

Michelle V Buchanan

List of Publications by Year in descending order

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71
papers

3,210
citations

257450

24
h-index

155660

55
g-index

71
all docs

71
docs citations

71
times ranked

3712
citing authors

#	ARTICLE	IF	CITATIONS
1	The Hydrogen Economy. <i>Physics Today</i> , 2004, 57, 39-44.	0.3	1,277
2	Frog Embryo Teratogenesis Assay: <i>Xenopus</i> (FETAX) – A Short-Term Assay Applicable to Complex Environmental Mixtures. , 1983, , 393-405.		124
3	Imaging of Vapor Plumes Produced by Matrix Assisted Laser Desorption: A Plume Sharpening Effect. <i>Physical Review Letters</i> , 1999, 83, 444-447.	7.8	103
4	Fourier Transform Mass Spectrometry of High-Mass Biomolecules. <i>Analytical Chemistry</i> , 1993, 65, 245A-259A.	6.5	96
5	Chemical Composition of Fingerprints for Gender Determination. <i>Journal of Forensic Sciences</i> , 2002, 47, 1-3.	1.6	92
6	The 40Å...m general purpose small-angle neutron scattering instrument at Oak Ridge National Laboratory. <i>Journal of Applied Crystallography</i> , 2012, 45, 990-998.	4.5	89
7	The Bio-SANS instrument at the High Flux Isotope Reactor of Oak Ridge National Laboratory. <i>Journal of Applied Crystallography</i> , 2014, 47, 1238-1246.	4.5	83
8	Structural Characterization of Normal and Modified Oligonucleotides by Matrix-assisted Laser Desorption Fourier Transform Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 1991, 2, 402-412.	2.8	71
9	Analysis of Polymerase Chain Reaction-Amplified DNA Products by Mass Spectrometry Using Matrix-Assisted Laser Desorption and Electrospray: Current Status. <i>Analytical Biochemistry</i> , 1995, 230, 205-214.	2.4	67
10	Fourier transform mass spectrometry of high-mass biomolecules. <i>Analytical Chemistry</i> , 1993, 65, 245A-259A.	6.5	63
11	Mass spectral characterization of nitrogen-containing compounds with ammonia chemical ionization. <i>Analytical Chemistry</i> , 1982, 54, 570-574.	6.5	60
12	Analysis of modified oligonucleotides by matrix-assisted laser desorption/ionization Fourier transform mass spectrometry. <i>Analytical Chemistry</i> , 1995, 67, 2924-2930.	6.5	55
13	Investigation of UV matrix-assisted laser desorption fourier transform mass spectrometry for peptides. <i>Journal of the American Society for Mass Spectrometry</i> , 1991, 2, 22-28.	2.8	54
14	Differentiation of polycyclic aromatic hydrocarbons using electron capture negative chemical ionization. <i>Organic Mass Spectrometry</i> , 1984, 19, 486-489.	1.3	52
15	Detection of Bacterial DNA Polymerase Chain Reaction Products by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1996, 10, 377-382.	1.5	52
16	Improving Spot Homogeneity by Using Polymer Substrates in Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Oligonucleotides. <i>Analytical Chemistry</i> , 2001, 73, 2617-2624.	6.5	52
17	Matrix-assisted laser desorption fourier transform mass spectrometry for the structural examination of modified nucleic acid constituents. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1991, 111, 365-380.	1.8	45
18	Matrix-assisted laser desorption/ionization Fourier-transform mass spectrometry of oligodeoxyribonucleotides. <i>Rapid Communications in Mass Spectrometry</i> , 1993, 7, 828-836.	1.5	44

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19	Cadiolides A and B, New Metabolites from an Ascidian of the Genus Botryllus. <i>Journal of Organic Chemistry</i> , 1998, 63, 4147-4150.	3.2	38
20	Heterobimetallic Zeolite, InV-ZSM-5, Enables Efficient Conversion of Biomass Derived Ethanol to Renewable Hydrocarbons. <i>Scientific Reports</i> , 2015, 5, 16039.	3.3	38
21	The Structural Characterization of Polycyclic Aromatic Hydrocarbon Dihydrodiol Epoxide DNA Adducts Using Matrix-Assisted Laser Desorption/Ionization Fourier Transform Mass Spectrometry. <i>Analytical Chemistry</i> , 1994, 66, 1274-1285.	6.5	32
22	MALDI-TOF Analysis of Polymerase Chain Reaction Products from Methanotrophic Bacteria. <i>Analytical Chemistry</i> , 1998, 70, 2693-2698.	6.5	30
23	Negative ions generated by reactions with oxygen in the chemical ionization source. I. Characterization of gas-phase and wall-catalyzed reactions of fluorene, anthracene and fluoranthene. <i>Organic Mass Spectrometry</i> , 1989, 24, 94-104.	1.3	29
24	Materials in extreme environments. <i>Physics Today</i> , 2009, 62, 32-37.	0.3	29
25	A naturally occurring pyrimidodiazepine in <i>Drosophila</i> : chemical and spectral properties and relationship to drosoplerin. <i>Biochemistry</i> , 1982, 21, 5700-5706.	2.5	25
26	Mass spectral characterization of oxygen-containing aromatics with methanol chemical ionization. <i>Analytical Chemistry</i> , 1984, 56, 546-549.	6.5	25
27	<title>Chemical characterization of fingerprints from adults and children</title>. , 1997, , .		25
28	A Simple, Lensless Interface of an RF Glow Discharge Device to an FT-ICR (FTMS). <i>Applied Spectroscopy</i> , 1992, 46, 1327-1330.	2.2	24
29	Methyl guanine isomer distinction by hydrogen / deuterium exchange using a fourier transform mass spectrometer. <i>Journal of the American Society for Mass Spectrometry</i> , 1993, 4, 296-305.	2.8	24
30	A General System for Studying Protein-Protein Interactions in Gram-Negative Bacteria. <i>Journal of Proteome Research</i> , 2008, 7, 3319-3328.	3.7	24
31	Biotesting of wastewater: A comparative study using the <i>Salmonella</i> and CHO assay systems. <i>Environmental and Molecular Mutagenesis</i> , 1989, 14, 254-263.	2.2	23
32	Analysis for TNF- α Using Solid-Phase Affinity Capture with Radiolabel and MALDI-MS Detection. <i>Analytical Chemistry</i> , 1999, 71, 4727-4733.	6.5	23
33	Negative ions generated by reactions with oxygen in the chemical ionization source. II. The use of wall-catalyzed oxidation reactions for differentiation of polycyclic aromatic hydrocarbons and their methyl derivatives. <i>Organic Mass Spectrometry</i> , 1989, 24, 705-717.	1.3	22
34	Determination of cocaine and heroin vapor pressures using commercial and illicit samples. <i>Analyst</i> , The, 2000, 125, 1393-1396.	3.5	20
35	Rapid extraction and structural characterization of biomolecules in agarose gels by laser desorption Fourier transform mass spectrometry. <i>Analytical Chemistry</i> , 1993, 65, 1329-1335.	6.5	19
36	Embryotoxic and teratogenic effects of aqueous extracts of tar from a coal gasification electrostatic precipitator. <i>Teratogenesis, Carcinogenesis, and Mutagenesis</i> , 1982, 2, 1-11.	0.8	17

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37	Formation of [M + 14] anions from fluorene: Negative ion CI studies using GC/MS, MS/MS and FTMS. <i>Biomedical & Environmental Mass Spectrometry</i> , 1987, 14, 395-399.	1.6	17
38	Principles and Features of Fourier Transform Mass Spectrometry. <i>ACS Symposium Series</i> , 1987, , 1-20.	0.5	16
39	Applications of mass spectrometry to DNA sequencing. <i>Genetic Analysis, Techniques and Applications</i> , 1991, 8, 223-229.	1.5	16
40	The distribution of dermal tumorigens in coal liquids: Relationship of tumorigenicity and microbial mutagenicity. <i>Journal of Applied Toxicology</i> , 1984, 4, 117-123.	2.8	15
41	Nitric Oxide Chemical Ionization Ion Trap Mass Spectrometry for the Determination of Automotive Exhaust Constituents. <i>Analytical Chemistry</i> , 1997, 69, 5121-5129.	6.5	15
42	New high-flux small-angle neutron scattering instrumentation and the Center for Structural and Molecular Biology at Oak Ridge National Laboratory. <i>Journal of Applied Crystallography</i> , 2003, 36, 829-831.	4.5	14
43	Toxic and teratogenic effects of chemical class fractions of a coal-gasification electrostatic precipitator tar. <i>Toxicology</i> , 1983, 29, 87-99.	4.2	13
44	Characterization of photo-induced pyrimidine cyclobutane dimers by laser desorption fourier transform mass spectrometry. <i>Biological Mass Spectrometry</i> , 1990, 19, 55-62.	0.5	12
45	Movement of chemical warfare agent simulants through porous media. <i>Journal of Hazardous Materials</i> , 1994, 37, 303-325.	12.4	12
46	An electrostatic ion guide interface for combining electrospray with Fourier transform ion cyclotron resonance mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1995, 9, 731-734.	1.5	11
47	Thoughts on Starting the Hydrogen Economy. <i>Physics Today</i> , 2005, 58, 15-15.	0.3	11
48	Statistically Inferring Protein-Protein Associations with Affinity Isolation LC-MS/MS Assays. <i>Journal of Proteome Research</i> , 2007, 6, 3788-3795.	3.7	11
49	Positional and geometric characterization of olefinic double bonds by fluorine magnetic resonance spectrometry. <i>Analytical Chemistry</i> , 1977, 49, 2146-2149.	6.5	9
50	Low level detection of chemical agent simulants in meat and milk by ion trap mass spectrometry. <i>Journal of Hazardous Materials</i> , 1995, 42, 49-59.	12.4	9
51	Differentiation of methyl substituted fluorenes, anthracenes and benz[a]anthracenes using surface-catalyzed oxidation reactions and negative ion chemical ionization mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1988, 2, 184-188.	1.5	8
52	Analysis of Planar Chromatograms by Fast Atom Bombardment and Laser Desorption Mass Spectrometry. <i>Journal of Liquid Chromatography and Related Technologies</i> , 1990, 13, 2841-2869.	1.0	7
53	Low-temperature hydrogen transfer and cracking catalysis in molten SbCl ₃ -AlCl ₃ . <i>Fuel</i> , 1981, 60, 694-698.	6.4	6
54	The preparative scale separation and the identification of constituents of anthraquinone-derived dye mixtures. <i>Analytica Chimica Acta</i> , 1982, 135, 111-119.	5.4	6

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55	The preparative scale separation and the identification of constituents of anthraquinone-derived dye mixtures. <i>Analytica Chimica Acta</i> , 1982, 135, 121-128.	5.4	6
56	Carbon-13 NMR spectra of anthraquinone-derived dyes. <i>Magnetic Resonance in Chemistry</i> , 1985, 23, 161-165.	1.9	6
57	Characterization of olefinic double bonds in linear unsaturated fatty acids using fluorine magnetic resonance spectrometry. <i>Analytical Chemistry</i> , 1980, 52, 253-254.	6.5	5
58	Chemical characterization of the mutagenic neutral aromatic polar fractions of petroleum substitutes. <i>Fuel</i> , 1983, 62, 1177-1180.	6.4	5
59	Synthesis of Electrophore-labeled Oligonucleotides and Characterization by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry. <i>Journal of Mass Spectrometry</i> , 1996, 31, 661-668.	1.6	5
60	Multimode ionization cell for gas chromatographic detection. <i>Review of Scientific Instruments</i> , 1986, 57, 3075-3080.	1.3	4
61	Differentiation of Polycyclic Aromatic Hydrocarbons Using a Multimode Ionization Gas Chromatographic Detector. <i>Journal of Chromatographic Science</i> , 1988, 26, 49-54.	1.4	4
62	Rapid Analysis of Animal Drug Residues by Microcolumn Solid-Phase Extraction and Thermal Desorption Ion Trap Mass Spectrometry. <i>Journal of AOAC INTERNATIONAL</i> , 1994, 77, 1428-1434.	1.5	4
63	Characterization of Modified Nucleic Acid Constituents by Matrix-Assisted Laser Desorption Mass Spectrometry. <i>Polycyclic Aromatic Compounds</i> , 1994, 6, 95-102.	2.6	4
64	Fourier Transform Mass Spectrometry Studies of Negative Ion Processes. <i>ACS Symposium Series</i> , 1987, , 175-191.	0.5	4
65	Negative- and positive-ion chemical ionization mass spectra of aromatic amines: Surface-assisted reactions involving oxygen. <i>Organic Mass Spectrometry</i> , 1993, 28, 953-962.	1.3	3
66	Negative ion processes for the unambiguous identification of polycyclic aromatic compounds. <i>Fuel</i> , 1987, 66, 954-959.	6.4	2
67	Laser-enhanced negative ion mass spectroscopy for weakly electron-attaching species. <i>International Journal of Mass Spectrometry</i> , 1999, 193, 77-86.	1.5	2
68	Polycyclic aromatic hydrocarbon dermal tumorigens†Comparison of high-boiling petroleum crude oils and distillates and coal-derived liquids. <i>Fuel</i> , 1987, 66, 1046-1049.	6.4	1
69	<title>Detection and analysis of polymerase chain reaction products by mass spectrometry</title> . , 1997, 2985, 120.		1
70	The preparative scale separation and the identification of constituents of anthraquinonep-derived dye mixtures. <i>Analytica Chimica Acta</i> , 1983, 155, 151-158.	5.4	0
71	Rapid Method for Isolating Targeted Organic Chemicals from Biological Matrices. <i>Analytical Letters</i> , 1994, 27, 351-362.	1.8	0