ICAR-National Institute of Research on Jute & Allied Fibre Technology
12, Regent Park, Kolkata-700040

राष्ट्रीय पटसन एवं समवर्गी रेशा प्रौद्योगिकी अनुसंधान संस्थान

12, रीजेन्ट पार्क, कोलकाता - 700040

PROFILE*

1. Full Name: Dr Sambhu Nath Chattopadhyay
2. Educational Qualification: B.Tech (Textile Technology, University of Calcutta),
   M.Tech (Fibre Sc & Technology, IIT Delhi),
   PhD (Engineering, Jadavpur University)
3. Designation: Principal Scientist &
   Head Chemical & Biochemical Processing Division (Actg)
4. ARS Discipline : Textile Chemistry
5. Date of joining in ICAR : 07.08.1989
6. Date of Joining in ICAR-NINFET : 01.01.1990
7. Working experiences (in years)
   i. Research : 33 years
   ii. Teaching
   iii. Industry : 02 years
8. Area of work (Five areas only)
   i. Preparatory processing of natural fibres
   ii. Colouration of natural fibres
   iii. Pulp & Paper from natural fibre biomass
   iv. Particle boards from jute stick
   v. Biocomposite
9. Contact details
   i. Mobile No : 9433825561 / 9330441553
   ii. Email (Including ICAR email) : sambhu_in@yahoo.com ; drsambhuc@gmail.com : sambhu.chattopadhyay@icar.gov.in
10. Number of project completed (As PI)
    i. Institutional Project : 12
    ii. Sponsored : 02
11. Professional Achievements (Awards / Best Papers/Appreciation)
    i. The paper entitled "Potential of jute and banana blended engineered fabric for technical application" by Chattopadhyay S N, Pan N C, Roy A N , Samanta K

K in the webinar on "35 Indian Engineering Congress"on 18.12.2020 organised by The Institution of Engineers (India) has been adjudged as **Best Paper** in Textile Engineering Division.

12. List of publication (Numbers only)
    i. Research papers in National journal (NAAS rated) : 40
    ii. Research papers in International journal (NAAS rated) : 25
    iii. Popular articles ; 50
    iv. Book Chapter : 15
    v. Books Edited : 4
    vi. Seminar Papers : 50
    vii. Bulletin : 6
13. Seminar presentation (numbers only)
    i. Invited papers : 10
    ii. Research papers : 40
14. Patents Applied (Numbers only) : 2
15. Patents Granted (Details)
    i. A Patent has been granted on Re-use of reactive dye left out after dyeing following two-step two-bath method (Application No- 1593/DEL/2004 patent no - 272713)
16. Technology Commercialised (five with details)
    i. Bleaching of jute at low temperature with maximum retention of tenacity using novel oxidative bleaching agent, per acetic acid (PAA).
    ii. Re-use of reactive dye left out after dyeing following two-step two-bath method
    iii. Single bath bleaching-dyeing of jute fabric with various combinations like ; Hydrogen peroxide bleaching - direct dyeing ; Sodium chlorite bleaching - 1:2 metal complex dyeing ; Sodium chlorite bleaching - basic dyeing
    iv. Dyeing of jute fabric with natural dyes extracted from manjistha,annatto, babool & ratanjot
    v. Hydrogen peroxide bleaching and reactive dyeing of jute at ambient condition suitable for small scale industries
17. List the five major achievements in the career
    i. Training of hundreds of artisans, unemployed youths, women particularly on eco-friendly bleaching, dyeing, etc to improve their income. Enrichment of jute & allied fibre science and its understandings.

ii. Development of Pilot Plant Facility for Pulp & Paper, Particle Board

iii. Compilation of Book on "Journey of research for 75 years" of ICAR-NINFET

iv. Drafting and Preparation of Vision document of ICAR-NINFET, Vision 2050

v. Planning of the Business Incubation Centre of ICAR-NINFET

18. List the 10 best publications in the whole career (Details)

i. Chattopadhyay S N , Pan N C, Roy A N and Samanta K K and Khan A.,(2022) Two-Step Bleaching of Jute Yarn and Fabric Using Hydrogen Peroxide and Peracetic Acid, Journal of Natural Fibers, 19:3, 1159-1167, DOI: 10.1080/15440478.2020.1821278

ii. Chattopadhyay S N and Pan N C, Ecofriendly printing of jute fabric with natural dyes and thickener, Journal of Natural Fibers, (DOI: 10.1080/15440478.2018.1449161, March 2018) Vol 16, No-8, 1077-1088, 2019.

iii. Chattopadhyay S N , Pan N C, Roy A N and Samanta K K , Pretreatment of jute and banana fibre – its effect of blended yarn and fabric, Journal of Natural Fibers, (DOI: 10.1080/15440478.2018.1469450, May 2018) Vol 17. No-1, 75-83, 2020.

iv. Chattopadhyay S N, Pan N C, Roy A K and Khan A, Sustainable colouration of jute fabric using natural dyes with improved colour yield and functional properties, AATCC Journal of Research, 2(2), March / April 2015, 20-27

v. Chattopadhyay S N, Pan N C, Roy A K, Saxena S and Khan A, Development of natural dyed jute fabric with improved colour yield and UV protection characteristics, Journal of the Textile Institute (UK), 104(8), 2013, 808-818.

vi. Chattopadhyay S N, Pan N C, Roy A K& Khan A, Dyeing of jute fabric using indigosol dyes, Journal of Natural Fiber (USA), 6 (1), 2009, Jan – March, 98-107

vii. Chattopadhyay S N, Pan N C, Day A, Mondal S B and Khan A, Reactive dyeing of a pretreated jute fabric using minimum application technology, Journal of The Textile Institute (UK), 97(6), 2006, 493-501.

viii. Chattopadhyay S.N, Pan N.C & Day, A, Reuse of reactive dyes for dyeing of jute fabric. Bioresource Technology (U.K), 97, February 2006, 77-83.

ix. Chattopadhyay S. N, Pan N.C. & Day A, Ambient temperature bleaching and reactive dyeing of jute-Effect of pretreatment, bleaching and dyeing methods, Journal of the Textile Institute, 93,P-1,2002, No.3, 306-315.

x. Chattopadhyay S.N, Pan N.C & Day, A, A wet processing of jute at ambient temperature, AATCC Review,4, No.9, Sept, 2004, 27-27.

19. Training program attended (Numbers only) : 15
20. Training program organized (Numbers only) : 30
21. Professional Affiliations (Details)

a. Awarded Fellow of The Institution of Engineers (India) [FIE, Membership No F/109949/5 Division of attachment –TX (Textile Engineering)]

b. Awarded as "FELLOW" [FTA] of The Textile Association (India) for outstanding contribution in the field of textile

c. Awarded Life Membership of The Indian Science Congress Association. Membership No – L19375

d. Awarded Life Membership of The Indian Natural Fibre Society [Reg.No.S/IL/92532 of 2012-2013]

Life Membership Code - TINFS/L-21

e. Awarded Life Membership of Forum of Scientists, Engineers and Technologists (FOSET)

[Registration No : S/54424 of 1986-87] Membership No : LM/2013-2259

f. Awarded Life Membership of Association of Carbohydrate Chemists and Technologists (India) [ACCTI].Membership No: LM/243/14

g. Awarded Life Membership of Indian Fibre Society, Mumbai

h. Awarded Patron Member of The Textile Association (India), Membership No – WB/PM/1232

i. Awarded Chartered Engineer (India) by the Institution of Engineers (India)