Mass Spectrometry-Based Protein Footprinting for Hig Fundamentals and Applications

Chemical Reviews

120, 4355-4454

DOI: 10.1021/acs.chemrev.9b00815

Citation Report

#	Article	IF	Citations
1	Delineating Heme-Mediated versus Direct Protein Oxidation in Peroxidase-Activated Cytochrome c by Top-Down Mass Spectrometry. Biochemistry, 2020, 59, 4108-4117.	1.2	3
2	Determination of the glycoprotein specificity of lectins on cell membranes through oxidative proteomics. Chemical Science, 2020, 11, 9501-9512.	3.7	22
3	MEMBRANE PROTEIN STRUCTURES AND INTERACTIONS FROM COVALENT LABELING COUPLED WITH MASS SPECTROMETRY. Mass Spectrometry Reviews, 2022, 41, 51-69.	2.8	10
4	Proteinâ€“Ligand Affinity Determinations Using Covalent Labeling-Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2020, 31, 1544-1553.	1.2	9
5	Developments in Hydrogen/Deuterium Exchange Mass Spectrometry. Analytical Chemistry, 2021, 93, 567-582.	3.2	63
6	Higher-Order Structure Characterization of NKG2A/CD94 Protein Complex and Anti-NKG2A Antibody Binding Epitopes by Mass Spectrometry-Based Protein Footprinting Strategies. Journal of the American Society for Mass Spectrometry, 2021, 32, 1567-1574.	1.2	8
7	Accurate protein structure prediction with hydroxyl radical protein footprinting data. Nature Communications, 2021, 12, 341.	5.8	31
8	Multidimensional Vibrational Circular Dichroism Apparatus Equipped with Quantum Cascade Laser and Its Use for Investigating Some Peptide Systems Containing <scp>d</scp>-Amino Acids. Analytical Chemistry, 2021, 93, 2742-2748.	3.2	14
9	Glycanâ€“protein cross-linking mass spectrometry reveals sialic acid-mediated protein networks on cell surfaces. Chemical Science, 2021, 12, 8767-8777.	3.7	14
10	Investigation of D76N Î²₂-Microglobulin Using Protein Footprinting and Structural Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2021, 32, 1583-1592.	1.2	3
11	Inline Liquid Chromatographyâ€“Fast Photochemical Oxidation of Proteins for Targeted Structural Analysis of Conformationally Heterogeneous Mixtures. Analytical Chemistry, 2021, 93, 3510-3516.	3.2	5
12	Freeâ€Radical Membrane Protein Footprinting by Photolysis of Perfluoroisopropyl Iodide Partitioned to Detergent Micelle by Sonication. Angewandte Chemie, 2021, 133, 8949-8955.	1.6	0
13	Freeâ€Radical Membrane Protein Footprinting by Photolysis of Perfluoroisopropyl Iodide Partitioned to Detergent Micelle by Sonication. Angewandte Chemie - International Edition, 2021, 60, 8867-8873.	7.2	9
14	Structural Proteomics Methods to Interrogate the Conformations and Dynamics of Intrinsically Disordered Proteins. Frontiers in Chemistry, 2021, 9, 603639.	1.8	19
15	Benefits of Ion Mobility Separation and Parallel Accumulationâ€“Serial Fragmentation Technology on timsTOF Pro for the Needs of Fast Photochemical Oxidation of Protein Analysis. ACS Omega, 2021, 6, 10352-10361.	1.6	18
16	Complementary Structural Information for Stressed Antibodies from Hydrogenâ€“Deuterium Exchange and Covalent Labeling Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2021, 32, 1237-1248.	1.2	10
17	Self-Organized Amphiphiles Are Poor Hydroxyl Radical Scavengers in Fast Photochemical Oxidation of Proteins Experiments. Journal of the American Society for Mass Spectrometry, 2021, 32, 1155-1161.	1.2	6
18	Water-Soluble Iridium Photoredox Catalyst for the Trifluoromethylation of Biomolecule Substrates in Phosphate Buffered Saline Solvent. Organic Letters, 2021, 23, 3823-3827.	2.4	11

#	Article	IF	Citations
19	Protein Footprinting via Covalent Protein Painting Reveals Structural Changes of the Proteome in Alzheimerâ€™s Disease. Journal of Proteome Research, 2021, 20, 2762-2771.	1.8	34
20	Platform Incubator with Movable XY Stage: A New Platform for Implementing In-Cell Fast Photochemical Oxidation of Proteins. Journal of Visualized Experiments, 2021, , .	0.2	0
21	Measuring Protein Shapes in Living Cells. Journal of Proteome Research, 2021, 20, 3017-3017.	1.8	7
22	Utilization of Hydrophobic Microenvironment Sensitivity in Diethylpyrocarbonate Labeling for Protein Structure Prediction. Analytical Chemistry, 2021, 93, 8188-8195.	3.2	20
23	Laser-free Hydroxyl Radical Protein Footprinting to Perform Higher Order Structural Analysis of Proteins. Journal of Visualized Experiments, 2021, , .	0.2	6
24	Covalent Labeling with Diethylpyrocarbonate for Studying Protein Higher-Order Structure by Mass Spectrometry. Journal of Visualized Experiments, 2021, , .	0.2	1
25	In-Cell Labeling and Mass Spectrometry for Systems-Level Structural Biology. Chemical Reviews, 2022, 122, 7647-7689.	23.0	17
26	Hydroxyl radical mediated damage of proteins in low oxygen solution investigated using X-ray footprinting mass spectrometry. Journal of Synchrotron Radiation, 2021, 28, 1333-1342.	1.0	6
27	Footprinting Mass Spectrometry of Membrane Proteins: Ferroportin Reconstituted in Saposin A Picodiscs. Analytical Chemistry, 2021, 93, 11370-11378.	3.2	8
28	Characterizing Endogenous Protein Complexes with Biological Mass Spectrometry. Chemical Reviews, 2022, 122, 7386-7414.	23.0	24
29	Pistachio Hull Extract as a Practical Strategy to Extend the Shelf Life of Raw Minced Beef: Chemometrics in Quality Evaluation. Evidence-based Complementary and Alternative Medicine, 2021, 2021, 1-12.	0.5	6
30	Recent advancements in mass spectrometry for higher order structure characterization of protein therapeutics. Drug Discovery Today, 2022, 27, 196-206.	3.2	9
31	Mass Spectrometry of Nucleic Acid Noncovalent Complexes. Chemical Reviews, 2022, 122, 7720-7839.	23.0	40
32	Approaches to Heterogeneity in Native Mass Spectrometry. Chemical Reviews, 2022, 122, 7909-7951.	23.0	31
33	Structural mapping techniques distinguish the surfaces of fibrillar 1N3R and 1N4R human tau. Journal of Biological Chemistry, 2021, 297, 101252.	1.6	4
34	Carbocation Footprinting of Soluble and Transmembrane Proteins. Analytical Chemistry, 2021, 93, 13101-13105.	3.2	8
36	Fenton-Chemistry-Based Oxidative Modification of Proteins Reflects Their Conformation. International Journal of Molecular Sciences, 2021, 22, 9927.	1.8	6
37	The utilization of the search engine, Bolt, to decrease search time and increase peptide identifications in hydroxyl radical protein footprintingâ€based workflows. Proteomics, 2021, 21, e2000295.	1.3	6

#	Article	IF	Citations
38	Advances in Hydrogen/Deuterium Exchange Mass Spectrometry and the Pursuit of Challenging Biological Systems. Chemical Reviews, 2022, 122, 7562-7623.	23.0	109
39	Epitope and Paratope Mapping of PD-1/Nivolumab by Mass Spectrometry-Based Hydrogenâ€“Deuterium Exchange, Cross-linking, and Molecular Docking. Analytical Chemistry, 2020, 92, 9086-9094.	3.2	38
40	Higher-order structural characterisation of native proteins and complexes by top-down mass spectrometry. Chemical Science, 2020, 11, 12918-12936.	3.7	81
41	Hydroxyl Radical Protein Footprinting: A Mass Spectrometry-Based Structural Method for Studying the Higher Order Structure of Proteins. Chemical Reviews, 2022, 122, 7532-7561.	23.0	35
42	Diethylpyrocarbonate Footprints a Membrane Protein in Micelles. Journal of the American Society for Mass Spectrometry, 2021, 32, 2636-2643.	1.2	8
44	Protein Structure Prediction with Mass Spectrometry Data. Annual Review of Physical Chemistry, 2022, 73, 1-19.	4.8	18
45	Time-Resolved Acetaldehyde-Based Accessibility Profiling Maps Ligandâ€“Target Interactions. Journal of the American Society for Mass Spectrometry, 2021, 32, 519-530.	1.2	2
46	Systematic workflow for studying domain contributions of bispecific antibodies to selectivity in multimodal chromatography. Biotechnology and Bioengineering, 2022, 119, 211-225.	1.7	5
47	Hydroxyl radical footprinting analysis of a human haptoglobin-hemoglobin complex. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2022, 1870, 140735.	1.1	8
49	Fast Fluoroalkylation of Proteins Uncovers the Structure and Dynamics of Biological Macromolecules. Journal of the American Chemical Society, 2021, 143, 20670-20679.	6.6	13
50	Advanced technologies for single-cell in situ protein profiling. Science China Chemistry, 2022, 65, 48-67.	4.2	8
51	Mass Spectrometry-Based Structural Proteomics for Metal Ion/Protein Binding Studies. Biomolecules, 2022, 12, 135.	1.8	6
52	Benzoyl Transfer for Footprinting Alcohol-Containing Residues in Higher Order Structural Applications of Mass-Spectrometry-Based Proteomics. Analytical Chemistry, 2022, 94, 1520-1524.	3.2	6
53	Correlation among copolyether spacers, molecular geometry and interfacial properties of extended surfactants. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 639, 128286.	2.3	5
54	Utilization of Fast Photochemical Oxidation of Proteins and Both Bottom-up and Top-down Mass Spectrometry for Structural Characterization of a Transcription Factorâ€“dsDNA Complex. Analytical Chemistry, 2022, 94, 3203-3210.	3.2	10
55	Mass Spectrometry-Based Technologies for Probing the Three-Dimensional World of Plant Proteins. Plant Physiology, 2022, , .	2.3	1
56	Accounting for Neighboring Residue Hydrophobicity in Diethylpyrocarbonate Labeling Mass Spectrometry Improves Rosetta Protein Structure Prediction. Journal of the American Society for Mass Spectrometry, 2022, 33, 584-591.	1.2	8
57	Distinguishing Histidine Tautomers in Proteins Using Covalent Labeling-Mass Spectrometry. Analytical Chemistry, 2022, 94, 1003-1010.	3.2	4

#	Article	IF	Citations
58	Chloride-Mediated Peroxide-Free Photochemical Oxidation of Proteins (PPOP) in Mass Spectrometry-Based Structural Analysis. Analytical Chemistry, 2022, 94, 1135-1142.	3.2	6
60	Investigating Antimicrobial Peptideâ€“Membrane Interactions Using Fast Photochemical Oxidation of Peptides in Nanodiscs. Journal of the American Society for Mass Spectrometry, 2022, 33, 62-67.	1.2	4
61	In-Cell Structural Biology by NMR: The Benefits of the Atomic Scale. Chemical Reviews, 2022, 122, 9497-9570.	23.0	55
62	Advances in mass spectrometryâ€based footprinting of membrane proteins. Proteomics, 2022, 22, e2100222.	1.3	4
63	Mass Spectrometry Methods for Measuring Protein Stability. Chemical Reviews, 2022, 122, 7690-7719.	23.0	31
64	Cross-linking and mass spectrometry as a tool for studying the structural biology of ribonucleoproteins. Structure, 2022, 30, 441-461.	1.6	9
65	Advances in mass spectrometry-based epitope mapping of protein therapeutics. Journal of Pharmaceutical and Biomedical Analysis, 2022, 215, 114754.	1.4	8
66	Protein Chemistry Combined with Mass Spectrometry for Protein Structure Determination. Chemical Reviews, 2022, 122, 7488-7499.	23.0	20
67	Nanoparticles and photochemistry for native-like transmembrane protein footprinting. Nature Communications, 2021, 12, 7270.	5.8	14
68	Collision-Induced Unfolding of Native-like Protein Ions Within a Trapped Ion Mobility Spectrometry Device. Journal of the American Society for Mass Spectrometry, 2022, 33, 83-89.	1.2	14
69	Validated determination of NRG1 Ig-like domain structure by mass spectrometry coupled with computational modeling. Communications Biology, 2022, 5, 452.	2.0	6
70	Covalent Labeling-Mass Spectrometry Provides a Molecular Understanding of Noncovalent Polymerâ€“Protein Complexation. ACS Biomaterials Science and Engineering, 2022, 8, 2489-2499.	2.6	0
71	Nanomolar affinity of EF-hands in neuronal calcium sensor 1 for bivalent cations Pb2+, Mn2+, and Hg2+. Metallomics, 2022, 14, .	1.0	6
72	Advances in highâ€resolution mass spectrometry techniques for analysis of high massâ€toâ€charge ions. Mass Spectrometry Reviews, 2023, 42, 2426-2445.	2.8	7
73	Structural mass spectrometry of membrane proteins. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2022, 1870, 140813.	1.1	7
74	Multiplex Chemical Labeling of Amino Acids for Protein Footprinting Structure Assessment. Analytical Chemistry, 2022, 94, 9819-9825.	3.2	9
75	Native topâ€down mass spectrometry for higherâ€order structural characterization of proteins and complexes. Mass Spectrometry Reviews, 2023, 42, 1876-1926.	2.8	19
76	Automated Specific Amino Acid Footprinting Mass Spectrometry: Repurposing an HDX Platform for Determining Reagent Feasibility. Analytical Chemistry, 2022, 94, 10314-10319.	3.2	1

#	Article	IF	Citations
77	Top-Down Detection of Oxidative Protein Footprinting by Collision-Induced Dissociation, Electron-Transfer Dissociation, and Electron-Capture Dissociation. Analytical Chemistry, 2022, 94, 9993-10002.	3.2	8
78	Circular dichroism of biopharmaceutical proteins in a quality-regulated environment. Journal of Pharmaceutical and Biomedical Analysis, 2022, 219, 114945.	1.4	4
79	Probing protein higher-order structures by native capillary electrophoresis-mass spectrometry. TrAC - Trends in Analytical Chemistry, 2022, 157, 116739.	5.8	5
80	Occurrence, analysis and removal of pesticides, hormones, pharmaceuticals, and other contaminants in soil and water streams for the past two decades: a review. Research on Chemical Intermediates, 2022, 48, 3633-3683.	1.3	3
81	De novo assisted AFB1-Specific monoclonal antibody sequence assembly and comprehensive molecular characterization. Analytical Biochemistry, 2022, 656, 114883.	1.1	0
83	Quantitative Structural Proteomics Unveils the Conformational Changes of Proteins under the Endoplasmic Reticulum Stress. Analytical Chemistry, 2022, 94, 13250-13260.	3.2	1
84	Applications of MALDI-MS/MS-Based Proteomics in Biomedical Research. Molecules, 2022, 27, 6196.	1.7	21
86	Rapid Online Oxidation of Proteins and Peptides via Electrospray-Accelerated Ozonation. Journal of the American Society for Mass Spectrometry, 2022, 33, 2078-2086.	1.2	4
87	Using mass spectrometryâ€based methods to understand amyloid formation and inhibition of alphaâ€synuclein and amyloid beta. Mass Spectrometry Reviews, 0, , .	2.8	7
88	Challenges and Strategies for a Thorough Characterization of Antibody Acidic Charge Variants. Bioengineering, 2022, 9, 641.	1.6	8
89	Protein footprinting by mass spectrometry: H/D exchange, specific amino acid labeling, and fast photochemical oxidation of proteins. , 2023, , 227-270.		2
90	Quantifying In Situ Structural Stabilities of Human Blood Plasma Proteins Using a Novel Iodination Protein Stability Assay. Journal of Proteome Research, 2022, 21, 2920-2935.	1.8	4
93	Seeing the complete picture: proteins in top-down mass spectrometry. Essays in Biochemistry, 2023, 67, 283-300.	2.1	8
94	Assessment of the phytochemical composition, antimicrobial activity and anti-inflammatory effects of Lobularia maritima extracts on lipopolysaccharide-stimulated RAW 264.7 cells and their capacity to extend the shelf life of raw minced beef. Journal of Functional Foods, 2022, 99, 105327.	1.6	11
95	Structural Analysis of Phosphorylation Proteoforms in a Dynamic Heterogeneous System Using Flash Oxidation Coupled In-Line with Ion Exchange Chromatography. Analytical Chemistry, 2022, 94, 18017-18024.	3.2	4
96	Generation and delivery of free hydroxyl radicals using a remote plasma. Plasma Sources Science and Technology, 2023, 32, 015005.	1.3	2
97	Profiling protein targets of cellular toxicant exposure. Molecular Omics, 2023, 19, 191-204.	1.4	2
98	Mass spectrometric insights into protein aggregation. Essays in Biochemistry, 2023, 67, 243-253.	2.1	4

#	Article	IF	Citations
99	Elucidating Proteinâ€“Ligand Interactions in Cell Lysates Using High-Throughput Hydrogenâ€“Deuterium Exchange Mass Spectrometry with Integrated Protein Thermal Depletion. Analytical Chemistry, 0, , .	3.2	3
100	The Deuterium Calculator: An Open-Source Tool for Hydrogenâ€“Deuterium Exchange Mass Spectrometry Analysis. Journal of Proteome Research, 2023, 22, 532-538.	1.8	2
101	Strategies for Increasing the Depth and Throughput of Protein Analysis by plexDIA. Journal of Proteome Research, 2023, 22, 697-705.	1.8	11
102	Computational insight into stability-enhanced systems of anthocyanin with protein/peptide. Food Chemistry Molecular Sciences, 2023, 6, 100168.	0.9	4
104	Investigating Daptomycinâ€“Membrane Interactions Using Native MS and Fast Photochemical Oxidation of Peptides in Nanodiscs. Analytical Chemistry, 2023, 95, 4984-4991.	3.2	4
105	Biophysical and Integrative Characterization of Protein Intrinsic Disorder as a Prime Target for Drug Discovery. Biomolecules, 2023, 13, 530.	1.8	2
106	Measurement and utilization of the proteomic reactivity by mass spectrometry. Mass Spectrometry Reviews, 0, , .	2.8	0
108	Proteomics mining of cancer hallmarks on a singleâ€cell resolution. Mass Spectrometry Reviews, 0, , .	2.8	0
142	Fabrication of protein-based nanomaterials as photonanomedicine agents. , 2024, , 93-122.		0
146	Developing Alternative Multilinear Regression-Based Intelligence Hybrid Model. Studies in Systems, Decision and Control, 2024, , 81-107.	0.8	0