

James P Reilly

List of Publications by Year in descending order

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105
papers

4,831
citations

87401

40
h-index

111975

67
g-index

107
all docs

107
docs citations

107
times ranked

3809
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-Dimensional Ion Mobility/TOFMS Analysis of Electrosprayed Biomolecules. <i>Analytical Chemistry</i> , 1998, 70, 2236-2242.	3.2	330
2	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.	0.7	250
3	Observation of <i>Escherichia coli</i> Ribosomal Proteins and Their Posttranslational Modifications by Mass Spectrometry. <i>Analytical Biochemistry</i> , 1999, 269, 105-112.	1.1	211
4	Ultraviolet photofragmentation of biomolecular ions. <i>Mass Spectrometry Reviews</i> , 2009, 28, 425-447.	2.8	194
5	Improving the resolution of matrix-assisted laser desorption/ionization time-of-flight mass spectrometry by exploiting the correlation between ion position and velocity. <i>Rapid Communications in Mass Spectrometry</i> , 1994, 8, 865-868.	0.7	172
6	The laser photoelectron spectrum of gas phase benzene. <i>Journal of Chemical Physics</i> , 1983, 79, 3206-3219.	1.2	171
7	Monitoring the Growth of a Bacteria Culture by MALDI-MS of Whole Cells. <i>Analytical Chemistry</i> , 1999, 71, 1990-1996.	3.2	159
8	Optimization of Guanidination Procedures for MALDI Mass Mapping. <i>Analytical Chemistry</i> , 2002, 74, 1884-1890.	3.2	143
9	Pathways of Peptide Ion Fragmentation Induced by Vacuum Ultraviolet Light. <i>Journal of the American Society for Mass Spectrometry</i> , 2005, 16, 1384-1398.	1.2	111
10	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.	0.7	108
11	Gas-phase separations of protease digests. <i>Journal of the American Society for Mass Spectrometry</i> , 1998, 9, 1213-1216.	1.2	104
12	Zero kinetic energy photoelectron spectra of jet-cooled aniline. <i>Journal of Chemical Physics</i> , 1993, 99, 3224-3233.	1.2	103
13	Fragmentation of Singly Charged Peptide Ions by Photodissociation at $\lambda = 157$ nm. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 4791-4.	7.2	89
14	Peptide photodissociation at 157 nm in a linear ion trap mass spectrometer. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 1657-1665.	0.7	87
15	High-Resolution Time-of-Flight Mass Spectra of Alkanethiolate-Coated Gold Nanocrystals. <i>Journal of the American Chemical Society</i> , 1998, 120, 1528-1532.	6.6	78
16	The laser photoelectron spectrum of gas phase aniline. <i>Journal of Chemical Physics</i> , 1985, 82, 1741-1749.	1.2	77
17	The Action of N-terminal Acetyltransferases on Yeast Ribosomal Proteins. <i>Journal of Biological Chemistry</i> , 1999, 274, 37035-37040.	1.6	74
18	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.	1.2	72

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19	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.	1.2	67
20	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.	0.7	66
21	Quantitation Using Enhanced Signal Tags: A Technique for Comparative Proteomics. <i>Journal of Proteome Research</i> , 2003, 2, 15-21.	1.8	66
22	Investigation of Enzyme Kinetics Using Quench-Flow Techniques with MALDI-TOF Mass Spectrometry. <i>Analytical Chemistry</i> , 2000, 72, 3311-3319.	3.2	65
23	Fragmentation of oligosaccharide ions with 157 nm vacuum ultraviolet light. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 2313-2320.	0.7	62
24	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.	1.2	62
25	Photoelectron energy distribution following UV laser ionization of gas phase benzene. <i>Journal of Chemical Physics</i> , 1980, 73, 3503-3505.	1.2	61
26	Analyzing a mixture of disaccharides by IMS-VUVPD-MS. <i>International Journal of Mass Spectrometry</i> , 2012, 309, 161-167.	0.7	61
27	Factors that impact the vacuum ultraviolet photofragmentation of peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 1439-1452.	1.2	57
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.	2.5	56
29	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.	2.5	55
30	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.	0.9	54
31	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.	1.8	50
32	New Insights into the Vacuum UV Photodissociation of Peptides. <i>Journal of the American Chemical Society</i> , 2010, 132, 1606-1610.	6.6	49
33	Peptide de Novo Sequencing Facilitated by a Dual-Labeling Strategy. <i>Analytical Chemistry</i> , 2005, 77, 6300-6309.	3.2	48
34	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.	0.7	48
35	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.	1.2	48
36	Novel Amidinating Cross-Linker for Facilitating Analyses of Protein Structures and Interactions. <i>Analytical Chemistry</i> , 2010, 82, 7736-7743.	3.2	45

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37	High resolution vibrational overtone spectroscopy of hydrogen peroxide in the $\hat{\nu}=4$ region. Journal of Chemical Physics, 1989, 91, 5239-5250.	1.2	43
38	Theoretical Calculations on Excited Electronic States of Benzaldehyde and Observation of the S ₂ †S ₀ Jet-Cooled Spectrum. The Journal of Physical Chemistry, 1996, 100, 17111-17123.	2.9	43
39	Structural Analysis of a Prokaryotic Ribosome Using a Novel Amidinating Cross-Linker and Mass Spectrometry. Journal of Proteome Research, 2011, 10, 3604-3616.	1.8	43
40	The NH stretch in pyrrole: A study of the fundamental ($\hat{\nu}=1$) and third overtone ($\hat{\nu}=4$) bands in the bulk gas and in a molecular beam. Journal of Chemical Physics, 1992, 96, 3431-3440.	1.2	40
41	Space- $\hat{\nu}$ Velocity Correlation Focusing. Analytical Chemistry, 1996, 68, 1419-1428.	3.2	40
42	Structures of $\hat{\nu}$ -type ions formed in the 157 nm photodissociation of singly-charged peptide ions. Journal of the American Society for Mass Spectrometry, 2006, 17, 1315-1321.	1.2	38
43	Probing Protein Tertiary Structure with Amidination. Analytical Chemistry, 2005, 77, 7274-7281.	3.2	37
44	The laser photoelectron spectrum of gas phase $\hat{\nu}$ -difluorobenzene. Journal of Chemical Physics, 1989, 90, 5349-5359.	1.2	36
45	Peptide de Novo Sequencing Using 157 nm Photodissociation in a Tandem Time-of-Flight Mass Spectrometer. Analytical Chemistry, 2010, 82, 898-908.	3.2	34
46	High resolution study of methane- $\hat{\nu}$'s $3\hat{\nu}/21+1\hat{\nu}/23$ vibrational overtone band. Journal of Chemical Physics, 1994, 100, 7916-7927.	1.2	33
47	Toward a Simple, Expedient, and Complete Analysis of Human Hemoglobin by MALDI-TOFMS. Analytical Chemistry, 1999, 71, 3397-3404.	3.2	33
48	Peptide Photodissociation with 157 nm Light in a Commercial Tandem Time-of-Flight Mass Spectrometer. Analytical Chemistry, 2009, 81, 7829-7838.	3.2	33
49	A Top-Down/Bottom-Up Study of the Ribosomal Proteins of <i>Caulobacter crescentus</i> . Journal of Proteome Research, 2007, 6, 337-347.	1.8	31
50	Improved Calibration of Time-of-Flight Mass Spectra by Simplex Optimization of Electrostatic Ion Calculations. Analytical Chemistry, 2000, 72, 3327-3337.	3.2	30
51	Probing the Structure of the <i>Caulobacter crescentus</i> Ribosome with Chemical Labeling and Mass Spectrometry. Journal of Proteome Research, 2006, 5, 2935-2946.	1.8	30
52	Time-resolved observation of product ions generated by 157 nm photodissociation of singly protonated phosphopeptides. Journal of the American Society for Mass Spectrometry, 2009, 20, 2334-2341.	1.2	30
53	Gas-phase conformation-specific photofragmentation of proline-containing peptide ions. Journal of the American Society for Mass Spectrometry, 2010, 21, 1455-1465.	1.2	30
54	Controlled Formation of Peptide Bonds in the Gas Phase. Journal of the American Chemical Society, 2011, 133, 15834-15837.	6.6	30

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55	Benzaldehyde photochemistry studied with laser ionization mass and photoelectron spectroscopy. <i>Journal of Chemical Physics</i> , 1983, 78, 3341-3343.	1.2	28
56	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.	0.7	28
57	Fragmentation of amidinated peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 2004, 15, 158-167.	1.2	28
58	Ribosomal Proteins of <i>Deinococcus radiodurans</i> : Their Solvent Accessibility and Reactivity. <i>Journal of Proteome Research</i> , 2009, 8, 1228-1246.	1.8	27
59	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.	1.2	27
60	<i>B. subtilis</i> Ribosomal Proteins: Structural Homology and Post-Translational Modifications. <i>Journal of Proteome Research</i> , 2009, 8, 4193-4206.	1.8	26
61	The Stark effect in methane's $3\frac{1}{2}1+1\frac{1}{2}3$ vibrational overtone band. <i>Journal of Chemical Physics</i> , 1993, 99, 1429-1432.	1.2	25
62	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.	1.2	25
63	Structural analysis of leukotriene C ₄ isomers using collisional activation and 157 nm photodissociation. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 14-26.	1.2	25
64	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.	1.2	23
65	<i>De Novo</i> 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.	1.8	22
66	ADVANCEMENT IN PROTEIN INFERENCE FROM SHOTGUN PROTEOMICS USING PEPTIDE DETECTABILITY. , 2006, , .		22
67	High-resolution zero kinetic energy photoelectron spectra of para-propylaniline. <i>Journal of Chemical Physics</i> , 1994, 100, 5411-5421.	1.2	21
68	Rapid Analysis of Hemoglobin from Whole Human Blood by Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry. , 1997, 11, 1435-1439.		20
69	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.	1.8	19
70	Ratiometric Pulse-Chase Amidination Mass Spectrometry as a Probe of Biomolecular Complex Formation. <i>Analytical Chemistry</i> , 2011, 83, 9092-9099.	3.2	19
71	Multiphoton Ionization Photoelectron Spectroscopy. <i>Israel Journal of Chemistry</i> , 1984, 24, 266-272.	1.0	18
72	Probing the structure and activity of trypsin with amidination. <i>Analytical Biochemistry</i> , 2007, 367, 13-19.	1.1	18

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73	Does a Charge Tag Really Provide a Fixed Charge?. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 2463-2465.	7.2	18
74	Denaturation of metalloproteins with EDTA to facilitate enzymatic digestion and mass fingerprinting. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 1268-1272.	0.7	17
75	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.	3.2	17
76	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.	0.7	14
77	Laser Ionization Measurements of the Photodissociation Kinetics of Jet-Cooled Benzaldehyde. <i>Journal of Physical Chemistry A</i> , 1997, 101, 7934-7942.	1.1	12
78	Photodissociation of Charge Tagged Peptides. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1182-1190.	1.2	12
79	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.	1.2	11
80	Laser desorption/gas-phase ionization of the amino acid tryptophan. <i>Rapid Communications in Mass Spectrometry</i> , 1994, 8, 731-734.	0.7	9
81	Photoionization Studies of Chromophore-Labeled Amino Acids and Peptides. <i>Journal of Physical Chemistry A</i> , 2000, 104, 10383-10391.	1.1	9
82	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.	1.2	9
83	157 nm Photodissociation of Dipeptide Ions Containing N-Terminal Arginine. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 196-203.	1.2	9
84	Unique Fragmentation of Singly Charged DEST Cross-Linked Peptides. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1046-1052.	1.2	8
85	Impact of Amidation on Peptide Fragmentation and Identification in Shotgun Proteomics. <i>Journal of Proteome Research</i> , 2016, 15, 3656-3665.	1.8	8
86	In Vitro and In Vivo Chemical Labeling of Ribosomal Proteins: A Quantitative Comparison. <i>Analytical Chemistry</i> , 2012, 84, 9355-9361.	3.2	7
87	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.	1.2	7
88	ETD-Cleavable Linker for Confident Cross-linked Peptide Identifications. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 1631-1642.	1.2	7
89	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.	1.3	6
90	Investigation of VUV photodissociation propensities using peptide libraries. <i>International Journal of Mass Spectrometry</i> , 2011, 308, 142-154.	0.7	6

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91	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.	1.2	6
92	Subset of Fluorophores Is Responsible for Radiation Brightening in Viromimetic Particles. <i>Journal of Physical Chemistry B</i> , 2021, 125, 10494-10505.	1.2	5
93	Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry as a Tool to Probe the Reactions of trans-Hex-2-enal with Proteins. , 1997, 32, 662-665.		4
94	Laser Ionization Studies of Gas Phase and Surface Adsorbed Molecules. <i>Laser Chemistry</i> , 1983, 3, 19-28.	0.5	4
95	Photosynthesis of a Combinatorial Peptide Library in the Gas Phase. <i>Analytical Chemistry</i> , 2015, 87, 9384-9388.	3.2	3
96	Use of Cysteine Aminoethylation To Identify the Hypervariable Peptides of an Antibody. <i>Analytical Chemistry</i> , 2018, 90, 1608-1612.	3.2	3
97	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.	1.8	3
98	Design and evaluation of a low-cost, high-speed signal amplifier. <i>Review of Scientific Instruments</i> , 2001, 72, 243-246.	0.6	2
99	Bacterial Strain Differentiation by Mass Spectrometry. , 2006, , 181-201.		2
100	Identification of N-terminal protein processing sites by chemical labeling mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2019, 33, 1015-1023.	0.7	2
101	Analysis of Methylation, Acetylation, and Other Modifications in Bacterial Ribosomal Proteins. <i>Methods in Molecular Biology</i> , 2019, 1934, 293-307.	0.4	1
102	Fingerprint matching of E. coli strains with matrix-assisted laser desorption/ionization time-of-flight mass spectrometry of whole cells using a modified correlation approach. , 1998, 12, 630.		1
103	Interpretation of Anomalously Long Crosslinks in Ribosome Crosslinking reveals the ribosome interaction in stationary phase E. coli. <i>RSC Chemical Biology</i> , 0, , .	2.0	1
104	Unusual fragmentation of derivatized cysteine-containing peptides. <i>Rapid Communications in Mass Spectrometry</i> , 2018, 32, 1491-1496.	0.7	0
105	Aqueous Solutions of Peptides and Trialkylamines Lead to Unexpected Peptide Modification. <i>Molecules</i> , 2021, 26, 6481.	1.7	0