Xiangang Hu

List of Publications by Citations

125 papers	4,088 citations	33 h-index	60 g-index
130 ext. papers	5,334 ext. citations	9.9 avg, IF	6.5 L-index

#	Paper	IF	Citations
125	Occurrence and source analysis of typical veterinary antibiotics in manure, soil, vegetables and groundwater from organic vegetable bases, northern China. *Environmental Pollution*, **2010**, 158, 2992-8	9.3	631
124	Health and ecosystem risks of graphene. *Chemical Reviews*, **2013**, 113, 3815-35	68.1	289
123	Effects of Graphene Oxide and Oxidized Carbon Nanotubes on the Cellular Division, Microstructure, Uptake, Oxidative Stress, and Metabolic Profiles. *Environmental Science & Technology*, **2015**, 49, 10825-33	10.3	136
122	Interactions between graphene oxide and plant cells: Regulation of cell morphology, uptake, organelle damage, oxidative effects and metabolic disorders. *Carbon*, **2014**, 80, 665-676	10.4	117
121	Molecular Mechanisms of Developmental Toxicity Induced by Graphene Oxide at Predicted Environmental Concentrations. *Environmental Science & Technology*, **2017**, 51, 7861-7871	10.3	111
120	Specific nanotoxicity of graphene oxide during zebrafish embryogenesis. *Nanotoxicology*, **2016**, 10, 42-52	5.3	97
119	Graphene oxide amplifies the phytotoxicity of arsenic in wheat. *Scientific Reports*, **2014**, 4, 6122	4.9	94
118	Envelopment-Internalization Synergistic Effects and Metabolic Mechanisms of Graphene Oxide on Single-Cell Chlorella vulgaris Are Dependent on the Nanomaterial Particle Size. *ACS Applied Materials & Interfaces*, **2015**, 7, 18104-12	9.5	87
117	Covalently synthesized graphene oxide-aptamer nanosheets for efficient visible-light photocatalysis of nucleic acids and proteins of viruses. *Carbon*, **2012**, 50, 2772-2781	10.4	85
116	Mitigation in Multiple Effects of Graphene Oxide Toxicity in Zebrafish Embryogenesis Driven by Humic Acid. *Environmental Science & Technology*, **2015**, 49, 10147-54	10.3	82
115	Ultra-trace graphene oxide in a water environment triggers Parkinson's disease-like symptoms and metabolic disturbance in zebrafish larvae. *Biomaterials*, **2016**, 93, 83-94	15.6	78
114	Rice ingestion is a major pathway for human exposure to organophosphate flame retardants (OPFRs) in China. *Journal of Hazardous Materials*, **2016**, 318, 686-693	12.8	75
113	Machine learning predicts the functional composition of the protein corona and the cellular recognition of nanoparticles. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 10492-10499	11.5	73
112	Nitrogen doped g-C3N4 with the extremely narrow band gap for excellent photocatalytic activities under visible light. *Applied Catalysis B: Environmental*, **2021**, 281, 119474	21.8	71
111	Graphene Oxide Quantum Dots Reduce Oxidative Stress and Inhibit Neurotoxicity In Vitro and In Vivo through Catalase-Like Activity and Metabolic Regulation. *Advanced Science*, **2018**, 5, 1700595	13.6	70
110	Knowledge gaps between nanotoxicological research and nanomaterial safety. *Environment International*, **2016**, 94, 8-23	12.9	70
109	Graphene Oxide Quantum Dots as Novel Nanozymes for Alcohol Intoxication. *ACS Applied Materials & Interfaces*, **2017**, 9, 12241-12252	9.5	64

108	Systemic Stress and Recovery Patterns of Rice Roots in Response to Graphene Oxide Nanosheets. *Environmental Science & Technology*, **2017**, 51, 2022-2030	10.3	62
107	Novel hydrated graphene ribbon unexpectedly promotes aged seed germination and root differentiation. *Scientific Reports*, **2014**, 4, 3782	4.9	62
106	Humic acid acts as a natural antidote of graphene by regulating nanomaterial translocation and metabolic fluxes in vivo. *Environmental Science & Technology*, **2014**, 48, 6919-27	10.3	62
105	Ambient water and visible-light irradiation drive changes in graphene morphology, structure, surface chemistry, aggregation, and toxicity. *Environmental Science & Technology*, **2015**, 49, 3410-8	10.3	59
104	Mitochondria-targeted TPP-MoS with dual enzyme activity provides efficient neuroprotection through M1/M2 microglial polarization in an Alzheimer's disease model. *Biomaterials*, **2020**, 232, 119752	15.6	52
103	L-cysteine: a biocompatible, breathable and beneficial coating for graphene oxide. *Biomaterials*, **2015**, 52, 301-11	15.6	50
102	Immobilized smart RNA on graphene oxide nanosheets to specifically recognize and adsorb trace peptide toxins in drinking water. *Journal of Hazardous Materials*, **2012**, 213-214, 387-92	12.8	48
101	Graphene oxide regulates the bacterial community and exhibits property changes in soil. *RSC Advances*, **2015**, 5, 27009-27017	3.7	44
100	Robust aptamer sol-gel solid phase microextraction of very polar adenosine from human plasma. *Journal of Chromatography A*, **2013**, 1279, 7-12	4.5	41
99	The Phases of WS Nanosheets Influence Uptake, Oxidative Stress, Lipid Peroxidation, Membrane Damage, and Metabolism in Algae. *Environmental Science & Technology*, **2018**, 52, 13543-13552	10.3	40
98	Exposure to PbSe Nanoparticles and Male Reproductive Damage in a Rat Model. *Environmental Science & Technology*, **2019**, 53, 13408-13416	10.3	39
97	ssDNA aptamer-based column for simultaneous removal of nanogram per liter level of illicit and analgesic pharmaceuticals in drinking water. *Environmental Science & Technology*, **2011**, 45, 4890-5	10.3	39
96	Integrating Biolayer Interferometry, Atomic Force Microscopy, and Density Functional Theory Calculation Studies on the Affinity between Humic Acid Fractions and Graphene Oxide. *Environmental Science & Technology*, **2019**, 53, 3773-3781	10.3	38
95	Simultaneous Analysis of Selected Typical Antibiotics in Manure by Microwave-Assisted Extraction and LC-MSn. *Chromatographia*, **2010**, 71, 217-223	2.1	37
94	Graphene oxide nanosheets at trace concentrations elicit neurotoxicity in the offspring of zebrafish. *Carbon*, **2017**, 117, 182-191	10.4	35
93	Influence of environmental factors on nanotoxicity and knowledge gaps thereof. *NanoImpact*, **2016**, 2, 82-92	5.6	33
92	Occurrence, accumulation, attenuation and priority of typical antibiotics in sediments based on long-term field and modeling studies. *Journal of Hazardous Materials*, **2012**, 225-226, 91-8	12.8	33
91	Environmental Transformations and Algal Toxicity of Single-Layer Molybdenum Disulfide Regulated by Humic Acid. *Environmental Science & Technology*, **2018**, 52, 2638-2648	10.3	32

90	Nanocolloids in Natural Water: Isolation, Characterization, and Toxicity. *Environmental Science & Technology*, **2018**, 52, 4850-4860	10.3	32
89	Screening Priority Factors Determining and Predicting the Reproductive Toxicity of Various Nanoparticles. *Environmental Science & Technology*, **2018**, 52, 9666-9676	10.3	32
88	Integrating proteomics, metabolomics and typical analysis to investigate the uptake and oxidative stress of graphene oxide and polycyclic aromatic hydrocarbons. *Environmental Science: Nano*, **2018**, 5, 115-129	7.1	32
87	Quantitative analyses of relationships between ecotoxicological effects and combined pollution. *Science in China Series C: Life Sciences*, **2004**, 47, 332-9		31
86	Super-performance photothermal conversion of 3D macrostructure graphene-CuFeSe2 aerogel contributes to durable and fast clean-up of highly viscous crude oil in seawater. *Nano Energy*, **2020**, 70, 104511	17.1	30
85	Integrating metabolic analysis with biological endpoints provides insight into nanotoxicological mechanisms of graphene oxide: From effect onset to cessation. *Carbon*, **2016**, 109, 65-73	10.4	30
84	Solar-assisted fabrication of dimpled 2H-MoS membrane for highly efficient water desalination. *Water Research*, **2020**, 170, 115367	12.5	30
83	Biotransformation of graphene oxide nanosheets in blood plasma affects their interactions with cells. *Environmental Science: Nano*, **2017**, 4, 1569-1578	7.1	29
82	Biodegradation of graphene-based nanomaterials in blood plasma affects their biocompatibility, drug delivery, targeted organs and antitumor ability. *Biomaterials*, **2019**, 202, 12-25	15.6	29
81	Graphene Oxide Inhibits Antibiotic Uptake and Antibiotic Resistance Gene Propagation. *ACS Applied Materials & Interfaces*, **2016**, 8, 33165-33174	9.5	27
80	Dissolved Oxygen and Visible Light Irradiation Drive the Structural Alterations and Phytotoxicity Mitigation of Single-Layer Molybdenum Disulfide. *Environmental Science & Technology*, **2019**, 53, 7759-7769	10.3	26
79	Integrating multi-omics and regular analyses identifies the molecular responses of zebrafish brains to graphene oxide: Perspectives in environmental criteria. *Ecotoxicology and Environmental Safety*, **2019**, 180, 269-279	7	26
78	Study of the Persistence of the Phytotoxicity Induced by Graphene Oxide Quantum Dots and of the Specific Molecular Mechanisms by Integrating Omics and Regular Analyses. *Environmental Science & Technology*, **2019**, 53, 3791-3801	10.3	26
77	Characterization of Biological Secretions Binding to Graphene Oxide in Water and the Specific Toxicological Mechanisms. *Environmental Science & Technology*, **2016**, 50, 8530-7	10.3	26
76	Phytotoxicity induced by engineered nanomaterials as explored by metabolomics: Perspectives and challenges. *Ecotoxicology and Environmental Safety*, **2019**, 184, 109602	7	24
75	Characterization of the effects of trace concentrations of graphene oxide on zebrafish larvae through proteomic and standard methods. *Ecotoxicology and Environmental Safety*, **2018**, 159, 221-231	7	24
74	Photo-Oxidative Degradation Mitigated the Developmental Toxicity of Polyamide Microplastics to Zebrafish Larvae by Modulating Macrophage-Triggered Proinflammatory Responses and Apoptosis. *Environmental Science & Technology*, **2020**, 54, 13888-13898	10.3	23
73	Aqueously Released Graphene Oxide Embedded in Epoxy Resin Exhibits Different Characteristics and Phytotoxicity of Chlorella vulgaris from the Pristine Form. *Environmental Science & Technology*, **2017**, 51, 5425-5433	10.3	22

72	Comparisons of Microwave-Assisted Extraction, Simultaneous Distillation-Solvent Extraction, Soxhlet Extraction and Ultrasound Probe for Polycyclic Musks in Sediments: Recovery, Repeatability, Matrix Effects and Bioavailability. *Chromatographia*, **2011**, 74, 489-495	2.1	22
71	Effects of the size and oxidation of graphene oxide on crop quality and specific molecular pathways. *Carbon*, **2018**, 140, 352-361	10.4	21
70	Untargeted Metabolic Pathway Analysis as an Effective Strategy to Connect Various Nanoparticle Properties to Nanoparticle-Induced Ecotoxicity. *Environmental Science & Technology*, **2020**, 54, 3395-3406	10.3	20
69	Nanohole-boosted electron transport between nanomaterials and bacteria as a concept for nano-bio interactions. *Nature Communications*, **2021**, 12, 493	17.4	20
68	Strategies and knowledge gaps for improving nanomaterial biocompatibility. *Environment International*, **2017**, 102, 177-189	12.9	19
67	Polymeric nanoparticle-aptamer bioconjugates can diminish the toxicity of mercury in vivo. *Toxicology Letters*, **2012**, 208, 69-74	4.4	19
66	Emerging investigator series: design of hydrogel nanocomposites for the detection and removal of pollutants: from nanosheets, network structures, and biocompatibility to machine-learning-assisted design. *Environmental Science: Nano*, **2018**, 5, 2216-2240	7.1	19
65	A 2D-2D heterojunction BiWO/WS as a broad-spectrum bactericide: Sulfur vacancies mediate the interface interactions between biology and nanomaterials. *Biomaterials*, **2020**, 243, 119937	15.6	18
64	Deep exploration of random forest model boosts the interpretability of machine learning studies of complicated immune responses and lung burden of nanoparticles. *Science Advances*, **2021**, 7,	14.3	18
63	Graphene oxide quantum dots stimulate indigenous bacteria to remove oil contamination. *Journal of Hazardous Materials*, **2019**, 366, 694-702	12.8	17
62	Applications and challenges of elemental sulfur, nanosulfur, polymeric sulfur, sulfur composites, and plasmonic nanostructures. *Critical Reviews in Environmental Science and Technology*, **2019**, 49, 2314-2358	11.1	15
61	Root exudates as natural ligands that alter the properties of graphene oxide and environmental implications thereof. *RSC Advances*, **2015**, 5, 17615-17622	3.7	15
60	Characterization and toxicity of nanoscale fragments in wastewater treatment plant effluent. *Science of the Total Environment*, **2018**, 626, 1332-1341	10.2	15
59	Integrating metabolomics and physiological analysis to investigate the toxicological mechanisms of sewage sludge-derived biochars to wheat. *Ecotoxicology and Environmental Safety*, **2019**, 185, 109664	7	15
58	Fabrication of 1T-MoS2 nanosheets and the high-efficiency removal of toxic metals in aquatic systems: Performance and mechanisms. *Chemical Engineering Journal*, **2020**, 386, 123996	14.7	14
57	Predicting nanotoxicity by an integrated machine learning and metabolomics approach. *Environmental Pollution*, **2020**, 267, 115434	9.3	13
56	Natural Nanocolloids Mediate the Phytotoxicity of Graphene Oxide. *Environmental Science & Technology*, **2020**, 54, 4865-4875	10.3	12
55	Influence of Size and Phase on the Biodegradation, Excretion, and Phytotoxicity Persistence of Single-Layer Molybdenum Disulfide. *Environmental Science & Technology*, **2020**, 54, 12295-12306	10.3	12

54	Separation and analysis of carbon nanomaterials in complex matrix. *TrAC - Trends in Analytical Chemistry*, **2016**, 80, 416-428	14.6	12
53	Leaching of graphene oxide nanosheets in simulated soil and their influences on microbial communities. *Journal of Hazardous Materials*, **2021**, 404, 124046	12.8	12
52	Knowledge gaps in immune response and immunotherapy involving nanomaterials: Databases and artificial intelligence for material design. *Biomaterials*, **2021**, 266, 120469	15.6	12
51	Widely distributed nanocolloids in water regulate the fate and risk of graphene oxide. *Water Research*, **2019**, 165, 114987	12.5	11
50	WS Nanosheets at Noncytotoxic Concentrations Enhance the Cytotoxicity of Organic Pollutants by Disturbing the Plasma Membrane and Efflux Pumps. *Environmental Science & Technology*, **2020**, 54, 1698-1709	10.3	11
49	Machine Learning Boosts the Design and Discovery of Nanomaterials. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 6130-6147	8.3	11
48	Graphene oxide enters the rice roots and disturbs the endophytic bacterial communities. *Ecotoxicology and Environmental Safety*, **2020**, 192, 110304	7	10
47	Nanoholes Regulate the Phytotoxicity of Single-Layer Molybdenum Disulfide. *Environmental Science & Technology*, **2019**, 53, 13938-13948	10.3	10
46	Adsorption behavior of Sudan I-IV on a coastal soil and their forecasted biogeochemical cycles. *Environmental Science and Pollution Research*, **2017**, 24, 10749-10758	5.1	9
45	Graphene oxide nanosheets mitigate the developmental toxicity of TDCIPP in zebrafish via activating the mitochondrial respiratory chain and energy metabolism. *Science of the Total Environment*, **2020**, 727, 138486	10.2	9
44	Green synthesis of low-toxicity graphene-fulvic acid with an open band gap enhances demethylation of methylmercury. *ACS Applied Materials & Interfaces*, **2014**, 6, 9220-7	9.5	9
43	Cellular proliferation and differentiation induced by single-layer molybdenum disulfide and mediation mechanisms of proteins via the Akt-mTOR-p70S6K signaling pathway. *Nanotoxicology*, **2017**, 11, 781-793	5.3	8
42	Persistence and Recovery of ZIF-8 and ZIF-67 Phytotoxicity. *Environmental Science & Technology*, **2021**, 55, 15301-15312	10.3	8
41	Vegetation alleviate the negative effects of graphene oxide on benzo[a]pyrene dissipation and the associated soil bacterial community. *Chemosphere*, **2020**, 253, 126725	8.4	7
40	Pathogen Receptor Membrane-Coating Facet Structures Boost Nanomaterial Immune Escape and Antibacterial Performance. *Nano Letters*, **2021**, 21, 9966-9975	11.5	7
39	The nanomaterial-induced bystander effects reprogrammed macrophage immune function and metabolic profile. *Nanotoxicology*, **2020**, 14, 1137-1155	5.3	7
38	Hexavalent chromium amplifies the developmental toxicity of graphene oxide during zebrafish embryogenesis. *Ecotoxicology and Environmental Safety*, **2021**, 208, 111487	7	6
37	Nanocolloids, but Not Humic Acids, Augment the Phytotoxicity of Single-Layer Molybdenum Disulfide Nanosheets. *Environmental Science & Technology*, **2021**, 55, 1122-1133	10.3	6

36	Nanoscale colloids induce metabolic disturbance of zebrafish at environmentally relevant concentrations. *Environmental Science: Nano*, **2019**, 6, 1562-1575	7.1	5
35	Photoaging enhanced the adverse effects of polyamide microplastics on the growth, intestinal health, and lipid absorption in developing zebrafish. *Environment International*, **2021**, 158, 106922	12.9	5
34	Screening of safe soybean cultivars for cadmium contaminated fields. *Scientific Reports*, **2020**, 10, 12965	4.9	5
33	Native nanodiscs from blood inhibit pulmonary fibrosis. *Biomaterials*, **2019**, 192, 51-61	15.6	5
32	Surface atomic arrangement of nanomaterials affects nanotoxicity. *Nanotoxicology*, **2021**, 15, 114-130	5.3	5
31	Screening Small Metabolites from Cells as Multifunctional Coatings Simultaneously Improves Nanomaterial Biocompatibility and Functionality. *Advanced Science*, **2018**, 5, 1800341	13.6	5
30	Direct and Indirect Genotoxicity of Graphene Family Nanomaterials on DNA-A Review. *Nanomaterials*, **2021**, 11,	5.4	4
29	Stress Response and Nutrient Homeostasis in Lettuce (Lactuca sativa) Exposed to Graphene Quantum Dots Are Modulated by Particle Surface Functionalization. *Advanced Biology*, **2021**, 5, e2000778		4
28	Identifying the Phytotoxicity and Defense Mechanisms Associated with Graphene-Based Nanomaterials by Integrating Multiomics and Regular Analysis. *Environmental Science & Technology*, **2021**, 55, 9938-9948	10.3	4
27	Impact of algal extracellular polymeric substances on the environmental fate and risk of molybdenum disulfide in aqueous media. *Water Research*, **2021**, 205, 117708	12.5	4
26	Environmental decomposition and remodeled phytotoxicity of framework-based nanomaterials. *Journal of Hazardous Materials*, **2022**, 422, 126846	12.8	4
25	Sub-chronic exposure to Tris(1,3-dichloro-2-propyl) phosphate induces sex-dependent hepatotoxicity in rats. *Environmental Science and Pollution Research*, **2019**, 26, 33351-33362	5.1	3
24	Integrating omics and traditional analyses to profile the synergistic toxicity of graphene oxide and triphenyl phosphate. *Environmental Pollution*, **2020**, 263, 114473	9.3	3
23	Metal status in soils within a developing education park: Potential risk of land development. *Land Degradation and Development*, **2020**, 31, 430-438	4.4	3
22	Facile Bioself-Assembled Crystals in Plants Promote Photosynthesis and Salt Stress Resistance. *ACS Nano*, **2021**, 15, 5165-5177	16.7	3
21	Conversion relationships between environmental quality criteria of water/air and soil. *Science China Earth Sciences*, **2018**, 61, 1781-1791	4.6	3
20	Formation of S defects in MoS2-coated wood for high-efficiency seawater desalination. *Environmental Science: Nano*, **2021**, 8, 2069-2080	7.1	3
19	Soil bacterial communities respond differently to graphene oxide and reduced graphene oxide after 90 days of exposure. *Soil Ecology Letters*, **2020**, 2, 176-179	2.7	2

18	Response of soil enzymes, functional bacterial groups, and microbial communities exposed to sudan I-IV. *Ecotoxicology and Environmental Safety*, **2018**, 166, 328-335	7	2
17	Derived regional soil-environmental quality criteria of metals based on Anhui soil-crop systems at the regulated level.. *Science of the Total Environment*, **2022**, 154060	10.2	2
16	Relationships between airborne microbial community diversity, heating supply patterns and particulate matter properties. *Journal of Environmental Chemical Engineering*, **2022**, 10, 107309	6.8	1
15	Magnetic Field-Guided MoS2/WS2 Heterolayered Nanofilm Regulates Cell Behavior and Gene Expression. *ACS Applied Nano Materials*, **2021**, 4, 10828-10835	5.6	1
14	The Forms, Distribution, and Risk Assessment of Sulfonamide Antibiotics in the Manure-Soil-Vegetable System of Feedlot Livestock. *Bulletin of Environmental Contamination and Toxicology*, **2020**, 105, 790-797	2.7	1
13	Nanoparticles with Multiple Enzymatic Activities Purified from Groundwater Efficiently Cross the Blood-Brain Barrier, Improve Memory, and Provide Neuroprotection.. *ACS Applied Bio Materials*, **2021**, 4, 5503-5519	4.1	1
12	Adsorption-desorption of hydrophilic contaminants rhodamine B with/without Cd on a coastal soil: implications for mariculture and seafood safety. *Environmental Science and Pollution Research*, **2018** , 25, 34636-34643	5.1	1
11	Bionanoscale Recognition Underlies Cell Fate and Therapy. *Advanced Healthcare Materials*, **2021**, 10, e2101260	10.1	1
10	Machine learning may accelerate the recognition and control of microplastic pollution: Future prospects.. *Journal of Hazardous Materials*, **2022**, 432, 128730	12.8	1
9	Extracellular polymeric substances mediate defect generation and phytotoxicity of single-layer MoS.. *Journal of Hazardous Materials*, **2022**, 429, 128361	12.8	0
8	Anthropogenic impacts on the biodiversity and anti-interference ability of microbial communities in lakes.. *Science of the Total Environment*, **2022**, 820, 153264	10.2	0
7	Nanocolloids in drinking water increase the risk of obesity in mice by modulating gut microbes. *Environment International*, **2021**, 146, 106302	12.9	0
6	Bioavailability and toxicity variation of benzo(a)pyrene in three soil□wheat systems: Indicators of soil quality. *Land Degradation and Development*, **2021**, 32, 3847-3855	4.4	0
5	Quantum dots bind nanosheet to promote nanomaterial stability and resist endotoxin-induced fibrosis and PM-induced pneumonia.. *Ecotoxicology and Environmental Safety*, **2022**, 234, 113420	7	0
4	Multifeature superposition analysis of the effects of microplastics on microbial communities in realistic environments.. *Environment International*, **2022**, 162, 107172	12.9	0
3	Multiple factors drive imbalance in the global microbial assemblage in soil.. *Science of the Total Environment*, **2022**, 154920	10.2	0
2	Impact of sulfhydryl ligands on the transformation of silver ions by molybdenum disulfide and their combined toxicity to freshwater algae.. *Journal of Hazardous Materials*, **2022**, 435, 128953	12.8	0
1	Reply to the □comment on □raphene oxide regulates the bacterial community and exhibits property changes in soil□by C. Forstner, P. Wang, P. M. Kopittke and P. G. Dennis, RSC Adv., 2016, 6, DOI: 10.1039/C5RA26329H. *RSC Advances*, **2016**, 6, 53688-53689	3.7	