Frank von der Kammer

List of Publications by Year
in descending order

#	Article	IF	Citations
1	The ecotoxicology and chemistry of manufactured nanoparticles. Ecotoxicology, 2008, 17, 287-314.	1.1	774
2	Nanoparticles: structure, properties, preparation and behaviour in environmental media. Ecotoxicology, 2008, 17, 326-343.	1.1	535
3	Analysis of engineered nanomaterials in complex matrices (environment and biota): General considerations and conceptual case studies. Environmental Toxicology and Chemistry, 2012, 31, 32-49.	2.2	390
4	Release of TiO₂ Nanoparticles from Sunscreens into Surface Waters: A One-Year Survey at the Old Danube Recreational Lake. Environmental Science & Technology, 2014, 48, 5415-5422.	4.6	344
5	Nanomaterials for environmental studies: Classification, reference material issues, and strategies for physico-chemical characterisation. Science of the Total Environment, 2010, 408, 1745-1754.	3.9	339
6	Paradigms to assess the environmental impact of manufactured nanomaterials. Environmental Toxicology and Chemistry, 2012, 31, 3-14.	2.2	294
7	Algal testing of titanium dioxide nanoparticlesâ€"Testing considerations, inhibitory effects and modification of cadmium bioavailability. Toxicology, 2010, 269, 190-197.	2.0	273
8	Separation and characterization of nanoparticles in complex food and environmental samples by field-flow fractionation. TrAC - Trends in Analytical Chemistry, 2011, 30, 425-436.	5.8	243
9	Nanostructured TiO₂: Transport Behavior and Effects on Aquatic Microbial Communities under Environmental Conditions. Environmental Science & Technology, 2009, 43, 8098-8104.	4.6	216
10	Spot the Difference: Engineered and Natural Nanoparticles in the Environmentâ€"Release, Behavior, and Fate. Angewandte Chemie - International Edition, 2014, 53, 12398-12419.	7.2	210
11	Detection and characterization of silver nanoparticles in chicken meat by asymmetric flow field flow fractionation with detection by conventional or single particle ICP-MS. Analytical and Bioanalytical Chemistry, 2013, 405, 8185-8195.	1.9	178
12	Iron Oxides as Geochemical Nanovectors for Metal Transport in Soil-River Systems. Elements, 2008, 4, 401-406.	0.5	176
13	Commercial Titanium Dioxide Nanoparticles in Both Natural and Synthetic Water: Comprehensive Multidimensional Testing and Prediction of Aggregation Behavior. Environmental Science & Technology, 2011, 45, 10045-10052.	4.6	175
14	A Review of the Properties and Processes Determining the Fate of Engineered Nanomaterials in the Aquatic Environment. Critical Reviews in Environmental Science and Technology, 2015, 45, 2084-2134.	6.6	172
15	Microplastic Exposure Assessment in Aquatic Environments: Learning from Similarities and Differences to Engineered Nanoparticles. Environmental Science & Technology, 2017, 51, 2499-2507.	4.6	146
16	Behavior of Ag nanoparticles in soil: Effects of particle surface coating, aging and sewage sludge amendment. Environmental Pollution, 2013, 182, 141-149.	3.7	129
17	The road to nowhere: equilibrium partition coefficients for nanoparticles. Environmental Science: Nano, 2014, 1, 317-323.	2.2	129
18	Single-particle multi-element fingerprinting (spMEF) using inductively-coupled plasma time-of-flight mass spectrometry (ICP-TOFMS) to identify engineered nanoparticles against the elevated natural background in soils. Environmental Science: Nano, 2017, 4, 307-314.	2.2	128

#	Article	IF	Citations
19	Estimating the relevance of engineered carbonaceous nanoparticle facilitated transport of hydrophobic organic contaminants in porous media. Environmental Pollution, 2009, 157, 1117-1126.	3.7	119
20	Field-flow fractionation and inductively coupled plasma mass spectrometer coupling: History, development and applications. Journal of Analytical Atomic Spectrometry, 2010, 25, 613.	1.6	118
21	Concern-driven integrated approaches to nanomaterial testing and assessment â€“ report of the NanoSafety Cluster Working Group 10. Nanotoxicology, 2014, 8, 334-348.	1.6	118
22	Legal and practical challenges in classifying nanomaterials according to regulatory definitions. Nature Nanotechnology, 2019, 14, 208-216.	15.6	115
23	Effect of pH and Stream Order on Iron and Arsenic Speciation in Boreal Catchments. Environmental Science & Technology, 2013, 47, 7120-7128.	4.6	113
24	Progress towards the validation of modeled environmental concentrations of engineered nanomaterials by analytical measurements. Environmental Science: Nano, 2015, 2, 421-428.	2.2	110
25	Size-Based Speciation of Natural Colloidal Particles by Flow Field Flow Fractionation, Inductively Coupled Plasma-Mass Spectroscopy, and Transmission Electron Microscopy/X-ray Energy Dispersive Spectroscopy:Â Colloidsâˆ’Trace Element Interaction. Environmental Science & Technology, 2006, 40, 2156-2162.	4.6	104
26	Current status and future direction for examining engineered nanoparticles in natural systems. Environmental Chemistry, 2014, 11, 351.	0.7	103
27	Where is the nano? Analytical approaches for the detection and quantification of TiO₂ engineered nanoparticles in surface waters. Environmental Science: Nano, 2018, 5, 313-326.	2.2	101
28	Detection of Engineered Copper Nanoparticles in Soil Using Single Particle ICP-MS. International Journal of Environmental Research and Public Health, 2015, 12, 15756-15768.	1.2	100
29	Size fractionation and characterization of natural colloids by flow-field flow fractionation coupled to multi-angle laser light scattering. Journal of Chromatography A, 2006, 1104, 272-281.	1.8	98
30	Using FlFFF and aTEM to determine trace metalâ€“nanoparticle associations in riverbed sediment. Environmental Chemistry, 2010, 7, 82.	0.7	97
31	Influence of surface functionalization and particle size on the aggregation kinetics of engineered nanoparticles. Chemosphere, 2012, 87, 918-924.	4.2	95
32	Optimisation of asymmetrical flow field flow fractionation for environmental nanoparticles separation. Journal of Chromatography A, 2008, 1206, 160-165.	1.8	89
33	Validation of methods for the detection and quantification of engineered nanoparticles in food. Food Chemistry, 2013, 138, 1959-1966.	4.2	88
34	Field-flow fractionation coupled to multi-angle laser light scattering detectors: Applicability and analytical benefits for the analysis of environmental colloids. Analytica Chimica Acta, 2005, 552, 166-174.	2.6	87
35	Assessment of the physico-chemical behavior of titanium dioxide nanoparticles in aquatic environments using multi-dimensional parameter testing. Environmental Pollution, 2010, 158, 3472-3481.	3.7	87
36	Relevance of peat-draining rivers for the riverine input of dissolved iron into the ocean. Science of the Total Environment, 2010, 408, 2402-2408.	3.9	86

#	Article	IF	Citations
37	Natural Organic Matter Concentration and Hydrochemistry Influence Aggregation Kinetics of Functionalized Engineered Nanoparticles. Environmental Science & Technology, 2013, 47, 4113-4120.	4.6	86
38	Humic acid adsorption and surface charge effects on schwertmannite and goethite in acid sulphate waters. Water Research, 2008, 42, 2051-2060.	5.3	85
39	Identification and characterization of organic nanoparticles in food. TrAC - Trends in Analytical Chemistry, 2011, 30, 100-112.	5.8	84
40	Optimization and evaluation of asymmetric flow field-flow fractionation of silver nanoparticles. Journal of Chromatography A, 2013, 1272, 116-125.	1.8	84
41	The role of nanominerals and mineral nanoparticles in the transport of toxic trace metals: Field-flow fractionation and analytical TEM analyses after nanoparticle isolation and density separation. Geochimica Et Cosmochimica Acta, 2013, 102, 213-225.	1.6	82
42	The potential of TiO2 nanoparticles as carriers for cadmium uptake in Lumbriculus variegatus and Daphnia magna. Aquatic Toxicology, 2012, 118-119, 1-8.	1.9	78
43	River-derived humic substances as iron chelators in seawater. Marine Chemistry, 2015, 174, 85-93.	0.9	74
44	First steps towards a generic sample preparation scheme for inorganic engineered nanoparticles in a complex matrix for detection, characterization, and quantification by asymmetric flow-field flow fractionation coupled to multi-angle light scattering and ICP-MS. Journal of Analytical Atomic Spectrometry, 2015, 30, 1286-1296.	1.6	66
45	Key principles and operational practices for improved nanotechnology environmental exposure assessment. Nature Nanotechnology, 2020, 15, 731-742.	15.6	66
46	Using FLOWFFF and HPSEC to determine trace metalâ€“colloid associations in wetland runoff. Water Research, 2013, 47, 2757-2769.	5.3	59
47	Strategies for determining heteroaggregation attachment efficiencies of engineered nanoparticles in aquatic environments. Environmental Science: Nano, 2020, 7, 351-367.	2.2	59
48	The influence of pH on iron speciation in podzol extracts: Iron complexes with natural organic matter, and iron mineral nanoparticles. Science of the Total Environment, 2013, 461-462, 108-116.	3.9	55
49	Meeting the Needs for Released Nanomaterials Required for Further Testingâ€"The SUN Approach. Environmental Science & Technology, 2016, 50, 2747-2753.	4.6	55
50	Natural sample fractionation by FlFFFâ€“MALLSâ€“TEM: Sample stabilization, preparation, pre-concentration and fractionation. Journal of Chromatography A, 2005, 1093, 156-166.	1.8	53
51	Nanoscale lignin particles as sources of dissolved iron to the ocean. Global Biogeochemical Cycles, 2012, 26, .	1.9	53
52	Colloid-associated export of arsenic in stream water during stormflow events. Chemical Geology, 2013, 352, 81-91.	1.4	46
53	3D characterization of natural colloids by FlFFF-MALLS-TEM. Analytical and Bioanalytical Chemistry, 2005, 383, 549-556.	1.9	45
54	Influence of carrier solution ionic strength and injected sample load on retention and recovery of natural nanoparticles using Flow Field-Flow Fractionation. Journal of Chromatography A, 2011, 1218, 6763-6773.	1.8	41

#	Article	IF	Citations
55	Ageing of synthetic and natural schwertmannites at pH 2â€"8. Clay Minerals, 2008, 43, 437-448.	0.2	40
56	TiO2 nanomaterial detection in calcium rich matrices by spICPMS. A matter of resolution and treatment. Journal of Analytical Atomic Spectrometry, 2017, 32, 1400-1411.	1.6	39
57	Release of TiO 2 â€" (Nano) particles from construction and demolition landfills. NanoImpact, 2017, 8, 73-79.	2.4	39
58	Silver and gold nanoparticle separation using asymmetrical flow-field flow fractionation: Influence of run conditions and of particle and membrane charges. Journal of Chromatography A, 2016, 1440, 150-159.	1.8	38
59	Dynamic light-scattering measurement comparability of nanomaterial suspensions. Journal of Nanoparticle Research, 2014, 16, 1.	0.8	37
60	Quantifying the influence of humic acid adsorption on colloidal microsphere deposition onto iron-oxide-coated sand. Environmental Pollution, 2010, 158, 3498-3506.	3.7	36
61	Production of reference materials for the detection and size determination of silica nanoparticles in tomato soup. Analytical and Bioanalytical Chemistry, 2014, 406, 3895-907.	1.9	36
62	Environmental Impacts by Fragments Released from Nanoenabled Products: A Multiassay, Multimaterial Exploration by the SUN Approach. Environmental Science & Technology, 2018, 52, 1514-1524.	4.6	36
63	Nanoscale Coloristic Pigments: Upper Limits on Releases from Pigmented Plastic during Environmental Aging, In Food Contact, and by Leaching. Environmental Science & Technology, 2017, 51, 11669-11680.	4.6	35
64	Transformations of Nanoenabled Copper Formulations Govern Release, Antifungal Effectiveness, and Sustainability throughout the Wood Protection Lifecycle. Environmental Science & Technology, 2018, 52, 1128-1138.	4.6	34
65	Freshwater suspended particulate matterâ€"Key components and processes in floc formation and dynamics. Water Research, 2022, 220, 118655.	5.3	34
66	Asymmetrical flow-field-flow fractionation coupled with inductively coupled plasma mass spectrometry for the analysis of gold nanoparticles in the presence of natural nanoparticles. Journal of Chromatography A, 2014, 1372, 204-211.	1.8	33
67	Feasibility of the development of reference materials for the detection of Ag nanoparticles in food: neat dispersions and spiked chicken meat. Accreditation and Quality Assurance, 2015, 20, 3-16.	0.4	33
68	Harmonizing across environmental nanomaterial testing media for increased comparability of nanomaterial datasets. Environmental Science: Nano, 2020, 7, 13-36.	2.2	32
69	Tetrachloroferrate containing ionic liquids: Magnetic- and aggregation behavior. Inorganic Chemistry Communication, 2010, 13, 1485-1488.	1.8	31
70	Scientific rationale for the development of an OECD test guideline on engineered nanomaterial stability. NanoImpact, 2018, 11, 42-50.	2.4	31
71	Influence of ionic strength and pH on the limitation of latex microsphere deposition sites on iron-oxide coated sand by humic acid. Environmental Pollution, 2011, 159, 1896-1904.	3.7	30
72	Agar agar-stabilized milled zerovalent iron particles for in situ groundwater remediation. Science of the Total Environment, 2016, 563-564, 713-723.	3.9	29

#	Article	IF	Citations
73	Physicochemical characterization of titanium dioxide pigments using various techniques for size determination and asymmetric flow field flow fractionation hyphenated with inductively coupled plasma mass spectrometry. Analytical and Bioanalytical Chemistry, 2016, 408, 6679-6691.	1.9	29
74	Application of a high-performance liquid chromatography fluorescence detector as a nephelometric turbidity detector following Field-Flow Fractionation to analyse size distributions of environmental colloids. Journal of Chromatography A, 2005, 1100, 81-89.	1.8	27
75	Natural organic matter and iron export from the Tanner Moor, Austria. Limnologica, 2013, 43, 239-244.	0.7	27
76	Bovine Serum Albumin Adsorption to Iron-Oxide Coated Sands Can Change Microsphere Deposition Mechanisms. Environmental Science & Technology, 2012, 46, 2583-2591.	4.6	26
77	Impact of particle size and light exposure on the effects of TiO₂ nanoparticles on <i>Caenorhabditis elegans</i>. Environmental Toxicology and Chemistry, 2014, 33, 2288-2296.	2.2	23
78	Proposal for a tiered dietary bioaccumulation testing strategy for engineered nanomaterials using fish. Environmental Science: Nano, 2018, 5, 2030-2046.	2.2	23
79	Accessibility of Humic-Associated Fe to a Microbial Siderophore: Implications for Bioavailability. Environmental Science & Technology, 2014, 48, 1015-1022.	4.6	22
80	Opportunities for examining the natural nanogeochemical environment using recent advances in nanoparticle analysis. Journal of Analytical Atomic Spectrometry, 2019, 34, 1768-1772.	1.6	22
81	Persistence of copper-based nanoparticle-containing foliar sprays in Lactuca sativa (lettuce) characterized by spICP-MS. Journal of Nanoparticle Research, 2019, 21, 1.	0.8	22
82	Concentrations and Distributions of Metals Associated with Dissolved Organic Matter from the Suwannee River (GA, USA). Environmental Engineering Science, 2015, 32, 54-65.	0.8	21
83	Quantification and Characterization of Nanoparticulate Zinc in an Urban Watershed. Frontiers in Environmental Science, 2020, 8, .	1.5	21
84	Accurate quantification of TiO2 nanoparticles in commercial sunscreens using standard materials and orthogonal particle sizing methods for verification. Talanta, 2020, 215, 120921.	2.9	21
85	Toward a comprehensive and realistic risk evaluation of engineered nanomaterials in the urban water system. Frontiers in Chemistry, 2014, 2, 39.	1.8	20
86	Effect of field site hydrogeochemical conditions on the corrosion of milled zerovalent iron particles and their dechlorination efficiency. Science of the Total Environment, 2018, 618, 1619-1627.	3.9	20
87	A Large-Scale 3D Study on Transport of Humic Acid-Coated Goethite Nanoparticles for Aquifer Remediation. Water (Switzerland), 2020, 12, 1207.	1.2	20
88	Combining gas-phase electrophoretic mobility molecular analysis (GEMMA), light scattering, field flow fractionation and cryo electron microscopy in a multidimensional approach to characterize liposomal carrier vesicles. International Journal of Pharmaceutics, 2016, 513, 309-318.	2.6	19
89	Characterisation of Aquatic Colloids and Macromolecules by Field-Flow Fractionation. , 2007, , 223-276.		18
90	Combining spatially resolved hydrochemical data with in-vitro nanoparticle stability testing: Assessing environmental behavior of functionalized gold nanoparticles on a continental scale. Environment International, 2013, 59, 53-62.	4.8	17

#	Article	IF	Citations
91	Mechanisms of (photo)toxicity of TiO₂ nanomaterials (NM103, NM104, NM105): using high-throughput gene expression in <i>Enchytraeus crypticus</i>. Nanoscale, 2018, 10, 21960-21970.	2.8	17
92	Natural colloid characterization using flow-field-flow-fractionation followed by multi-detector analysis. Water Science and Technology, 1998, 37, 173.	1.2	15
93	Nano electrospray gas-phase electrophoretic mobility molecular analysis (nES GEMMA) of liposomes: applicability of the technique for nano vesicle batch control. Analyst, The, 2016, 141, 6042-6050.	1.7	15
94	Comparison of Different Monitoring Programs of the 2002 Summer Flood in the River Elbe. Clean - Soil, Air, Water, 2005, 33, 404-417.	0.8	14
95	A uniform measurement expression for cross method comparison of nanoparticle aggregate size distributions. Analyst, The, 2015, 140, 5257-5267.	1.7	14
96	Impact of Sodium Humate Coating on Collector Surfaces on Deposition of Polymer-Coated Nanoiron Particles. Environmental Science & Technology, 2017, 51, 9202-9209.	4.6	14
97	Impact of natural nanophases on heavy-metal retention in zeolite-supported reactive filtration facilities for urban run-off treatment. Fresenius' Journal of Analytical Chemistry, 2001, 371, 652-659.	1.5	13
98	The importance of aromaticity to describe the interactions of organic matter with carbonaceous materials depends on molecular weight and sorbent geometry. Environmental Sciences: Processes and Impacts, 2020, 22, 1888-1897.	1.7	13
99	Methanol-based extraction protocol for insoluble and moderately water-soluble nanoparticles in plants to enable characterization by single particle ICP-MS. Analytical and Bioanalytical Chemistry, 2021, 413, 299-314.	1.9	13
100	New guidance brings clarity to environmental hazard and behaviour testing of nanomaterials. Nature Nanotechnology, 2021, 16, 482-483.	15.6	13
101	Rapid analysis of gunshot residues with single-particle inductively coupled plasma time-of-flight mass spectrometry. Forensic Science International, 2022, 332, 111202.	1.3	11
102	Quantification of anthropogenic and geogenic Ce in sewage sludge based on Ce oxidation state and rare earth element patterns. Water Research X, 2020, 9, 100059.	2.8	9
103	Exploring Nanogeochemical Environments: New Insights from Single Particle ICP-TOFMS and AF4-ICPMS. ACS Earth and Space Chemistry, 2022, 6, 943-952.	1.2	9
104	Modeling colloid deposition on a protein layer adsorbed to iron-oxide-coated sand. Journal of Contaminant Hydrology, 2012, 142-143, 50-62.	1.6	7
105	Nanomaterial environmental risk assessment. Integrated Environmental Assessment and Management, 2015, 11, 333-335.	1.6	7
106	Intra-laboratory assessment of a method for the detection of TiO2 nanoparticles present in sunscreens based on multi-detector asymmetrical flow field-flow fractionation. NanoImpact, 2020, 19, 100233.	2.4	6
107	Refinement of the selection of physicochemical properties for grouping and read-across of nanoforms. NanoImpact, 2022, 25, 100375.	2.4	6
108	Novel multimethod approach for the determination of the colloidal stability of nanomaterials in complex environmental mixtures using a global stability index: TiO2 as case study. Science of the Total Environment, 2021, 801, 149607.	3.9	5

#	Article	IF	Citations
109	Towards Standardization for Determining Dissolution Kinetics of Nanomaterials in Natural Aquatic Environments: Continuous Flow Dissolution of Ag Nanoparticles. Nanomaterials, 2022, 12, 519.	1.9	5
110	Solving Familiar Problems: Leveraging Environmental Testing Methods for Nanomaterials to Evaluate Microplastics and Nanoplastics. Nanomaterials, 2022, 12, 1332.	1.9	5
111	Assessing the Lability and Environmental Mobility of Organically Bound Copper by Stable Isotope Dilution. Environmental Science & Technology, 2022, 56, 5580-5589.	4.6	2
112	Comparing the Influence of Two Different Natural Organic Matter Types on Colloid Deposition in Saturated Porous Medium. Advanced Materials Research, 0, 455-456, 1324-1329.	0.3	1
113	A critical evaluation of short columns for estimating the attachment efficiency of engineered nanomaterials in natural soils. Environmental Science: Nano, 2021, 8, 1801-1814.	2.2	1
114	Transport of Colloids in Filter Columns: Laboratory and Field Experiments. , 2007, , 87-115.		0