spectrometry and Protein Database Searches. Analytical Chemistry, 1999, 71, 2732-2738.	6.5	307
7	Dissection of Proteolytic <sup>18</sup> O Labeling: An Endoprotease-Catalyzed <sup>16</sup> O-to- <sup>18</sup> O Exchange of Truncated Peptide Substrates. Journal of Proteome Research, 2003, 2, 147-152.	3.7	199
8	Proteolytic <sup>18</sup> O Labeling for Comparative Proteomics: An Evaluation of Endoprotease Glu-C as the Catalytic Agent. Journal of Proteome Research, 2002, 1, 27-33.	3.7	169
9	Rapid Characterization of Spores of Bacillus cereus Group Bacteria by Matrix-Assisted Laser Desorption-Ionization Time-of-Flight Mass Spectrometry. Applied and Environmental Microbiology, 2000, 66, 3828-3834.	3.1	141
10	Kurstakins: A New Class of Lipopeptides Isolated from Bacillus thuringiensis. Journal of Natural Products, 2000, 63, 1492-1496.	3.0	137
11	Exosomes from Myeloid-Derived Suppressor Cells Carry Biologically Active Proteins. Journal of Proteome Research, 2014, 13, 836-843.	3.7	137
12	Characterization of Protein Biomarkers Desorbed by MALDI from Whole Fungal Cells. Analytical Chemistry, 2001, 73, 5228-5231.	6.5	121
13	Lectin-Based Affinity Capture for MALDI-MS Analysis of Bacteria. Analytical Chemistry, 1999, 71, 1460-1463.	6.5	117
14	Identification of Bacillus Spores by Matrix-Assisted Laser Desorption Ionization-Mass Spectrometry. Applied and Environmental Microbiology, 1999, 65, 4313-4319.	3.1	113
15	Structural analysis of oligosaccharides by tandem mass spectrometry: Collisional activation of sodium adduct ions. Biological Mass Spectrometry, 1990, 19, 747-754.	0.5	102
16	Lectin and Carbohydrate Affinity Capture Surfaces for Mass Spectrometric Analysis of Microorganisms. Analytical Chemistry, 2001, 73, 751-757.	6.5	97
17	A review of quantitative methods for proteomic studies. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2007, 855, 14-20.	2.3	93
18	Small, Acid-Soluble Proteins as Biomarkers in Mass Spectrometry Analysis of Bacillus Spores. Applied and Environmental Microbiology, 2003, 69, 1100-1107.	3.1	90

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19	18O2-Labeling in Quantitative Proteomic Strategies: A Status Report. Journal of Proteome Research, 2009, 8, 2140-2143.	3.7	88
20	Mass Spectrometry-Based Proteolytic Mapping for Rapid Virus Identification. Analytical Chemistry, 2002, 74, 2529-2534.	6.5	84
21	Differential Content of Proteins, mRNAs, and miRNAs Suggests that MDSC and Their Exosomes May Mediate Distinct Immune Suppressive Functions. Journal of Proteome Research, 2018, 17, 486-498.	3.7	84
22	Investigation of Doxorubicin Resistance in MCF-7 Breast Cancer Cells Using Shot-Gun Comparative Proteomics with Proteolytic18O Labeling. Journal of Proteome Research, 2004, 3, 455-462.	3.7	82
23	High-Throughput Middle-Down Analysis Using an Orbitrap. Journal of Proteome Research, 2010, 9, 3886-3890.	3.7	78
24	Characterization of Bacillus Spore Species and Their Mixtures Using Postsource Decay with a Curved-Field Reflectron. Analytical Chemistry, 2003, 75, 5618-5627.	6.5	70
25	Integration of Jacobson's Pellicle Method into Proteomic Strategies for Plasma Membrane Proteins. Journal of Proteome Research, 2004, 3, 1267-1277.	3.7	69
26	Rapid Chemical Digestion of Small Acid-Soluble Spore Proteins for Analysis of Bacillus Spores. Analytical Chemistry, 2006, 78, 181-188.	6.5	63
27	Evaluation of Microwave-Accelerated Residue-Specific Acid Cleavage for Proteomic Applications. Journal of Proteome Research, 2008, 7, 579-586.	3.7	62
28	Analysis of Viral Glycoproteins by MALDI-TOF Mass Spectrometry. Analytical Chemistry, 2001, 73, 1544-1548.	6.5	59
29	The PRY/SPRY/B30.2 Domain of Butyrophilin 1A1 (BTN1A1) Binds to Xanthine Oxidoreductase. Journal of Biological Chemistry, 2009, 284, 22444-22456.	3.4	59
30	Surface Glycoproteins of Exosomes Shed by Myeloid-Derived Suppressor Cells Contribute to Function. Journal of Proteome Research, 2017, 16, 238-246.	3.7	57
31	Rapid characterization of <i>Bacillus</i> spores targeting species-specific peptides produced with an atmospheric pressure matrix-assisted laser desorption/ionization source. Journal of Mass Spectrometry, 2005, 40, 464-474.	1.6	53
32	Unbiased Examination of Changes in Plasma Membrane Proteins in Drug Resistant Cancer Cells. Journal of Proteome Research, 2005, 4, 2148-2153.	3.7	53
33	Differential Protein Expression in the Cytosol Fraction of an MCF-7 Breast Cancer Cell Line Selected for Resistance toward Melphalan. Journal of Proteome Research, 2002, 1, 435-442.	3.7	50
34	A Duplicated ESAT-6 Region of ESX-5 Is Involved in Protein Export and Virulence of Mycobacteria. Infection and Immunity, 2015, 83, 4349-4361.	2.2	49
35	Ubiquitinated Proteins in Exosomes Secreted by Myeloid-Derived Suppressor Cells. Journal of Proteome Research, 2014, 13, 5965-5972.	3.7	44
36	Rapid microorganism identification with on-slide proteolytic digestion followed by matrix-assisted laser desorption/ionization tandem mass spectrometry and database searching. Rapid Communications in Mass Spectrometry, 2002, 16, 1953-1956.	1.5	42

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37	Applications of 1.06-µm IR Laser Desorption on a Fourier Transform Mass Spectrometer. <i>Analytical Chemistry</i> , 1998, 70, 4890-4895.	6.5	41
38	Extracellular vesicle proteomes reflect developmental phases of <i>Bacillus subtilis</i> . <i>Clinical Proteomics</i> , 2016, 13, 6.	2.1	41
39	Corona plasma discharge for rapid analysis of microorganisms by mass spectrometry. , 1999, 13, 604-606.		38
40	Primary sequence and site-selective hydroxylation of prolines in isoforms of a major peanut allergen protein Ara h 2. <i>Protein Science</i> , 2010, 19, 174-182.	7.6	38
41	Analysis of a Model Virus Using Residue-Specific Chemical Cleavage and MALDI-TOF Mass Spectrometry. <i>Analytical Chemistry</i> , 2007, 79, 654-658.	6.5	36
42	Top-down analysis of low mass proteins in exosomes shed by murine myeloid-derived suppressor cells. <i>International Journal of Mass Spectrometry</i> , 2015, 378, 264-269.	1.5	34
43	Integration of Residue-Specific Acid Cleavage into Proteomic Workflows. <i>Journal of Proteome Research</i> , 2007, 6, 4525-4527.	3.7	33
44	Factors contributing to peak broadening and mass accuracy in the characterization of intact spores using matrix-assisted laser desorption/ionization coupled with time-of-flight mass spectrometry. <i>Journal of Mass Spectrometry</i> , 2001, 36, 929-936.	1.6	30
45	Proteomic Evidence for Roles for Nucleolin and Poly[ADP-ribosyl] Transferase in Drug Resistance. <i>Journal of Proteome Research</i> , 2005, 4, 1583-1591.	3.7	29
46	Endothermic ion molecule reactions. <i>Journal of the American Society for Mass Spectrometry</i> , 1991, 2, 189-197.	2.8	25
47	Identification of β-Lactamase in Antibiotic-Resistant <i>Bacillus cereus</i> Spores. <i>Applied and Environmental Microbiology</i> , 2008, 74, 904-906.	3.1	25
48	Matrix-assisted laser desorption/ionization time-of-flight analysis of <i>Bacillus</i> spores using a 2.94-µm infrared laser. <i>Rapid Communications in Mass Spectrometry</i> , 2000, 14, 1701-1706.	1.5	24
49	Integration of 18O Labeling and Solution Isoelectric Focusing in a Shotgun Analysis of Mitochondrial Proteins. <i>Journal of Proteome Research</i> , 2007, 6, 4601-4607.	3.7	24
50	Detection of Plasmid Insertion in <i>Escherichia coli</i> by MALDI-TOF Mass Spectrometry. <i>Analytical Chemistry</i> , 2007, 79, 5399-5406.	6.5	24
51	Enrichment of Plasma Membrane Proteins Using Nanoparticle Pellicles: Comparison between Silica and Higher Density Nanoparticles. <i>Journal of Proteome Research</i> , 2013, 12, 1134-1141.	3.7	23
52	Critical Reviews in Analytical Chemistry. <i>Analytical Chemistry</i> , 2014, 86, 1-1.	6.5	22
53	Solution Isoelectric Focusing for Peptide Analysis: A Comparative Investigation of an Insoluble Nuclear Protein Fraction. <i>Journal of Proteome Research</i> , 2005, 4, 2126-2132.	3.7	20
54	Extension of microwave-accelerated residue-specific acid cleavage to proteins with carbohydrate side chains and disulfide linkages. <i>International Journal of Mass Spectrometry</i> , 2008, 278, 109-113.	1.5	20

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55	Evaluation of Spectral Counting for Relative Quantitation of Proteoforms in Top-Down Proteomics. Analytical Chemistry, 2016, 88, 10900-10907.	6.5	18
56	Proteolytic Labeling With $^{18}\text{O}$ for Comparative Proteomics Studies. Methods in Molecular Biology, 2007, 359, 135-142.	0.9	18
57	Molecular cargo in myeloid-derived suppressor cells and their exosomes. Cellular Immunology, 2021, 359, 104258.	3.0	17
58	Proteomic Identification and Analysis of K63-Linked Ubiquitin Conjugates. Analytical Chemistry, 2012, 84, 10121-10128.	6.5	16
59	Unexpected Trypsin Cleavage at Ubiquitinated Lysines. Analytical Chemistry, 2015, 87, 8144-8148.	6.5	16
60	Peptide-based systems analysis of inflammation induced myeloid-derived suppressor cells reveals diverse signaling pathways. Proteomics, 2016, 16, 1881-1888.	2.2	16
61	Microwave assisted acid cleavage for denaturation and proteolysis of intact human adenovirus. International Journal of Mass Spectrometry, 2011, 301, 7-11.	1.5	14
62	Top-Down Proteomic Characterization of Truncated Proteoforms. Journal of Proteome Research, 2019, 18, 4013-4019.	3.7	14
63	Ubiquitin Conjugation Probed by Inflammation in Myeloid-Derived Suppressor Cell Extracellular Vesicles. Journal of Proteome Research, 2018, 17, 315-324.	3.7	13
64	Rapid analysis of ricin using hot acid digestion and MALDI-TOF mass spectrometry. Journal of Mass Spectrometry, 2018, 53, 1013-1017.	1.6	13
65	Top-Down Analysis of Branched Proteins Using Mass Spectrometry. Analytical Chemistry, 2018, 90, 4032-4038.	6.5	12
66	Mass-biased partitioning to enhance middle down proteomics analysis. Journal of Mass Spectrometry, 2013, 48, 340-343.	1.6	10
67	Characterization of intact microorganisms by MALDI mass spectrometry. Mass Spectrometry Reviews, 2001, 20, 157.	5.4	10
68	Quantitative Protein Analysis Using Enzymatic [ $^{18}\text{O}$ ]Water Labeling. Current Protocols in Protein Science, 2014, 76, 23.4.1-23.4.9.	2.8	9
69	Metastable decay of peptide ions on a Fourier transform mass spectrometer equipped with an external ion source. , 2000, 35, 183-188.		8
70	Preparing to read the ubiquitin code: top-down analysis of unanchored ubiquitin tetramers. Journal of Mass Spectrometry, 2016, 51, 629-637.	1.6	8
71	Preparing to read the ubiquitin code: characterization of ubiquitin trimers by top-down mass spectrometry. Journal of Mass Spectrometry, 2016, 51, 315-321.	1.6	8
72	Preparing to read the ubiquitin code: a middle-out strategy for characterization of all lysine-linked diubiquitins. Journal of Mass Spectrometry, 2014, 49, 1272-1278.	1.6	7

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73	Microwave supported hydrolysis prepares Bacillus spores for proteomic analysis. International Journal of Mass Spectrometry, 2019, 435, 227-233.	1.5	7
74	MALDI-TOF Mass Spectrometric Detection of SARS-CoV-2 Using Cellulose Sulfate Ester Enrichment and Hot Acid Treatment. Journal of Proteome Research, 2022, 21, 2055-2062.	3.7	7
75	Analysis of the topology of ubiquitin chains. Methods in Enzymology, 2019, 626, 323-346.	1.0	6
76	Top-down analysis of novel synthetic branched proteins. Journal of Mass Spectrometry, 2019, 54, 19-25.	1.6	6
77	Rapid Characterization of Microorganisms by Mass Spectrometry: An Overview. ACS Symposium Series, 2011, , 1-4.	0.5	4
78	Laser Desorption electron impact mass spectrometry: Studies of ion radical fragmentation mechanisms and hydrogen/deuterium rearrangement in time-resolved experiments. Organic Mass Spectrometry, 1989, 24, 694-698.	1.3	3
79	Nanowire pellicles for eukaryotic cells: nanowire coating and interaction with cells. Nanomedicine, 2014, 9, 1171-1180.	3.3	2
80	Extraction of Membrane Components from Neisseria gonorrhoeae Using Catanionic Surfactant Vesicles: A New Approach for the Study of Bacterial Surface Molecules. Pharmaceutics, 2020, 12, 787.	4.5	2
81	Bioinformatics for Flexibility, Reliability, and Mixture Analysis of Intact Microorganisms. , 2006, , 257-277.		1
82	Asp-Selective Microwave-Supported Acid Proteolysis. , 2013, , 225-236.		1
83	Comparison of nanowire pellicles for plasma membrane enrichment: coating nanowires on cell. Journal of Nanoparticle Research, 2013, 15, 2133.	1.9	1
84	Corona plasma discharge for rapid analysis of microorganisms by mass spectrometry. , 1999, 13, 604.		1
85	Isotope Labeling in Quantitative Proteomics. , 2006, , 47-61.		0
86	From genes to function: Kick-starting US HUPO. Journal of Proteomics, 2014, 107, 144-145.	2.4	0
87	Application of Higher Density Iron Oxide Nanoparticle Pellicles to Enrich the Plasma Membrane and Its Proteome from Cells in Suspension. Methods in Molecular Biology, 2018, 1722, 79-90.	0.9	0
88	Catherine Clarke Fenselau. , 2015, , 75-76.		0