

# James P Reilly

## List of Publications by Year in descending order

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105  
papers

4,831  
citations

76326

40  
h-index

98798

67  
g-index

107  
all docs

107  
docs citations

107  
times ranked

3388  
citing authors

#	ARTICLE	IF	CITATIONS
1	Subset of Fluorophores Is Responsible for Radiation Brightening in Viromimetic Particles. <i>Journal of Physical Chemistry B</i> , 2021, 125, 10494-10505.	2.6	5
2	Aqueous Solutions of Peptides and Trialkylamines Lead to Unexpected Peptide Modification. <i>Molecules</i> , 2021, 26, 6481.	3.8	0
3	Use of Multiple Ion Fragmentation Methods to Identify Protein Cross-Links and Facilitate Comparison of Data Interpretation Algorithms. <i>Journal of Proteome Research</i> , 2020, 19, 2758-2771.	3.7	3
4	Analysis of Methylation, Acetylation, and Other Modifications in Bacterial Ribosomal Proteins. <i>Methods in Molecular Biology</i> , 2019, 1934, 293-307.	0.9	1
5	ETD-Cleavable Linker for Confident Cross-linked Peptide Identifications. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 1631-1642.	2.8	7
6	Identification of N-Terminal protein processing sites by chemical labeling mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2019, 33, 1015-1023.	1.5	2
7	Use of Cysteine Aminoethylation To Identify the Hypervariable Peptides of an Antibody. <i>Analytical Chemistry</i> , 2018, 90, 1608-1612.	6.5	3
8	Unusual fragmentation of derivatized cysteine-containing peptides. <i>Rapid Communications in Mass Spectrometry</i> , 2018, 32, 1491-1496.	1.5	0
9	A Novel Triethylphosphonium Charge Tag on Peptides: Synthesis, Derivatization, and Fragmentation. <i>Journal of the American Society for Mass Spectrometry</i> , 2017, 28, 1889-1900.	2.8	6
10	Distinguishing Aspartic and Isoaspartic Acids in Peptides by Several Mass Spectrometric Fragmentation Methods. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 2041-2053.	2.8	27
11	Impact of Amidination on Peptide Fragmentation and Identification in Shotgun Proteomics. <i>Journal of Proteome Research</i> , 2016, 15, 3656-3665.	3.7	8
12	Factors Affecting the Production of Aromatic Immonium Ions in MALDI 157 nm Photodissociation Studies. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 834-846.	2.8	7
13	Photosynthesis of a Combinatorial Peptide Library in the Gas Phase. <i>Analytical Chemistry</i> , 2015, 87, 9384-9388.	6.5	3
14	157 nm Photodissociation of Dipeptide Ions Containing N-Terminal Arginine. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 196-203.	2.8	9
15	157 nm Photodissociation of a Complete Set of Dipeptide Ions Containing C-Terminal Arginine. <i>Journal of the American Society for Mass Spectrometry</i> , 2013, 24, 675-683.	2.8	9
16	Dynamics of Ribosomal Protein S1 on a Bacterial Ribosome with Cross-Linking and Mass Spectrometry. <i>Molecular and Cellular Proteomics</i> , 2012, 11, 1965-1976.	3.8	55
17	In Vitro and In Vivo Chemical Labeling of Ribosomal Proteins: A Quantitative Comparison. <i>Analytical Chemistry</i> , 2012, 84, 9355-9361.	6.5	7
18	Unique Fragmentation of Singly Charged DEST Cross-Linked Peptides. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1046-1052.	2.8	8

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19	Photodissociation of Charge Tagged Peptides. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1182-1190.	2.8	12
20	Analyzing a mixture of disaccharides by IMS-VUVPD-MS. <i>International Journal of Mass Spectrometry</i> , 2012, 309, 161-167.	1.5	61
21	Structural Analysis of a Prokaryotic Ribosome Using a Novel Amidinating Cross-Linker and Mass Spectrometry. <i>Journal of Proteome Research</i> , 2011, 10, 3604-3616.	3.7	43
22	Ratiometric Pulse-Chase Amidination Mass Spectrometry as a Probe of Biomolecular Complex Formation. <i>Analytical Chemistry</i> , 2011, 83, 9092-9099.	6.5	19
23	Controlled Formation of Peptide Bonds in the Gas Phase. <i>Journal of the American Chemical Society</i> , 2011, 133, 15834-15837.	13.7	30
24	Investigation of VUV photodissociation propensities using peptide libraries. <i>International Journal of Mass Spectrometry</i> , 2011, 308, 142-154.	1.5	6
25	An Ion Mobility/Ion Trap/Photodissociation Instrument for Characterization of Ion Structure. <i>Journal of the American Society for Mass Spectrometry</i> , 2011, 22, 1477-85.	2.8	72
26	Gas-phase conformation-specific photofragmentation of proline-containing peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 1455-1465.	2.8	30
27	Variation of the chemical reactivity of <i>Thermus thermophilus</i> HB8 ribosomal proteins as a function of pH. <i>Proteomics</i> , 2010, 10, 3669-3687.	2.2	6
28	Comprehensive Characterization of Methicillin-resistant <i>Staphylococcus aureus</i> subsp. <i>aureus</i> COL Secretome by Two-dimensional Liquid Chromatography and Mass Spectrometry. <i>Molecular and Cellular Proteomics</i> , 2010, 9, 1898-1919.	3.8	56
29	New Insights into the Vacuum UV Photodissociation of Peptides. <i>Journal of the American Chemical Society</i> , 2010, 132, 1606-1610.	13.7	49
30	Novel Amidinating Cross-Linker for Facilitating Analyses of Protein Structures and Interactions. <i>Analytical Chemistry</i> , 2010, 82, 7736-7743.	6.5	45
31	De Novo Sequencing of Tryptic Peptides Derived from <i>Deinococcus radiodurans</i> Ribosomal Proteins Using 157 nm Photodissociation MALDI TOF/TOF Mass Spectrometry. <i>Journal of Proteome Research</i> , 2010, 9, 3025-3034.	3.7	22
32	Peptide de Novo Sequencing Using 157 nm Photodissociation in a Tandem Time-of-Flight Mass Spectrometer. <i>Analytical Chemistry</i> , 2010, 82, 898-908.	6.5	34
33	Ultraviolet photofragmentation of biomolecular ions. <i>Mass Spectrometry Reviews</i> , 2009, 28, 425-447.	5.4	194
34	Radical-driven dissociation of odd-electron peptide radical ions produced in 157 nm photodissociation. <i>Journal of the American Society for Mass Spectrometry</i> , 2009, 20, 1378-1390.	2.8	48
35	Time-resolved observation of product ions generated by 157 nm photodissociation of singly protonated phosphopeptides. <i>Journal of the American Society for Mass Spectrometry</i> , 2009, 20, 2334-2341.	2.8	30
36	Extracting Both Peptide Sequence and Glycan Structural Information by 157 nm Photodissociation of N-Linked Glycopeptides. <i>Journal of Proteome Research</i> , 2009, 8, 734-742.	3.7	50

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37	Ribosomal Proteins of <i>Deinococcus radiodurans</i> : Their Solvent Accessibility and Reactivity. <i>Journal of Proteome Research</i> , 2009, 8, 1228-1246.	3.7	27
38	<i>B. subtilis</i> Ribosomal Proteins: Structural Homology and Post-Translational Modifications. <i>Journal of Proteome Research</i> , 2009, 8, 4193-4206.	3.7	26
39	Development of a Linear Ion Trap/Orthogonal-Time-of-Flight Mass Spectrometer for Time-Dependent Observation of Product Ions by Ultraviolet Photodissociation of Peptide Ions. <i>Analytical Chemistry</i> , 2009, 81, 8809-8817.	6.5	17
40	Peptide Photodissociation with 157 nm Light in a Commercial Tandem Time-of-Flight Mass Spectrometer. <i>Analytical Chemistry</i> , 2009, 81, 7829-7838.	6.5	33
41	Correlating the Chemical Modification of <i>Escherichia coli</i> Ribosomal Proteins with Crystal Structure Data. <i>Journal of Proteome Research</i> , 2009, 8, 4466-4478.	3.7	19
42	Identification of isomeric N-glycan structures by mass spectrometry with 157 nm laser-induced photofragmentation. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 1027-1040.	2.8	62
43	Does a Charge Tag Really Provide a Fixed Charge?. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 2463-2465.	13.8	18
44	Use of 157-nm photodissociation to probe structures of <i>y</i> - and <i>b</i> -type ions produced in collision-induced dissociation of peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 695-702.	2.8	11
45	Structural analysis of leukotriene C <sub>4</sub> isomers using collisional activation and 157 nm photodissociation. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 14-26.	2.8	25
46	A Top-Down/Bottom-Up Study of the Ribosomal Proteins of <i>Caulobacter crescentus</i> . <i>Journal of Proteome Research</i> , 2007, 6, 337-347.	3.7	31
47	Probing the structure and activity of trypsin with amidination. <i>Analytical Biochemistry</i> , 2007, 367, 13-19.	2.4	18
48	Factors that impact the vacuum ultraviolet photofragmentation of peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 1439-1452.	2.8	57
49	Two dimensional liquid phase separations of proteins using online fractionation and concentration between chromatographic dimensions. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2007, 847, 103-113.	2.3	23
50	Laser-induced photofragmentation of neutral and acidic glycans inside an ion-trap mass spectrometer. <i>Rapid Communications in Mass Spectrometry</i> , 2007, 21, 1452-1460.	1.5	48
51	Probing the Structure of the <i>Caulobacter crescentus</i> Ribosome with Chemical Labeling and Mass Spectrometry. <i>Journal of Proteome Research</i> , 2006, 5, 2935-2946.	3.7	30
52	Structures of $\hat{1}\pm$ -type ions formed in the 157 nm photodissociation of singly-charged peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2006, 17, 1315-1321.	2.8	38
53	Bacterial Strain Differentiation by Mass Spectrometry. , 2006, , 181-201.		2
54	ADVANCEMENT IN PROTEIN INFERENCE FROM SHOTGUN PROTEOMICS USING PEPTIDE DETECTABILITY. , 2006, , .		22

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55	Pathways of Peptide Ion Fragmentation Induced by Vacuum Ultraviolet Light. <i>Journal of the American Society for Mass Spectrometry</i> , 2005, 16, 1384-1398.	2.8	111
56	Denaturation of metalloproteins with EDTA to facilitate enzymatic digestion and mass fingerprinting. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 1268-1272.	1.5	17
57	Peptide photodissociation at 157 nm in a linear ion trap mass spectrometer. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 1657-1665.	1.5	87
58	Fragmentation of oligosaccharide ions with 157 nm vacuum ultraviolet light. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 2313-2320.	1.5	62
59	Peptide de Novo Sequencing Facilitated by a Dual-Labeling Strategy. <i>Analytical Chemistry</i> , 2005, 77, 6300-6309.	6.5	48
60	Probing Protein Tertiary Structure with Amidination. <i>Analytical Chemistry</i> , 2005, 77, 7274-7281.	6.5	37
61	Fragmentation of Singly Charged Peptide Ions by Photodissociation at $\lambda = 157$ nm. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 4791-4.	13.8	89
62	Fragmentation of amidinated peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2004, 15, 158-167.	2.8	28
63	Quantitation Using Enhanced Signal Tags: A Technique for Comparative Proteomics. <i>Journal of Proteome Research</i> , 2003, 2, 15-21.	3.7	66
64	Optimization of Guanidination Procedures for MALDI Mass Mapping. <i>Analytical Chemistry</i> , 2002, 74, 1884-1890.	6.5	143
65	Artifacts and unassigned masses encountered in peptide mass mapping. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2002, 782, 363-383.	2.3	67
66	Use of matrix clusters and trypsin autolysis fragments as mass calibrants in matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2002, 16, 1714-1722.	1.5	66
67	Elucidation of the initial step of oligonucleotide fragmentation in matrix-assisted laser desorption/ionization using modified nucleic acids. <i>Journal of the American Society for Mass Spectrometry</i> , 2001, 12, 744-753.	2.8	25
68	Design and evaluation of a low-cost, high-speed signal amplifier. <i>Review of Scientific Instruments</i> , 2001, 72, 243-246.	1.3	2
69	Enhancing the intensities of lysine-terminated tryptic peptide ions in matrix-assisted laser desorption/ionization mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2000, 14, 2147-2153.	1.5	108
70	The Yeast Heat Shock Transcription Factor Changes Conformation in Response to Superoxide and Temperature. <i>Molecular Biology of the Cell</i> , 2000, 11, 1753-1764.	2.1	54
71	Photoionization Studies of Chromophore-Labeled Amino Acids and Peptides. <i>Journal of Physical Chemistry A</i> , 2000, 104, 10383-10391.	2.5	9
72	Improved Calibration of Time-of-Flight Mass Spectra by Simplex Optimization of Electrostatic Ion Calculations. <i>Analytical Chemistry</i> , 2000, 72, 3327-3337.	6.5	30

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73	Investigation of Enzyme Kinetics Using Quench-Flow Techniques with MALDI-TOF Mass Spectrometry. <i>Analytical Chemistry</i> , 2000, 72, 3311-3319.	6.5	65
74	Monitoring the Growth of a Bacteria Culture by MALDI-MS of Whole Cells. <i>Analytical Chemistry</i> , 1999, 71, 1990-1996.	6.5	159
75	Observation of <i>Escherichia coli</i> Ribosomal Proteins and Their Posttranslational Modifications by Mass Spectrometry. <i>Analytical Biochemistry</i> , 1999, 269, 105-112.	2.4	211
76	The Action of N-terminal Acetyltransferases on Yeast Ribosomal Proteins. <i>Journal of Biological Chemistry</i> , 1999, 274, 37035-37040.	3.4	74
77	Toward a Simple, Expedient, and Complete Analysis of Human Hemoglobin by MALDI-TOFMS. <i>Analytical Chemistry</i> , 1999, 71, 3397-3404.	6.5	33
78	Detection of the bacteriological sex factor in <i>E. coli</i> by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 625-629.	1.5	28
79	Fingerprint matching of <i>E. coli</i> strains with matrix-assisted laser desorption/ionization time-of-flight mass spectrometry of whole cells using a modified correlation approach. <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 630-636.	1.5	250
80	Gas-phase separations of protease digests. <i>Journal of the American Society for Mass Spectrometry</i> , 1998, 9, 1213-1216.	2.8	104
81	High-Resolution Time-of-Flight Mass Spectra of Alkanethiolate-Coated Gold Nanocrystals. <i>Journal of the American Chemical Society</i> , 1998, 120, 1528-1532.	13.7	78
82	Three-Dimensional Ion Mobility/TOFMS Analysis of Electrosprayed Biomolecules. <i>Analytical Chemistry</i> , 1998, 70, 2236-2242.	6.5	330
83	Fingerprint matching of <i>E. coli</i> strains with matrix-assisted laser desorption/ionization time-of-flight mass spectrometry of whole cells using a modified correlation approach. , 1998, 12, 630.		1
84	Laser Ionization Measurements of the Photodissociation Kinetics of Jet-Cooled Benzaldehyde. <i>Journal of Physical Chemistry A</i> , 1997, 101, 7934-7942.	2.5	12
85	Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry as a Tool to Probe the Reactions of <i>trans</i> -Hex-2-enal with Proteins. , 1997, 32, 662-665.		4
86	Rapid Analysis of Hemoglobin from Whole Human Blood by Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry. , 1997, 11, 1435-1439.		20
87	Theoretical Calculations on Excited Electronic States of Benzaldehyde and Observation of the S <sub>2</sub> †S <sub>0</sub> Jet-Cooled Spectrum. <i>The Journal of Physical Chemistry</i> , 1996, 100, 17111-17123.	2.9	43
88	Space-velocity Correlation Focusing. <i>Analytical Chemistry</i> , 1996, 68, 1419-1428.	6.5	40
89	Effects of Matrix Variations and the Presence of Iron on Matrix-assisted Laser Desorption/Ionization Mass Spectra of DNA. <i>Rapid Communications in Mass Spectrometry</i> , 1996, 10, 1980-1986.	1.5	14
90	High-resolution zero kinetic energy photoelectron spectra of <i>para</i> -propylaniline. <i>Journal of Chemical Physics</i> , 1994, 100, 5411-5421.	3.0	21

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91	Laser desorption/gas-phase ionization of the amino acid tryptophan. Rapid Communications in Mass Spectrometry, 1994, 8, 731-734.	1.5	9
92	Improving the resolution of matrix-assisted laser desorption/ionization time-of-flight mass spectrometry by exploiting the correlation between ion position and velocity. Rapid Communications in Mass Spectrometry, 1994, 8, 865-868.	1.5	172
93	High resolution study of methane's $3\hat{1}/21+1\hat{1}/23$ vibrational overtone band. Journal of Chemical Physics, 1994, 100, 7916-7927.	3.0	33
94	Zero kinetic energy photoelectron spectra of jet-cooled aniline. Journal of Chemical Physics, 1993, 99, 3224-3233.	3.0	103
95	The Stark effect in methane's $3\hat{1}/21+1\hat{1}/23$ vibrational overtone band. Journal of Chemical Physics, 1993, 99, 1429-1432.	3.0	25
96	The NH stretch in pyrrole: A study of the fundamental ( $\hat{1}''v=1$ ) and third overtone ( $\hat{1}''v=4$ ) bands in the bulk gas and in a molecular beam. Journal of Chemical Physics, 1992, 96, 3431-3440.	3.0	40
97	The laser photoelectron spectrum of gas phase $\epsilon$ -difluorobenzene. Journal of Chemical Physics, 1989, 90, 5349-5359.	3.0	36
98	High resolution vibrational overtone spectroscopy of hydrogen peroxide in the $\hat{1}''v=4$ region. Journal of Chemical Physics, 1989, 91, 5239-5250.	3.0	43
99	The laser photoelectron spectrum of gas phase aniline. Journal of Chemical Physics, 1985, 82, 1741-1749.	3.0	77
100	Multiphoton Ionization Photoelectron Spectroscopy. Israel Journal of Chemistry, 1984, 24, 266-272.	2.3	18
101	The laser photoelectron spectrum of gas phase benzene. Journal of Chemical Physics, 1983, 79, 3206-3219.	3.0	171
102	Benzaldehyde photochemistry studied with laser ionization mass and photoelectron spectroscopy. Journal of Chemical Physics, 1983, 78, 3341-3343.	3.0	28
103	Laser Ionization Studies of Gas Phase and Surface Adsorbed Molecules. Laser Chemistry, 1983, 3, 19-28.	0.5	4
104	Photoelectron energy distribution following UV laser ionization of gas phase benzene. Journal of Chemical Physics, 1980, 73, 3503-3505.	3.0	61
105	Interpretation of Anomalously Long Crosslinks in Ribosome Crosslinking reveals the ribosome interaction in stationary phase E. coli. RSC Chemical Biology, 0, , .	4.1	1