

Name Dr. Santosh Ranjan Mohanty
Degree PhD
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Research Interest:

Climate change - Greenhouse gas (GHG) emission and mitigation in agroecosystem, Flux and feedback response of GHG, Biogeochemical process and microbial metabolism of GHG, Linking microbial community structure to global change.

Plant- microbial interaction – Microbiome of rhizosphere and phyllosphere using metagenomic approach to understand microbial interaction for nutrient use efficiency in response to ecological change,

Microbial diversity – Molecular and genomics approaches to study the structural and functional microbial groups involved in major elemental cycling process. Interactive response of functional microbial groups to environmental perturbation.

Environmental Biotechnology - Bioremediation of toxic compounds especially organic pollutants and uranium in surface and subsurface sediments. Development of bioremediation techniques using metagenomic approaches.

Professional experience

- Academic Faculty University of Wisconsin, Stout, USA 2008-2009
- Research Scientist, University of Wisconsin, Madison USA 2005-2008
- Asst Research Scientist at University of Alabama, Tuscaloosa, USA 2003-2005
- Post doctoral Fellow at Max Planck Institute for Terrestrial Microbiology, Germany 2001-2003.

Awards

- Editorial member - Academic Journal 2012
- Best Oral Presentation at International conference Biofest 2012
- Fellow of Biodiversity Association (FABSc) 2013
- Eminent Scientist award 2014 - National Environmental Science Academy
- Young investigator award 2015 – India Bioscience

Publications

Research Papers International	26
National and International invited Presentation	28

1. SR Mohanty, K Bharati, BTS Moorthy, B Ramakrishnan, VR Rao 2001 Effect of the herbicide butachlor on methane emission and ebullition flux from a direct-seeded flooded rice field. *Biology and fertility of soils*; 33 (3), 175-180
2. SR Mohanty, PLE Bodelier, V Floris, R Conrad 2006 Differential effects of nitrogenous fertilizers on methane-consuming microbes in rice field and forest soils- *Applied and Environmental Microbiology*, 72 (2), 1346-1354
3. SR Mohanty, PLE Bodelier, R Conrad 2007 Effect of temperature on composition of the methanotrophic community in rice field and forest soil. *FEMS microbiology ecology*; 62 (1), 24-31
4. SR Mohanty, B Kollah, DB Hedrick, AD Peacock, RK Kukkadapu 2008 Biogeochemical processes in ethanol stimulated uranium-contaminated subsurface sediments. *Environmental science & technology* 42 (12), 4384-4390
5. SR Mohanty, K Bharati, VR Rao, TK Adhya, 2009 Dynamics of changes in methanogenesis and associated microflora in a flooded alluvial soil following repeated application of dicyandiamide, a nitrification inhibitor. *Microbiological research* 164 (1), 71-80
6. SR Mohanty, DR Nayak, YJ Babu, TK Adhya. 2009 Butachlor inhibits production and oxidation of methane in tropical rice soils under flooded condition *Microbiological research*; 159 (3), 193-201
7. SR Mohanty, K Bharati, B Eoin L, TC Hazen, E Roden 2011 16S rRNA gene microarray analysis of microbial communities in ethanol-stimulated subsurface sediment. *Microbes and Environment*; 26, 261-265
8. SR Mohanty, P Rajput, B Kollah, D Chourasiya, A Tiwari, M Singh 2014 Methane oxidation and abundance of methane oxidizers in tropical agricultural soil (vertisol) in response to CuO and ZnO nanoparticles contamination. *Environmental monitoring and assessment* 186 (6), 3743-3753
9. SR Mohanty, B Kollah, VK Sharma, AB Singh, M Singh, AS Rao 2014 Methane oxidation and methane driven redox process during sequential reduction of a flooded soil ecosystem. *Annals of Microbiology* 64 (1), 65-74
10. B Kollah, G Dubey, P Dunfield, SR Mohanty 2014 Influence of bioenergy crop *Jatropha curcas* amendment on soil biogeochemistry in a tropical vertisol *Mitigation and Adaptation Strategies for Global Change*, 1-12