James F Ranville

List of Publications by Citations

123 papers	7,452 citations	46 h-index	84 g-index
130 ext. papers	8,270 ext. citations	6.1 avg, IF	5.89 L-index

#	Paper	IF	Citations
123	Nanoparticle analysis and characterization methodologies in environmental risk assessment of engineered nanoparticles. *Ecotoxicology*, **2008**, 17, 344-61	2.9	486
122	Potential scenarios for nanomaterial release and subsequent alteration in the environment. *Environmental Toxicology and Chemistry*, **2012**, 31, 50-9	3.8	457
121	Determining transport efficiency for the purpose of counting and sizing nanoparticles via single particle inductively coupled plasma mass spectrometry. *Analytical Chemistry*, **2011**, 83, 9361-9	7.8	457
120	Nanoparticle size detection limits by single particle ICP-MS for 40 elements. *Environmental Science & Technology*, **2014**, 48, 10291-300	10.3	294
119	Release of TiO2 nanoparticles from sunscreens into surface waters: a one-year survey at the old Danube recreational Lake. *Environmental Science & Technology*, **2014**, 48, 5415-22	10.3	283
118	Detecting nanoparticulate silver using single-particle inductively coupled plasma-mass spectrometry. *Environmental Toxicology and Chemistry*, **2012**, 31, 115-21	3.8	255
117	Natural, incidental, and engineered nanomaterials and their impacts on the Earth system. *Science*, **2019**, 363,	33.3	250
116	Solubility of nano-zinc oxide in environmentally and biologically important matrices. *Environmental Toxicology and Chemistry*, **2012**, 31, 93-9	3.8	216
115	Nanopesticides: guiding principles for regulatory evaluation of environmental risks. *Journal of Agricultural and Food Chemistry*, **2014**, 62, 4227-40	5.7	210
114	Silver nanoparticle characterization using single particle ICP-MS (SP-ICP-MS) and asymmetrical flow field flow fractionation ICP-MS (AF4-ICP-MS). *Journal of Analytical Atomic Spectrometry*, **2012**, 27, 1131	3.7	208
113	Single Particle ICP-MS: Advances toward routine analysis of nanomaterials. *Analytical and Bioanalytical Chemistry*, **2016**, 408, 5053-74	4.4	199
112	Extraction and analysis of silver and gold nanoparticles from biological tissues using single particle inductively coupled plasma mass spectrometry. *Environmental Science & Technology*, **2013**, 47, 14315-23	10.3	165
111	Preserving the distribution of inorganic arsenic species in groundwater and acid mine drainage samples. *Environmental Science & Technology*, **2002**, 36, 2213-8	10.3	163
110	Single particle inductively coupled plasma-mass spectrometry: a performance evaluation and method comparison in the determination of nanoparticle size. *Environmental Science & Technology*, **2012**, 46, 12272-80	10.3	159
109	Characterization of silver nanoparticles using flow-field flow fractionation interfaced to inductively coupled plasma mass spectrometry. *Journal of Chromatography A*, **2011**, 1218, 4219-25	4.5	146
108	Photodegradation of roxarsone in poultry litter leachates. *Science of the Total Environment*, **2003**, 302, 237-45	10.2	130
107	Evidence for the aquatic binding of arsenate by natural organic matter-suspended Fe(III). *Environmental Science & Technology*, **2006**, 40, 5380-7	10.3	108

106	Analysis of gold nanoparticle mixtures: a comparison of hydrodynamic chromatography (HDC) and asymmetrical flow field-flow fractionation (AF4) coupled to ICP-MS. *Journal of Analytical Atomic Spectrometry*, **2012**, 27, 1532	3.7	102
105	Silver nanowire exposure results in internalization and toxicity to Daphnia magna. *ACS Nano*, **2013**, 7, 10681-94	16.7	101
104	Geochemical, mineralogical and microbiological characteristics of sediment from a naturally reduced zone in a uranium-contaminated aquifer. *Applied Geochemistry*, **2012**, 27, 1499-1511	3.5	99
103	Field and laboratory arsenic speciation methods and their application to natural-water analysis. *Water Research*, **2004**, 38, 355-64	12.5	92
102	Current status and future direction for examining engineered nanoparticles in natural systems. *Environmental Chemistry*, **2014**, 11, 351	3.2	88
101	Overcoming challenges in analysis of polydisperse metal-containing nanoparticles by single particle inductively coupled plasma mass spectrometry. *Journal of Analytical Atomic Spectrometry*, **2012**, 27, 1093	3.7	88
100	Cardiac and vascular metal deposition with high mortality in nephrogenic systemic fibrosis. *Kidney International*, **2008**, 73, 1413-8	9.9	86
99	Bioavailability, toxicity, and bioaccumulation of quantum dot nanoparticles to the amphipod Leptocheirus plumulosus. *Environmental Science & Technology*, **2012**, 46, 5550-6	10.3	81
98	Potential Environmental Impacts and Antimicrobial Efficacy of Silver- and Nanosilver-Containing Textiles. *Environmental Science & Technology*, **2016**, 50, 4018-26	10.3	79
97	A regional-scale study of chromium and nickel in soils of northern California, USA. *Applied Geochemistry*, **2009**, 24, 1500-1511	3.5	79
96	Low risk posed by engineered and incidental nanoparticles in drinking water. *Nature Nanotechnology*, **2018**, 13, 661-669	28.7	73
95	Daphnia need to be gut-cleared too: the effect of exposure to and ingestion of metal-contaminated sediment on the gut-clearance patterns of D. magna. *Aquatic Toxicology*, **2005**, 71, 143-54	5.1	73
94	Presence of organoarsenicals used in cotton production in agricultural water and soil of the southern United States. *Journal of Agricultural and Food Chemistry*, **2002**, 50, 7340-4	5.7	73
93	Development of sedimentation field-flow fractionation-inductively coupled plasma mass-spectrometry for the characterization of environmental colloids. *Analytica Chimica Acta*, **1999**, 381, 315-329	6.6	73
92	Dermally adhered soil: 1. Amount and particle-size distribution. *Integrated Environmental Assessment and Management*, **2006**, 2, 375-384	2.5	71
91	Comparison of on-line detectors for field flow fractionation analysis of nanomaterials. *Talanta*, **2013**, 104, 140-8	6.2	69
90	Field-flow fractionation characterization and binding properties of particulate and colloidal organic matter from the Rio Amazon and Rio Negro. *Organic Geochemistry*, **2002**, 33, 269-279	3.1	67
89	Characterzation of colloidal and humic-bound Ni and U in the "dissolved" fraction of contaminated sediment extracts. *Environmental Science & Technology*, **2005**, 39, 2478-85	10.3	64

88	Multiple Method Analysis of TiO Nanoparticle Uptake in Rice (Oryza sativa L.) Plants. *Environmental Science & Technology*, **2017**, 51, 10615-10623	10.3	62
87	Particle-Size and Element Distributions of Soil Colloids. *Soil Science Society of America Journal*, **2005**, 69, 1173-1184	2.5	62
86	Effects of iron on arsenic speciation and redox chemistry in acid mine water. *Journal of Geochemical Exploration*, **2005**, 85, 55-62	3.8	56
85	Influence of stability on the acute toxicity of CdSe/ZnS nanocrystals to Daphnia magna. *Environmental Toxicology and Chemistry*, **2010**, 29, 1338-44	3.8	54
84	Metal(loid) levels in biological matrices from human populations exposed to mining contamination--Panasqueira Mine (Portugal). *Journal of Toxicology and Environmental Health - Part A: Current Issues*, **2012**, 75, 893-908	3.2	53
83	Detection of single walled carbon nanotubes by monitoring embedded metals. *Environmental Sciences: Processes and Impacts*, **2013**, 15, 204-13	4.3	50
82	Quantifying uranium complexation by groundwater dissolved organic carbon using asymmetrical flow field-flow fractionation. *Journal of Contaminant Hydrology*, **2007**, 91, 233-46	3.9	50
81	The iron status in colloidal matter from the Rio Negro, Brasil. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2003**, 217, 1-9	5.1	49
80	Comparing the effects of nanosilver size and coating variations on bioavailability, internalization, and elimination, using Lumbriculus variegatus. *Environmental Toxicology and Chemistry*, **2013**, 32, 2069-77	3.8	48
79	Synchrotron X-ray 2D and 3D elemental imaging of CdSe/ZnS quantum dot nanoparticles in Daphnia magna. *Analytical and Bioanalytical Chemistry*, **2009**, 394, 911-7	4.4	48
78	Thioarsenic species associated with increased arsenic release during biostimulated subsurface sulfate reduction. *Environmental Science & Technology*, **2014**, 48, 13367-75	10.3	47
77	Physical, chemical, and in vitro toxicological characterization of nanoparticles in chemical mechanical planarization suspensions used in the semiconductor industry: towards environmental health and safety assessments. *Environmental Science: Nano*, **2015**, 2, 227-244	7.1	46
76	The persistence and transformation of silver nanoparticles in littoral lake mesocosms monitored using various analytical techniques. *Environmental Chemistry*, **2014**, 11, 419	3.2	45
75	The effect of hardness on the stability of citrate-stabilized gold nanoparticles and their uptake by Daphnia magna. *Journal of Hazardous Materials*, **2012**, 213-214, 434-9	12.8	43
74	Weathering and transport of chromium and nickel from serpentinite in the Coast Range ophiolite to the Sacramento Valley, California, USA. *Applied Geochemistry*, **2015**, 61, 72-86	3.5	42
73	Observed and modeled seasonal trends in dissolved and particulate Cu, Fe, Mn, and Zn in a mining-impacted stream. *Water Research*, **2008**, 42, 3135-45	12.5	37
72	Collection and analysis of colloidal particles transported in the Mississippi River, U.S.A.. *Journal of Contaminant Hydrology*, **1990**, 6, 241-250	3.9	33
71	Biomonitoring of several toxic metal(loid)s in different biological matrices from environmentally and occupationally exposed populations from Panasqueira mine area, Portugal. *Environmental Geochemistry and Health*, **2014**, 36, 255-69	4.7	32

70	Gadolinium deposition in nephrogenic systemic fibrosis: an examination of tissue using synchrotron x-ray fluorescence spectroscopy. *Journal of the American Academy of Dermatology*, **2010**, 62, 38-44	4.5	32
69	Use of a single-bowl continuous-flow centrifuge for dewatering suspended sediments: Effect on sediment physical and chemical characteristics. *Hydrological Processes*, **1991**, 5, 201-214	3.3	32
68	Evaluation of Different Field-Flow Fractionation Techniques for Separating Bacteria. *Separation Science and Technology*, **2000**, 35, 1761-1775	2.5	30
67	Detection and Sizing of Ti-Containing Particles in Recreational Waters Using Single Particle ICP-MS. *Bulletin of Environmental Contamination and Toxicology*, **2018**, 100, 120-126	2.7	30
66	Surface Modification of Gd Nanoparticles with pH-Responsive Block Copolymers for Use As Smart MRI Contrast Agents. *ACS Applied Materials & Interfaces*, **2016**, 8, 5040-50	9.5	29
65	Photodegradation of polymer-CNT nanocomposites: effect of CNT loading and CNT release characteristics. *Environmental Science: Nano*, **2017**, 4, 967-982	7.1	28
64	Phytotoxicity of silver nanoparticles to Lemna minor: Surface coating and exposure period-related effects. *Science of the Total Environment*, **2018**, 618, 1389-1399	10.2	28
63	Quantitative resolution of nanoparticle sizes using single particle inductively coupled plasma mass spectrometry with the K-means clustering algorithm. *Journal of Analytical Atomic Spectrometry*, **2014**, 29, 1630	3.7	28
62	Analysis of pH dependent uranium(VI) sorption to nanoparticulate hematite by flow field-flow fractionation-inductively coupled plasma mass spectrometry. *Environmental Science & Technology*, **2009**, 43, 5403-9	10.3	27
61	Methods for the Detection and Characterization of Silica Colloids by Microsecond spICP-MS. *Analytical Chemistry*, **2016**, 88, 4733-41	7.8	27
60	Metal deposition in calcific uremic arteriolopathy. *Journal of the American Academy of Dermatology*, **2009**, 61, 73-9	4.5	24
59	Arsenic geochemistry in a biostimulated aquifer: an aqueous speciation study. *Environmental Toxicology and Chemistry*, **2013**, 32, 1216-23	3.8	23
58	Application of flow field flow fractionation-ICPMS for the study of uranium binding in bacterial cell suspensions. *Analytical Chemistry*, **2005**, 77, 1393-7	7.8	23
57	The Use of Field and Mesocosm Experiments to Quantify Effects of Physical and Chemical Stressors in Mining-Contaminated Streams. *Environmental Science & Technology*, **2016**, 50, 7825-33	10.3	22
56	Effect of age on acute toxicity of cadmium, copper, nickel, and zinc in individual-metal exposures to Daphnia magna neonates. *Environmental Toxicology and Chemistry*, **2017**, 36, 113-119	3.8	20
55	Acute Toxicity of Ternary Cd-Cu-Ni and Cd-Ni-Zn Mixtures to Daphnia magna: Dominant Metal Pairs Change along a Concentration Gradient. *Environmental Science & Technology*, **2017**, 51, 4471-4481	10.3	20
54	Using single-particle ICP-MS for monitoring metal-containing particles in tap water. *Environmental Science: Water Research and Technology*, **2018**, 4, 1923-1932	4.2	19
53	Evaluation and application of anion exchange resins to measure groundwater uranium flux at a former uranium mill site. *Water Research*, **2011**, 45, 4866-76	12.5	18

52	Spatial variations in the fate and transport of metals in a mining-influenced stream, North Fork Clear Creek, Colorado. *Science of the Total Environment*, **2009**, 407, 6223-34	10.2	18
51	A test of the additivity of acute toxicity of binary-metal mixtures of ni with Cd, Cu, and Zn to Daphnia magna, using the inflection point of the concentration-response curves. *Environmental Toxicology and Chemistry*, **2016**, 35, 1843-51	3.8	18
50	Methodology for quantifying engineered nanomaterial release from diverse product matrices under outdoor weathering conditions and implications for life cycle assessment. *Environmental Science: Nano*, **2017**, 4, 1784-1797	7.1	17
49	Biodegradation of Carbon Nanotube/Polymer Nanocomposites using a Monoculture. *Environmental Science & Technology*, **2018**, 52, 40-51	10.3	17
48	Measurement of the Density of Engineered Silver Nanoparticles Using Centrifugal FFF-TEM and Single Particle ICP-MS. *Analytical Chemistry*, **2017**, 89, 6056-6064	7.8	16
47	Radionuclides, trace elements, and radium residence in phosphogypsum of Jordan. *Environmental Geochemistry and Health*, **2011**, 33, 149-65	4.7	16
46	Direct versus indirect determination of suspended sediment associated metals in a mining-influenced watershed. *Applied Geochemistry*, **2008**, 23, 1218-1231	3.5	16
45	Bioavailability of sediment-associated Cu and Zn to Daphnia magna. *Aquatic Toxicology*, **2006**, 77, 402-11	5.1	16
44	Analysis of single-walled carbon nanotubes using spICP-MS with microsecond dwell time. *NanoImpact*, **2016**, 1, 65-72	5.6	16
43	The development of bio-carbon adsorbents from Lodgepole Pine to remediate acid mine drainage in the Rocky Mountains. *Biomass and Bioenergy*, **2008**, 32, 267-276	5.3	15
42	Coupling single particle ICP-MS with field-flow fractionation for characterizing metal nanoparticles contained in nanoplastic colloids. *Environmental Science: Nano*, **2020**, 7, 514-524	7.1	15
41	Dermally adhered soil: 2. Reconstruction of dry-sieve particle-size distributions from wet-sieve data. *Integrated Environmental Assessment and Management*, **2006**, 2, 385-390	2.5	14
40	Chronic and pulse exposure effects of silver nanoparticles on natural lake phytoplankton and zooplankton. *Ecotoxicology*, **2017**, 26, 502-515	2.9	13
39	Quantifying temporal and geographic variation in sunscreen and mineralogic titanium-containing nanoparticles in three recreational rivers. *Science of the Total Environment*, **2020**, 743, 140845	10.2	13
38	Nanoparticles in the environment: stability and toxicity. *Reviews on Environmental Health*, **2012**, 27, 175-9	3.8	13
37	Characterization of silver nanoparticle aggregates using single particle-inductively coupled plasma-mass spectrometry (spICP-MS). *Chemosphere*, **2017**, 171, 468-475	8.4	12
36	Opportunities for examining the natural nanogeochemical environment using recent advances in nanoparticle analysis. *Journal of Analytical Atomic Spectrometry*, **2019**, 34, 1768-1772	3.7	12
35	Effect of Surface Charge and Elemental Composition on the Swelling and Delamination of Montmorillonite Nanoclays Using Sedimentation Field-flow Fractionation and Mass Spectroscopy. *Clays and Clay Minerals*, **2015**, 63, 457-468	2.1	12

34	An evaluation of trace metal distribution, enrichment factors and risk in sediments of a coastal lagoon (Ria de Aveiro, Portugal). *Environmental Earth Sciences*, **2012**, 67, 2043-2052	2.9	12
33	Bioaccumulation and in-vivo dissolution of CdSe/ZnS with three different surface coatings by Daphnia magna. *Chemosphere*, **2016**, 143, 115-22	8.4	11
32	Quantification and Characterization of Nanoparticulate Zinc in an Urban Watershed. *Frontiers in Environmental Science*, **2020**, 8,	4.8	11
31	Contaminant discharge and uncertainty estimates from passive flux meter measurements. *Water Resources Research*, **2012**, 48,	5.4	11
30	An enriched stable-isotope approach to determine the gill-zinc binding properties of juvenile rainbow trout (Oncorhynchus mykiss) during acute zinc exposures in hard and soft waters. *Environmental Toxicology and Chemistry*, **2009**, 28, 1233-43	3.8	11
29	Gunshot residue (GSR) analysis by single particle inductively coupled plasma mass spectrometry (spICP-MS). *Forensic Science International*, **2018**, 288, e20-e25	2.6	11
28	Copper release and transformation following natural weathering of nano-enabled pressure-treated lumber. *Science of the Total Environment*, **2019**, 668, 234-244	10.2	10
27	Simulation of a hydraulic fracturing wastewater surface spill on agricultural soil. *Science of the Total Environment*, **2018**, 645, 229-234	10.2	10
26	Detection and characterization of uranium–humic complexes during 1D transport studies. *Geochimica Et Cosmochimica Acta*, **2013**, 109, 127-142	5.5	10
25	It is raining plastic. *US Geological Survey Open-File Report*,		10
24	Cholinesterase activity on Echinogammarus meridionalis (Pinkster) and Atyaephyra desmarestii (Millet): characterisation and in vivo effects of copper and zinc. *Ecotoxicology*, **2014**, 23, 449-58	2.9	9
23	Sequestration of arsenate from aqueous solution using 2-line ferrihydrite: equilibria, kinetics, and X-ray absorption spectroscopic analysis. *Environmental Earth Sciences*, **2014**, 71, 3307-3318	2.9	9
22	Influence of Metal Contamination and Sediment Deposition on Benthic Invertebrate Colonization at the North Fork Clear Creek Superfund Site, Colorado, USA. *Environmental Science & Technology*, **2018**, 52, 7072-7080	10.3	9
21	Natural organic matter. *Interface Science and Technology*, **2006**, 299-315	2.3	7
20	Measurement of total Zn and Zn isotope ratios by quadrupole ICP-MS for evaluation of Zn uptake in gills of brown trout (Salmo trutta) and rainbow trout (Oncorhynchus mykiss). *Talanta*, **2009**, 80, 676-84	6.2	6
19	Is the Factor-of-2 Rule Broadly Applicable for Evaluating the Prediction Accuracy of Metal-Toxicity Models?. *Bulletin of Environmental Contamination and Toxicology*, **2018**, 100, 64-68	2.7	5
18	Field-Flow Fractionation Coupled to Inductively Coupled Plasma-Mass Spectrometry (FFF-ICP-MS): Methodology and Application to Environmental Nanoparticle Research **2012**, 277-299		4
17	Evaluating performance, degradation, and release behavior of a nanoform pigmented coating after natural and accelerated weathering. *NanoImpact*, **2020**, 17, 100199	5.6	4

16	Characteristics and Stability of Incidental Iron Oxide Nanoparticles during Remediation of a Mining-Impacted Stream. *Environmental Science & Technology*, **2019**, 53, 11214-11222	10.3	3
15	Feeding preferences of two detritivores related to size and metal content of leaves: the crustaceans Atyaephyra desmarestii (Millet) and Echinogammarus meridionalis (Pinkster). *Environmental Science and Pollution Research*, **2014**, 21, 12325-35	5.1	3
14	A Simple Scheme to Determine Potential Aquatic Metal Toxicity from Mining Wastes. *Environmental Forensics*, **2007**, 8, 119-128	1.6	3
13	Assessing CeO2 and TiO2 Nanoparticle Concentrations in the Seine River and Its Tributaries Near Paris. *Frontiers in Environmental Science*,8,	4.8	3
12	Age-related differences in sensitivity to metals can matter for Daphnia magna neonates. *Integrated Environmental Assessment and Management*, **2017**, 13, 208-210	2.5	2
11	Size Distributions. *Frontiers of Nanoscience*, **2015**, 8, 91-121	0.7	2
10	Reactive transport modeling of remedial scenarios to predict cadmium, copper, and zinc in north fork of Clear Creek, Colorado **2009**, 19, 101-119		2
9	Differentiation of colloidal and dissolved silica: analytical separation using spectrophotometry and inductively coupled plasma atomic emission spectrometry. *Analytica Chimica Acta*, **1991**, 249, 509-511	6.6	2
8	PREDICTING TOXIC EFFECTS OF COPPER ON AQUATIC BIOTA IN MINERALIZED AREAS BY USING THE BIOTIC LIGAND MODEL. *Journal of the American Society of Mining and Reclamation*, **2006**, 2006, 2055-2077	2.5	2
7	Physiological effects of essential metals on two detritivores: Atyaephyra desmarestii (Millet) and Echinogammarus meridionalis (Pinkster). *Environmental Toxicology and Chemistry*, **2016**, 35, 1442-8	3.8	2
6	Assessment of Young Dong tributary and Imgok Creek impacted by Young Dong coal mine, South Korea. *Environmental Geochemistry and Health*, **2012**, 34 Suppl 1, 95-103	4.7	1
5	Distribution of potentially toxic metal and radionuclide contamination in soils related to phosphogypsum waste stockpiling in the Eshidiya Mine, Jordan. *Geochemistry: Exploration, Environment, Analysis*, **2010**, 10, 419-433	1.8	1
4	Simultaneous Insight into Dissolution and Aggregation of Metal Sulfide Nanoparticles through Single-Particle Inductively Coupled Plasma Mass Spectrometry. *ACS Earth and Space Chemistry*, **2022**, 6, 541-550	3.2	1
3	Exploring Nanogeochemical Environments: New Insights from Single Particle ICP-TOFMS and AF4-ICPMS.. *ACS Earth and Space Chemistry*, **2022**, 6, 943-952	3.2	1
2	Distribution and mode of occurrences of radionuclides in phosphogypsum from the Aqaba and Eshidiya fertilizer plants, Jordan. *Diqiu Huaxue*, **2006**, 25, 178-178		
1	Coupled Microbial and Chemical Reactions in Uranium Bioremediation **2006**, 183-190		