Peng Zhang

List of Publications by Year
in descending order

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91

papers

4,837

citations

101384

36

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102304

66

g-index

93

all docs

93

docs citations

93

times ranked

4764

citing authors

#	Article	IF	Citations
1	Biotransformation of Ceria Nanoparticles in Cucumber Plants. ACS Nano, 2012, 6, 9943-9950.	7.3	319
2	Nano-CeO₂ Exhibits Adverse Effects at Environmental Relevant Concentrations. Environmental Science & Technology, 2011, 45, 3725-3730.	4.6	257
3	Uptake and distribution of ceria nanoparticles in cucumber plants. Metallomics, 2011, 3, 816.	1.0	226
4	Magnetic (Fe3O4) Nanoparticles Reduce Heavy Metals Uptake and Mitigate Their Toxicity in Wheat Seedling. Sustainability, 2017, 9, 790.	1.6	217
5	Acquired Superoxideâ€Scavenging Ability of Ceria Nanoparticles. Angewandte Chemie - International Edition, 2015, 54, 1832-1835.	7.2	179
6	Comparative toxicity of nanoparticulate/bulk Yb₂O₃ and YbCl₃ to cucumber (<i>Cucumis sativus</i>). Environmental Science & Technology, 2012, 46, 1834-1841.	4.6	153
7	Phytotoxicity and biotransformation of La₂O₃nanoparticles in a terrestrial plant cucumber (<i>Cucumis sativus</i>). Nanotoxicology, 2011, 5, 743-753.	1.6	151
8	Nanotechnology and artificial intelligence to enable sustainable and precision agriculture. Nature Plants, 2021, 7, 864-876.	4.7	150
9	Responses of enzymatic activity and microbial communities to biochar/compost amendment in sulfamethoxazole polluted wetland soil. Journal of Hazardous Materials, 2020, 385, 121533.	6.5	131
10	Origin of the different phytotoxicity and biotransformation of cerium and lanthanum oxide nanoparticles in cucumber. Nanotoxicology, 2015, 9, 262-270.	1.6	123
11	Physiological impacts of zero valent iron, Fe3O4 and Fe2O3 nanoparticles in rice plants and their potential as Fe fertilizers. Environmental Pollution, 2021, 269, 116134.	3.7	121
12	Effect of cerium oxide nanoparticles on asparagus lettuce cultured in an agar medium. Environmental Science: Nano, 2014, 1, 459-465.	2.2	108
13	Species-specific toxicity of ceria nanoparticles to<i>Lactuca</i>plants. Nanotoxicology, 2015, 9, 1-8.	1.6	106
14	Toxic effects of graphene on the growth and nutritional levels of wheat (Triticum aestivum L.): short- and long-term exposure studies. Journal of Hazardous Materials, 2016, 317, 543-551.	6.5	105
15	Fate and Phytotoxicity of CeO2 Nanoparticles on Lettuce Cultured in the Potting Soil Environment. PLoS ONE, 2015, 10, e0134261.	1.1	100
16	Phytotoxicity, uptake and transformation of nano-CeO2 in sand cultured romaine lettuce. Environmental Pollution, 2017, 220, 1400-1408.	3.7	99
17	Xylem and Phloem Based Transport of CeO₂ Nanoparticles in Hydroponic Cucumber Plants. Environmental Science & Technology, 2017, 51, 5215-5221.	4.6	97
18	Toxicity and transformation of graphene oxide and reduced graphene oxide in bacteria biofilm. Science of the Total Environment, 2017, 580, 1300-1308.	3.9	97

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19	Î²-Amyloid peptide increases levels of iron content and oxidative stress in human cell and Caenorhabditis elegans models of Alzheimer disease. Free Radical Biology and Medicine, 2011, 50, 122-129.	1.3	96
20	Transformation of ceria nanoparticles in cucumber plants is influenced by phosphate. Environmental Pollution, 2015, 198, 8-14.	3.7	84
21	Where Does the Transformation of Precipitated Ceria Nanoparticles in Hydroponic Plants Take Place?. Environmental Science & Technology, 2015, 49, 10667-10674.	4.6	82
22	Comparative effects of nano and bulk-Fe3O4 on the growth of cucumber (Cucumis sativus). Ecotoxicology and Environmental Safety, 2018, 165, 547-554.	2.9	76
23	Nanomaterial Transformation in the Soilâ€“Plant System: Implications for Food Safety and Application in Agriculture. Small, 2020, 16, e2000705.	5.2	71
24	Dynamic intracellular exchange of nanomaterialsâ€™ protein corona perturbs proteostasis and remodels cell metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	56
25	Phytotoxicity, Translocation, and Biotransformation of NaYF₄Upconversion Nanoparticles in a Soybean Plant. Small, 2015, 11, 4774-4784.	5.2	49
26	Trophic Transfer and Transformation of CeO₂ Nanoparticles along a Terrestrial Food Chain: Influence of Exposure Routes. Environmental Science & Technology, 2018, 52, 7921-7927.	4.6	49
27	Alleviation of nitrogen stress in rice (<i>Oryza sativa</i>) by ceria nanoparticles. Environmental Science: Nano, 2020, 7, 2930-2940.	2.2	48
28	Plant species-dependent transformation and translocation of ceria nanoparticles. Environmental Science: Nano, 2019, 6, 60-67.	2.2	46
29	Comparative Pulmonary Toxicity of Two Ceria Nanoparticles with the Same Primary Size. International Journal of Molecular Sciences, 2014, 15, 6072-6085.	1.8	44
30	Shape-Dependent Transformation and Translocation of Ceria Nanoparticles in Cucumber Plants. Environmental Science and Technology Letters, 2017, 4, 380-385.	3.9	44
31	Catalytic oxidation of volatile organic compounds by non-noble metal catalyst: Current advancement and future prospectives. Journal of Cleaner Production, 2022, 363, 132523.	4.6	44
32	A critical review on surface-modified nano-catalyst application for the photocatalytic degradation of volatile organic compounds. Environmental Science: Nano, 2022, 9, 61-80.	2.2	43
33	Metal sorption onto nanoscale plastic debris and trojan horse effects in Daphnia magna: Role of dissolved organic matter. Water Research, 2020, 186, 116410.	5.3	42
34	Graphene Oxide-Induced pH Alteration, Iron Overload, and Subsequent Oxidative Damage in Rice (<i>Oryza sativa</i> L.): A New Mechanism of Nanomaterial Phytotoxicity. Environmental Science & Technology, 2020, 54, 3181-3190.	4.6	42
35	Quantifying and Imaging Engineered Nanomaterials In Vivo: Challenges and Techniques. Small, 2013, 9, 1482-1491.	5.2	41
36	Phytotoxicity of CeO2 nanoparticles on radish plant (Raphanus sativus). Environmental Science and Pollution Research, 2017, 24, 13775-13781.	2.7	41

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37	Toxicity of cerium and thorium on Daphnia magna. Ecotoxicology and Environmental Safety, 2016, 134, 226-232.	2.9	40
38	Multi-Wall Carbon Nanotubes Promote the Growth of Maize (<i>Zea mays</i>) by Regulating Carbon and Nitrogen Metabolism in Leaves. Journal of Agricultural and Food Chemistry, 2021, 69, 4981-4991.	2.4	39
39	Particle number-based trophic transfer of gold nanomaterials in an aquatic food chain. Nature Communications, 2021, 12, 899.	5.8	38
40	Growing Rice (<i>Oryza sativa</i>) Aerobically Reduces Phytotoxicity, Uptake, and Transformation of CeO₂ Nanoparticles. Environmental Science & Technology, 2021, 55, 8654-8664.	4.6	37
41	Bio-interaction of nano and bulk lanthanum and ytterbium oxides in soil system: Biochemical, genetic, and histopathological effects on Eisenia fetida. Journal of Hazardous Materials, 2021, 415, 125574.	6.5	37
42	Distribution and bioavailability of ceria nanoparticles in an aquatic ecosystem model. Chemosphere, 2012, 89, 530-535.	4.2	35
43	Multidisciplinary Approach to Understand Medial Arterial Calcification. Arteriosclerosis, Thrombosis, and Vascular Biology, 2018, 38, 363-372.	1.1	35
44	Surface Functionalization of Grapheneâ€Based Materials: Biological Behavior, Toxicology, and Safeâ€Byâ€Design Aspects. Advanced Biology, 2021, 5, e2100637.	1.4	34
45	Biotransformation modulates the penetration of metallic nanomaterials across an artificial bloodâ€"brain barrier model. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	32
46	Influence of Speciation of Thorium on Toxic Effects to Green Algae Chlorella pyrenoidosa. International Journal of Molecular Sciences, 2017, 18, 795.	1.8	31
47	Biotransformation of dietary inorganic arsenic in a freshwater fish Carassius auratus and the unique association between arsenic dimethylation and oxidative damage. Journal of Hazardous Materials, 2020, 391, 122153.	6.5	31
48	Biochar is an effective amendment to remediate Cd-contaminated soilsâ€"a meta-analysis. Journal of Soils and Sediments, 2020, 20, 3884-3895.	1.5	30
49	Green synthesis of metal-based nanoparticles for sustainable agriculture. Environmental Pollution, 2022, 309, 119755.	3.7	29
50	Phytotoxicity of silver nanoparticles to cucumber (Cucumis sativus) and wheat (Triticum aestivum). Journal of Zhejiang University: Science A, 2014, 15, 662-670.	1.3	28
51	Protein corona influences liver accumulation and hepatotoxicity of gold nanorods. NanoImpact, 2016, 3-4, 40-46.	2.4	27
52	Interactions Between Engineered Nanomaterials and Plants: Phytotoxicity, Uptake, Translocation, and Biotransformation. , 2015, , 77-99.		26
53	Elucidating the origin of the surface functionalization - dependent bacterial toxicity of graphene nanomaterials: Oxidative damage, physical disruption, and cell autolysis. Science of the Total Environment, 2020, 747, 141546.	3.9	26
54	Quantifying the total ionic release from nanoparticles after particle-cell contact. Environmental Pollution, 2015, 196, 194-200.	3.7	25

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55	Stable isotope labeling of metal/metal oxide nanomaterials for environmental and biological tracing. Nature Protocols, 2019, 14, 2878-2899.	5.5	25
56	Deciphering the particle specific effects on metabolism in rat liver and plasma from ZnO nanoparticles versus ionic Zn exposure. Environment International, 2020, 136, 105437.	4.8	25
57	Bioaccumulation of ytterbium oxide nanoparticles insinuate oxidative stress, inflammatory, and pathological lesions in ICR mice. Environmental Science and Pollution Research, 2020, 27, 32944-32953.	2.7	25
58	Different physiological responses of C3 and C4 plants to nanomaterials. Environmental Science and Pollution Research, 2021, 28, 25542-25551.	2.7	25
59	Dioxins as potential risk factors for autism spectrum disorder. Environment International, 2018, 121, 906-915.	4.8	23
60	Intranasal exposure to ZnO nanoparticles induces alterations in cholinergic neurotransmission in rat brain. Nano Today, 2020, 35, 100977.	6.2	22
61	Elucidating the mechanism of the surface functionalization dependent neurotoxicity of graphene family nanomaterials. Nanoscale, 2020, 12, 18600-18605.	2.8	22
62	Uncertainties in the antibacterial mechanisms of graphene family materials. Nano Today, 2022, 43, 101436.	6.2	22
63	Quantifying the biodistribution of nanoparticles. Nature Nanotechnology, 2011, 6, 755-755.	15.6	20
64	Peptide-Au Clusters Induced Tumor Cells Apoptosis via Targeting Glutathione Peroxidase-1: The Molecular Dynamics Assisted Experimental Studies. Scientific Reports, 2017, 7, 131.	1.6	20
65	Development of gold nanorods for cancer treatment. Journal of Inorganic Biochemistry, 2021, 220, 111458.	1.5	19
66	Quantifying the biodistribution of nanoparticles. Nature Nanotechnology, 2011, 6, 755-755.	15.6	18
67	Quantifying the distribution of ceria nanoparticles in cucumber roots: the influence of labeling. RSC Advances, 2015, 5, 4554-4560.	1.7	18
68	Do the joint effects of size, shape and ecocorona influence the attachment and physical eco(cyto)toxicity of nanoparticles to algae?. Nanotoxicology, 2020, 14, 310-325.	1.6	18
69	The dynamic changes of arsenic biotransformation and bioaccumulation in muscle of freshwater food fish crucian carp during chronic dietborne exposure. Journal of Environmental Sciences, 2021, 100, 74-81.	3.2	17
70	The dynamic effects of different inorganic arsenic species in crucian carp (Carassius auratus) liver during chronic dietborne exposure: Bioaccumulation, biotransformation and oxidative stress. Science of the Total Environment, 2020, 727, 138737.	3.9	16
71	Influence of phosphate on phytotoxicity of ceria nanoparticles in an agar medium. Environmental Pollution, 2017, 224, 392-399.	3.7	15
72	<i>Bacillus subtilis</i> causes dissolution of ceria nanoparticles at the nanoâ€“bio interface. Environmental Science: Nano, 2019, 6, 216-223.	2.2	15

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73	Effect of CeO2 nanoparticles on plant growth and soil microcosm in a soil-plant interactive system. Environmental Pollution, 2022, 300, 118938.	3.7	15
74	The analytical quest for sub-micron plastics in biological matrices. Nano Today, 2021, 41, 101296.	6.2	14
75	Stress Response and Nutrient Homeostasis in Lettuce (<i>Lactuca sativa</i>) Exposed to Graphene Quantum Dots Are Modulated by Particle Surface Functionalization. Advanced Biology, 2021, 5, e2000778.	1.4	12
76	Effects of age on mineral elements, amino acids and fatty acids in Chinese chestnut fruits. European Food Research and Technology, 2021, 247, 2079-2086.	1.6	12
77	Increase in the active ingredients of traditional Chinese medicine <i>Isatis indigotica</i> through iron nanoparticles supplementation <i>versus</i> carbon nanotubes: a comparative study. Environmental Science: Nano, 2022, 9, 2966-2978.	2.2	12
78	Abiotic mediation of common ions on the co-exposure of CeO2 NPs with Sb (III) or Sb (V) to Glycine max (Linn.) Merrill. (Soybean): Impacts on uptake, accumulation and physiochemical characters. Environmental Pollution, 2020, 267, 115594.	3.7	11
79	Quantifying the dissolution of nanomaterials at the nano-bio interface. Science China Chemistry, 2015, 58, 761-767.	4.2	10
80	Characterization of oxide film in P92 ferritic-martensitic steel exposed to high temperature and pressure water. Journal of Nuclear Materials, 2020, 541, 152406.	1.3	9
81	Elucidating the origin of the toxicity of nano-CeO2 to Chlorella pyrenoidosa: the role of specific surface area and chemical composition. Environmental Science: Nano, 2021, 8, 1701-1712.	2.2	9
82	An analytical workflow for dynamic characterization and quantification of metal-bearing nanomaterials in biological matrices. Nature Protocols, 2022, 17, 1926-1952.	5.5	9
83	Toxicity of Two Different Size Ceria Nanoparticles to Mice After Repeated Intranasal Instillation. Journal of Nanoscience and Nanotechnology, 2019, 19, 2474-2482.	0.9	8
84	First In Vivo Evidence for Compromised Brain Energy Metabolism upon Intranasal Exposure to ZnO Nanoparticles. Environmental Science and Technology Letters, 2020, 7, 315-322.	3.9	8
85	The stochastic association of nanoparticles with algae at the cellular level: Effects of NOM, particle size and particle shape. Ecotoxicology and Environmental Safety, 2021, 218, 112280.	2.9	7
86	Simulations of morphological transformation in silver nanoparticles as a tool for assessing their reactivity and potential toxicity. NanoImpact, 2019, 14, 100147.	2.4	6
87	Multi-walled carbon nanotubes improve nitrogen use efficiency and nutritional quality in <i>Brassica campestris</i>. Environmental Science: Nano, 2022, 9, 1315-1329.	2.2	4
88	Immobilization of cadmium in soil and improved iron concentration and grain yields of maize (Zea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 53161-53170.	2.7	2
89	Coacervation Conditions and Cross-Linking Determines Availability of Carbonyl Groups on Elastin and its Calcification. Crystal Growth and Design, 2020, 20, 7170-7179.	1.4	2
90	Nanomaterial Transformation: Nanomaterial Transformation in the Soilâ€“Plant System: Implications for Food Safety and Application in Agriculture (Small 21/2020). Small, 2020, 16, 2070116.	5.2	1

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91	Graphene Quantum Dots: Stress Response and Nutrient Homeostasis in Lettuce (<i>Lactuca sativa</i>) Exposed to Graphene Quantum Dots Are Modulated by Particle Surface Functionalization (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock 10	11.4	0