

### Brief Profile

1. Full Name : Dr. Sanchita Biswas Murmu
2. Educational Qualification : PhD
3. Designation : Scientist
4. ARS Discipline : Agricultural Structure and Process Engineering
5. Date of joining in ICAR :07.01.2020
6. Date of Joining in ICAR-NINFET:04.04.2020
7. Working experiences (in years)
  - a. Research: 10 years
  - b. Teaching: Nil
  - c. Industry: Nil
8. Area of work (Five areas only)
  - a. Development of active packaging technologies for shelf-life extension of fruits and vegetables
  - b. Development of Rigid packaging from natural fibre for storage and transport of fruits and vegetables and Flexible packaging from natural fibre for storage and transport of snacks, confectionary, nuts etc.
  - c. Development of insulation material from natural fibre to replace conventional Poly Urethane Rigid Road Insulation
  - d. Development of functional food and therapeutic products from natural fibre biomass
  - e. Development of storage structures from Natural fibre based materials for fruits, vegetables and grain storage.
9. Contact details
  - a. Mobile No:9434858382/7477852424 (WhatsAPP)
  - b. Email (Including ICAR email):sanchita.biswas@icar.gov.in
10. Number of project completed (As PI)
  - a. One Ongoing : Development of bio-degradable packaging boxes from jute stick & jute pulp for Agri-horticultural produce Funded by National Jute Board
11. Professional Achievements (Awards / Best Papers/Appreciation)
  - a. Received Certificate of Appreciation for delivering invited Speaker Talk at SPARC sponsored Indo-US conference on 'Processing, Packaging, and Coating for Safe Food'.
  - b. Received Certificate of Appreciation for delivering invited Speaker Talk as a resource person for the Webinar on “Innovative Measures in Food Packaging Systems” On January 27, 2022 Organized by Department of Food Technology, (NBA Accredited) Haldia Institute of Technology In collaboration with Internal Quality Assurance Cell (IQAC) In association with Association of Food Scientists and Technologists (India), Haldia
  - c. Delivered invited lecture at webinar of IIT Kharagpur on the topic “Opportunity of Natural Fibre as Environment Friendly Food Packaging Material”
12. List of publication (Numbers only)
  - a. Research papers in National journal (NAAS rated):
  - b. Research papers in International journal (NAAS rated): 07

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12, Regent Park, Kolkata-700040

- c. Popular articles:03
  - d. Book Chapter:05
  - e. Books Edited: 01
  - f. Seminar Papers: 01
  - g. Bulletin:01
13. Seminar presentation (numbers only)
- a. Invited papers: 03
  - b. Research papers: 01
14. Patents Applied (Numbers only): Nil
15. Patents Granted (Details) : Nil
16. Technology Commercialised (five with details ) : Nil
17. List the five major achievements in the career
- a. Obtained MHRD fellowship for perusing M-Tech during 2009-2011
  - b. Obtained MHRD fellowship for perusing PhD during 2013-2018
  - c. Obtained Sponsorship for physically attending International Conference at Orlando, Florida, USA in 2016 (Conference Name: American Society of Agricultural and Biological Engineers)
  - d. Obtained Externally funded project form National Jute Board in 2022
18. List the 10 best publications in the whole career (Details)
- SB Murmu, HN Mishra, The effect of edible coating based on Arabic gum, sodium caseinate and essential oil of cinnamon and lemon grass on guava, Food Chemistry 245, 820-828
  - SB Murmu, HN Mishra, Optimization of the arabic gum based edible coating formulations with sodium caseinate and tulsi extract for guava, LWT-Food Science and Technology 80, 271-279
  - SB Murmu, HN Mishra, Post-harvest shelf-life of banana and guava: Mechanisms of common degradation problems and emerging counteracting strategies, Innovative Food Science & Emerging Technologies 49, 20-30
  - SB Murmu, HN Mishra, Selection of the best active modified atmosphere packaging with ethylene and moisture scavengers to maintain quality of guava during low-temperature storage, Food chemistry 253, 55-62
  - SB Murmu, HN Mishra, Engineering evaluation of thickness and type of packaging materials based on the modified atmosphere packaging requirements of guava (Cv. Baruiipur), LWT-Food Science and Technology 78, 273-280
  - SB Murmu, HN Mishra, Measurement and modelling the effect of temperature, relative humidity and storage duration on the transpiration rate of three banana cultivars, Scientia Horticulturae 209, 124-131
  - SB Murmu, Alternatives derived from renewable natural fibre to replace conventional polyurethane rigid foam insulation, Cleaner Engineering and Technology, 100513
19. Training program attended (Numbers only):07
20. Training program organized (Numbers only): 01
21. Professional Affiliations (Details)
- a. Life member of Indian Society of Agricultural Engineers
  - b. Life member of The Indian Natural Fibre Society
  - c. Lifetime member of the ARS forum