Nikolla P Qafoku

List of Publications by Year
in descending order

100 papers	3,761 citations	126907 33 h-index	144013 57 g-index
113 all docs	113 docs citations	113 times ranked	3646 citing authors

#	Article	IF	Citations
1	Natural, incidental, and engineered nanomaterials and their impacts on the Earth system. Science, 2019, 363, .	12.6	479
2	Developing a molecular picture of soil organic matterâ€“mineral interactions by quantifying organoâ€“mineral binding. Nature Communications, 2017, 8, 396.	12.8	150
3	Geochemical Implications of Gas Leakage associated with Geologic CO₂ Storageâ€”A Qualitative Review. Environmental Science & Technology, 2013, 47, 23-36.	10.0	146
4	The biogeochemistry of technetium: A review of the behavior of an artificial element in the natural environment. Numerische Mathematik, 2010, 310, 721-752.	1.4	142
5	Variable Charge Soils: Their Mineralogy, Chemistry and Management. Advances in Agronomy, 2004, 84, 159-215.	5.2	137
6	Kinetic Desorption and Sorption of U(VI) during Reactive Transport in a Contaminated Hanford Sediment. Environmental Science & Technology, 2005, 39, 3157-3165.	10.0	137
7	Immobilization of 99-Technetium (VII) by Fe(II)-Goethite and Limited Reoxidation. Environmental Science & Technology, 2011, 45, 4904-4913.	10.0	124
8	Scaleâ€dependent desorption of uranium from contaminated subsurface sediments. Water Resources Research, 2008, 44, .	4.2	123
9	Geochemical, mineralogical and microbiological characteristics of sediment from a naturally reduced zone in a uranium-contaminated aquifer. Applied Geochemistry, 2012, 27, 1499-1511.	3.0	123
10	Abiotic Reductive Immobilization of U(VI) by Biogenic Mackinawite. Environmental Science & Technology, 2013, 47, 2361-2369.	10.0	100
11	Uranium in Framboidal Pyrite from a Naturally Bioreduced Alluvial Sediment. Environmental Science & Technology, 2009, 43, 8528-8534.	10.0	85
12	Anion Transport through Columns of Highly Weathered Acid Soil: Adsorption and Retardation. Soil Science Society of America Journal, 1996, 60, 132-137.	2.2	81
13	Cr(OH)₃(s) Oxidation Induced by Surface Catalyzed Mn(II) Oxidation. Environmental Science & Technology, 2014, 48, 10760-10768.	10.0	74
14	Silver-functionalized silica aerogels and their application in the removal of iodine from aqueous environments. Journal of Hazardous Materials, 2019, 379, 119364.	12.4	64
15	Iodine immobilization by materials through sorption and redox-driven processes: A literature review. Science of the Total Environment, 2020, 716, 132820.	8.0	59
16	Removal of TcO₄^{â€“} from Representative Nuclear Waste Streams with Layered Potassium Metal Sulfide Materials. Chemistry of Materials, 2016, 28, 3976-3983.	6.7	56
17	Modeling the impact of carbon dioxide leakage into an unconfined, oxidizing carbonate aquifer. International Journal of Greenhouse Gas Control, 2016, 44, 290-299.	4.6	56
18	Terrestrial Nanoparticles and Their Controls on Soil-/Geo-Processes and Reactions. Advances in Agronomy, 2010, 107, 33-91.	5.2	55

#	ARTICLE	IF	CITATIONS
19	Adsorption Properties of Subtropical and Tropical Variable Charge Soils: Implications from Climate Change and Biochar Amendment. Advances in Agronomy, 2016, 135, 1-58.	5.2	54
20	Anion Transport in Columns of Variable Charge Subsoils: Nitrate and Chloride. Journal of Environmental Quality, 2000, 29, 484-493.	2.0	48
21	Arsenate Displacement from Fly Ash in Amended Soils. Water, Air, and Soil Pollution, 1999, 114, 185-198.	2.4	47
22	Transport-controlled kinetics of dissolution and precipitation in the sediments under alkaline and saline conditions. Geochimica Et Cosmochimica Acta, 2004, 68, 2981-2995.	3.9	47
23	Iron oxide waste form for stabilizing 99Tc. Journal of Nuclear Materials, 2012, 429, 201-209.	2.7	46
24	Aluminum Effect on Dissolution and Precipitation under Hyperalkaline Conditions. Journal of Environmental Quality, 2003, 32, 2364-2372.	2.0	43
25	Review of the impacts of leaking CO2 gas and brine on groundwater quality. Earth-Science Reviews, 2017, 169, 69-84.	9.1	42
26	Foam Delivery of Calcium Polysulfide to the Vadose Zone for Chromium(VI) Immobilization: A Laboratory Evaluation. Vadose Zone Journal, 2009, 8, 976-985.	2.2	41
27	Geochemical and mineralogical investigation of uranium in multi-element contaminated, organic-rich subsurface sediment. Applied Geochemistry, 2014, 42, 77-85.	3.0	40
28	Effect of Coupled Dissolution and Redox Reactions on Cr(VI)aqAttenuation during Transport in the Sediments under Hyperalkaline Conditions. Environmental Science & Technology, 2003, 37, 3640-3646.	10.0	39
29	Mineralogy and chemistry of some variable charge subsoils. Communications in Soil Science and Plant Analysis, 2000, 31, 1051-1070.	1.4	38
30	RETENTION AND TRANSPORT OF CALCIUM NITRATE IN VARIABLE CHARGE SUBSOILS. Soil Science, 2001, 166, 297-307.	0.9	38
31	Adsorption and Desorption of Indifferent Ions in Variable Charge Subsoils. Soil Science Society of America Journal, 2002, 66, 1231-1239.	2.2	38
32	Influence of acidic and alkaline waste solution properties on uranium migration in subsurface sediments. Journal of Contaminant Hydrology, 2013, 151, 155-175.	3.3	38
33	Technetium Stabilization in Low-Solubility Sulfide Phases: A Review. ACS Earth and Space Chemistry, 2018, 2, 532-547.	2.7	36
34	Interactions of aqueous U(VI) with soil minerals in slightly alkaline natural systems. Reviews in Environmental Science and Biotechnology, 2008, 7, 355-380.	8.1	34
35	Climate-Change Effects on Soils: Accelerated Weathering, Soil Carbon, and Elemental Cycling. Advances in Agronomy, 2015, 131, 111-172.	5.2	34
36	Coupled Geochemical Impacts of Leaking CO₂ and Contaminants from Subsurface Storage Reservoirs on Groundwater Quality. Environmental Science & Technology, 2015, 49, 8202-8209.	10.0	34

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37	Evaluating impacts of CO2 intrusion into an unconsolidated aquifer: I. Experimental data. International Journal of Greenhouse Gas Control, 2016, 44, 323-333.	4.6	31
38	Proteinâ€“Mineral Interactions: Molecular Dynamics Simulations Capture Importance of Variations in Mineral Surface Composition and Structure. Langmuir, 2016, 32, 6194-6209.	3.5	31
39	Incorporation Modes of Iodate in Calcite. Environmental Science & Technology, 2018, 52, 5902-5910.	10.0	31
40	Advective Removal of Intraparticle Uranium from Contaminated Vadose Zone Sediments, Hanford, U.S.. Environmental Science & Technology, 2008, 42, 1565-1571.	10.0	30
41	Strong mineralogic control of soil organic matter composition in response to nutrient addition across diverse grassland sites. Science of the Total Environment, 2020, 736, 137839.	8.0	29
42	A review of the behavior of radioiodine in the subsurface at two DOE sites. Science of the Total Environment, 2019, 691, 466-475.	8.0	28
43	Relative Humidity Controls Ammonia Loss from Urea Applied to Loblolly Pine. Soil Science Society of America Journal, 2010, 74, 543-549.	2.2	27
44	Getters for improved technetium containment in cementitious waste forms. Journal of Hazardous Materials, 2018, 341, 238-247.	12.4	25
45	Aluminum Effect on Dissolution and Precipitation under Hyperalkaline Conditions. Journal of Environmental Quality, 2003, 32, 2354-2363.	2.0	24
46	Design and Ammoniaâ€Recovery Evaluation of a Wind Speedâ€Sensitive Chamber System. Soil Science Society of America Journal, 2001, 65, 1302-1306.	2.2	23
47	Pathways of Aqueous Cr(VI) Attenuation in a Slightly Alkaline Oxic Subsurface. Environmental Science & Technology, 2009, 43, 1071-1077.	10.0	23
48	Chromium transport in an acidic waste contaminated subsurface medium: The role of reduction. Chemosphere, 2010, 81, 1492-1500.	8.2	23
49	Evaluating impacts of CO2 intrusion into an unconsolidated aquifer: II. Modeling results. International Journal of Greenhouse Gas Control, 2016, 44, 300-309.	4.6	23
50	Time-Dependent Iodate and Iodide Adsorption to Fe Oxides. ACS Earth and Space Chemistry, 2019, 3, 2415-2420.	2.7	23
51	Mineralogy of a perudic Andosol in central Java, Indonesia. Geoderma, 2008, 144, 379-386.	5.1	21
52	Silver-based getters for ¹²⁹I removal from low-activity waste. Radiochimica Acta, 2016, 104, 905-913.	1.2	21
53	Technetium immobilization by materials through sorption and redox-driven processes: A literature review. Science of the Total Environment, 2020, 716, 132849.	8.0	19
54	The function of Sn(II)-apatite as a Tc immobilizing agent. Journal of Nuclear Materials, 2016, 480, 393-402.	2.7	18

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55	Direct Visualization of Aggregate Morphology and Dynamics in a Model Soil Organicâ€"Mineral System. Environmental Science and Technology Letters, 2017, 4, 186-191.	8.7	18
56	Efficacy of acetate-amended biostimulation for uranium sequestration: Combined analysis of sediment/groundwater geochemistry and bacterial community structure. Applied Geochemistry, 2017, 78, 172-185.	3.0	18
57	Technetium and iodine aqueous species immobilization and transformations in the presence of strong reductants and calcite-forming solutions: Remedial action implications. Science of the Total Environment, 2018, 636, 588-595.	8.0	17
58	Impact of iron and manganese nano-metal-oxides on contaminant interaction and fortification potential in agricultural systems â€" a review. Environmental Chemistry, 2019, 16, 377.	1.5	17
59	Geochemical impacts of leaking CO2 from subsurface storage reservoirs to an unconfined oxidizing carbonate aquifer. International Journal of Greenhouse Gas Control, 2016, 44, 310-322.	4.6	16
60	Element mobilization and immobilization from carbonate rocks between CO2 storage reservoirs and the overlying aquifers during a potential CO2 leakage. Chemosphere, 2018, 197, 399-410.	8.2	16
61	Chromate Effect on Iodate Incorporation into Calcite. ACS Earth and Space Chemistry, 2019, 3, 1624-1630.	2.7	16
62	Geochemical and Geophysical Changes during Ammonia Gas Treatment of Vadose Zone Sediments for Uranium Remediation. Vadose Zone Journal, 2012, 11, vzj2011.0158.	2.2	14
63	Mineral assemblage transformation of a metakaolin-based waste form after geopolymer encapsulation. Journal of Nuclear Materials, 2016, 473, 320-332.	2.7	13
64	Current Understanding of the Use of Alkaline Extractions of Soils to Investigate Soil Organic Matter and Environmental Processes. Journal of Environmental Quality, 2019, 48, 1561-1564.	2.0	13
65	Chemical weathering of new pyroclastic deposits from Mt. Merapi (Java), Indonesia. Journal of Mountain Science, 2009, 6, 240-254.	2.0	12
66	CR(VI) FATE IN MINERALOGICALLY ALTERED SEDIMENTS BY HYPERALKALINE WASTE FLUIDS. Soil Science, 2007, 172, 598-613.	0.9	11
67	Evidence of technetium and iodine release from a sodalite-bearing ceramic waste form. Applied Geochemistry, 2016, 66, 210-218.	3.0	11
68	Performance of the Fluidized Bed Steam Reforming product under hydraulically unsaturated conditions. Journal of Environmental Radioactivity, 2014, 131, 119-128.	1.7	10
69	Phyllosilicate mineral dissolution upon alkaline treatment under aerobic and anaerobic conditions. Applied Clay Science, 2020, 189, 105520.	5.2	10
70	Uranium fate in Hanford sediment altered by simulated acid waste solutions. Applied Geochemistry, 2015, 63, 1-9.	3.0	9
71	Fe-solid phase transformations under highly basic conditions. Applied Geochemistry, 2007, 22, 2054-2064.	3.0	8
72	Advective Desorption of Uranium(VI) from Contaminated Hanford Vadose Zone Sediments under Saturated and Unsaturated Conditions. Vadose Zone Journal, 2008, 7, 1144-1159.	2.2	8

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73	Remediation of Technetium in Vadose Zone Sediments Using Ammonia and Hydrogen Sulfide Gases. Vadose Zone Journal, 2015, 14, 1-12.	2.2	8
74	Characterizing Technetium in Subsurface Sediments for Contaminant Remediation. ACS Earth and Space Chemistry, 2018, 2, 1145-1160.	2.7	8
75	Evaluating Impacts of CO2 Gas Intrusion Into a Confined Sandstone aquifer: Experimental Results. Energy Procedia, 2014, 63, 3275-3284.	1.8	7
76	Glass Corrosion in the Presence of Iron-Bearing Materials and Potential Corrosion Suppressors. Materials Research Society Symposia Proceedings, 2015, 1744, 139-144.	0.1	7
77	Influence of Carbon and Microbial Community Priming on the Attenuation of Uranium in a Contaminated Floodplain Aquifer. Ground Water, 2015, 53, 600-613.	1.3	7
78	Risk of Geologic Sequestration of CO2 to Groundwater Aquifers: Current Knowledge and Remaining Questions. Energy Procedia, 2017, 114, 3052-3059.	1.8	7
79	Methanogenesis-induced pHâ€"Eh shifts drives aqueous metal(loid) mobility in sulfide mineral systems under CO2 enriched conditions. Geochimica Et Cosmochimica Acta, 2016, 173, 232-245.	3.9	6
80	In situ precipitation of hydrous ferric oxide (HFO) for remediation of subsurface iodine contamination. Journal of Contaminant Hydrology, 2020, 235, 103705.	3.3	6
81	A Review of Bismuth(III)-Based Materials for Remediation of Contaminated Sites. ACS Earth and Space Chemistry, 2022, 6, 883-908.	2.7	6
82	Effect of extent of natural subsurface bioreduction on Fe-mineralogy of subsurface sediments. Journal of Physics: Conference Series, 2010, 217, 012047.	0.4	5
83	Microbial Methylation of Iodide in Unconfined Aquifer Sediments at the Hanford Site, USA. Frontiers in Microbiology, 2019, 10, 2460.	3.5	5
84	Charge fingerprint in relation to mineralogical composition of Quaternary volcanic ash along a climatic gradient on Java Island, Indonesia. Catena, 2019, 172, 547-557.	5.0	5
85	Iodate interactions with calcite: implications for natural attenuation. Environmental Earth Sciences, 2020, 79, 1.	2.7	5
86	Simultaneous immobilization of aqueous co-contaminants using a bismuth layered material. Journal of Environmental Radioactivity, 2021, 237, 106711.	1.7	5
87	ARSENIC, BORON, SELENIUM, AND MOLYBDENUM DISPLACEMENT AND TRANSPORT IN A FLY ASH AMENDED SOIL LEACHED WITH CALCIUM PHOSPHATE SOLUTION. Communications in Soil Science and Plant Analysis, 2001, 32, 1499-1512.	1.4	4
88	Evaluating impacts of CO2 and CH4 gas intrusion into an unconsolidated aquifer: fate of As and Cd. Frontiers in Environmental Science, 2015, 3, .	3.3	4
89	Persistence of chromate in vadose zone and aquifer sediments in Hanford, Washington. Science of the Total Environment, 2019, 676, 482-492.	8.0	4
90	Selective Interactions of Soil Organic Matter Compounds with Calcite and the Role of Aqueous Ca. ACS Earth and Space Chemistry, 0, , .	2.7	4

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91	Physical control on CCl4 and CHCl3 desorption from artificially contaminated and aged sediments with supercritical carbon dioxide. Chemosphere, 2009, 74, 494-500.	8.2	3
92	Fungal hyphae develop where titanomagnetite inclusions reach the surface of basalt grains. Scientific Reports, 2022, 12, 3407.	3.3	3
93	Silicon concentration and pH controls over competitive or simultaneous incorporation of iodate and chromate into calcium carbonate phases. Applied Geochemistry, 2021, 128, 104941.	3.0	2
94	Editorial: Searching for Solutions to Soil Pollution: Underlying Soil-Contaminant Interactions and Development of Innovative Land Remediation and Reclamation Techniques. Frontiers in Environmental Science, 2022, 9, .	3.3	2
95	Response to Comment on â€œGeochemical Implications of Gas Leakage associated with Geologic CO2 Storageâ€"A Qualitative Reviewâ€• Environmental Science & Technology, 2013, 47, 4951-4952.	10.0	1
96	Technetium Getters to Improve Cast Stone Performance. Materials Research Society Symposia Proceedings, 2015, 1744, 43-52.	0.1	1
97	Evaluation of gaseous substrates for microbial immobilization of contaminant mixtures in unsaturated subsurface sediments. Journal of Environmental Radioactivity, 2020, 214-215, 106183.	1.7	1
98	Ion Transport Dynamics in Acid Variable Charge Subsoils. Soil Science and Plant Nutrition, 2005, 51, 601-603.	1.9	0
99	Stability of mineralâ€organic matter associations under varying biogeochemical conditions. Soil Science Society of America Journal, 0, , .	2.2	0
100	SSSAJ 2021 Publisher's Report. Soil Science Society of America Journal, 2022, 86, 868-878.	2.2	0