

# Patricia A Holden

## List of Publications by Citations

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115  
papers

8,903  
citations

48  
h-index

94  
g-index

121  
ext. papers

10,010  
ext. citations

7.8  
avg, IF

6.12  
L-index

#	Paper	IF	Citations
115	Variations in microbial community composition through two soil depth profiles. <i>Soil Biology and Biochemistry</i> , <b>2003</b> , 35, 167-176	7.5	1156
114	Influence of drying-rewetting frequency on soil bacterial community structure. <i>Microbial Ecology</i> , <b>2003</b> , 45, 63-71	4.4	491
113	Soybean susceptibility to manufactured nanomaterials with evidence for food quality and soil fertility interruption. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, E2451-6	11.5	377
112	Drying and rewetting effects on C and N mineralization and microbial activity in surface and subsurface California grassland soils. <i>Soil Biology and Biochemistry</i> , <b>2008</b> , 40, 2281-2289	7.5	365
111	Evidence for negative effects of TiO <sub>2</sub> and ZnO nanoparticles on soil bacterial communities. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 1659-64	10.3	357
110	Analysis of engineered nanomaterials in complex matrices (environment and biota): general considerations and conceptual case studies. <i>Environmental Toxicology and Chemistry</i> , <b>2012</b> , 31, 32-49	3.8	355
109	Controls on microbial CO <sub>2</sub> production: a comparison of surface and subsurface soil horizons. <i>Global Change Biology</i> , <b>2003</b> , 9, 1322-1332	11.4	321
108	Extracellular DNA in single- and multiple-species unsaturated biofilms. <i>Applied and Environmental Microbiology</i> , <b>2005</b> , 71, 5404-10	4.8	235
107	Microfiber Masses Recovered from Conventional Machine Washing of New or Aged Garments. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 11532-11538	10.3	224
106	Performance of forty-one microbial source tracking methods: a twenty-seven lab evaluation study. <i>Water Research</i> , <b>2013</b> , 47, 6812-28	12.5	212
105	Identification of soil bacteria susceptible to TiO <sub>2</sub> and ZnO nanoparticles. <i>Applied and Environmental Microbiology</i> , <b>2012</b> , 78, 6749-58	4.8	195
104	Biomagnification of cadmium selenide quantum dots in a simple experimental microbial food chain. <i>Nature Nanotechnology</i> , <b>2011</b> , 6, 65-71	28.7	189
103	Enhanced exopolymer production and chromium stabilization in <i>Pseudomonas putida</i> unsaturated biofilms. <i>Applied and Environmental Microbiology</i> , <b>2006</b> , 72, 1988-96	4.8	167
102	Considerations of Environmentally Relevant Test Conditions for Improved Evaluation of Ecological Hazards of Engineered Nanomaterials. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 6124-45	10.3	165
101	Evaluation of extraction and purification methods for obtaining PCR-amplifiable DNA from compost for microbial community analysis. <i>Journal of Microbiological Methods</i> , <b>2002</b> , 49, 255-64	2.8	155
100	Evaluation of exposure concentrations used in assessing manufactured nanomaterial environmental hazards: are they relevant?. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 10541-51	10.3	145
99	Effects of soluble cadmium salts versus CdSe quantum dots on the growth of planktonic <i>Pseudomonas aeruginosa</i> . <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 2589-94	10.3	136

98	Enhanced visualization of microbial biofilms by staining and environmental scanning electron microscopy. <i>Journal of Microbiological Methods</i> , <b>2007</b> , 68, 577-87	2.8	128
97	Nanomaterial categorization for assessing risk potential to facilitate regulatory decision-making. <i>ACS Nano</i> , <b>2015</b> , 9, 3409-17	16.7	119
96	Physical morphology and surface properties of unsaturated <i>Pseudomonas putida</i> biofilms. <i>Journal of Bacteriology</i> , <b>2000</b> , 182, 3809-15	3.5	118
95	Ecological nanotoxicology: integrating nanomaterial hazard considerations across the subcellular, population, community, and ecosystems levels. <i>Accounts of Chemical Research</i> , <b>2013</b> , 46, 813-22	24.3	115
94	Microbial Processes in the Vadose Zone. <i>Vadose Zone Journal</i> , <b>2005</b> , 4, 1-21	2.7	113
93	Toxicity of metal oxide nanoparticles in <i>Escherichia coli</i> correlates with conduction band and hydration energies. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 1105-12	10.3	111
92	A mechanistic model of runoff-associated fecal coliform fate and transport through a coastal lagoon. <i>Water Research</i> , <b>2003</b> , 37, 589-608	12.5	99
91	Diversity, composition, and geographical distribution of microbial communities in California salt marsh sediments. <i>Applied and Environmental Microbiology</i> , <b>2006</b> , 72, 3357-66	4.8	94
90	Zinc oxide nanoparticles delay soybean development: a standard soil microcosm study. <i>Ecotoxicology and Environmental Safety</i> , <b>2014</b> , 100, 131-7	7	93
89	Dispersion of TiO <sub>2</sub> nanoparticle agglomerates by <i>Pseudomonas aeruginosa</i> . <i>Applied and Environmental Microbiology</i> , <b>2010</b> , 76, 7292-8	4.8	86
88	Storm drains are sources of human fecal pollution during dry weather in three urban southern California watersheds. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 293-8	10.3	83
87	Potential mechanisms and environmental controls of TiO <sub>2</sub> nanoparticle effects on soil bacterial communities. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 14411-7	10.3	79
86	Microbial Processes in the Vadose Zone. <i>Vadose Zone Journal</i> , <b>2005</b> , 4, 1-21	2.7	79
85	Sewage exfiltration as a source of storm drain contamination during dry weather in urban watersheds. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 7151-7	10.3	78
84	Soybean plants modify metal oxide nanoparticle effects on soil bacterial communities. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 13489-96	10.3	77
83	Elongation correlates with nutrient deprivation in <i>Pseudomonas aeruginosa</i> -unsaturated biofilms. <i>Microbial Ecology</i> , <b>2002</b> , 43, 416-23	4.4	76
82	Assessing the role of <i>Pseudomonas aeruginosa</i> surface-active gene expression in hexadecane biodegradation in sand. <i>Applied and Environmental Microbiology</i> , <b>2002</b> , 68, 2509-18	4.8	75
81	Comparison of subsurface and surface soil bacterial communities in California grassland as assessed by terminal restriction fragment length polymorphisms of PCR-amplified 16S rRNA genes. <i>Microbial Ecology</i> , <b>2003</b> , 46, 216-27	4.4	73

80	Five reasons to use bacteria when assessing manufactured nanomaterial environmental hazards and fates. <i>Current Opinion in Biotechnology</i> , <b>2014</b> , 27, 73-8	11.4	70
79	Damage assessment for soybean cultivated in soil with either CeO or ZnO manufactured nanomaterials. <i>Science of the Total Environment</i> , <b>2017</b> , 579, 1756-1768	10.2	69
78	Long-Term Effects of Multiwalled Carbon Nanotubes and Graphene on Microbial Communities in Dry Soil. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 3965-74	10.3	68
77	The University of California Center for the Environmental Implications of Nanotechnology. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 6453-7	10.3	61
76	Probing biopolymers with the atomic force microscope: a review. <i>Journal of Biomaterials Science, Polymer Edition</i> , <b>2000</b> , 11, 675-83	3.5	61
75	Microbial community composition and denitrifying enzyme activities in salt marsh sediments. <i>Applied and Environmental Microbiology</i> , <b>2008</b> , 74, 7585-95	4.8	60
74	Bacterial diversity in marine hydrocarbon seep sediments. <i>Environmental Microbiology</i> , <b>2004</b> , 6, 799-808	5.2	59
73	Agglomeration Determines Effects of Carbonaceous Nanomaterials on Soybean Nodulation, Dinitrogen Fixation Potential, and Growth in Soil. <i>ACS Nano</i> , <b>2017</b> , 11, 5753-5765	16.7	53
72	Toluene diffusion and reaction in unsaturated <i>Pseudomonas putida</i> biofilms. <i>Biotechnology and Bioengineering</i> , <b>1997</b> , 56, 656-70	4.9	51
71	Bioaccumulation of Multiwall Carbon Nanotubes in <i>Tetrahymena thermophila</i> by Direct Feeding or Trophic Transfer. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 8876-85	10.3	48
70	Characterization of fecal concentrations in human and other animal sources by physical, culture-based, and quantitative real-time PCR methods. <i>Water Research</i> , <b>2013</b> , 47, 6873-82	12.5	48
69	An assessment of fluorescence- and absorbance-based assays to study metal-oxide nanoparticle ROS production and effects on bacterial membranes. <i>Small</i> , <b>2013</b> , 9, 1753-64	11	48
68	Comparison of free-living and particle-associated bacterial communities in a coastal lagoon. <i>Microbial Ecology</i> , <b>2003</b> , 46, 228-37	4.4	47
67	Microbial source tracking in a coastal California watershed reveals canines as controllable sources of fecal contamination. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 9043-52	10.3	44
66	Genome-wide bacterial toxicity screening uncovers the mechanisms of toxicity of a cationic polystyrene nanomaterial. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 2398-405	10.3	44
65	Carbonaceous Nanomaterials Have Higher Effects on Soybean Rhizosphere Prokaryotic Communities During the Reproductive Growth Phase than During Vegetative Growth. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 6636-6646	10.3	38
64	Integrated approach to evaluating the toxicity of novel cysteine-capped silver nanoparticles to <i>Escherichia coli</i> and <i>Pseudomonas aeruginosa</i> . <i>Analyst, The</i> , <b>2014</b> , 139, 954-63	5	38
63	Differential growth of and nanoscale TiO <sub>2</sub> accumulation in <i>Tetrahymena thermophila</i> by direct feeding versus trophic transfer from <i>Pseudomonas aeruginosa</i> . <i>Applied and Environmental Microbiology</i> , <b>2013</b> , 79, 5616-24	4.8	37

62	Water stress effects on toluene biodegradation by <i>Pseudomonas putida</i> . <i>Biodegradation</i> , <b>1997</b> , 8, 143-514.1	4.1	37
61	Macromolecular composition of unsaturated <i>Pseudomonas aeruginosa</i> biofilms with time and carbon source. <i>Biofilms</i> , <b>2004</b> , 1, 37-47		36
60	Soil biofilms: microbial interactions, challenges, and advanced techniques for ex-situ characterization. <i>Soil Ecology Letters</i> , <b>2019</b> , 1, 85-93	2.7	35
59	Spatial Models of Sewer Pipe Leakage Predict the Occurrence of Wastewater Indicators in Shallow Urban Groundwater. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 1213-1223	10.3	32
58	Evaluation of chemical, molecular, and traditional markers of fecal contamination in an effluent dominated urban stream. <i>Environmental Science &amp; Technology</i> , <b>2010</b> , 44, 7369-75	10.3	30
57	Implementation of a multidisciplinary approach to solve complex nano EHS problems by the UC Center for the Environmental Implications of Nanotechnology. <i>Small</i> , <b>2013</b> , 9, 1428-43	11	29
56	Wastewater compounds in urban shallow groundwater wells correspond to exfiltration probabilities of nearby sewers. <i>Water Research</i> , <b>2015</b> , 85, 467-75	12.5	27
55	Modeling physiological processes that relate toxicant exposure and bacterial population dynamics. <i>PLoS ONE</i> , <b>2012</b> , 7, e26955	3.7	27
54	Strategies for robust and accurate experimental approaches to quantify nanomaterial bioaccumulation across a broad range of organisms. <i>Environmental Science: Nano</i> , <b>2019</b> , 6,	7.1	26
53	Towards a better understanding of <i>Pseudomonas putida</i> biofilm formation in the presence of ZnO nanoparticles (NPs): Role of NP concentration. <i>Environment International</i> , <b>2020</b> , 137, 105485	12.9	26
52	Multiwall Carbon Nanotubes Induce More Pronounced Transcriptomic Responses in <i>Pseudomonas aeruginosa</i> PG201 than Graphene, Exfoliated Boron Nitride, or Carbon Black. <i>ACS Nano</i> , <b>2018</b> , 12, 2728-2740	16.7	25
51	Assessing interactions of hydrophilic nanoscale TiO <sub>2</sub> with soil water. <i>Journal of Nanoparticle Research</i> , <b>2013</b> , 15, 1	2.3	23
50	Dynamic energy budget approach to modeling mechanisms of CdSe quantum dot toxicity. <i>Ecotoxicology</i> , <b>2013</b> , 22, 319-30	2.9	23
49	Effect of freshwater sediment characteristics on the persistence of fecal indicator bacteria and genetic markers within a Southern California watershed. <i>Water Research</i> , <b>2017</b> , 119, 1-11	12.5	22
48	Nanoparticle dispersion in environmentally relevant culture media: a TiO <sub>2</sub> case study and considerations for a general approach. <i>Journal of Nanoparticle Research</i> , <b>2012</b> , 14, 1	2.3	22
47	Comparison of the host specificities of two bacteroidales quantitative PCR assays used for tracking human fecal contamination. <i>Applied and Environmental Microbiology</i> , <b>2011</b> , 77, 6258-60	4.8	22
46	The role of alternative testing strategies in environmental risk assessment of engineered nanomaterials. <i>Environmental Science: Nano</i> , <b>2017</b> , 4, 292-301	7.1	20
45	Alginate Acid-Aided Dispersion of Carbon Nanotubes, Graphene, and Boron Nitride Nanomaterials for Microbial Toxicity Testing. <i>Nanomaterials</i> , <b>2018</b> , 8,	5.4	20

44	Detection limits and cost comparisons of human- and gull-associated conventional and quantitative PCR assays in artificial and environmental waters. <i>Journal of Environmental Management</i> , <b>2014</b> , 136, 112-20	7.8	18
43	The influence of in situ chemical oxidation on microbial community composition in groundwater contaminated with chlorinated solvents. <i>Microbial Ecology</i> , <b>2013</b> , 65, 39-49	4.4	18
42	Effects of TiO <sub>2</sub> and Ag nanoparticles on polyhydroxybutyrate biosynthesis by activated sludge bacteria. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 14712-20	10.3	18
41	Bacterial and mineral elements in an arctic biofilm: a correlative study using fluorescence and electron microscopy. <i>Microscopy and Microanalysis</i> , <b>2010</b> , 16, 153-65	0.5	18
40	Application of an integrated community analysis approach for microbial source tracking in a coastal creek. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 7195-201	10.3	18
39	SARS-CoV-2 Wastewater Surveillance for Public Health Action. <i>Emerging Infectious Diseases</i> , <b>2021</b> , 27, 1-8	10.2	18
38	Canine scent detection and microbial source tracking of human waste contamination in storm drains. <i>Water Environment Research</i> , <b>2014</b> , 86, 550-8	2.8	17
37	High performance separation of aerosol sprayed mesoporous TiO <sub>2</sub> sub-microspheres from aggregates via density gradient centrifugation. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 4162		16
36	Physical Properties of Carbon Nanomaterials and Nanoceria Affect Pathways Important to the Nodulation Competitiveness of the Symbiotic N-Fixing Bacterium <i>Bradyrhizobium diazoefficiens</i> . <i>Small</i> , <b>2020</b> , 16, e1906055	11	16
35	How do the microhabitats framed by soil structure impact soil bacteria and the processes that they regulate? <b>2011</b> , 118-148		15
34	Advancing Risk Analysis for Nanoscale Materials: Report from an International Workshop on the Role of Alternative Testing Strategies for Advancement. <i>Risk Analysis</i> , <b>2016</b> , 36, 1520-37	3.9	13
33	Separation of Bacteria, Protozoa and Carbon Nanotubes by Density Gradient Centrifugation. <i>Nanomaterials</i> , <b>2016</b> , 6,	5.4	13
32	Cannabis and the Environment: What Science Tells Us and What We Still Need to Know. <i>Environmental Science and Technology Letters</i> , <b>2021</b> , 8, 98-107	11	11
31	Analysis of run-to-run variation of bar-coded pyrosequencing for evaluating bacterial community shifts and individual taxa dynamics. <i>PLoS ONE</i> , <b>2014</b> , 9, e99414	3.7	10
30	Evaluation of frameworks proposed as protective of antimicrobial resistance propagation in the environment. <i>Environment International</i> , <b>2020</b> , 144, 106053	12.9	9
29	Fate of engineered nanomaterials in natural environments and impacts on ecosystems <b>2019</b> , 61-103		8
28	An improved method for nanogold in situ hybridization visualized with environmental scanning electron microscopy. <i>Journal of Microscopy</i> , <b>2009</b> , 236, 5-10	1.9	8
27	Impact of metal oxide nanoparticles on in vitro DNA amplification. <i>PeerJ</i> , <b>2019</b> , 7, e7228	3.1	8

26	Host-Symbiont Interaction Model Explains Non-monotonic Response of Soybean Growth and Seed Production to Nano-CeO Exposure. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 4944-4950	10.3	7
25	Engineered nanomaterials and symbiotic dinitrogen fixation in legumes. <i>Current Opinion in Environmental Science and Health</i> , <b>2018</b> , 6, 54-59	8.1	7
24	Analysis of soil bacteria susceptibility to manufactured nanoparticles via data visualization. <i>Beilstein Journal of Nanotechnology</i> , <b>2015</b> , 6, 1635-51	3	7
23	Surf zone microbiological water quality following emergency beach nourishment using sediments from a catastrophic debris flow. <i>Water Research</i> , <b>2020</b> , 176, 115733	12.5	6
22	Community Analysis-Based Methods <b>2011</b> , 251-282		6
21	Effects of carbonaceous nanomaterials on soil-grown soybeans under combined heat and insect stresses. <i>Environmental Chemistry</i> , <b>2019</b> , 16, 482-493	3.2	5
20	Soybeans Grown with Carbonaceous Nanomaterials Maintain Nitrogen Stoichiometry by Assimilating Soil Nitrogen to Offset Impaired Dinitrogen Fixation. <i>ACS Nano</i> , <b>2020</b> , 14, 585-594	16.7	5
19	Limited Bacterial Removal in Full-Scale Stormwater Biofilters as Evidenced by Community Sequencing Analysis. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 9199-9208	10.3	5
18	University Stormwater Management within Urban Environmental Regulatory Regimes: Barriers to Progressivity or Opportunities to Innovate?. <i>Environmental Management</i> , <b>2021</b> , 67, 12-25	3.1	5
17	Environmental Attitudes and Knowledge: Do They Matter for Support and Investment in Local Stormwater Infrastructure?. <i>Society and Natural Resources</i> , <b>2021</b> , 34, 885-905	2.4	4
16	Toxicity of Manufactured Nanomaterials to Microorganisms <b>2016</b> , 320-346		4
15	Predicting Solute Transport Through Green Stormwater Infrastructure With Unsteady Transit Time Distribution Theory. <i>Water Resources Research</i> , <b>2021</b> , 57, e2020WR028579	5.4	4
14	Bacterial Interactions with CdSe Quantum Dots and Environmental Implications 197-231		3
13	Influence of soil characteristics and metal(loid)s on antibiotic resistance genes in green stormwater infrastructure in Southern California. <i>Journal of Hazardous Materials</i> , <b>2022</b> , 424, 127469	12.8	3
12	DEB modeling for nanotoxicology, microbial ecology, and environmental engineering: Comment on: "Physics of metabolic organization" by Marko Jusup et al. <i>Physics of Life Reviews</i> , <b>2017</b> , 20, 49-51	2.1	2
11	Nano-LaO Induces Honeybee () Death and Enriches for Pathogens in Honeybee Gut Bacterial Communities.. <i>Frontiers in Microbiology</i> , <b>2021</b> , 12, 780943	5.7	2
10	Sars-Cov-2 Wastewater Surveillance for Public Health Action: Connecting Perspectives From Wastewater Researchers and Public Health Officials During a Global Pandemic		2
9	Sources of Low Level Human Fecal Markers in Recreational Waters of Two Santa Barbara, CA Beaches: Roles of WWTP Outfalls and Swimmers. <i>Water Research</i> , <b>2021</b> , 202, 117378	12.5	2

8	Uptake and depuration of carbon- and boron nitride-based nanomaterials in the protozoa <i>Tetrahymena thermophila</i> . <i>Environmental Science: Nano</i> , <b>2021</b> , 8, 3613-3628	7.1	1
7	Bather Shedding as a Source of Human Fecal Markers to a Recreational Beach. <i>Frontiers in Microbiology</i> , <b>2021</b> , 12, 673190	5.7	1
6	Molecular Mechanisms of Nanomaterial-Bacterial Interactions Revealed by Omics-The Role of Nanomaterial Effect Level. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 683520	5.8	1
5	Highly variable removal of pathogens, antibiotic resistance genes, conventional fecal indicators and human-associated fecal source markers in a pilot-scale stormwater biofilter operated under realistic stormflow conditions.. <i>Water Research</i> , <b>2022</b> , 219, 118525	12.5	1
4	A Review of Environmental Pollution from the Use and Disposal of Cigarettes and Electronic Cigarettes: Contaminants, Sources, and Impacts. <i>Sustainability</i> , <b>2021</b> , 13, 12994	3.6	0
3	Evaluating the relationships between specific drainage area characteristics and soil metal concentrations in long-established bioswales receiving suburban stormwater runoff. <i>Science of the Total Environment</i> , <b>2021</b> , 757, 143778	10.2	0
2	Probing Biomaterials with the Atomic Force Microscope. <i>Microscopy and Microanalysis</i> , <b>1999</b> , 5, 1012-1013	3.5	0
1	Response to Comment on "Cannabis and the Environment: What Science Tells Us and What We Still Need to Know" <i>Environmental Science and Technology Letters</i> , <b>2021</b> , 8, 486-486	11	0