

Dr. Abhijit Sarkar

Designation: Scientist
Division of Environmental Soil Science



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Research specialization:

Controlled release fertilizers; Polymer chemistry; Soil fertility; Soil pollution and control; Exploration of potential uses of waste materials in agriculture; Phosphorus chemistry; Soil microbiology; Soil quality; Carbon sequestration; Nitrogen dynamics; Composting

Professional Experience:

Position Hold	Institution	Joined
Scientist	ICAR-Indian Institute of Soil Science, Bhopal, Madhya Pradesh	29.06.2018
Scientist	ICAR- Indian Institute of Water Management, Bhubaneswar, Odisha	15.10.2016
Scientist	ICAR-NAARM, Hyderabad, Telangana	05.07.2016

Awards and Honors:

- 2021:** **AWSAR (Augmenting Writing Skills for Articulating Research) Award** from Department of Science and Technology (DST), Government of India
- 2019:** **Best Presentation Award for Poster presentation** at International Conference on Global Perspective in Agricultural and Applied Sciences for Food and Environmental Security (GAAFES, 2019)
- 2019:** **Certificate of Appreciation** from ICAR-Indian Institute of Soil Science (ICAR-IISS) for designing the LOGO of ICAR-IISS, Bhopal
- 2015:** **International Plant Nutrition Institute (IPNI) Scholar Award 2015** from IPNI, Norcross, United States (USA)
- 2015:** **Indian Society of Soil Science (ISSS) Zonal Award (North Zone) 2015** from ISSS, New Delhi for the M.Sc. research work
- 2015:** **Yash Pal Kalra Travel Award** from ISSS Delhi Chapter, New Delhi
- 2015:** Secured **1st Rank (Soil Science)** in List of candidates recommended in order of merit of ARS-2014 published by Agricultural Scientist Recruitment Board (ASRB), New Delhi
- 2014:** Qualified **National Eligibility Test (NET)** of Indian Council of Agricultural Research (ICAR)
- 2014:** Obtained **CSIR-UGC Junior Research Fellowship (JRF) and National Eligibility Test (NET)** in Earth, Atmospheric, Ocean and Planetary Science under UGC Scheme for the Ph.D. (2013, 2014)

2014: ICAR - Senior Research Fellowship (**SRF**) for Ph.D. (Soil Sciences) (AIEEA-Ph.D.; AIR: 8)

2012: ICAR - Junior Research Fellowship (**JRF**) for M.Sc. (Physical Science) (AIEEA-PGs; AIR: 2)

Publications (top 10):

Sarkar A, Biswas DR, Datta SC, Dwivedi BS, Bhattacharyya R, Kumar R, Bandyopadhyay KK, Saha M, Chawla G, Saha JK, Patra AK (2021) Preparation of novel biodegradable starch/poly(vinyl alcohol)/bentonite grafted polymeric films for fertilizer encapsulation. *Carbohydrate Polymers* 259, 117679. (NAAS 2021 rating: 13.18)

Sarkar A, Biswas DR, Datta SC, Roy T, Moharana PC, Biswas SS, Ghosh A (2018) Polymer coated novel controlled release rock phosphate formulations for improving phosphorus use efficiency by wheat in an Inceptisol. *Soil and Tillage Research* 180, 48-62. (NAAS 2021 rating: 10.60)

Sarkar A, Biswas DR, Datta SC, Roy T, Biswas SS, Ghosh A, Saha M, Moharana PC, Bhattacharyya R (2020) Synthesis of poly(vinyl alcohol) and liquid paraffin-based controlled release nitrogen-phosphorus formulations for improving phosphorus use efficiency in Wheat. *Journal of Soil Science and Plant Nutrition* 20, 1770-1784. (NAAS 2021 rating: 8.16)

Sarkar A, Saha M, Saha JK, Coumar MV, Mandal A, Patra AK (2021) Comparative assessment of P adsorption, release kinetics, enzymatic activities of weathered fly ash amended texturally different soils. *International Journal of Environmental Sciences and Technology*. <https://10.1007/s13762-021-03196-3>. (NAAS 2021 rating: 8.54)

Sarkar A, Biswas DR, Datta SC, Dwivedi BS, Kumar R, Bandyopadhyay KK, Bhattacharyya R, Saha M, Biswas SS, Patra AK (2021) Double-boiled linseed and mustard oil-based formulations to prepare oil-coated controlled release fertilizers. *Indian Journal of Agricultural Sciences* 91, 310-4. (NAAS 2021 rating: 6.21)

Saha M, **Sarkar A**, Badyopadhyay PK, Nandi R, Singh KC (2021) Tillage and potassium management for improving yield, physiological, and biochemical responses of rainfed lentil under moisture stressed rice-fallow. *Journal of Soil Science and Plant Nutrition* 20, 2536–2551. (NAAS 2021 rating: 8.16)

Saha M, Das M, **Sarkar A** (2021) Distinct nature of soil organic carbon pools and indices under nineteen years of rice-based crop diversification switched over from uncultivated land in eastern plateau region of India. *Soil and Tillage Research* 207, 104856. (NAAS 2021 rating: 10.60)

Ghosh A, Kumar S, Manna MC, Singh AK, Sharma P, **Sarkar A**, Saha M, Bhattacharyya R, Misra S, Biswas SS, Biswas DR, Gautam K, Kumar RV (2019) Long-term in situ moisture conservation in horti-pasture system improves biological health of degraded land. *Journal of Environmental Management* 248, 109339. (NAAS 2021 rating: 11.65)

Roy T, Biswas DR, Ghosh A, Patra AK, Singh RD, **Sarkar A**, Biswas SS (2019) Dynamics of culturable microbial fraction in an Inceptisol under short-term amendment with municipal sludge from different sources. *Applied Soil Ecology* 136, 116-121. (NAAS 2021 rating: 9.19)

Ghosh A, Misra S, Bhattacharyya R, **Sarkar A**, Singh AK, Tyagi VC, Kumar RV, Meena VS (2020) Agriculture, dairy and fishery farming practices and greenhouse gas emission footprint: A strategic appraisal for mitigation. *Environmental Science and Pollution Research* 27, 10160-10184. (NAAS 2021 rating: 9.06)