Deb P. Jaisi

Education and Training

Institution	Major	Degree	Year
Tribhuvan University, Kathmandu, Nepal	Geology	B.S./M.S.	1994/98
Asian Institute of Technology, Thailand	Engineering and Applied Geology	M.S.	2003
Miami University, Oxford, OH	Geology	Ph.D.	2007
Yale University, New Haven, CT	Geology & Geophysics		2010

Research and Professional Experience

2011-Present Assistant Professor, Department of Plant and Soil Sciences, University of Delaware, DE
2013-Present Joint faculty, Department of Geological Sciences, University of Delaware, Newark, DE
2003-2007 Research Assistant, Miami University, Department of Geology, Oxford, OH Research
2003-2003 Research Associate, Asian Institute of Technology, Bangkok, Thailand
1999-2001 Lecturer, Tribhuvan University, Kathmandu, Nepal

Publications (total 42; google citations 1620; h-index 17; i10-index: 21)

1. Wang D, Xie Y, Jaisi DP, and Jin Y (2016). Effects of low-molecular-weight organic acids on the dissolution of hydroxyapatite nanoparticles in batch and column systems. *Environmental Science: Nano*, DOI: 10.1039/c6en00085a.
2. Feng X, Yan Y, Wan B, Li W, Jaisi DP, Zheng L, Zhang J, and Liu F (2016). Enhanced dissolution and transformation of ZnO nanoparticles: The role of inositol hexakisphosphate. E*nvironmental Science & Technology*, 50, 5651-5660.
3. Joshi SR, Li XN and Jaisi DP (2016). Transformation of phosphorus pools in an agricultural soil: An application of ^{18}O labeling of phosphate. *Soil Science Society of America Journal* 80, 69–78.
4. Wu J, Paudel P, Sun M, Joshi SR, Stout L, Greiner R, and Jaisi DP. (2015) Mechanisms and pathways of phytate degradation: Evidences from HPLC, ^{31}P NMR, and $\delta^{18}O$ of phosphate. *Soil Sci Soc Am J*. 79, 1615–1628, 2015.
5. Wang D, Jin Y and Jaisi DP (2015). Effect of size selective retention on the co-transport of hydroxyapatite and goethite nanoparticles in saturated porous media. *Environmental Science & Technology*, 49, 8461-8470.
6. Joshi SR, Kukkadapu RK, Burdige D, Bowden M, Sparks DL and Jaisi DP (2015). Organic matter remineralization predominates phosphorus cycling in the mid-bay sediments in the Chesapeake Bay. *Environ Sci Technol.* 49, 5887−5896.
7. Jaisi DP, Blake RE, Liang Y and Chang S-J (2014). Investigation of compound-specific organic-inorganic phosphorus transformation using stable isotope ratios in phosphate. In *Applied Manure and Nutrient Chemistry for Sustainable Agriculture and Environment* (Eds. Z. He and H. Zhang). 267–292.
8. Jaisi DP and Blake RE (2014). Advances in using oxygen isotope ratios of phosphate to understand phosphorus cycling in the environment. *Advance in Agronomy* 125, 1−54.
9. Jaisi DP, Kukkadapu RK, Stout LM, Varga T and Blake RE (2011). Biotic and abiotic pathways of phosphorus cycling in minerals and sediments: Insights from oxygen isotope ratios in phosphate. *Environmental Science & Technology* 45, 6254–6261.
10. Stout LM, Joshi SR, Kana T and Jaisi DP (2014). Microbial activities and phosphorus cycling: an application of oxygen isotope ratios in phosphate. *Geochimica et Cosmochimica Acta* 138,101−116.
11. Jaisi DP and Blake RE (2010). Tracing sources and cycling of phosphorus in Peru Margin sediments using oxygen isotopes in authigenic and detrital phosphates. *Geochimica et Cosmochimica Acta* 74, 3199–3212.
12. Petosa AR, Jaisi DP, Quevedo IR, Elimelech M and Tufenkji N (2010). Aggregation and deposition of engineered nanomaterials in aquatic environments: Role of physicochemical interactions. *Environmental Science & Technology,* 44, 6532–6549.

Synergistic Activities

1. Associate Editor, Clays and Clay Minerals (2014- present); Councilor, Executive committee members on society awards and policy and administration of the Clay Mineral Society (2013-2016).
2. Session organizer in professional society meetings: i) Frontiers in nanogeoscience (Goldschmidt 2008; ii) Interactions of clay minerals with microorganisms and biomolecules (CMS, 2014); iii) Advanced molecular techniques characterizing soil biogeochemical processes (SSSA, 2014); iv) Tracking legacy phosphorus in lakes and rivers (SSSA, 2015); v) Environmental fate of chemicals of emerging concern (SSSA, 2015); and vi) New insights on nutrient sources and biogeochemical processes in surface waters as revealed by advanced techniques and in situ optical sensors (AGU, 2015).
3. Ad-hoc reviewer of research proposals on NSF, DOE, USDA, Canada Innovation Grant, BSF (USA-Israel Binational Science Foundation), FNRS-Belgium, German Research Foundation (DGF); NSF panel reviewer (Geobiology and Low Temperature Geochemistry, Spring 2014).
4. Frequent peer reviewer (#21 in 2015): Applied Geochemistry, Biogeoscience, Bioresource Technology, Chemical Geology, Clays and Clay Minerals, Chemosphere, Environmental Microbiology, Environmental Monitoring, Environmental Science Processes and Impacts, Environmental Studies and Sciences, Environmental Pollution, Environmental Science & Technology, ES&T- Letters, FEMS Microbiology, FEMS-Letters, Geochimica et Cosmochimica Acta, Geoscience J, Geoderma, J Soil Water and Conservation, Geomicrobiology J, J Geophysical Research-Biogeosciences, J American Chemical Society, J Environmental Quality, J Colloid and Interface Science, J Alloys and Compounds, Langmuir, Nanomedicine, PLOS One, Soil Biology and Biochemistry, Soil Science Society of America J, The Science of the Total Environment, Water Research, Water Resources Research.

Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers

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[1]University of Delaware; [2]Pacific Northwest National Lab; [3]Old Dominion University; [4]Yale University; [5]US Geological Survey; [6]University Maryland; [7]Mt. Sinai Hospital; [8]Yonsei University; [9]University Kentucky; [10]McGill University; [11] USDA; [12]Michigan State University; [13]Northeastern University; [14]Delaware Tech; [15]Chinese Academy of Sciences, China; [16]Max Rubner-Institut, Germany

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