

# Amy M Mckenna

## List of Publications by Year in descending order

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94  
papers

5,376  
citations

81900

39  
h-index

88630

70  
g-index

95  
all docs

95  
docs citations

95  
times ranked

4506  
citing authors

#	ARTICLE	IF	CITATIONS
1	Time-dependent molecular progression and acute toxicity of oil-soluble, interfacially-active, and water-soluble species reveals their rapid formation in the photodegradation of Macondo Well Oil. <i>Science of the Total Environment</i> , 2022, 813, 151884.	8.0	7
2	PFAS Analysis with Ultrahigh Resolution 21T FT-ICR MS: Suspect and Nontargeted Screening with Unrivaled Mass Resolving Power and Accuracy. <i>Environmental Science &amp; Technology</i> , 2022, 56, 2455-2465.	10.0	34
3	Enhanced Speciation of Pyrogenic Organic Matter from Wildfires Enabled by 21 T FT-ICR Mass Spectrometry. <i>Analytical Chemistry</i> , 2022, 94, 2973-2980.	6.5	22
4	Nitrogen Enrichment during Soil Organic Matter Burning and Molecular Evidence of Maillard Reactions. <i>Environmental Science &amp; Technology</i> , 2022, 56, 4597-4609.	10.0	20
5	Microbial iron cycling during palsa hillslope collapse promotes greenhouse gas emissions before complete permafrost thaw. <i>Communications Earth &amp; Environment</i> , 2022, 3, .	6.8	11
6	A new conceptual framework for the transformation of groundwater dissolved organic matter. <i>Nature Communications</i> , 2022, 13, 2153.	12.8	69
7	Elucidating the role of reactive nitrogen intermediates in hetero-cyclization during hydrothermal liquefaction of food waste. <i>Green Chemistry</i> , 2022, 24, 5125-5141.	9.0	9
8	Unique Molecular Features of Water-Soluble Photo-Oxidation Products among Refined Fuels, Crude Oil, and Herded Burnt Residue under High Latitude Conditions. <i>ACS ES&amp;T Water</i> , 2022, 2, 994-1002.	4.6	12
9	Climatic, land cover, and anthropogenic controls on dissolved organic matter quantity and quality from major alpine rivers across the Himalayan-Tibetan Plateau. <i>Science of the Total Environment</i> , 2021, 754, 142411.	8.0	22
10	Metal oxide supported Ni-impregnated bifunctional catalysts for controlling char formation and maximizing energy recovery during catalytic hydrothermal liquefaction of food waste. <i>Sustainable Energy and Fuels</i> , 2021, 5, 941-955.	4.9	23
11	Molecular Comparison of Solid-Phase Extraction and Liquid/Liquid Extraction of Water-Soluble Petroleum Compounds Produced through Photodegradation and Biodegradation by FT-ICR Mass Spectrometry. <i>Analytical Chemistry</i> , 2021, 93, 4611-4618.	6.5	10
12	Bioactivity of Humic Acids Extracted From Shale Ore: Molecular Characterization and Structure-Activity Relationship With Tomato Plant Yield Under Nutritional Stress. <i>Frontiers in Plant Science</i> , 2021, 12, 660224.	3.6	18
13	Macromolecular Characterization of Compound Selectivity for Oxidation and Oxidative Alterations of Dissolved Organic Matter by Manganese Oxide. <i>Environmental Science &amp; Technology</i> , 2021, 55, 7741-7751.	10.0	46
14	Spatio-temporal changes in dissolved organic matter composition along the salinity gradient of a marsh-influenced estuarine complex. <i>Limnology and Oceanography</i> , 2021, 66, 3040-3054.	3.1	11
15	Soil Organic Matter Characterization by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry (FTICR MS): A Critical Review of Sample Preparation, Analysis, and Data Interpretation. <i>Environmental Science &amp; Technology</i> , 2021, 55, 9637-9656.	10.0	88
16	Advances and Challenges in the Molecular Characterization of Petroporphyrins. <i>Energy &amp; Fuels</i> , 2021, 35, 18056-18077.	5.1	23
17	Plastic Formulation is an Emerging Control of Its Photochemical Fate in the Ocean. <i>Environmental Science &amp; Technology</i> , 2021, 55, 12383-12392.	10.0	38
18	Lessons Learned from a Decade-Long Assessment of Asphaltenes by Ultrahigh-Resolution Mass Spectrometry and Implications for Complex Mixture Analysis. <i>Energy &amp; Fuels</i> , 2021, 35, 16335-16376.	5.1	21

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19	Discovery of Oxygenated Hydrocarbon Biodegradation Products at a Late-Stage Petroleum Release Site. <i>Energy &amp; Fuels</i> , 2021, 35, 16713-16723.	5.1	3
20	Expanding the Analytical Window for Biochar Speciation: Molecular Comparison of Solvent Extraction and Water-Soluble Fractions of Biochar by FT-ICR Mass Spectrometry. <i>Analytical Chemistry</i> , 2021, 93, 15365-15372.	6.5	13
21	Assessing the Role of Photochemistry in Driving the Composition of Dissolved Organic Matter in Glacier Runoff. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2021JG006516.	3.0	7
22	Changes in groundwater dissolved organic matter character in a coastal sand aquifer due to rainfall recharge. <i>Water Research</i> , 2020, 169, 115201.	11.3	60
23	Copper impact on enzymatic cascade and extracellular sequestration via distinctive pathways of nitrogen removal in green sorption media at varying stormwater field conditions. <i>Chemosphere</i> , 2020, 243, 125399.	8.2	3
24	Fate and transport processes of nitrogen in biosorption activated media for stormwater treatment at varying field conditions of a roadside linear ditch. <i>Environmental Research</i> , 2020, 181, 108915.	7.5	9
25	Deciphering Dissolved Organic Matter: Ionization, Dopant, and Fragmentation Insights via Fourier Transform-Ion Cyclotron Resonance Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2020, 54, 16249-16259.	10.0	31
26	The interaction of dissolved organic nitrogen removal and microbial abundance in iron-filings based green environmental media for stormwater treatment. <i>Environmental Research</i> , 2020, 188, 109815.	7.5	9
27	High-Resolution Mass Spectrometry Identification of Novel Surfactant-Derived Sulfur-Containing Disinfection Byproducts from Gas Extraction Wastewater. <i>Environmental Science &amp; Technology</i> , 2020, 54, 9374-9386.	10.0	27
28	Molecular Transformation of Crude Oil Contaminated Soil after Bioelectrochemical Degradation Revealed by FT-ICR Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2020, 54, 2500-2509.	10.0	19
29	Characterisation of shallow groundwater dissolved organic matter in aeolian, alluvial and fractured rock aquifers. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 273, 163-176.	3.9	37
30	Speciation and conversion of carbon and nitrogen in young landfill leachate during anaerobic biological pretreatment. <i>Waste Management</i> , 2020, 106, 88-98.	7.4	15
31	Molecular-Level Characterization of Asphaltenes Isolated from Distillation Cuts. <i>Energy &amp; Fuels</i> , 2019, 33, 2018-2029.	5.1	34
32	Molecular-Level Characterization of Oil-Soluble Ketone/Aldehyde Photo-Oxidation Products by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Reveals Similarity Between Microcosm and Field Samples. <i>Environmental Science &amp; Technology</i> , 2019, 53, 6887-6894.	10.0	43
33	Atmospheric Pressure Photoionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Characterization of Oil Sand Process-Affected Water in Constructed Wetland Treatment. <i>Energy &amp; Fuels</i> , 2019, 33, 4420-4431.	5.1	8
34	Detailed Compositional Characterization of the 2014 Bangladesh Furnace Oil Released into the World's Largest Mangrove Forest. <i>Energy &amp; Fuels</i> , 2018, 32, 3232-3242.	5.1	17
35	Statistically Significant Differences in Composition of Petroleum Crude Oils Revealed by Volcano Plots Generated from Ultrahigh Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectra. <i>Energy &amp; Fuels</i> , 2018, 32, 1206-1212.	5.1	25
36	Comprehensive Analysis of Changes in Crude Oil Chemical Composition during Biosouring and Treatments. <i>Environmental Science &amp; Technology</i> , 2018, 52, 1290-1300.	10.0	15

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37	Correlations between Molecular Composition and Adsorption, Aggregation, and Emulsifying Behaviors of PetroPhase 2017 Asphaltenes and Their Thin-Layer Chromatography Fractions. <i>Energy &amp; Fuels</i> , 2018, 32, 2769-2780.	5.1	35
38	1.1-billion-year-old porphyrins establish a marine ecosystem dominated by bacterial primary producers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6978-E6986.	7.1	68
39	Composition-Dependent Sorptive Fractionation of Anthropogenic Dissolved Organic Matter by Fe(III)-Montmorillonite. <i>Soil Systems</i> , 2018, 2, 14.	2.6	25
40	The Impact of Carbon Source as Electron Donor on Composition and Concentration of Dissolved Organic Nitrogen in Biosorption-Activated Media for Stormwater and Groundwater Co-Treatment. <i>Environmental Science &amp; Technology</i> , 2018, 52, 9380-9390.	10.0	27
41	<i>Fremyella diplosiphon</i> as a Biodiesel Agent: Identification of Fatty Acid Methyl Esters via Microwave-Assisted Direct In Situ Transesterification. <i>Bioenergy Research</i> , 2018, 11, 528-537.	3.9	13
42	Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Characterization of Athabasca Oil Sand Process-Affected Waters Incubated in the Presence of Wetland Plants. <i>Energy &amp; Fuels</i> , 2017, 31, 1731-1740.	5.1	25
43	Organic coating on biochar explains its nutrient retention and stimulation of soil fertility. <i>Nature Communications</i> , 2017, 8, 1089.	12.8	371
44	Adsorptive fractionation of dissolved organic matter (DOM) by mineral soil: Macroscale approach and molecular insight. <i>Organic Geochemistry</i> , 2017, 103, 113-124.	1.8	102
45	Structural Characterization of Natural Nickel and Copper Binding Ligands along the US GEOTRACES Eastern Pacific Zonal Transect. <i>Frontiers in Marine Science</i> , 2016, 3, .	2.5	60
46	Characterization of products from fast and isothermal hydrothermal liquefaction of microalgae. <i>AIChE Journal</i> , 2016, 62, 815-828.	3.6	45
47	4 Years after the <i>Deepwater Horizon</i> Spill: Molecular Transformation of Macondo Well Oil in Louisiana Salt Marsh Sediments Revealed by FT-ICR Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2016, 50, 9061-9069.	10.0	66
48	Applications of comprehensive two-dimensional gas chromatography (GC-MS) in studying the source, transport, and fate of petroleum hydrocarbons in the environment. , 2016, , 399-448.		20
49	Photochemical changes in water accommodated fractions of MC252 and surrogate oil created during solar exposure as determined by FT-ICR MS. <i>Marine Pollution Bulletin</i> , 2016, 104, 262-268.	5.0	34
50	High Field Electron Paramagnetic Resonance Characterization of Electronic and Structural Environments for Paramagnetic Metal Ions and Organic Free Radicals in Deepwater Horizon Oil Spill Tar Balls. <i>Analytical Chemistry</i> , 2015, 87, 2306-2313.	6.5	31
51	Unprecedented Insights into the Chemical Complexity of Coal Tar from Comprehensive Two-Dimensional Gas Chromatography Mass Spectrometry and Direct Infusion Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy &amp; Fuels</i> , 2015, 29, 641-648.	5.1	33
52	Longitudinal shifts in dissolved organic matter chemogeography and chemodiversity within headwater streams: a river continuum reprise. <i>Biogeochemistry</i> , 2015, 124, 371-385.	3.5	60
53	Silver Cationization for Rapid Speciation of Sulfur-Containing Species in Crude Oils by Positive Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy &amp; Fuels</i> , 2014, 28, 447-452.	5.1	43
54	Chromatographic Enrichment and Subsequent Separation of Nickel and Vanadyl Porphyrins from Natural Seeps and Molecular Characterization by Positive Electrospray Ionization FT-ICR Mass Spectrometry. <i>Analytical Chemistry</i> , 2014, 86, 10708-10715.	6.5	45

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55	Lithium Cationization for Petroleum Analysis by Positive Ion Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy &amp; Fuels</i> , 2014, 28, 6841-6847.	5.1	22
56	Synthesis and characterization of lignin-based carbon materials with tunable microstructure. <i>RSC Advances</i> , 2014, 4, 4743-4753.	3.6	75
57	Sunlight creates oxygenated species in water-soluble fractions of Deepwater horizon oil. <i>Journal of Hazardous Materials</i> , 2014, 280, 636-643.	12.4	83
58	Direct Analysis of Thin-Layer Chromatography Separations of Petroleum Samples by Laser Desorption Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Imaging. <i>Energy &amp; Fuels</i> , 2014, 28, 6284-6288.	5.1	25
59	Targeted Petroleomics: Analytical Investigation of Macondo Well Oil Oxidation Products from Pensacola Beach. <i>Energy &amp; Fuels</i> , 2014, 28, 4043-4050.	5.1	130
60	Conversion of Lignin Precursors to Carbon Fibers with Nanoscale Graphitic Domains. <i>ACS Sustainable Chemistry and Engineering</i> , 2014, 2, 2002-2010.	6.7	68
61	Molecular Evidence of Heavy-Oil Weathering Following the M/V <i>Cosco Busan</i> Spill: Insights from Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2014, 48, 3760-3767.	10.0	35
62	Unprecedented Ultrahigh Resolution FT-ICR Mass Spectrometry and Parts-Per-Billion Mass Accuracy Enable Direct Characterization of Nickel and Vanadyl Porphyrins in Petroleum from Natural Seeps. <i>Energy &amp; Fuels</i> , 2014, 28, 2454-2464.	5.1	88
63	Biodegradation at the Seafloor: Ultrahigh Resolution FT-ICR Mass Spectral Characterization of Natural Petroleum Seeps. <i>International Oil Spill Conference Proceedings</i> , 2014, 2014, 2083-2097.	0.1	0
64	On the Size Distribution of Self-Associated Asphaltenes. <i>Energy &amp; Fuels</i> , 2013, 27, 5083-5106.	5.1	98
65	Heavy Petroleum Composition. 3. Asphaltene Aggregation. <i>Energy &amp; Fuels</i> , 2013, 27, 1246-1256.	5.1	162
66	Expansion of the Analytical Window for Oil Spill Characterization by Ultrahigh Resolution Mass Spectrometry: Beyond Gas Chromatography. <i>Environmental Science &amp; Technology</i> , 2013, 47, 7530-7539.	10.0	144
67	Tetramethylammonium Hydroxide as a Reagent for Complex Mixture Analysis by Negative Ion Electrospray Ionization Mass Spectrometry. <i>Analytical Chemistry</i> , 2013, 85, 7803-7808.	6.5	27
68	Oil Spill Source Identification by Principal Component Analysis of Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectra. <i>Analytical Chemistry</i> , 2013, 85, 9064-9069.	6.5	51
69	Joint Industrial Case Study for Asphaltene Deposition. <i>Energy &amp; Fuels</i> , 2013, 27, 1899-1908.	5.1	56
70	Evaluation of the Extraction Method and Characterization of Water-Soluble Organics from Produced Water by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy &amp; Fuels</i> , 2013, 27, 1846-1855.	5.1	18
71	Heavy Petroleum Composition. 4. Asphaltene Compositional Space. <i>Energy &amp; Fuels</i> , 2013, 27, 1257-1267.	5.1	147
72	Tailored Ion Radius Distribution for Increased Dynamic Range in FT-ICR Mass Analysis of Complex Mixtures. <i>Analytical Chemistry</i> , 2013, 85, 265-272.	6.5	38

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73	Heavy Petroleum Composition. 5. Compositional and Structural Continuum of Petroleum Revealed. <i>Energy &amp; Fuels</i> , 2013, 27, 1268-1276.	5.1	166
74	Compositional Analysis of Oil Residues by Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy &amp; Fuels</i> , 2013, 27, 2002-2009.	5.1	27
75	Mass Resolution and Mass Accuracy: How Much Is Enough?. <i>Mass Spectrometry</i> , 2013, 2, S0009-S0009.	0.6	39
76	Characterization of Pine Pellet and Peanut Hull Pyrolysis Bio-oils by Negative-Ion Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy &amp; Fuels</i> , 2012, 26, 3810-3815.	5.1	93
77	Characterization of Pyrogenic Black Carbon by Desorption Atmospheric Pressure Photoionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2012, 84, 1281-1287.	6.5	80
78	Selective Ionization of Dissolved Organic Nitrogen by Positive Ion Atmospheric Pressure Photoionization Coupled with Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2012, 84, 5085-5090.	6.5	31
79	Waxphaltene Determinator Method for Automated Precipitation and Redissolution of Wax and Asphaltene Components. <i>Energy &amp; Fuels</i> , 2012, 26, 2256-2268.	5.1	22
80	A molecular model for Illinois No. 6 Argonne Premium coal: Moving toward capturing the continuum structure. <i>Fuel</i> , 2012, 95, 35-49.	6.4	112
81	Compositional Boundaries for Fossil Hydrocarbons. <i>Energy &amp; Fuels</i> , 2011, 25, 2174-2178.	5.1	103
82	Atmospheric Pressure Laser-Induced Acoustic Desorption Chemical Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for the Analysis of Complex Mixtures. <i>Analytical Chemistry</i> , 2011, 83, 1616-1623.	6.5	45
83	Parts-Per-Billion Fourier Transform Ion Cyclotron Resonance Mass Measurement Accuracy with a "Walking" Calibration Equation. <i>Analytical Chemistry</i> , 2011, 83, 1732-1736.	6.5	190
84	Analysis and Identification of Biomarkers and Origin of Color in a Bright Blue Crude Oil. <i>Energy &amp; Fuels</i> , 2011, 25, 172-182.	5.1	44
85	Electrically Compensated Fourier Transform Ion Cyclotron Resonance Cell for Complex Mixture Mass Analysis. <i>Analytical Chemistry</i> , 2011, 83, 6907-6910.	6.5	103
86	Petroleum Analysis. <i>Analytical Chemistry</i> , 2011, 83, 4665-4687.	6.5	186
87	Petroleomics: advanced molecular probe for petroleum heavy ends. <i>Journal of Mass Spectrometry</i> , 2011, 46, 337-343.	1.6	172
88	Petroleomics: A Test Bed for Ultra-High-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>European Journal of Mass Spectrometry</i> , 2010, 16, 367-371.	1.0	19
89	The coupling of direct analysis in real time ionization to Fourier transform ion cyclotron resonance mass spectrometry for ultrahigh-resolution mass analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2010, 24, 784-790.	1.5	56
90	Combining biomarker and bulk compositional gradient analysis to assess reservoir connectivity. <i>Organic Geochemistry</i> , 2010, 41, 812-821.	1.8	66

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91	Heavy Petroleum Composition. 1. Exhaustive Compositional Analysis of Athabasca Bitumen HVGO Distillates by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: A Definitive Test of the Boduszynski Model. Energy & Fuels, 2010, 24, 2929-2938.	5.1	138
92	Heavy Petroleum Composition. 2. Progression of the Boduszynski Model to the Limit of Distillation by Ultrahigh-Resolution FT-ICR Mass Spectrometry. Energy & Fuels, 2010, 24, 2939-2946.	5.1	106
93	Petroleum Crude Oil Characterization by IMS-MS and FTICR MS. Analytical Chemistry, 2009, 81, 9941-9947.	6.5	164
94	Identification of Vanadyl Porphyrins in a Heavy Crude Oil and Raw Asphaltene by Atmospheric Pressure Photoionization Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry. Energy & Fuels, 2009, 23, 2122-2128.	5.1	185