Profile

Dr. Sudeshna Bhattacharjya

Designation: Scientist
Division of Soil Biology

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Research specialization:

- Soil biology and ecology,
- Soil microbial autotrophy,
- Biogeochemistry
- Soil organic matter decomposition,
- Dynamics of soil microbes and enzymes,
- Terrestrial elemental cycling (CNPK),
- Sustainable agricultural practices,
- Bio-waste recycling

Professional Experience:

- **Agricultural Research Scientist (ARS) in ICAR-National Academy of Agricultural Research Management** (01/01/2015 –09/01/2015)
- **Agricultural Research Scientist (ARS) in Division of Soil Biology at ICAR-Indian Institute of Soil Science, Bhopal** (10/04/2015 – Present)

Awards and Honours:

- ✓ Top merit listed students in West Bengal in Madhyamik (Class 10 final or Secondary)
- ✓ University Merit Scholarship by BCKV, Mohanpur, West Bengal (2004-2008).
- ✓ ICAR Junior Research Fellowship for M.Sc (Ag.) Soil Science (All India Rank: 16) (2008-2010)
- ✓ DST-INSPIRE Junior Research Fellowship for Ph.D (Soil Science) (2010-2012)
- ✓ DST-INSPIRE Senior Research Fellowship for Ph.D (Soil Science) (2012-2014)
- ✓ ICAR-NET Qaulified (2010, 2011)
- ✓ Early Career Research Award by DST-SERB, Govt. of India (2017-2020)
- ✓ Best Oral Presentation Award in National Conference on "Organic Waste Management for Environmental and Food Security", 8-10th February, 2018 at IISS, Bhopal.

- ✓ Best Oral Presentation in 44th ACISAC & National Symposium on "Balanced Fertilizer to Sustainable Soil Health, Crop Production and Food Security" held at Dept. Of Soil Science. GBPUA&T, Pantnagar, 25-26th November, 2011.
- ✓ **Reviewer Recognition certificate** from PLOSONE (2018, 2019); Soil Use and Management (2019); Journal of The Saudi Society of Agricultural Sciences (2018); Ecological Engineering (2017); Agriculture Ecosystem & Environment (2017).

Top Ten publications:

- Padhan K, **Bhattacharjya Sudeshna***, Sahu A, Manna MC, Sharma MP, Singh M, Wanjari R, Sharma RP, Sharma GK, Patra AK. (2020). Soil N transformation as modulated by soil microbes in a 44 years long term fertilizer experiment in a sub-humid to humid Alfisol. *Applied Soil Ecology*. 145: 103355 (Corresponding author).
- Avijit Ghosh, Madhab Manna, Asha Sahu, Nirmal De, J Thakur, Asit mandal, **Sudeshna Bhattacharjya**, Mohammad Mahmudur Rahman, Ravi Naidu, Raja Dakhli, Mahaveer Sharma, Sukanya Misra (2020). Novel bio-filtration method for the removal of heavy metals from municipal solid waste. *Environmental Technology & Innovation*. 17: 100619
- Sahu Asha, Manna, MC, **Bhattacharjya Sudeshna**, Thakur JK, Mandal A, Rahman MM, Singh UB, Bhargav VK, Srivastava S, Patra AK, Chaudhari SK and Khanna SS (2019). Thermophilic Ligno-Cellulolytic Fungi: The future of Efficient and Rapid Bio-Waste Management. *Journal of Environmental Management*. 244:144-153**.**
- **Bhattacharjya Sudeshna**, Sahu Asha, Manna MC and Patra AK (2019). Potential of surplus crop residues, horticultural waste and animal excreta as nutrient source in the central and western regions of India. *Current Science*, 116 (8):1314-1323.
- Manna MC, Rahman MM, Naidu R, Sahu Asha, **Bhattacharjya Sudeshna**, Wanjari RH, Patra AK, Chaudhari SK, Majumdar K and Khanna SS (2018) Bio-waste management in subtropical soils of India: Future challenges and opportunities in Agriculture. *Advances in Agronomy*. 152: 87-148.
- **Bhattacharjya Sudeshna,** Bhaduri D, Chauhan S, Chandra R, Raverkar KP, Pareek N. (2017). Comparative evaluation of three contrasting land use systems for soil carbon, microbial and biochemical indicators in North-Western Himalaya. *Ecological Engineering*. 103: 21-30.
- Joshi SK, Bajpai RK, Kumar P, Tiwari A, Bachkaiya V, Manna MC, Sahu Asha, **Bhattacharjya Sudeshna**, Rahman MM, Wanjari RH, Singh M, Coumar V, Patra AK, Chaudhari SK (2017) Soil Organic Carbon Dynamics in a Chhattisgarh Vertisol after Use of a Rice–Wheat System for 16 Years. *Agronomy Journal*. 109(6):1-14.
- **Bhattacharjya Sudeshna**, Ramesh Chandra, Mahaveer P. Sharma, Sushil K. Sharma, and RichaAgnihotri. (2017). Biochar and Crop Residue Amendments on Soil Microbial and Biochemical Properties. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci*. 87 (3): 975-983.
- **Bhattacharjya Sudeshna**, Chandra R, Pareek N, Raverkar KP. (2016). Biochar and crop residue application to soil: effect on soil biochemical properties, nutrient availability and yield of rice (*Oryza sativa* L.) and wheat (*Triticum aestivum* L.). *Archives of Agronomy and Soil Science*. 62 (8): 1095-1108.
- **Bhattacharjya, S** and Chandra R (2013). Effect of inoculation methods of *Mesorhizobium ciceri* and PGPR in chickpea (*Cicer arietinum* L.) on symbiotic traits, yields, nutrient uptake and soil properties. *Legume Research*, 36 (4): 331-337