



भारत-अन्न-सुरा
12, रीजेंट पार्क, कोलकाता -700 040, (आईएसओ 9001: 2015)

ICAR-National Institute of Natural Fibre Engineering & Technology
12, Regent Park, Kolkata - 700 040, (An ISO 9001: 2015 Certified Institute)



PROFILE

1. Full Name: **Dr. Manik Bhowmick**
2. Educational Qualification: Ph.D, M.Tech, B.tech
3. Designation: **Senior Scientist**
4. ARS Discipline: Textile Manufacture
5. Date of joining in ICAR: 15th December 2009
6. Date of Joining in ICAR-NINFET: 14th May 2016
7. Working experiences (in years)
 - a. Research: 15 years
 - b. Teaching: 4Years
 - c. Industry: 1year
8. Area of work (Five areas only)
 - a. Spinning of Natural fibre
 - b. Weaving of Natural fibre
 - c. Composite
 - d. Friction spinning
9. Contact details
 - a. Mobile No: 932036146
 - b. Email (Including ICAR email): Manik.Bhowmick@icar.gov.in
10. Number of project completed (As PI)
 - a. Diversified Uses Of Chemically Modified Ramie: PI
 - b. KGN-MSME: Development of value added products from Kans Grass and Nettle, its commercial use towards product development in Handloom, Handicrafts & Textile industries: PI
 - c. Characterization, Processing and Product Development of Indian Hemp (Cannabinus Sativa L.) : Value chain :
 - d. Application of Jute Based Agro-textiles As Mulching Material For Wide-scale Awareness Of Farmers.
 - e. Development Of Digital Drape Meter
 - f. Standardisation of Compression Molding Machine Parameters for Natural Fibre Reinforced Composite for use in Construction Purposes as Wood Substitutes
 - g. Development of Composite Yarns for Technical Textiles from Natural Fibres based on Friction Spinning.



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11. Professional Achievements (Awards / Best Papers/Appreciation)
 - a. Best paper award: 3
 - b. ...
12. List of publication (Numbers only)
 - a. Research papers in National journal (NAAS rated): 7
 - b. Research papers in International journal (NAAS rated): 14
 - c. Popular articles: 5
 - d. Book Chapter: 10
 - e. Books Edited: 1
 - f. Seminar Papers: 15
 - g. Bulletin: 5
13. Seminar presentation (numbers only)
 - a. Invited papers: 1
 - b. Research papers: 10
14. Patents Applied (Numbers only): 1
15. Patents Granted (Details):1
 - a. Patent no. 509388 with date of filing 18/02/2020 and titled 'System for measurement of drape coefficient of flexible sheets' has been granted on dated 10/02/2024.
16. Technology Commercialised (five with details)
17. List the five major achievements in the career
 - a. Developed a novel ecofriendly protocol for spinning of Ligno-cellulosic fibres like Ramie, Hemp fibre
 - b. Developed protocol for commercial utilization of Kans-plant and kansphool.
 - c. Developed a fabric drape testing instrument.
18. List the 10 best research publications in the whole career (Details)
 - a. Bhowmick M, Mukhopadhyay S and Alagirusamy R, 2012, Mechanical properties of natural fibre-reinforced composites, Textile Progress, Taylor & Francis, Vol.44, No.2, 85-140 .
 - b. Bhowmick M, Basak S, Samanta KK, 2022, Ramie degum liquor: Wastage bio-macromolecule for making thermally stable functionalize polyester fabric - Polymer Degradation and Stability, Article- 109959



भारत-अन्न-सुरा प्राकृतिक रेशा अभियांत्रिकी एवं प्रौद्योगिकी संस्थान-
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- c. Bhowmick M, Basu G, 2020, Portable digital drape meter with a unique sensor-based measurement system, Measurement, Vol. 171, Article- 108745.
- d. Bhowmick M, Rakshit A K and Chattopadhyay S K, 2018, Structure-property of DREF-3 friction spun yarn made using twisted staple fibrous core, Journal of Natural fibres. Volume 17, Issue 2, Pages 235-245.
- e. Bhowmick M, Rakshit AK and Chattopadhyay SK, 2018, DREF-3 yarn Structure with plied staple fibrous core, Research Journal of Textile and Apparel, 46 (8), 235-246.
- f. Sengupta S, Bhowmick M, Karmokar S, 2021, Effect of structure on vertical and horizontal wicking performance concerning jute (chorchorus olitorius) and water, Journal of Natural Fibers, 2021, 1-18, <https://doi.org/10.1080/15440478.2021.1980173>
- g. Das S, Basak S, Bhowmick M, Chattopadhyay S K, Ambare M G, 2016, Waste paper as a cheap source of natural fibre to reinforce polyester resin in production of bio-composites, Journal of Polymer Engineering, Vol 36, Issue 5, 441-447.
- h. Das S, Bhowmick M, Chattopadhyay S K, Basak S, 2015, Application of biomimicry in extiles, current science, Vol 109, Issue 5, 893-901.
- i. Halari N R, Rakshit A K, Chattopadhyay S K, Bhowmick M, 2015, Effect of twist level and twist direction of core (double) yarn on dref-3 spun yarn, Indian Journal of Fibre & Textile Research, vol 40, issue 2, 137-139.

19. Training program attended (Numbers only): 7

20. Training program organized (Numbers only): 6

21. Professional Affiliations (Details)

- a. Life member of "The Indian Natural Fibre Society", ICAR-NINFET, Kolkata.
- b. Life member of "Indian Society for Cotton Improvement", ICAR-CIRCOT, Mumbai.
- c. Life member of "Indian Fibre Society", ICAR-CIRCOT, Mumbai.

