Deb P Jaisi

List of Publications by Year
in descending order

84 papers	5,250 citations	101543 36 h-index	85541 71 g-index
86 all docs	86 docs citations	86 times ranked	5924 citing authors

#	Article	IF	Citations
1	Aggregation and Deposition of Engineered Nanomaterials in Aquatic Environments: Role of Physicochemical Interactions. Environmental Science & Technology, 2010, 44, 6532-6549.	10.0	986
2	Environmental application of biochar: Current status and perspectives. Bioresource Technology, 2017, 246, 110-122.	9.6	536
3	Microbe-clay mineral interactions. American Mineralogist, 2009, 94, 1505-1519.	1.9	230
4	Transport of Single-Walled Carbon Nanotubes in Porous Media: Filtration Mechanisms and Reversibility. Environmental Science & Technology, 2008, 42, 8317-8323.	10.0	219
5	Single-Walled Carbon Nanotubes Exhibit Limited Transport in Soil Columns. Environmental Science & Technology, 2009, 43, 9161-9166.	10.0	198
6	Organic phosphorus in the terrestrial environment: a perspective on the state of the art and future priorities. Plant and Soil, 2018, 427, 191-208.	3.7	145
7	Control of Fe(III) site occupancy on the rate and extent of microbial reduction of Fe(III) in nontronite. Geochimica Et Cosmochimica Acta, 2005, 69, 5429-5440.	3.9	142
8	Toxicity of Functionalized Single-Walled Carbon Nanotubes on Soil Microbial Communities: Implications for Nutrient Cycling in Soil. Environmental Science & Technology, 2013, 47, 625-633.	10.0	138
9	Influence of biogenic Fe(II) on the extent of microbial reduction of Fe(III) in clay minerals nontronite, illite, and chlorite. Geochimica Et Cosmochimica Acta, 2007, 71, 1145-1158.	3.9	137
10	Removal of hydrogen sulfide generated during anaerobic treatment of sulfate-laden wastewater using biochar: Evaluation of efficiency and mechanisms. Bioresource Technology, 2017, 234, 115-121.	9.6	126
11	Organic Matter Remineralization Predominates Phosphorus Cycling in the Mid-Bay Sediments in the Chesapeake Bay. Environmental Science & Technology, 2015, 49, 5887-5896.	10.0	117
12	Redox-Active Oxygen-Containing Functional Groups in Activated Carbon Facilitate Microbial Reduction of Ferrihydrite. Environmental Science & Technology, 2017, 51, 9709-9717.	10.0	113
13	Reduction and long-term immobilization of technetium by Fe(II) associated with clay mineral nontronite. Chemical Geology, 2009, 264, 127-138.	3.3	108
14	Effect of Size-Selective Retention on the Cotransport of Hydroxyapatite and Goethite Nanoparticles in Saturated Porous Media. Environmental Science & Technology, 2015, 49, 8461-8470.	10.0	93
15	Fractionation of oxygen isotopes in phosphate during its interactions with iron oxides. Geochimica Et Cosmochimica Acta, 2010, 74, 1309-1319.	3.9	85
16	Tracing sources and cycling of phosphorus in Peru Margin sediments using oxygen isotopes in authigenic and detrital phosphates. Geochimica Et Cosmochimica Acta, 2010, 74, 3199-3212.	3.9	83
17	Phosphorus adsorption behaviors of MgO modified biochars derived from waste woody biomass resources. Journal of Environmental Chemical Engineering, 2020, 8, 103723.	6.7	78
18	Characterizing Phosphorus Speciation of Chesapeake Bay Sediments Using Chemical Extraction, ³¹P NMR, and X-ray Absorption Fine Structure Spectroscopy. Environmental Science & Technology, 2015, 49, 203-211.	10.0	69

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19	Biotic and Abiotic Pathways of Phosphorus Cycling in Minerals and Sediments: Insights from Oxygen Isotope Ratios in Phosphate. Environmental Science & Technology, 2011, 45, 6254-6261.	10.0	66
20	Partitioning of Fe(II) in reduced nontronite (NAu-2) to reactive sites: reactivity in terms of Tc(VII) reduction. Clays and Clay Minerals, 2008, 56, 175-189.	1.3	64
21	Microbial activities and phosphorus cycling: An application of oxygen isotope ratios in phosphate. Geochimica Et Cosmochimica Acta, 2014, 138, 101-116.	3.9	64
22	Hyperexponential and nonmonotonic retention of polyvinylpyrrolidone-coated silver nanoparticles in an Ultisol. Journal of Contaminant Hydrology, 2014, 164, 35-48.	3.3	61
23	Enhanced Dissolution and Transformation of ZnO Nanoparticles: The Role of Inositol Hexakisphosphate. Environmental Science & Technology, 2016, 50, 5651-5660.	10.0	60
24	Degradation of glyphosate and bioavailability of phosphorus derived from glyphosate in a soil-water system. Water Research, 2019, 163, 114840.	11.3	59
25	Transformation of Phosphorus Pools in an Agricultural Soil: An Application of Oxygenâ€18 Labeling in Phosphate. Soil Science Society of America Journal, 2016, 80, 69-78.	2.2	57
26	ACCD-producing rhizobacteria from an Andean Altiplano native plant (Parastrephia quadrangularis) and their potential to alleviate salt stress in wheat seedlings. Applied Soil Ecology, 2019, 136, 184-190.	4.3	56
27	Nontronite particle aggregation induced by microbial Fe(III) reduction and exopolysaccharide production. Clays and Clay Minerals, 2007, 55, 96-107.	1.3	53
28	Fe2+ sorption onto nontronite (NAu-2). Geochimica Et Cosmochimica Acta, 2008, 72, 5361-5371.	3.9	50
29	Transport and Retention of Polyvinylpyrrolidoneâ€Coated Silver Nanoparticles in Natural Soils. Vadose Zone Journal, 2015, 14, 1-13.	2.2	48
30	Degradation and Isotope Source Tracking of Glyphosate and Aminomethylphosphonic Acid. Journal of Agricultural and Food Chemistry, 2016, 64, 529-538.	5.2	48
31	Mechanisms of Bond Cleavage during Manganese Oxide and UV Degradation of Glyphosate: Results from Phosphate Oxygen Isotopes and Molecular Simulations. Journal of Agricultural and Food Chemistry, 2016, 64, 8474-8482.	5.2	46
32	The Formation of Illite from Nontronite by Mesophilic and Thermophilic Bacterial Reaction. Clays and Clay Minerals, 2011, 59, 21-33.	1.3	45
33	Alleviating sulfide toxicity using biochar during anaerobic treatment of sulfate-laden wastewater. Bioresource Technology, 2020, 301, 122711.	9.6	44
34	Kinetic Analysis of Microbial Reduction of Fe(III) in Nontronite. Environmental Science & Technology, 2007, 41, 2437-2444.	10.0	41
35	Advances in Using Oxygen Isotope Ratios of Phosphate to Understand Phosphorus Cycling in the Environment. Advances in Agronomy, 2014, , 1-53.	5.2	40
36	Effects of low-molecular-weight organic acids on the dissolution of hydroxyapatite nanoparticles. Environmental Science: Nano, 2016, 3, 768-779.	4.3	40

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37	Cotransport of hydroxyapatite nanoparticles and hematite colloids in saturated porous media: Mechanistic insights from mathematical modeling and phosphate oxygen isotope fractionation. Journal of Contaminant Hydrology, 2015, 182, 194-209.	3.3	37
38	Degradation of Glyphosate by Mn-Oxide May Bypass Sarcosine and Form Glycine Directly after Câ€"N Bond Cleavage. Environmental Science & Technology, 2018, 52, 1109-1117.	10.0	35
39	Identifying sources and cycling of phosphorus in the sediment of a shallow freshwater lake in China using phosphate oxygen isotopes. Science of the Total Environment, 2019, 676, 823-833.	8.0	34
40	The microbial cycling of phosphorus on long-term fertilized soil: Insights from phosphate oxygen isotope ratios. Chemical Geology, 2018, 483, 56-64.	3.3	32
41	Fate of As(III) and As(V) during Microbial Reduction of Arsenic-Bearing Ferrihydrite Facilitated by Activated Carbon. ACS Earth and Space Chemistry, 2018, 2, 878-887.	2.7	30
42	Birnessiteâ€Catalyzed Degradation of Glyphosate: A Mechanistic Study Aided by Kinetics Batch Studies and NMR Spectroscopy. Soil Science Society of America Journal, 2015, 79, 815-825.	2.2	29
43	Factors Controlling Phosphorus Mobilization in a Coastal Plain Tributary to the Chesapeake Bay. Soil Science Society of America Journal, 2015, 79, 826-837.	2.2	27
44	Phytate Degradation by Different Phosphohydrolase Enzymes: Contrasting Kinetics, Decay Rates, Pathways, and Isotope Effects. Soil Science Society of America Journal, 2017, 81, 61-75.	2.2	27
45	Mechanisms and Pathways of Phytate Degradation: Evidence from Oxygen Isotope Ratios of Phosphate, HPLC, and Phosphorusâ€31 NMR Spectroscopy. Soil Science Society of America Journal, 2015, 79, 1615-1628.	2.2	26
46	Changes in Sedimentary Phosphorus Burial Following Artificial Eutrophication of Lake 227, Experimental Lakes Area, Ontario, Canada. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG005713.	3.0	23
47	Role of Microbial Fe(III) Reduction and Solution Chemistry in Aggregation and Settling of Suspended Particles in the Mississippi River Delta Plain, Louisiana, USA. Clays and Clay Minerals, 2008, 56, 416-428.	1.3	20
48	Sources and Pathways of Formation of Recalcitrant and Residual Phosphorus in an Agricultural Soil. Soil Systems, 2018, 2, 45.	2.6	20
49	Stable Isotopes and Bayesian Modeling Methods of Tracking Sources and Differentiating Bioavailable and Recalcitrant Phosphorus Pools in Suspended Particulate Matter. Environmental Science & Technology, 2019, 53, 69-76.	10.0	20
50	Source partitioning of oxygenâ€consuming organic matter in the hypoxic zone of the Chesapeake Bay. Limnology and Oceanography, 2020, 65, 1801-1817.	3.1	20
51	Quantification and molecular characterization of organo-mineral associations as influenced by redox oscillations. Science of the Total Environment, 2020, 704, 135454.	8.0	19
52	Stable isotope fractionations during reactive transport of phosphate in packed-bed sediment columns. Journal of Contaminant Hydrology, 2013, 154, 10-19.	3.3	17
53	An Isotope Labeling Technique to Investigate Atom Exchange during Phosphate Sorption and Desorption. Soil Science Society of America Journal, 2015, 79, 1340-1351.	2.2	17
54	Spatiotemporal variations and relationships of phosphorus, phosphomonoesterases, and bacterial communities in sediments from two Chilean rivers. Science of the Total Environment, 2021, 776, 145782.	8.0	17

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55	Relationship of Phytate, Phytateâ€Mineralizing Bacteria, and Betaâ€Propeller Phytase Genes along a Coastal Tributary to the Chesapeake Bay. Soil Science Society of America Journal, 2016, 80, 84-96.	2.2	16
56	Adsorption and precipitation of <i>myo</i>â€inositol hexakisphosphate onto kaolinite. European Journal of Soil Science, 2020, 71, 226-235.	3.9	16
57	Phosphorus availability and turnover in the Chesapeake Bay: Insights from nutrient stoichiometry and phosphate oxygen isotope ratios. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 811-824.	3.0	15
58	Effects of <i>Myo</i>-inositol Hexakisphosphate on Zn(II) Sorption on Î³-Alumina: A Mechanistic Study. ACS Earth and Space Chemistry, 2018, 2, 787-796.	2.7	15
59	Water column particulate matter: A key contributor to phosphorus regeneration in a coastal eutrophic environment, the Chesapeake Bay. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 737-752.	3.0	14
60	Modeling of biotic and abiotic processes affecting phosphate oxygen isotope ratios in a mineral-water-biota system. Water Research, 2017, 126, 262-273.	11.3	14
61	Sizeâ€Dependent Turbidimetric Quantification of Suspended Soil Colloids. Vadose Zone Journal, 2017, 16, 1-8.	2.2	12
62	Competition of Sorption and Degradation Reactions during Glyphosate Degradation by Ferrihydrite/Î´-Manganese Oxide Composites. ACS Earth and Space Chemistry, 2019, 3, 1362-1370.	2.7	12
63	Phosphorus Transport along the Croplandâ€"Riparianâ€"Stream Continuum in Cold Climate Agroecosystems: A Review. Soil Systems, 2021, 5, 15.	2.6	12
64	Role of metal complexation on the solubility and enzymatic hydrolysis of phytate. PLoS ONE, 2021, 16, e0255787.	2.5	12
65	The effect of sample treatments on the oxygen isotopic composition of phosphate pools in soils. Chemical Geology, 2017, 474, 9-16.	3.3	11
66	Investigation of Compound-Specific Organic-Inorganic Phosphorus Transformation Using Stable Isotope Ratios in Phosphate. , 2014, , 267-292.		11
67	Bioavailability of Fe(III) In Loess Sediments: An Important Source of Electron Acceptors. Clays and Clay Minerals, 2010, 58, 542-557.	1.3	10
68	Is brood parasitism related to host nestling diet and nutrition?. Auk, 2015, 132, 717-734.	1.4	10
69	Distribution of inositol phosphates in animal feed grains and excreta: distinctions among isomers and phosphate oxygen isotope compositions. Plant and Soil, 2018, 430, 291-305.	3.7	8
70	Loading and Bioavailability of Colloidal Phosphorus in the Estuarine Gradient of the Deer Creekâ€Susquehanna River Transect in the Chesapeake Bay. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3717-3726.	3.0	8
71	Role of Maturation Temperature on Structural Substitution of Carbonate in Hydroxyapatite Nanoparticles. Jom, 2021, 73, 1044-1052.	1.9	7
72	Chemical oxidation of selenite to selenate: Evaluation of reactive oxygen species and O transfer pathways. Chemical Geology, 2021, 575, 120229.	3.3	6

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73	Effects of nitrogen application rate on phosphorus transformation in an Alfisol: Results from phosphate-oxygen isotope ratios. Applied Geochemistry, 2021, 134, 105094.	3.0	6
74	Synthesis of Hydroxyapatite Nanoparticles from Phosphorus Recovered from Animal Wastes. ACS Sustainable Chemistry and Engineering, 2021, 9, 15117-15126.	6.7	6
75	Synthesis and Degradation of Polyphosphate: Isotope Effects in Enzyme- and Bacteria-Catalyzed Reactions. ACS Earth and Space Chemistry, 2020, 4, 2327-2336.	2.7	5
76	Using diffusive gradients in thin films technique for in-situ measurement of labile phosphorus around Oryza sativa L. roots in flooded paddy soils. Pedosphere, 2021, 31, 76-82.	4.0	5
77	Oxygen isotopic fingerprints on the phosphorus cycle within the deep subseafloor biosphere. Geochimica Et Cosmochimica Acta, 2021, 310, 169-186.	3.9	5
78	Oxygen kinetic isotope effects in selenate during microbial reduction. Applied Geochemistry, 2015, 63, 261-271.	3.0	4
79	Determination of the Activation Energies of Phase Transition for Calcium Orthophosphates Based on Powder Xâ€Ray Diffraction Data. Crystal Research and Technology, 2022, 57, .	1.3	4
80	Distribution of phosphorous pools in western river sediments of the Urmia Lake basin, Iran. Environmental Science and Pollution Research, 2018, 25, 11614-11625.	5.3	3
81	Tracing the sources of phosphorus along the salinity gradient in a coastal estuary using multi-isotope proxies. Science of the Total Environment, 2021, 792, 148353.	8.0	3
82	Evolution of Oxygen Isotopologues in Phosphate and Pyrophosphate during Enzyme-Catalyzed Isotopic Exchange Reactions. ACS Earth and Space Chemistry, 2022, 6, 1543-1551.	2.7	3
83	Novel Route to Enhance the Solubility of Apatite, a Potential Nanofertilizer, through Structural Incorporation of Sodium and Potassium Ions. ACS Agricultural Science and Technology, 0, , .	2.3	2
84	Challenges and Successes in Identifying the Transfer and Transformation of Phosphorus from Soils to Open Waters and Sediments. Soil Systems, 2021, 5, 65.	2.6	0