Elijah Joel Petersen

List of Publications by Year
in descending order

85 papers	6,365 citations	50170 46 h-index	64668 79 g-index
89 all docs	89 docs citations	89 times ranked	6844 citing authors

#	Article	IF	Citations
1	Potential Release Pathways, Environmental Fate, And Ecological Risks of Carbon Nanotubes. Environmental Science & Technology, 2011, 45, 9837-9856.	4.6	446
2	Copper Oxide Nanoparticle Mediated DNA Damage in Terrestrial Plant Models. Environmental Science & Technology, 2012, 46, 1819-1827.	4.6	424
3	Biological Uptake and Depuration of Carbon Nanotubes by Daphnia magna. Environmental Science & Technology, 2009, 43, 2969-2975.	4.6	244
4	Identification and Avoidance of Potential Artifacts and Misinterpretations in Nanomaterial Ecotoxicity Measurements. Environmental Science & Technology, 2014, 48, 4226-4246.	4.6	209
5	Considerations of Environmentally Relevant Test Conditions for Improved Evaluation of Ecological Hazards of Engineered Nanomaterials. Environmental Science & Technology, 2016, 50, 6124-6145.	4.6	191
6	Nanomaterials in the aquatic environment: A European Unionâ€“United States perspective on the status of ecotoxicity testing, research priorities, and challenges ahead. Environmental Toxicology and Chemistry, 2016, 35, 1055-1067.	2.2	163
7	Bioaccumulation of Radio-Labeled Carbon Nanotubes by<i>Eisenia foetida</i>. Environmental Science & Technology, 2008, 42, 3090-3095.	4.6	162
8	Mechanisms and measurements of nanomaterial-induced oxidative damage to DNA. Analytical and Bioanalytical Chemistry, 2010, 398, 613-650.	1.9	153
9	Adapting OECD Aquatic Toxicity Tests for Use with Manufactured Nanomaterials: Key Issues and Consensus Recommendations. Environmental Science & Technology, 2015, 49, 9532-9547.	4.6	153
10	Ecological Uptake and Depuration of Carbon Nanotubes by <i>Lumbriculus variegatus</i>. Environmental Health Perspectives, 2008, 116, 496-500.	2.8	151
11	Detection and Quantification of Graphene-Family Nanomaterials in the Environment. Environmental Science & Technology, 2018, 52, 4491-4513.	4.6	147
12	Multifunctional Dendrimer-Modified Multiwalled Carbon Nanotubes: Synthesis, Characterization, and In Vitro Cancer Cell Targeting and Imaging. Biomacromolecules, 2009, 10, 1744-1750.	2.6	145
13	Influence of Carbon Nanotubes on Pyrene Bioaccumulation from Contaminated Soils by Earthworms. Environmental Science & Technology, 2009, 43, 4181-4187.	4.6	143
14	Mobility of Multiwalled Carbon Nanotubes in Porous Media. Environmental Science & Technology, 2009, 43, 8153-8158.	4.6	132
15	Biological Uptake and Depuration of Radio-labeled Graphene by <i>Daphnia magna</i>. Environmental Science & Technology, 2013, 47, 12524-12531.	4.6	131
16	Nanomaterial Categorization for Assessing Risk Potential To Facilitate Regulatory Decision-Making. ACS Nano, 2015, 9, 3409-3417.	7.3	129
17	Polyethyleneimine-Mediated Functionalization of Multiwalled Carbon Nanotubes: Synthesis, Characterization, and In Vitro Toxicity Assay. Journal of Physical Chemistry C, 2009, 113, 3150-3156.	1.5	122
18	Impact of Porous Media Grain Size on the Transport of Multi-walled Carbon Nanotubes. Environmental Science & Technology, 2011, 45, 9765-9775.	4.6	119

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19	Pilot estuarine mesocosm study on the environmental fate of Silver nanomaterials leached from consumer products. Science of the Total Environment, 2012, 421-422, 267-272.	3.9	113
20	Methodological considerations for testing the ecotoxicity of carbon nanotubes and fullerenes: Review. Environmental Toxicology and Chemistry, 2012, 31, 60-72.	2.2	113
21	Degradation of multiwall carbon nanotubes by bacteria. Environmental Pollution, 2013, 181, 335-339.	3.7	108
22	Methods to assess the impact of UV irradiation on the surface chemistry and structure of multiwall carbon nanotube epoxy nanocomposites. Carbon, 2014, 69, 194-205.	5.4	105
23	Quantification of Carbon Nanotubes in Environmental Matrices: Current Capabilities, Case Studies, and Future Prospects. Environmental Science & Technology, 2016, 50, 4587-4605.	4.6	104
24	Analysis of fullereneâ€C₆₀ and kinetic measurements for its accumulation and depuration in <i>Daphnia magna</i>. Environmental Toxicology and Chemistry, 2010, 29, 1072-1078.	2.2	102
25	Influence of Polyethyleneimine Graftings of Multi-Walled Carbon Nanotubes on their Accumulation and Elimination by and Toxicity to<i>Daphnia magna</i>. Environmental Science & Technology, 2011, 45, 1133-1138.	4.6	102
26	Biological Uptake, Distribution, and Depuration of Radio-Labeled Graphene in Adult Zebrafish: Effects of Graphene Size and Natural Organic Matter. ACS Nano, 2017, 11, 2872-2885.	7.3	98
27	Biodistribution and toxicity of radio-labeled few layer graphene in mice after intratracheal instillation. Particle and Fibre Toxicology, 2015, 13, 7.	2.8	93
28	Multiple Method Analysis of TiO₂ Nanoparticle Uptake in Rice (<i>Oryza sativa</i> L.) Plants. Environmental Science & Technology, 2017, 51, 10615-10623.	4.6	84
29	Tunable Synthesis and Immobilization of Zero-Valent Iron Nanoparticles for Environmental Applications. Environmental Science & Technology, 2008, 42, 8884-8889.	4.6	82
30	Degradation of 14C-labeled few layer graphene via Fenton reaction: Reaction rates, characterization of reaction products, and potential ecological effects. Water Research, 2015, 84, 49-57.	5.3	72
31	Effects of Polyethyleneimine-Mediated Functionalization of Multi-Walled Carbon Nanotubes on Earthworm Bioaccumulation and Sorption by Soils. Environmental Science & Technology, 2011, 45, 3718-3724.	4.6	68
32	Agglomeration of <i>Escherichia coli</i> with Positively Charged Nanoparticles Can Lead to Artifacts in a Standard <i>Caenorhabditis elegans</i> Toxicity Assay. Environmental Science & Technology, 2018, 52, 5968-5978.	4.6	68
33	Interactions of 14C-labeled multi-walled carbon nanotubes with soil minerals in water. Environmental Pollution, 2012, 166, 75-81.	3.7	65
34	Use of Cause-and-Effect Analysis to Design a High-Quality Nanocytotoxicology Assay. Chemical Research in Toxicology, 2015, 28, 21-30.	1.7	65
35	Phase Distribution of ¹⁴C-Labeled Multiwalled Carbon Nanotubes in Aqueous Systems Containing Model Solids: Peat. Environmental Science & Technology, 2011, 45, 1356-1362.	4.6	62
36	<i>Post hoc</i> Interlaboratory Comparison of Single Particle ICP-MS Size Measurements of NIST Gold Nanoparticle Reference Materials. Analytical Chemistry, 2015, 87, 8809-8817.	3.2	62

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37	Bioaccumulation of Multiwall Carbon Nanotubes in <i>Tetrahymena thermophila</i> by Direct Feeding or Trophic Transfer. Environmental Science & Technology, 2016, 50, 8876-8885.	4.6	61
38	Microscopic investigation of single-wall carbon nanotube uptake by <i>Daphnia magna</i>. Nanotoxicology, 2014, 8, 2-10.	1.6	60
39	Aqueous fullerene aggregates (nC60) generate minimal reactive oxygen species and are of low toxicity in fish: a revision of previous reports. Current Opinion in Biotechnology, 2011, 22, 533-537.	3.3	59
40	Relevance of octanolâ€“water distribution measurements to the potential ecological uptake of multiâ€walled carbon nanotubes. Environmental Toxicology and Chemistry, 2010, 29, 1106-1112.	2.2	57
41	NIST gold nanoparticle reference materials do not induce oxidative DNA damage. Nanotoxicology, 2013, 7, 21-29.	1.6	54
42	Toward achieving harmonization in a nanocytotoxicity assay measurement through an interlaboratory comparison study. ALTEX: Alternatives To Animal Experimentation, 2017, 34, 201-218.	0.9	52
43	Heavy Metal Contamination in the Brownfield Soils of Cleveland. Soil and Sediment Contamination, 2002, 11, 719-750.	1.1	50
44	Colloidal properties and stability of aqueous suspensions of few-layer graphene: Importance of graphene concentration. Environmental Pollution, 2017, 220, 469-477.	3.7	50
45	A screening study on the fate of fullerenes (nC₆₀) and their toxic implications in natural freshwaters. Environmental Toxicology and Chemistry, 2013, 32, 1224-1232.	2.2	48
46	Increasing evidence indicates low bioaccumulation of carbon nanotubes. Environmental Science: Nano, 2017, 4, 747-766.	2.2	48
47	Strategies for robust and accurate experimental approaches to quantify nanomaterial bioaccumulation across a broad range of organisms. Environmental Science: Nano, 2019, 6, 1619-1656.	2.2	48
48	Exposure of few layer graphene to Limnodrilus hoffmeisteri modifies the graphene and changes its bioaccumulation by other organisms. Carbon, 2016, 109, 566-574.	5.4	47
49	Comparative study of multiwall carbon nanotube nanocomposites by Raman, SEM, and XPS measurement techniques. Composites Science and Technology, 2021, 208, 108753.	3.8	47
50	Toxicity of fullerene (C₆₀) to sedimentâ€dwelling invertebrate <i>Chironomus riparius</i> larvae. Environmental Toxicology and Chemistry, 2012, 31, 2108-2116.	2.2	44
51	Impact of UV irradiation on multiwall carbon nanotubes in nanocomposites: Formation of entangled surface layer and mechanisms of release resistance. Carbon, 2017, 116, 191-200.	5.4	43
52	Toward Sustainable Environmental Quality: Priority Research Questions for North America. Environmental Toxicology and Chemistry, 2019, 38, 1606-1624.	2.2	43
53	DNA Damaging Potential of Photoactivated P25 Titanium Dioxide Nanoparticles. Chemical Research in Toxicology, 2014, 27, 1877-1884.	1.7	40
54	Biophysical characterization of functionalized titania nanoparticles and their application in dental adhesives. Acta Biomaterialia, 2017, 53, 585-597.	4.1	40

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55	Impact of size and sorption on degradation of trichloroethylene and polychlorinated biphenyls by nano-scale zerovalent iron. Journal of Hazardous Materials, 2012, 243, 73-79.	6.5	38
56	Separation, Sizing, and Quantitation of Engineered Nanoparticles in an Organism Model Using Inductively Coupled Plasma Mass Spectrometry and Image Analysis. ACS Nano, 2017, 11, 526-540.	7.3	38
57	Counting Caenorhabditis elegans: Protocol Optimization and Applications for Population Growth and Toxicity Studies in Liquid Medium. Scientific Reports, 2018, 8, 904.	1.6	37
58	IVIVE: Facilitating the Use of In Vitro Toxicity Data in Risk Assessment and Decision Making. Toxics, 2022, 10, 232.	1.6	35
59	Protective Roles of Singleâ€Wall Carbon Nanotubes in Ultrasonicationâ€Induced DNA Base Damage. Small, 2013, 9, 205-208.	5.2	32
60	Harmonizing across environmental nanomaterial testing media for increased comparability of nanomaterial datasets. Environmental Science: Nano, 2020, 7, 13-36.	2.2	32
61	Determining what really counts: modeling and measuring nanoparticle number concentrations. Environmental Science: Nano, 2019, 6, 2876-2896.	2.2	31
62	Cause-and-Effect Analysis as a Tool To Improve the Reproducibility of Nanobioassays: Four Case Studies. Chemical Research in Toxicology, 2020, 33, 1039-1054.	1.7	27
63	Development of Engineered Natural Organic Sorbents for Environmental Applications:Â 3. Reducing PAH Mobility and Bioavailability in Contaminated Soil and Sediment Systems. Environmental Science & Technology, 2007, 41, 2901-2907.	4.6	26
64	Variability of North American regulatory guidance for heavy metal contamination of residential soil. Journal of Environmental Engineering and Science, 2006, 5, 485-508.	0.3	25
65	Parametric Optimization of an Airâ€"Liquid Interface System for Flow-Through Inhalation Exposure to Nanoparticles: Assessing Dosimetry and Intracellular Uptake of CeO2 Nanoparticles. Nanomaterials, 2020, 10, 2369.	1.9	25
66	Separation of Bacteria, Protozoa and Carbon Nanotubes by Density Gradient Centrifugation. Nanomaterials, 2016, 6, 181.	1.9	24
67	Development of Engineered Natural Organic Sorbents for Environmental Applications. 4. Effects on Biodegradation and Distribution of Pyrene in Soils. Environmental Science & Technology, 2008, 42, 1283-1289.	4.6	21
68	Retention of 14C-labeled multiwall carbon nanotubes by humic acid and polymers: Roles of macromolecule properties. Carbon, 2016, 99, 229-237.	5.4	21
69	Effect of gold nanoparticles and ciprofloxacin on microbial catabolism: a communityâ€based approach. Environmental Toxicology and Chemistry, 2014, 33, 44-51.	2.2	17
70	Impact of and correction for instrument sensitivity drift on nanoparticle size measurements by single-particle ICP-MS. Analytical and Bioanalytical Chemistry, 2016, 408, 5099-5108.	1.9	15
71	Efficient electrochemical degradation of multiwall carbon nanotubes. Journal of Hazardous Materials, 2018, 354, 275-282.	6.5	14
72	New guidance brings clarity to environmental hazard and behaviour testing of nanomaterials. Nature Nanotechnology, 2021, 16, 482-483.	15.6	13

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73	Use of Cause-and-Effect Analysis to Optimize the Reliability of <i>In Vitro</i> Inhalation Toxicity Measurements Using an Airâ€“Liquid Interface. Chemical Research in Toxicology, 2021, 34, 1370-1385.	1.7	11
74	Characteristics to consider when selecting a positive control material for an in vitro assay. ALTEX: Alternatives To Animal Experimentation, 2021, 38, 365-376.	0.9	10
75	Combining secondary ion mass spectrometry image depth profiling and single particle inductively coupled plasma mass spectrometry to investigate the uptake and biodistribution of gold nanoparticles in Caenorhabditis elegans. Analytica Chimica Acta, 2021, 1175, 338671.	2.6	8
76	Bridging international approaches on nanoEHS. Nature Nanotechnology, 2021, 16, 608-611.	15.6	6
77	Resources for Developing Reliable and Reproducible <i>In Vitro</i> Toxicological Test Methods. Chemical Research in Toxicology, 2021, 34, 1367-1369.	1.7	5
78	U.S. Federal Agency interests and key considerations for new approach methodologies for nanomaterials. ALTEX: Alternatives To Animal Experimentation, 2021, , .	0.9	5
79	Solving Familiar Problems: Leveraging Environmental Testing Methods for Nanomaterials to Evaluate Microplastics and Nanoplastics. Nanomaterials, 2022, 12, 1332.	1.9	5
80	Current ecotoxicity testing needs among selected U.S. federal agencies. Regulatory Toxicology and Pharmacology, 2022, 133, 105195.	1.3	5
81	Development of a 96-Well Electrophilic Allergen Screening Assay for Skin Sensitization Using a Measurement Science Approach. Toxics, 2022, 10, 257.	1.6	4
82	Effects of aging and mixed nonaqueousâ€phase liquid sources in soil systems on earthworm bioaccumulation, microbial degradation, sequestration, and aqueous desorption of pyrene. Environmental Toxicology and Chemistry, 2011, 30, 988-996.	2.2	2
83	Estimation and uncertainty analysis of dose response in an inter-laboratory experiment. Metrologia, 2016, 53, S40-S45.	0.6	2
84	<i>In Response</i>: Measurement science challenges that complicate the assessment of the potential ecotoxicological risks of carbon nanomaterialsâ€"A governmental perspective. Environmental Toxicology and Chemistry, 2015, 34, 955-957.	2.2	1
85	Selection of an Optimal Abrasion Wheel Type for Nano-Coating Wear Studies under Wet or Dry Abrasion Conditions. Nanomaterials, 2020, 10, 1445.	1.9	1