

CV/RESUME

1. Name in full : **Prof (Dr.) Ashis Kumar Samanta.**
Professor and Former HOD, Dept of Jute and Fibre Tech,
Institute of Jute Technology, University of Calcutta



2. Father's Name : Late Sri Srishtidhor Samanta.

3. a) Address (Permanent Resi) : a) KALPANIR
for Emergency Communication 42A, Dr. Girindra Sekhar Bose Road,
Picnic Garden, Kolkata- 700 039
E.mail : ijtaksamanta@hotmail.com
ijtaksamanta@gmail.com

Mobile Phone : 09831161529

Office- Tel : -(033) 2461-5444 ,2461-5477/5326

b) Present Office Address : **DEPARTMENT OF JUTE AND FIBRE TECHNOLOGY**
INSTITUTE OF JUTE TECHNOLOGY, UNIVERSITY OF CALCUTTA
(Regular Communication Address) 35, Ballygunge Circular Road, Kolkata – 700 019, West Bengal, India
Office Tel-(033) 2461-5444, 2461-5477/5326
Tele- Fax (office) - (033)2461-5632
E. Mail: ijtaksamanta@hotmail.com
CU-Employee Code: TS-8914

4. Nationality : Indian, Hindu.

5. Date of Birth & Age : 22nd August, 1958.
Age: **62 yrs. Plus**

6. Educational Qualifications :

Sl. No.	Examination passed	University/ Institution	Year of passing	Title / Main Subjects	Div./ Class
1.	Ph.D. (Tech.)	University of Calcutta From Dept. of Polymer Sci.& Tech. (Formerly Dept. of Plastics & Rubber Tech., CU)	1996	Rubber & Plastic Technology (Effect of Chemical Texturing, Bleaching & Resin finishing of Jute/ Viscose, Jute/Cotton and Jute/ Polyester Blended Textiles)	--
2.	M. Tech. (Textile Technology) with specialization in Textile Chemistry	M.D. University, Rohtak (TITS, Bhiwani)	1986	Textile Technology with specialization in Textile Chemistry and Man Made Fibre Technology	I Rank 1 st
3.	B. Tech. (Fibre Tech.)	University of Calcutta (Inst. of Jute Tech., Kolkata)	1984	Fibre Technology (Jute)	I
4.	P.G. Diploma In Marketing & Sales Management	RPICM, (Bharatiya Vidya Bhaban, Kolkata Branch)	1984	Marketing Management	I
5.	Diploma in Production Management	IIIE (I), Kolkata chapter	1983	Production Management	--
6.	P G Diploma in Jute Technology (P.G. Diploma)	University of Calcutta Inst. of Jute Tech., Kolkata	1982	Jute Technology	I
7.	B.Sc. (Hons.) in Chemistry	University of Calcutta (Scottish Church College)	1979	Chemistry (Hons.) Physics, Maths.	II

7. **Other Professional Qualifications and Memberships :**

- **Life Member of American Association of Science and Technology (AASCIT) USA-LM-1004002 , 2016**
- * **FIC**, from Institution of Chemists (India): Feb, 1996, **F- 4319**.
- **FIE** and Chartered Engineer from Institution of Engineers (India) : 2005, **F-016965/6/Tx**, Life member of IE(I), 1988, **Chartered Engineer** of IE(I), 10th March, 1997, M-051975/ TX ,revalidated in 2005,F-016965/6
- **FIV, Fellow of Institution of Valuers**, India, F-19365, dated 14 -03-2009, for Category –XIV-TEXTILE (All types of Fibres , Yarns and Fabrics). and Approved Valuer.
- * **Member of Textile Association (India)**, Life Member, WB/ LM-322.
- * **Member of ISTE**, Life Member, LM - 5892.
- * Member of TINFS, Membership No. TINFS/LM-64/1113

8. Total No. of Publications by Prof Dr. A.K. Samanta : Total 312 (nos. of peer reviewed Research Papers: 127 and Review Papers + Tech.Articles :50 (review papers 18 and Other Technical Articles : 32) , Seminar & Conference Papers : 101 + Books/Manuals - 11 Training manuals + 3 Books + 10 Book chapters as authors and Total Edited work : 10 editing jobs (1 Book recently Edited on Chemistry and Technology of Natural and Synthetic Dyes and Pigments being published by In Tech publisher, UK and presently Editorial board member of 4 Journals and Ex- Asst Editor - 1 journal of MANTRA and total Conference Proceedings edited -4) as per detailed Lists given in part-2 as Annexure AKS/1, AKS/2, AKS/3 and AKS/4.

9. List of Books and Manuals published /Journals and Conference Proceedings edited : : 34 (Books/Manuals - 11 Training manuals + 3 Books + 10 Book chapters as authors and Total Edited work : 10 editing jobs (1 Book recently Edited on Chemistry and Technology of Natural and Synthetic Dyes and Pigments being published by In Tech publisher, UK and presently Editorial board member of 4 Journals and Ex- Asst Editor - 1 journal of MANTRA and total Conference Proceedings edited -4 : List is given in Annexure-AKS/4

10. (a) No. of PhD Thesis Guided : 12 Completed, 3 continuing now. (b) No. of Master's Thesis Guided : 13 Nos Completed

11. Any special awards/ recognition, received so far :

1. **Dr. Triguna Charan Sen Memorial National Award** in 1995-96 for best research paper in IE (I) Text. Engg. Journal.
2. **IE (I) Special Subject Paper Award** on current topic in 2006 in IE (I) Text. Engg. Journal.
3. **Special Merit Award** by Institution of Engineer (India) in 2007 in IE (I) Text. Engg. Journal
4. All India **Best Project Award** from Alps Industries, Ghaziabad in 2001 for Guidance of B Tech Project on Natural dyes.
5. **“Certificate of Excellence”** from AICTE for TAPTEC Project on Computer aided Colour Matching and Print Design, 2004.
6. **Best Practice award of NAAC** in National Seminar on NAAC Accreditation processes at J D Birla Institute on 5-6 th April-2013.
7. **Best Paper award in this International seminar and award was given by Sri Abdul Kalam Azad, Ex – President of Govt. of India in the International Conference on Environment and its Impact on Society held on 18-20th August,2013 , at J D Birla Institute , Jadavpur University, Kolkata.**
8. **Dr. Triguna Charan Sen Memorial National Award, 2013 for the best research paper of the year in Textile Engineering, awarded by Institution of Engineers (India) in 28th Engg Congress-Dec-2013.**
9. **2nd Best Poster presentation award** for Poster paper on Application of Natural Dyes from Eucalyptus bark on Silk Fabrics and its different Characteristics , IWND-NAIP International Seminar cum Workshop held on 5-7th March 2014 at NIMSME–organized by ANGRU for NAIP (ICAR) -VCND College of Home Science, Hyderabad, AP.
10. **Received Prestigious BHARAT NIRMAN AWARD in Education and Research Category for special contribution in Jute Technology education and research, June -2014.**
11. **Received Prestigious Award for “ Eminent Engineer-2019” from WBSC, Institution of Engineers(India) on 15-09-2019 for academic and societal contribution in Textile Engg. Field and contribution to WBSC of IE(I) –Textile Engg Division for last 30 yrs.**

12. Experience/ Employment Record:

A. PRESENT POSITION AND POSITIONS ENJOYED IN LAST 30 (THIRTY) YEARS OF SERVICE :

Sl. No.	Designation and Scale of Pay	Organisation with Address	Period of Service	Nature of Work and Level of Responsibility
1	PROFESSOR (Textile. Chemistry) for 14 yrs Plus Present Basic Pay - Rs. 77,000/- in the present pre-revised scale of 37400/- to 67000/-) as on March-2020 With time to time additional responsibility as follows)	Department of Jute and Fibre Technology, University of Calcutta , wef 1-07-2011 and earlier at Erstwhile Institute of Jute Technology 35, B C. Road. Kolkata-19, before its conversion as a P G DEPT. of CU,)	More than fourteen years - w.e.f. 15.05.2006 and Continuing till date	Teaching & Research in B Tech (JFT) and M Tech (TT) Courses in the rank of a Professor as well as Guidance of PhD Research/Coordinating Sponsored research etc with additional responsibility of ISDS Project on HRD & Skill Dev. on Jute besides Administration jobs as Professor In-Charge.(Academic) for 2 yrs (Aug-2009 to June 2011) at erstwhile IJT and HOD of DJFT (Jan-2014to Dec-2015) .. Handling Development of Course Curriculam for B.Tech and M Tech Courses. Revenue generated Through Testing & Technical services as well as Technical Consultancy Services for Industry. Member of different Technical Advisory /Research Advisory /selection & administrative committees of DJFT .
1A	Professor In-Charge(Academic) for 2 Yrs w ef August-2009-June-2011.(Approx-2yrs	Do –as above at IJT , Kolkata	August-2009-June-2011. (Approx-2yrs)	To look after academic administrative responsibility for day to day academic services and overall academic development of the Institute and AICTE approval & NBA accreditation of IJT and placement matters etc.
1B	Former Head of The Department ,Dept. of Jute and Fibre Tech, IJT, Calcutta University, 2Yrs.	Dept. of Jute and Fibre Tech, IJT, Calcutta University	From 1.1.2014 to 31-12-2015 (2Yrs)	Additional Responsibility as Head of The Dept. with entire administrative and academic administrative charge for running this dept. under CU as per statute and norms and rules of CU for 2 yrs (2014 and 2015) and PI of PGDJTM COURSE .
1C	Sr Consultant (part Time) In Khadi & Textiles -2 Yrs	MGIRI, Wardha Under MSME, Govt. of India,	Aug-2016 to June-2017 and Aug-2017 to March -2018 (Approx-2 Yrs)	As a Part time Sr Research Consultant , for regularly advising and supervising research guidance for their R & D Projects on Natural dyeing and Finishing in every months by two-three days visit/pm for acting as research advisor to the Dy Director (khadi and Textiles) and Principal Scientists and other Scientists of , Textile Dept of MGIRI, Wardha (Ministry of MSME, Govt. of India)
2.	ASSISTANT PROFESSOR (Textile. Chemistry), Last Basic Pay - Rs. 16,200/- in the present scale of 12,000-420/-- 18000/-)	INSTITUTE OF JUTE TECHNOLOGY, KOLKATA-700 019 (Affiliated to University of Calcutta)	- 8 yrs. (15.05.1998 to 14.05.2006)	Teaching, Research and Administration jobs with the responsibility of Section In-Charge of Textile Chemistry section. Teaching in M Tech and B.Tech(JFT) & M Tech(TT) Courses covering High Performance Fibres, and Advance Chemical Processing , Eco-Textiles , Protective Textiles etc. Man-Made Fibre Technology , Colour Science & Chemical Processing and Finishing, Process Control and Eco-Criteria etc Conducting in house R&D work & guiding PhD research work, Co-ordinating and organizing Mill Training of Workers and Supervisors. & edited books/ Trg. Manuals as Project Coordinator of UNDP-CCF1 HRD-Project for workers Trg.
3.	ASSISTANT DIRECTOR (Basic Pay was Rs. 5100/- in prerevised scale prior to 1996, Total : Rs. 12,244/-) (Scale of pay- 4500-150-5100-200-5700), in a Professor scale.	MAN-MADE TEXTILE RESEARCH ASSOCIATION, RING ROAD SURAT 395002	Since 3.3.97 (In lien) (up to date of rejoining IJT) One Year	Conducting, Co-ordinating and Monitoring R&D projects & MANTRA's publications (editing Mantra bulletin), Technical Services & Chemical Testing, Looking after Environment audit, Eco-Lab, Fibre Sc., extension services and Textile Research management & administrative work in a National level TRA.
4.	SR. LECTURER In Textile chemistry and SECTION- IN-CHARGE, Textile Chemistry Section, Last Basic pay was 3300/- as on 1.5.96 (Scale of pay 3000-100-150 –5000) (<u>Old scale</u>):Total : Rs. 8413/-	Institute of Jute Technology (affiliated to University of Calcutta) 35, Ballygunge Circular Road, Kolkata – 19	Nearly 4 years (In May, 93, was promoted to Sr Lecturer & Joined Mantra in lien on 3.3.97	* Teaching Jute and Textile Fibres, Man-Made Fibre Technology , Colour Science & Textile Chemical Processing including Chemical processing and Finishing , Process control and Environmental Awareness and Pollution Control etc. in B.Tech.(JFT) and old Diploma in Jute Tech. courses. Also Conducting and co-ordinating Research work & Trg. & Development Projects (MHRD/ AICTE/ SJDF etc.). Guiding nplant Trg and Chemical testing/technical services & Consultancy and Initiated In-House R&D & PhD research work.
5	LECTURER in Textile Chemistry (Scale of pay 2200-75-100-4000), Last Basic pay Rs 2800/-pm	Institute of Jute Technology Kolkata- 700 019	May '87 to May '93 (6 years)	To conduct teaching (Textile Fibre & Textile Chemistry in B. Tech., Dip. Jute Tech course), research, training and conducting short courses and guiding students practical and project work, technical services & testing & Lab Development Project etc.
6	VISITING LECTURER (at consolidated salary of Rs.2000/-L.S.per month).	-Do-	Feb.'87 to May '87	Teaching Textile Chemistry in Degree and Diploma courses (B.Tech & DJT) of IJT.
7	PART-TIME LECTURER in Fibre Science and MMFT etc (Rs.2400/- per session).	College of Textile Tech , Govt. of W.B. Serampore.	1987-88	Teaching and related jobs in Fibre Science/ Man Made fibre in B.Sc.Tech.(Textile) course of Calcutta University at CTTS.

Sl. No.	Designation and Scale of Pay	Organisation with Address	Period of Service	Nature of Work and Level of Responsibility
8	a) TECHNOLOGY TRAINEE Basic pay Rs.800/-(in 800-100-1500 scale). b) STUDENT APPRENTICE (Consolidated Rs.600/- per month as stipend).	N.J.M.C. Ltd., H.O.4,N.S. Rd Kolkata-700001 Unit -Kinnison Unit – Khardah N.J.M.C. Ltd.	05-08-83 to 12.7.85 (including one year study leave) 30.9.82 to 05- 08-83	Supervisory and production planning and controlling, quality inspection/ control, modernisation and renovation and other technical supervision jobs. Total 1.5 years exp. excluding study period)
9	TRAINEE CHEMISTS in Bleaching section (Rs. 400/- as stipend)	Crown Hosiery Factory, Kolkata-6	Aug '79 to Oct '80 (1 year 3 months)	In Tern Ship Training in Supervisory work and quality inspection of Hosiery Bleaching and Processing.
			TOTAL: 33 YEARS +	

13. Members of Editorial Board of National & International Journal : 5 (3 National Journal + 2 International Journal)

List of Journals :where included as Editorial Board Members :

- (1) Journal of Institution of Engineers(India)-Series-E (Textile and Chemical Engg, Springer publication.
- (2) Indian Journal of Natural Fibres , TINFS publication, India.
- (3) SCIREA Journal of Textile Science , SCIREA publication,
- (4) International Journal of Textile Sc and Engg. , Gavin publisher.
- (5) Asst. Editor of 'MANTRA BULLETIN', a monthly Journal of MANTRA during 1997-98, when was in lien to MANTRA from IJT

14. Total Publications : Number of Paper Published & Books /Manuals/Journal/Bulletin Edited by Prof A K Samanta : 283 papers + : (Out of which 132 are res. Papers + 101 conf. papers + 50 Review articles) plus written 3 Books +8 Book Chapters written +4 Edited Proceedings +11Trg Manuals ed + 10 Issues of Bulletin/Journals co-edited and also editorial Board member in Five (5) Journals –(2 National and 3 International) = Total –315

Total Paper Published: 220 + 7 (under process) (Annexure AKS/1,2,3)				Books/ Book Chapters (Annexure AKS/4)		Books /Book Chapters /Manuals/Journals /Conference proceedings Edited (Annexure –AKS-4)			
Research Papers: 127 ^a +6			Review Papers	Other Technical & popular Articles	Seminar & Conference Papers	Books ^b / Book Chapters ^c , Teaching Manual ^d	Training Manuals ^c Edited (Published by IJT) : Total 11	Edited BOOK & Seminar Proceedings ^f	Journal/ Bulletin Edited ^e
Foreign/ International	National	Under Process							
70	57	6 (3 - commu-nicated and 3 under Preparation)	18	32	101	3 Books + 10 Book Chapter + 1 Teaching Manual =Total 14	9 in three languages (Hindi, Eng. & Beng.) & 2 in English training manual edited =Total 11 Trg Manuals	Book-1. And SEM Proceed 4 = Total -5	Ex Asst Editor of Six issues of Monthly journal of Mantra Research Bulletin and Member of Editorial Board of four (4) journals i.e. J IE(I)-E Textile & Chemical:series-E and Indian Journal of Natural Fibres.and other 2 journals

15. Special Recognitions / positions and additional responsibilities held:

1. **Holding post of Chairman, BIS- Sectional Committee on Speciality Textile Chemicals and Dyestuff (National Committee) –TXD-07 from March -2014 to 2018 and again from April -2018 to March -2022 .**
 2. ***Holding position of Chairman, Board of Studies/ Experts in BFAD Course of CU at Rani Birla Girls' College, since 2008 to till Continuing**
 3. ***Holding position of Member of Editorial Board, for Journal of IE(I)-series-E , Textile and Chemical-(Springer)**
 4. **Held the position of Sr Consultant (part time) for guiding research projects in MGIRI, under MSME, GOI.**
 5. **Held Position of Former Head of The Dept, Dept of Jute and Fibre Technology, IJT, University of Calcutta**
 6. ***Worked as Professor In-charge (Academic) since August-2009 to June-2011(Approx 2 yrs) at IJT.**
 7. ***Worked for 1 year as Asst. Director (Grade –1) in Research Management Position in MANTRA, Surat.**
 8. ***Worked as Section In-charge of Textile Chemistry Section of IJT since Feb'1991 to 2009(18 yrs)**
 9. **Member, BIS Committee for National Standards on Jute (TX-03) and also for other committees of BIS for Textiles etc**
 10. **Enlisted Expert Member of National Board of Accreditation, For Accrediting Engg Degree Courses in India, by NBA.**
 11. **Acted as Member, Board of Studies & Experts in B Des Course in Fashion Technology at Amity School of Fashion Technology (ASOFT), AMITY UNIVERSITY, KOLKATA, since-Current Yr -2017.....**
 12. **Acted as Member of Research Advisory Committee of NIRJAFT under ICAR 2010-11 to 2012-13**
 13. **Acted as Member of Board of Studies, SILPASADAN, BISHWABHARATI (a Central University).-2011 -12, 12-13 and 13-14**
 14. **Worked as Member of Ph.D Committee in Textile Technology, Calcutta University, 2008 onwards to 2016 (two terms)and was convener of Phd Committee in Textile Technology, University of Calcutta**
 15. **Acted as Convener and Member of Syllabus Revisional Expert Committee for Textile Engg. for IE (I),Textiles 2009,**
 16. **Acted as advisory member for syllabus revision of BSc and M Sc Course in Textiles & Clothing and Fashion Studies etc. JDB Inst, JU and Bachelor of Fashion & Apparel Design Course, RBGC, CU .**
 17. **Acted as Chairman, Board of Studies for B Tech, M Tech and PGDJTM course , DJFT,CU from 2014 -2016 as HOD and also Last 32 yrs working as Member of Board of Studies, B Tech & and last 15 yrs as bos member of M Tech (TT) Course of IJT under CU & Examiner (Jute & Fibre Tech/ Textile Technology) besides working as Paper setter and Moderator of CU, WBUT, BU, NSOU etc. for different Degree and Diploma courses of these Universities.**
 18. **Hold position of Member of Governing Council of IJT for 3 terms & was acting Member of Governing Body of R.K. Mission Silpamandir,**
 19. **Member and Jt. Convener in 1998-2000, Convener in 2000-2004 & State Committee Member & Chairman of Textile Engg.Divn.WBSC, in 2004-08 and Co-Chairman for 2008-14, for Textile Engg. Divn.,WBSC of IE (I).**
 20. **Expert member of CU for Inspection Team for affiliation of BFAD Course under Rani Birla Girls' college , kolkata,**
 21. **Expert Member /Advisor for State Technical Council of Education for pre-affiliating inspection of Textile Design and Fashion Design related Diploma and certificate courses.**
 22. ***Expert member/Advisor of Staff Selection Commission for Recruitment of Technical Officers/ Personnel in Textiles**
 23. ***Expert Member for Selection of Professor/Associate Professor and Asst Professor and Asst Director/Dyeing Expert etc in Public Service Commission , West Bengal and also for PSC , Odissa .**
16. **Professional Training Undertaken for Specialized Knowledge : List is given in Annexure – AKS/ 5.**
17. **Fund Mobilization Through Sponsored Projects :Approx Rs 30.35 Crores in last 30 yrs : Details given in Annexure– AKS/6**
18. **List of Total B Tech Projects Guided : More than 34, List is given in Annexure-AKS/8**
19. **List of HRD/Research and Project Reports Prepared & Course Design Made : List is Given in Annexure-AKS/9**
20. **RESEARCH/ DEVELOPMENT WORK DONE IN THE WHOLE CAREER : Details is Given an Annexure-AKS/10**
21. **Specific Industrial Training & Short Courses Conducted and Co-ordinated: List is given in Annexure-AKS/11**
22. **List of Courses Being Taught in B Tech and M Tech Level : List is given in Annexure –AKS/12**
23. **Summary of The Achievements made so far : Given in Annexure-AKS/13**

24. List of Major additional responsibilities held /Work done: : Given in Annexure –AKS/14

25. Experience for (i) Academic and Administrative Management, (ii) Proven Leadership for Policy Planning, (iii) Monitoring and Evaluation of Academic and Research Activities and (iv) Promotion of Industry Institute Interaction and R&D Work :

Details are given in Annexure-AKS/15

26. Consultancy and Technical audit Services :

- (a) Provided leadership for technical audit valuation of machinery for **NTC mills of Eastern India** along with others faculty of IJT as entrusted to IJT.
- (b) Provided leadership for technical audit valuation of machinery for **NJMC mills , West Bengal and Bihar** along with others faculty of IJT as entrusted to IJT
- (c) Time to time provided consultancy services **to small entrepreneur and large jute mills for improving colour fastness, uniform dyeing and finishing of jute products on behalf of IJT including 3-4 bulk trial in jute mills**
- (d) **Consultancy At MGIRI ,Wardha :** Continued consultancy assignment as Part-time Sr. Research Consultants for MGIRI (Mahatma Gandhi Institute of Rural Industrialization) , Wardah, Maharashtra , under Ministry of MSME, Govt. of India, and University Share for this Consultancy work by Prof. A K Samanta, DJFT, IJT, CU in 2016-17 was deposited to CU.
- (e) **Consultancy At MGIRI ,Wardha :** Prof. A K Samanta, DJFT, IJT, CU also received consultancy assignment as Part-time Sr. Research Consultants for MGIRI (Mahatma Gandhi Institute of Rural Industrialization) , Wardah, Maharashtra , under Ministry of MSME, Govt. of India, and University Share for this Consultancy work by Prof. A K Samanta, DJFT, IJT, CU in 2017-18 was deposited to CU.

Summary of total publications by Prof. A K Samanta (1987 – March 2020)

- *Total No. of Publications by Dr. A.K. Samanta : Total 315 (312 + 3 under preparation) (Out of 315, Total peer reviewed Research Papers: 133 (127 published +3 Communicated + 3 under process), Review Papers + Tech.Articles :50 (review papers 18 and Other Technical Articles : 32 and Seminar & Conference Papers : 101) +Books/Manuals and Book Chapter : 23 (11 Training manuals + 5 Books + 10 Book chapters as authors) and Total Edited work : 10 editing jobs (1 Book Editing now and also editorial member of 5 Journals as member of Editorial Board or Asst Editor + 4 Conference Proceedings edited) as listed below :
- *Among total no. of 127 + 3 (under process) + 3 (Under Communication) research papers, International Publication- 71 , National Publication- 56+ 3 (under process) + 3 Under Communication .
- *Out of total research papers in refereed journals: 120+ 3 (under process) and 3 Under Communication & in other reputed journals: 7
- *Total no. of research papers on jute (marked by *): 74; and Rest 59 are on Non-Jute - other Textiles
- *Additional no of research papers under process: 6 (from Sl. no. 128 to 133 as listed after srl no, 127 below)
- *No. of Books authored : 5 , No of Book Chapters : 10 , No, of Training manuals edited : 11 : Total 23
- *Total No. of Journals /Bulletin/Conference proceedings edited: 4 + 5 = Total 9, Book Edited (In Tech) : 1 (One)
- *Member of Editorial Board of National & International Journal : 5 (3 National Journal + 2 International Journal)

(List of Journals :where included as Editorial Board Members :

- (1) Journal of Institution of Engineers(India)-Series-E (Textile and Chemical Engg, **IE(I)- Springer publication.**
- (2) Indian Journal of Natural Fibres , **TINFS** publication, India.
- (3) SCIREA: Journal of Textile Science , **SCIREA** publication,
- (4) International Journal of Textile Sc and Engg. , **Gavin** publisher
- (5) Asst. Editor of 'MANTRA BULLETIN', a monthly Journal of MANTRA during 1997-98, when was in lien to MANTRA from IJT

List of Total Research publications of Prof. (Dr.) A. K. Samanta (Jan-1989- Jan 2019) in 30 Yrs + =126 +5 (under communication)

01. *Some studies of cross-linking on Jute Fabric with different preparatory routes : (P.K.Ganguly, A.K.Samanta, et al) **Colourage**, 36, April 1989, P-19.
02. Some studies on chlorination of polypropylene : (A.K.Samanta, D.N.Sharma) **Colourage**, 37, March 1990, P-15.
03. Some studies on mechanical properties and acid dye uptake of solvent treated Nylon-6 filaments (A.K.Samanta, D.Sur, P.K.Ganguly & A.Chowdhury), Journal of **Man-Made Textiles in India**, April,1990,P-119.
04. Dyeing of polypropylene with Basic dyes after modification : (A.K.Samanta, D.N.Sharma), **Textile Trends**, 33, May 1990, P-37(**Reprinted in annual Textile Directory**, 1990-91).
05. *Some studies on quality performances of Jute/ Cotton furnishing fabrics : (A.K.Samanta, P.Chakraborty, D.Das), **Journal of Institution of Engineers- Textile Engineering**, 71, December ,1990, P-45.
06. Solvent texturing of partially oriented Nylon-6 multifilament yarn : (G.Basu, A.K.Samanta, R.K.Singh), **Indian Journal of Fibre & Textile Research**, 16, December 1991, P-246.
07. *Studies on Quantitative colour measurement of direct dyed Jute Fabric in relation to computerized colour matching : (A.K.Samanta, D.Das), **Journal of Institution of Engineers-Textile Engineering** 73, December 1992, P-53.
08. *Effect of selective pretreatments and different resin post-treatments on Jute/ Viscose upholstery fabric : (P.Ghosh, A.K.Samanta, D.Das), **Indian Journal of Fibre & Textile Research**, 19, December 1994, P-277.
09. Transfer printing of polyester/ cotton blended textiles with new type of reactive-cum-disperse dyes : (A.K.Samanta, D.N.Sharma, R.K.Talwar), **American Dyestuff Reporter(USA)**, February 1995, P-37.
10. Some studies on mechanical properties and atmospheric dyeing of solvent pretreated polyester multifilament yarn : (A.K.Samanta, D.Sur, D.P.Chattopadhyay, S.K.Ghosh et al), **Indian Journal of Fibre & Textile Research**, 20, March 1995, P-23.
11. *Modificaton on rotor –spun jute/ cotton yarns by causticisation (A.K. Samanta, D. Das & S.K. Sett) **Journal of Institution of Engg. – Textiles Engg.**, 76, 1995, p-12. **This paper received Dr. Triguna Charan Sen Memorial National Award, 1995 for the best research paper of the year in Textile Engineering, awarded by Institution of Engineers (I).**

12. Dyeing of polypropylene with some azo-disperse dyes of basic character via chlorination route (A.K. Samanta & D.N. Sharma) **Indian Journal of Fibre and Textile Research**, 20, 1995, P-206.
13. *Modification of Jute with citric acid- (P. Ghosh, D. Das & A.K. Samanta), **Journal of Polymer Materials**, 12, 1995, P-297.
14. Graft copolymerisation of Acrylamide on cotton cellulose in a limited aqueous system following pretreatment technique (P. Ghosh, A.K. Samanta and D. Dev) **Journal of Applied Polymer Science**, 58, 1995, p-1727.
- 15)* Effect of selective pretreatments and subsequent N-methylol-acrylamide resin post-treatment on jute/ cotton furnishing fabric (A. K. Samanta & P. Ghosh), **Indian Journal of Fibre and Textile Research**, 21, 1996, P- 131.
- 16) Reactive dyeing behaviour of ramie fabrics pretreated with different swelling agents and their rub fastness property (A. K. Samanta, D. Das & P. C. Dasgupta), **Indian J. Fibre & Textile Research**, 22, March 1997, P- 53.
- 17)* Some studies on jute/ polypropylene blended (blanket) fabric characteristics (A. K. Samanta, K. N. Chattopadhyay, A. Mukhopadhyay and B. Mitra), **Indian Jute Fibre & Textile Res.** 22,1997, P- 112.
- 18)* Effect of multiple soap wash on jute/ polypropylene blended (blanket) fabric (short communication) (K. N. Chattopadhyay, A. K. Samanta, A. Mukhopadhyay and B. Mitra), **Indian Jute Fibre & Textile Res.** 22, 1997, P- 130.
- 19)* Simultaneous free radical polymerization and acidic polycondensation of acrylamide-formaldehyde resin on jute fabric (A. K. Samanta, D. Dev and P. Ghosh), **J. Applied Polymer Science**, 64, 1997, P- 2473.
- 20)* Bulking or Chemical texturing of rotor-spun jute/polyester blended yarn (P. Ghosh and A. K. Samanta), **Journal of Textile Institute (U.K.)**, Part I: 88(3), 1997, P- 209.
- 21)* Chemical processing of diversified jute products : Some HRD and R & D Efforts : Part I (A. K. Samanta and D. Das), **Colourage**, Part-I, Dec.1997, P- 21.
- 22)* Chemical Processing of diversified jute products; Part-II (A.K. Samanta & D. Das) **Colourage**, , Jan., 1998, P- 35.
- 23) *Fibre reinforced composites from jute as wood substitute : Multiplicity of application (including some studies on use of Jute- reinforced composites in replacement of wooden Picking Stick by JRC in Silk loom) (A. K. Samanta and T. V. K. Srivastava), **Man-Made Textiles in India**, Feb. 1998, P- 45.
- 24) Problems and Care in dyeing microfilament polyester, (B.R. Rao, SR Naik, and A. K.Samanta **Proceedings of 39th Joint Technological Conference, NITRA, BTRA, SITRA, ATIRA** March, 1998, P-173.
- 25) * Graft copolymerisation of mixture of acrylamide and methyle methacrylate on jute fibre (P.Ghosh, A. K. Samanta and D. Dev), **J. Applied Polymer Sc. (USA)**, 68, 1998, P- 1139.
- 26) Studies on the effect of solvents and solvent mixture on dye uniformity and structure/ other properties of thermomechanically textured polyester multifilament yarn (T.N. Patra, D.P.Chattapadhyay, R.K. singh and A.K. Samanta), **Indian J. Fibre & Textile Res**, 23, 1998, p-267
- 27)* Effect of caustic pretreatments at varying tension level, on the dyeing behaviour of jute, flax,and ramie (D. P. Chattopadhyay, A. K. Samanta, Renuka Nanda and Sumeet Thakur), **Indian J. Fibre and Textile Res.**, 24, March 1999, P-74.
- 28)* Enzyme treatment on jute : Effect of resin treatment (A. K. Samanta, S. N. Chattopadhyay, S. K. Sanyal and A. Dey), **Colourage**, May 2001, P- 20.
- 29) Selective Chemical pretreatments and post-treatments on microdenier polyester fabric for improving surface depth of colour (A.K. Samanta, D.P. Chattapadhyay, A. Konar & D.N. Sharma), **Indian J. Fibre Text. Res**, 28, March, 2003, p-76.
- 30)* Application of Selective Natural Dyes on Jute & Cotton Fabrics by different techniques,A.K. Samanta , Deepali Singhee, Atanu Sengupta & Sk. Abdur Rahim), **Journal of Institution of Engineers (I), Text Engg. Vol-83**, - Feb-2003,p-22
- 31) Application of single and mixture of Selected Natural dyes on cotton fabric: a scientific approach, (A.K. Samanta, Deepali Singhee & Mitu Sethia), **Colourage**, 50 (10) , Oct, 2003, p-29.
- 32) Effect of single and mixed solvent pretreatment and selective dye-bath additives on surface colour strength and light fastness of microdenier polyester fabric, (A.K. Samanta, A. Konar, D. Ghosh & S. Acharyay), **Indian J. Fibre Text. Res.**,28, September, 2003,p-312.
- 33) Road Map for Wet Processing of Microdenier Polyester Fabric and Relevant Studies on its dyeability (A.K. Samanta,A. Konar. & D.P. Chattapadhyay), **Man-Made Textiles India**, 46, Oct,2003, p-391.
- 34) *Effect of selective chemical treatments of jute fibre aimed at improved textile related properties and processibility, (A.K. Samanta, G. Basu & P. Ghosh),**Indian J. Fibre Text. Res**, 29, March, 2004, p-85-99.

- 35) Efficacy of selective surfactants /detergents as washing agent on soiled white/ dyed cotton fabrics (A.K. Samanta, Deepali Singhee, Smita Parikh, Sunanda Mitra), **Indian J. Fibre & Text Res**, **29**, June , 2004, p-223.
- 36) *Effect of Different Methods of Bleaching and Resin Finishing on Physical Properties and Photoyellowing Character of Jute Fabric, (A.K. Samanta, K. K. Mahalanabis & Deepali Singhee), **Journal of Institution of Engineers (India), Text Engg.**, **85**, August, 2004, p-1-17
- 37) *A Simple Method of Measurement of Flexural Rigidity of Jute Fibre, (A.K. Samanta & G. Basu) **Journal of Institution of Engineers (India), Text Engg.** , **85**, Feb (2005), p-33-38
- 38) * Effect of Selective Pretreatments and Mixed Enzyme Treatment on Properties of Jute-Cotton Union Fabric, (A. K. Samanta, Deepali Singhee, Gautam Basu & K K Mahalanabis), **Indian J. Fibre & Text Res.** **30**,December, 2005, p 451-467.
- 39) *Effect of Chemical and Bio-Chemical Softening of Jute Fabric, (A.K.Samanta ,Sunanda Mitra and K K Mahalanabis), **Journal of Institution of Engineers(India)-Textile Engg.**, **86**, Feb (2006), p-21-33 . **This paper received Special Subject Award for the Best Research Paper published in the Journal of Institution of Engineers (India) in 2006**
- 40) * Physico-Chemical Studies on Dyeing of Jute Textiles with Natural Dyes Extracted from Red sandal wood, , (A K Samanta, Priti Agarwal & Siddhartha Datta), **Journal of Institution of Engineers (India) -Textile Engg.** vol **87** , August , 2006, P16-26.
- 41) *Modification of Properties of Jute Yarns by Some selective Chemical and Bio-Chemical Treatments: (A.K. Samanta, G. Basu & K Roy Gupta), **Journal of Institution of Engineers (India)-Textile Engg.** Vol 87, Feb-2007, 3-10.
- 42) *Hydrogen peroxide and potassium per-oxo-disulphate combined room temperature bleaching of jute, cotton and jute-cotton union fabrics – An energy efficient and eco-friendly process (A K samanta, Deepali Singhee, G basu and K K Mahalanabis) , **Indian J. Fibre & Text Res**, **32**, 2007, 221-231.
- 43) *Standardisation of Low Temperature Bleaching of Jute-Cotton Union Fabrics using a combination of Hydrogen Peroxide and Potasium-per-oxo-disulphate as Dual Oxidative Agents, (A K Samanta & Dipalee Singhee) **Journal of Institution of Engineers (India)-Textile Engg.**, August, **88**, 2007, p-19-32.
- 44) *Thermal Behaviour and Structural Features of Chemically and Bio-Chemically Modified Jute Substrate (A K Samanta, Deepali Singhee, G Basu & S K Biswas) **Indian J. Fibre & Text Res**, **32**, 2007, 355-365.
- 45) *Chemical Modification of Jute by Low degree of Aerial Graft-Co-Polymerisation of Acrylamide and its Mixture with Ethylene Glycol and Amino-Silicone Using $K_2S_2O_8$ Pretreatment Technique with Limited Aqueous System, (A K Samanta, S. Mitra, G Basu and K K Mahalanabis) **Journal of Polymer Materials**,**24** (3), 2007, 281-305. (Again Reprinted in **Journal of Polymer Materials** , **25** (2)-June –2008 ,127-157)
- 46) *Chemical Modification of Jute Fabric with Ethylene glycol and its Mixtures with Glyoxal and Aminosilicone Compound Under Different Catalyst Systems for Improving its Textile Related Properties and Thermal Behaviour , (A K Samanta, S K Biswas, S Mitra, G Basu and K K Mahalanabis) , **Journal of Polymer Materials** , **24** (4), 2007, 325-348. (Again Reprinted in **Journal of Polymer Materials** , **25** (2)-June –2008,159-184)
- 47) *Dyeing of jute and cotton fabrics using jackfruit wood extract: Part-I : Effects of mordanting and dyeing Process variables on colour yield and colour fastness Properties , (A K Samanta, Priti Agarwal & Siddhartha Datta), **Indian J. Fibre & Text Res**, **32**, 2007,466-476.
- 48) Effect of Glycol and Acrylamide Treatments on Textile Related Properties of Jute Fibres (A.K. Samanta, G. Basu & P. Ghosh), **Journal of Natural Fibres**, Vol **4** (4), 2007, 59-72
- 49) Effect of Glycol and Acrylamide Treatments of Jute Fibre on Its Processibility,(A.K. Samanta, G. Basu & P. Ghosh), **Journal of Natural Fibres**, Vol **5** (1), 2008, 19-35.
- 50) Structural Features of Glycol and Acrylamide Treated Jute Fibres (A.K. Samanta, G. Basu & P. Ghosh), **Journal of Natural Fibres**, Vol **5**(4), 2008, 444-460
- 51) * Simultaneous Dyeing and Finishing of Jute Fabric Using an Acid Dye and Selective N-Methylol Resins, (A K Samanta, Dipalee Singhee & K K Mahalanabis), **Journal of Institution of Engineers (India)-Textile Engg.** **88**, Feb-2008, p-17-26
- 52) *Physico-Chemical Studies on dyeing of jute and cotton fabrics using jackfruit wood extract as Natural Dyes : Part-II : Kinetic and Thermodynamic Studies, (A K Samanta, Priti Agarwal & Siddhartha Datta), **Indian J. Fibre & Text Res**, **33**, March , 2008,p- 66-72 .
- 53) Application of Mixture of Red sandal Wood and Other Natural Dyes for Dyeing of Jute Fabric-Studies on dye Compatibility, (A K Samanta, Priti Agarwal), **International Dyer** , March (3), 2008, 37-41

- 54) Characterisation and application of purified selective natural dyes on jute (A K Samanta , Priti Agarwal, A Konar & Siddhartha Datta) , **International Dyer**, April , 193(3) , 2008, 25-33
- 55) Dyeing of Jute with Binary Mixtures of Jackfruit Wood and Other Natural Dyes: Study on colour performance and dye compatibility (A K Samanta, Priti Agarwal & Siddhartha Datta) , **Indian J. Fibre & Text Res**, 33, June 2008, 171-180
- 56) Enzyme and Silicone Treatment of Jute Fibres : Part-I; Effect on Textile Related Properties, (A.K. Samanta, G. Basu & P. Ghosh), **Journal of the Textile Institute (UK) Vol. 99, No. 4**, 2008, 295-306
- 57) *Enzyme and Silicone Treatment of Jute Fibres : Part-II; Effect on Processibility during yarn making and yarn properties, (A.K. Samanta, G. Basu & P. Ghosh), **Journal of the Textile Institute, Vol. 99, No. 4**, 2008, 307-316.
- 58) G Basu, S S De & A K Samanta, Effect of bio-friendly conditioning agents on jute fibre spinning, - **Industrial Crops and Products**, 29 , 2009, 281-288.
- 59) Studies on Colour Strength Related Parameters and Compatibility for Dyeing of Cotton Fabrics with Binary Mixtures of Jackfruit Wood and Other Natural Dyes (A K Samanta, Priti Agarwal & Siddhartha Datta) , **Journal of Natural Fibres**, , 6, 2009, 27-45.
- 60) Studies on Colour Interaction Parameters and Colour Fastness Properties for Dyeing of Cotton Fabrics with Mixture of Jackfruit Wood and Other Natural Dyes (A K Samanta, Priti Agarwal & Siddhartha Datta) , **Journal of Natural Fibres** , 6, 2009, 171-190.
- 61) Application of single and mixtures of red sandal wood and other natural dyes for dyeing of jute fabric: Studies on colour parameters / colour fastness and compatibility (A K Samanta, Priti Agarwal , Deepali Singhee & Siddhartha Datta) , **Journal of the Textile Institute (UK)**, 100, 2009, 565-587.
- 62) Effect of N-Methylol Acrylamide and Ethylene diamine treatment on its Textile Related Properties and natural dyeing of Jute Fabric (A K Samanta and Priti Agarwal), **J Polymer Materials** , 26, No-3, 2009, 293-313.
- 63) Effect of Choline chloride treatment on its Textile Related Properties and natural dyeing of Jute Fabric (A K Samanta and Priti Agarwal), **J Polymer Materials** , 26, No-3, 2009, 315-329.
- 64) Effect of different Mordants , Extraction Conditions and Dyeing Process Variables on colour interaction Parameters and Colour Fastness properties in dyeing of Jute Fabric with Manjistha, a Natural Dye (A K Samanta , A Konar , Sarmishtha Chakrabarti (Mukherjee) & Siddhatha Datta) **Journal of Institution of Engineers (India)-Textile Engg.** 91, August , 2010, p7-15.
- 65) Dyeing of Jute Fabric with Tesu Extract : Part-1 : Effects of Different Mordants and Dyeing Process Variables on Colour Yield and Colour Fastness Properties ((A K Samanta , A Konar , Sarmishtha Chakrabarti (Mukherjee) & Siddhatha Datta), **Indian J. Fibre & Text Res**,, Jan -2011 , vol-36, page 63-73.
- 66) Effects of chemical modifications of jute fabric with Ethylene Diamine and Hydrazine on its textile related mechanical properties and dyeability (A K Samanta, A Konar , Priti Agarwal, & Siddhartha Datta) , **J Polymer Materials** ,27(3) 2010, p203-236.
- 67) Semi Durable Fire Retardant Finishing of Jute Fabric and its Thermal Behaviour (A K Samanta ,S K Biswas, A Bagchi and Reetuparna Bhattacharyay (Roy), **Journal of Institution of Engineers (India)-Textile Engg.** , Feb-2011, Vol 91, P- 18-20
- 68) Fire retardant Finishing of jute Fabric and its Thermal Behaviour using Phosphorous and Nitrogen Based Compounds(A K Samanta, A Bagchi & S K Biswas) **J Polymer Materials** , Vol. 28,(2), 2011, 149-169.
- 69) Dyeing of Jute Fabric with Tesu Extract : Part-II : Thermodynamic parameters and kinetics of dyeing (A K Samanta , A Konar , & Siddhatha Datta), **Indian J. Fibre & Text Res**,, Vol-37,June-2012 p-172-177
- 70) Eco-friendly Rot and Crease Resistance Finishing of Jute Fabric using Citric Acid and Poly Ethylene Glycol (A K Samanta, and A Bagchi) **J Polymer Materials** , vol-29,no-3,2012, p349-359.
- 71) Dyeing of Jute Fibre with Reactive Dyes: Optimisation of Process variables and Assesment of colour fastness Characteristics (A K Samanta, Sarmishtha Chakarbarti (Mukherjee) and T K Guharoy) **Journal of Institution of Engineers (India)-Series-E, Chemical & Textile Engg** , Vol-93(1) , March –Aug-2012, , p-15-24.(Published on line -12th Jan-2013 and DOI 10.1007/s40034-012-0002-5 and Print copy published in Aug--2012) **This paper received Dr. Triguna Charan Sen Memorial National Award, 2013 for the best research paper of the year in Textile Engineering, awarded by Institution of Engineers (India).**
- 72) Ecofriendly Rot and Crease Resistant Finishing of Jute Fabric using Citric acid and Chitosan (A K Samanta and A Bagchi) **Journal of Institution of Engineers (India)-Series-E, Chemical & Textile Engg** , Vol-94(1) , March –Aug-2013, , pp-07-13, ISSN 2250-2483 (Published on line -7th Nov-2013, in J. Inst. Eng. India Series-.E , DOI 10.1007/s40034-013-0017-6).

- 73) Effects of Amino-acid Modification of Jute Fabric on its Textile Related Properties and Dyeability with Selective Reactive Dyes –(A K samanta, A Konar, Tapas Ranajan Kar & Sarmishtha Chakraborty) **International Review of Applied Engineering Research**; ISSN 2248-9967 , Vol 4, No. 1 (2014), pp. 51-67.
- 74) Natural Dyeing of Jute Fabric with Catechu –(A K Samanta, A Konar , Mahadeb Datta & Siddartha Datta) **International Journal of Applied Engineering Research**, ISSN 0973-4562, Vol 9, No.4 (2014), Pp. 451-467.
- 75) Salt-free Reactive Dyeing of Amino-Acid Modified Jute (A K Samanta, A Konar and Sarmishtha Mukherjee) **Indian Journal of Natural Fibre** (NIRJAFT) : ISSN 2348-7445 Vol 1, No-1 (July-2014) pp. 15-28.
- 76) Eco-friendly Fire retardant finishing of Jute Fabric by Impregnation or coating Phosphorylated PVA and its effect on physical properties and thermal behaviour of treated jute fabric, (A.K.Samanta and Reetuparna Bhattacharyya (Roy) and Ranjana Chowdhury,) **International Journal of Applied Engineering Research**, ISSN 0973-4562, Volume 9, Number 4 (2014), pp. 439-450.
- 77) Effect of different woven structures on physical Properties of Cotton Muslin Fabric, (A.K Samanta , Asis Mukhopadhyay, M.M Bhagwat & Tapas Ranjan Kar), **Journal of Natural Fibres**, 12, (Aug, 2015) pp444-456.
- 78) Studies on Dyeing Process variables for Salt Free Reactive dyeing of Glycine (amino acid) modified cationized cotton muslin fabric (A.K Samanta , Tapas Ranjan Kar, Asis Mukhopadhyay, D Shome & A Konar), **Journal of Institution of Engineers (India)-Series-E, Chemical & Textile Engg** , Jan-June -2015, 96(1), pp31-44
- 79) Cationization of Periodate Oxidized Cotton Cellulose of Muslin Fabric using natural amino acid extract from Soyabean Seeds waste and its ecofriendly dyeing (A.K Samanta , Tapas Ranjan Kar, Asis Mukhopadhyay, D Shome & A Konar) , **Journal of Materials Sciences & Applications, AASCIT-USA** , Vol-1(4), July-20, 2015, pp142-154.
- 80) Simultaneous Dyeing and Rot Resistant Finishing of Jute Fabric (A K Samanta and Kasmitha Bhattacharyay) **Journal of Materials Sciences and Applications, AASCIT-USA** , Vol-1(4), July-30, 2015, pp174-184.
- 81) Dyeing of Jute Fabric with Binary mixtures of Catechu and other natural dyes : Study on Colour performance and Dye Compatability , (A K Samanta, Mahadeb Datta & Siddartha Datta) – **Journal of Materials Sciences and Applications, AASCIT-USA** , Vol-1(5), Sept-10, 2015, pp221-238.
- 82) Accelerated Retting Cum Softening of Coconut Fibres , (G Basu, Leena Mishra, Seiko Jose and Ashis Kr Samanta) , **Industrial Crops and Products, Elsevier publication, Vol. 77, 2015 , P-66-73.**
- 83) Simultaneous Dyeing and Fire Retardant Finishing of Jute Fabric using an acid dye and selective F R Finishing Chemicals (A K Samanta and Kasmitha Bhattacharyay) – **Textile and Light Industrial Science and Technology (TLIST) , USA, vol -4(1), June -2015 , pp- 1-16.**
- 84) Effects of Selective Chemical Softening and Different Modes of Citric Acid Treatment on Properties of Jute-Cotton Union Furnishing Fabric, (A.K.Samanta , Sunanda Mitra Roy, Pubalina Samanta & Deepali Singhee), **Journal of Materials , ASSCIT, USA , Vol 1(4), p-111-122 & published on line Nov 10th, -2015.)**
- 85) Studies on Reactive Dyeing of Natural Amino Acid Modified Cationized Jute Fabric: Colour Interaction Parameters and Colour Fastness Properties (Ashis Kumar Samanta, Nilendu Sekhar Bhaumik, Debasis Shome, Alok Nath Roy & Adwaita Konar) **Journal of Materials , ASSCIT, USA , vol 1(4), p-89-97 (published on line Nov 10th , 2015.)**
- 86) Fire Retardant Chemical Finishing of Jute Fabric using Sulfamate and Urea Mixture (Ashis Kumar Samanta, Reetuparna Bhattacharyya (Roy) and Ranjana Chowdhury , **Journal of Materials, ASSCIT, USA vol 1(4), p-98-110 (published on line on-Nov 10th , -2015.)**
- 87) Structure and Property of Indian Coconut Fibre ; (by A.K.Samanta Leena Mishra and G Basu) , **Annual Technical Volume** of Textile Engg Division Board, The **Institution of Engineers (India)- Vol-1, 2016, pp50-56.**
- 88) Study on Reuse of Coconut Fiber Chemical Retting Bath. Part 1: Retting Efficiency , (Seiko Jose, Leena Mishra, G. Basu, and A. K. Samanta) ; **Journal of Natural Fibre**, accepted and published on line DOI No. <http://dx.dot.org/10.1080/15440478.2015.1093441>, print version: **13 (5), 2016, p603-609**
- 89) Application of Polyethylene Glycol, Cetrimide, Chitosan and their mixtures on cotton muslin fabric to improve Rot Resistance, anti-microbial property and its salt-free dyeing (A.K Samanta , A Mukhopadhyay and M.M Bhagwat & Tapas Ranjan Kar), **Journal of Textile Institute , UK., Oct, 2015 (published on line on 1st Oct - 2015, DOI no. 10. 1080/00405000.2015.1114790 dt 1.10.15), print version Vol-107 (11), Nov. 2016, P-1386-1405**
- 90) Dyeability of Chemically modified cotton muslin fabric using Natural amino acid extract from soya bean seed (A.K Samanta , A Mukhopadhyay, A Konar , D Shome & Tapas Ranjan Kar), **Textile Research Journal, USA,**

- April ,2016 (published on line on 1st Oct -2015, DOI no. DOI: 10.1177 //0040517515621135, dated 14th April -2016 from - trj.sagepub.com), (Print version- Vol-86 (20), April-2016,p-2179-2192.)
- 91) Studies on Dyeing Process variables and colour interaction parameters for application of Direct Dyes on Jute, (Nilendu Sekhar Bhoumick , A.K Samanta, A Konar, and A N Ray), **Indian Journal of Natural Fibres, Vol-3,No-1, July-2016, p-1-10, (ISSN – 2348-7445).**
 - 92) Salt free Reactive Dyeing of Cotton Khadi Fabric by Cationizing with Different Types of Cationizing Compounds. (H.D.Sinnur, Ashis Kumar Samanta, Tapas Ranjan Kar, Runali Kaware and M.M.Bhagwat), **Indian Journal of Natural Fibres, Vol-3,No-1, July-2016, p-81-102, (ISSN – 2348-7445).**
 - 93) Simultaneous Dyeing and Fragrance Finishing of Cotton Fabric (A. K. Samanta, Anowar Hossain, A. Bagchi and Kashmita Bhattacharya) **Journal of Materials Science and Application, AASCIT,USA, vol-2(4),2016,p-25-34**
 - 94) "Study on reuse of coconut fibre chemical retting bath : Part II - Recovery and characterization of Lignin" (Seiko Jose, Leena Mishra, G. Basu, and A. K. Samanta; **Journal of Natural Fibre, (DOI-10.1080/15440478.2016.1212772) (Print Version – Vol-14(4), 2017, p-510-518).**
 - 95) Fire Retardant Finish of Jute Fabric with Nano ZnO, (A.K.Samanta and Reetuparna Bhattacharyya (Roy), Seiko Jose, G Basu and Ranjana Chowdhury), **Cellulose Journal, Vol-24 (2), 2017, P 1143-1157**
 - 96) Effect of chemical softening of coconut fibres on structure and properties of its blended yarn processing with jute, (Mishra Leena Ajay Kuamr Reshmi , G. Basu, and A. K. Samanta), **Fibres and Polymer , Springer publication, (DOI- 10.1007/s12221-017-6614-0) (Print Version – Vol-18(2), 2017, p-357-368)**
 - 97) Ecofriendly fire retardant and rot resistance finishing of jute fabric using Tin and Boron based compound----- (A K Samanta and A Bagchi) –**Journal of Institution of Engineers (India) –Series-E (Chemical and Textile Engg.) (Springer Publication) DOI No. 10.1007/s40034-017-0092-1 dt. 01.02.2017, (Print Version Vol-98(1), 2017, p-25-31)**
 - 98) Investigation of Structure and Property of Indian Cocos nucifera. L (Coconut) Fibre ; (by A.K.Samanta Leena Mishra and G Basu) , **J of The Institution of Engineers (India)- Series-E (Chemical and Textile Engg) – DOI: 10.1007/s40034-017-0096-x, 27th April -2017 p-1-6) (print version – Vol-98(2), Dec-2017, p-135-140)**
 - 99) Comparative Studies on Dyeability with Direct, acid and reactive dyes after Chemical modification of Jute with mixed amino acids extract obtained from waste soyabean seeds (A.K Samanta , A Konar , Nilendu Sekhar Bhoumick and A N Ray), **Journal of Institution of Engineers (India) –Series-E, (Chemical and Textile Engg.) Springer publication, DOI: 10.1007/s40034-017-0098-8, June -2017) (print version – Vol-98(2), Dec-2017, p-121-133)**
 - 100) Innovative Silk Dyeing using Enzyme and Rubia Cordifolia extract at room temperature (P S Vankar, Dhara Shukla (FEAT-IIT-Kanpur) and Samudrika Wijayapala (University of Moratuwa, Sri-Lanka) , and Ashis Kumar Samanta (DJFT, IJT, CU), **Pigment and Resin Technology, Vol-46 (4) , June-2017, p296-302.**
 - 101) Effect of Acid /Alkali and Cellulase Enriched Mixed Enzyme Treatments on Properties of Jute-cotton Union Furnishing Fabric, (A K Samanta, Sunanda Mitra Roy, Deepali Singhee and Pubalina Samanta), **Journal of Textile Engineering and Fashion Technology (JTEFT), On-Line published -Vol-1, No-2, March -2017, p-1-9.(DOI-Nos. 10.15406/jteft.2017.01.00011)**
 - 102) Characterisation of Chemically Modified Jute, Cotton and Jute-Cotton Union Fabrics after treatment with Natural Amino Acid extract of waste soya-bean seeds and tannic acid (A K Samanta, Adwaita Konar , A N Ray and Nilendu Sekhar Bhaumik), **Indian Journal of Natural Fibres , Vol-4 (1), July 2017, p 59-76.**
 - 103) Dyeability of Jute , Cotton and Jute-Cotton Union Fabrics after chemical modification with Tannic Acid and soya-bean seed extracted mixed natural amino acid— for dyeing with Acid, basic and reactive dyes, (A.Konar ,N. S. Bhaumik,A. K. Samanta,and A. N. Roy) **Indian Journal of Natural Fibres , Vol-4 (1), July 2017, p 77-88**
 - 104) Standardization of Mordant and Dyeing Process Variables for Dyeing of Cotton Khadi Fabric with Indian Madder as Natural dyes, (H D Sinnur , Ashis Kumar Samanta , D K Verma and Runali Kaware), **Indian J. of Natural Fibres, Vol-4 (1), July 2017, p 21-38.**
 - 105) Statistical optimization of critical dyeing conditions of salt free reactive dyeing for cationized (amino modified) cotton by treatment with soyabean seed waste, (Ashis Kumar Samanta, Asis Mukhopadhyay & Tapas Ranjan Kar) **Indian J. of Natural Fibres, Vol-4 (1), July 2017, p 45-58.**
 - 106) Simultaneous Cationization and Antimicrobial Treatment of Cotton Khadi Fabric with Poly-Hydroxy Methyl Amino Silicone (PHAMS) and Poly Ethylene Glycol (PEG), (Ashis Kumar Samanta, Tapas Ranjan Kar, Runali Kaware & Mohammed Sajid), **Procedia Engg. Jouranal, Elsevier publication , Vol-200 (2017) p-104-111**

- 107) Use of Metallic Fe (Iron) Mordant with or without Harda for Dyeing of Cotton Khadi Fabric with Natural dyes : Madder and Red-sandal wood, Pomegranate Rind and Babul (H D Sinnur, Ashis Kumar Samanta and D K Verma) **Indian Journal of Natural Fibres, Vol-4(2) , Jan -2018, pp 43 – 62.**
- 108) *Simultaneous Dyeing and Aroma Finishing of Jute Fabric" (A K Samanta, Kasmita Bhattacharyay) **Indian Journal of Natural Fibres, Vol-4(2) , Jan -2018, pp 81-97.**
- 109) Role of Major Constituents of Coconut fibres on absorption of ionic dyes, (A. K. Samanta, Leena Mishra and G. Basu) **Industrial Crops and Products, Vol-117, February 2018, pp-20-27**
- 110) Effect of Chemical Softening of Coconut Fibres on Structure and Properties of its Blended Yan with Jute (A. K. Samanta, Leena Mishra and G. Basu), **Fibres and Polymers, DOI 10.1007/s 12221-017-6614-0, Print Version Vol. 18 (2),January 2017,pp-357-368**
- 111) Appropriate Bleaching Technique for Coconut Fiber, (A. K. Samanta, Leena Mishra and G. Basu) **Journal of Natural Fibres** , on line published on 16.01.2018,DOI No. org/10.1080/15440478.2017.1423263, (Print Version)
- 112) Studies on Compatibility of Binary Mixture of Natural Dyes for Developing Compound Shades for Khadi Cotton Fabric "(Ashis Kumar Samanta, H D Sinnur and D K Verma), **AASCIT Journal of Materials , USA, Vol. 4(2), May 2018, PP 48-57 .**
- 113) Studies on Colouration and UV Protective Action of Anar Peel (Pomegranate Rind) as an Effective Natural Colorant for Cotton Khadi Fabric (H D Sinnur , Ashis Kumar Samanta , D K Verma and Runali Kaware), **Journal of Institution of Engineers (India) –Series-E (Chemical and Textile Engg.) (Springer Publication) , Vol-99 (1), June 2018, p 9-26**
- 114) Green Dyeing on Cotton Fabric Demodulated from Diospyros Malabarica and Camellia Sinensis with Green Mordanting Agent (A. K Samanta and A Hossain), **Latest Trends in Textile and Fashion Designing (Lupine Publishers), Vol. 2(2), 2018:LTTFD.MS.ID 000132, pp-1-8.**
- 115) Organic Colouration and antimicrobial finishing of organic cotton fabric by exploiting distilled organic extraction of organic Tectona Grandis and Azadirachta indica with Organic Mordanting Compare to Conventional Inorganic Mordants (A K Samanta, A Hossain, N S Bhaumik, P S Vankar and Dhara Shukla), **International Journal of Textile Science and Engineering, (Gavin Publishers), Published on line 4th June, 2018, DOI: 10.29011/IJTSE-113/100013, Vol-1 (issue 1), 2018, pp-1-12**
- 116) Pollution free dyeing on cotton fabric extracted from swietenia macrophylla and Musa Acuminata as unpolluted dyes and Citrus Lemon (L) as Unpolluted Mordanting agent (A K Samanta, A Hossain and A K M Saiful Islam) **Trends in Textile Engineering and Fashion Technology (Crimson Publishers), Published on line on 19th June, 2018, DOI:10.31031/TTEFT.2018.03.000558, Vol. 3(2), 2018:. pp-1-8.**
- 117) Non-toxic Coloration of Cotton Fabric using Non-toxic Colorant and Non-toxic Crosslinker, (Hossain A, Ashis Kumar Samanta, Bhaumik N S, Vankar PS and Shukla D,) **Journal of Textile Science & Engineering, Vol.8, issue 5, September 2018, DOI-10.4172/2165-8064.1000374**
- 118) Cost Minimisation in Sample Development and Approval Process by Proper Merchandising Action for Kids and Ladies Garments, (A. Hossain and Ashis Kumar Samanta), Trends and Textile Engineering and Fashion Technology, (Crimson Publishers), Vol-4, Issue-3, October 2018, Page – 1- 12, TTEFT .000590.2018 DOI – 10.31031/TTEFT.2018.04.000590
- 119) Standardization of Dyeing Process Variables for Dyeing of Cotton Khadi Fabric with Aqueous Extract of Babul Bark (Acacia Nilotica L.) (H D Sinnur, Ashis Kumar Samanta and D K Verma), **Journal of Institution of Engineers (India) –Series-E (Chemical and Textile Engg.) (Springer Publication) , Vol -99(2) , Dec 2018, p-187-207.**
- 120) Optimization of Antimicrobial finishing on cotton muslin fabric by treatment with PEG, Chitosan and Cetrimide, (Ashis Kumar Samanta, Asis Mukhopadhyay & Tapas Ranjan Kar) , MS No. IJFTR-1609, **Indian J. Fibre & Text Res., Vol -43, Dec -2018 , pp 441-449 .**
- 121) Studies on Compatibility of Selective Direct Dyes for Dyeing of Jute Fabric , **IJFTR-2059**, (A.K Samanta , A Konar ,Nilendu Sekhar Bhoumick and A N Ray) **Indian Journal of Fibre and Textile Research**Vol. 44, March 2019, pp. 98-106.
- 122) UV Protection And Antimicrobial Finish on cotton khadi fabric using a mixture of Nano Particles of Zinc Oxide (NP-ZnO) and Poly-Hydroxy-Amino Methyl Silicone (PHAMS), (Tapas Ranjan Kar, Ashis Kumar Samanta, Runali Kaware, & Mohammed Sajid) **Textile Research Journal, USA, published on line –DOI 10.1177/0040517518790973, Vol-89(11) 2019, p 2260-2278.**

- 123) **Statistical Optimisation of Nano Zinc Oxide based Fire Protective Finish Formulation on Jute Fabric** , By Ashis Kumar Samanta, Reetuparna Bhattacharyay (Roy) , Arindam Bagchi and Ranjana Chowdhuri, Published as a Chapter In a Book on: Functional Textiles and Clothing. Edited by Majumdar A., Gupta D., Gupta S, Springer-Nature, Singapore, Part – VIII (Textile Chemical Processing), **June 2019**, Pg.167 – 192
- 124) **Tannin Based Biomordants: New Perspective in improved natural dyeing** (Ashis K Samanta; Nilendu S Bhounik , Dhara Shukla and Padma S Vankar ,) **Chemical Methodologies Vol-3, July-2019,p-501-518**
- 125) Bio- Dyes, Bio Mordants and Bio-Finishes : Scientific Analysis for Its Application on Textiles (**by Ashis Kumar Samanta**) a chapter in a Book on Chemistry and Technology of Natural and Synthetic Dyes and Pigments , **on line published June-2020** , Published by In Tech Open publisher, London and Croatia, UK, **Edited by Prof A K Samanta (Chief Editor) and Prof Naseer Awwad and Dr Hamed Majdooa Algarni (Jt Editors), 2020-21**, ISBN:- 978-1-78985-998-0 : Print ISBN: 978-1-78985-997-3.
- 126) **Studies on Compatibility of Binary Mixture of Natural Dyes for Developing Compound Shades for Cotton Khadi Fabric, (IJFTR -3238) (by H D Sinnur, D K Verma and Ashis Kumar Samanta) , Indian J. Fibre & Text Res., Accepted in June-2020.**
- 127) **Statistical Optimisation of Ammonium Sulfamate and Urea Based Fire Protective Finishing of Jute Fabric by User Defined Quadratic Model (UDQM), (by Samanta Ashis Kumar, Bhattacharyya (Roy) Reetuparna, Bagchi A and Chowdhury Ranjana),**Proceedings of FTC-2020 International Seminar (at IIT-Delhi) held on 7th to 9th Feb-2020, being published by Springer-Nature, Singapore as book chapter in Book of Functional Textiles and Clothing-vol-2., Ed by Majumdar A.,Gupta D.,Gupta S, (Communicated in Feb-2020 and Accepted in May- 2020).-Under Process of publication.
- 128) **Statistical Optimization of Capric Acid Treatment on Cotton Fabric for Thermo-Regulating Finish to Produce Thermo-Tropic Smart Furnishing Textiles (Ayan Pal, Ashis Kumar Samanta & Tapas Ranjan Kar) –Communicated to Journal of Natural Fibres – June-2020**
- 129) **Study of effect of Phase Change Materials (PCM) like Capric Acid, Stearic Acid and PEG 600 on finishing of Cotton Khadi Fabric. (Tapas Ranjan Kar, Ashis Kumar Samanta; H D Sinnur & Mahesh Kumar); Communicated to Journal of Natural Fibres – June-2020**
- 130) **Optimization of dyeing process variables for eco-friendly dyeing of cotton fabric with Babul bark extract as a natural dye and Gallnut extract as a bio-mordant (by Yamini Dhanania, Deepali Singhee and & Ashis kumar Samnata)- Communicated to Journal of Natural Fibres – June-2020**

Additional Research papers under process (3) for Communication:

- 131) **Simultaneous Dyeing and Finishing of Cotton with Catechu as Natural dye and Neem /Orange Peel extract as Natural Finishing Agent to improve Antimicrobial and UV-Protective properties (Pubalina Samanta , A Konar , A chakraborty & Ashis Kumar Samanta), Indian Journal of Natural Fibres, to be communicated after revision**
- 132) ***A Study on Photofading Behaviour of Jute and Jute-Cotton Union Fabric with Application of Selective UV-Absorbers and Antioxidants, (A K Samanta & Deepali Singhee) , J. Textile Institute, (UK) , to be communicated in Dec -2020)**
- 133) ***Effect of Chemical modification of Jute Fabric with Hexamethylene Di-amine and its eco friendly dyeing with selective natural dye and reactive dye ,(A K Samanta, Mahadeb Datta, Sunanda Mitra Roy & Siddartha Datta), to be Communicated to Journal of Polymer Materials, to be communicated in Dec-2020**

Total Technical Articles & Review Papers Published by Prof. (Dr.) A.K. Samanta (1987- June 2019):

**[Total no. of review papers and technical articles : 50, Total no. of such papers on jute(marked by *) : 28
Total no. of review publications : 18, Other Technical Articles : 32]**

01. Polyester Fibre Production : A study on the use of TPA instead of DMT (A.K.Samanta, G.Basu), **Textile Trends**, December 1986, P-1.
02. Dyeing of Textured Polyester : Care in selection of dyes and necessary auxiliaries (A.K.Samanta), **Colourage**, 34, July 1987, P-26.
03. Polyester Fibre : A Review on its Structural Aspects (A.K.Samanta, D.S.Bandopadhaya, G.Bose), **Synthetic Fibres**, 16, April/ June 1987, P-6.
04. Di-electric heating application in textile processing : (A.K.Samanta), **Journal of the Institution of Engineers(India), Text Engg.**, 69, 1988, P-31.
05. Review on Polypropylene Dyeing : (A.K.Samanta), **Indian Textile Journal**, December 1988, P-208.
06. Thrust areas in non-traditional jute products:(P.Chakraborty, A.K.Samanta), **Indian Textile Journal**, July, 1990, P-60.
- 07.* Trading Aspects of Indian Jute Goods : Procedural Analysis (A.K.Samanta, P.Chakraborty), **Textile Trends**, 32, December 1989, P-39.
- 08.* Industrial forecasting with quantitative approach : A Review with case study in Jute Industry, (A.K.Samanta, P.Chakraborty), **Textile Trends**, 33, August 1990, P-38.
- 09.* Need of multi-tier technical manpower development for Indian Jute Industry : (A.K.Samanta, P.Chakraborty), **Textile Trends**, May 1992, P-41.
- 10.* A review on scope of small scale entrepreneurship development with jute based products : (A.K.Samanta), **Textile Trends**, November 1991, P-39 (Reprinted in IJT Annual Number,1991).
11. Review on basic and modified basic dyes for Acrylic fibres, (A.K.Samanta, D.Das),**Colourage**, Sept, 1992, P-70.
12. On-line colour control (for textile dyeing) : (A.K.Samanta), **Indian Textile Journal**, October 1992, P-70.
- 13.* A review and case study of computer application in jute or textile mills' dye house and computerized colour matching, (A.K.Samanta), **Textile Trend**, October 1993, P-37.
- 14.* Chemical finishing of jute and jute blended textiles- A review : (A.K.Samanta), **Colourage(XLII)**, 2, Feb, 1995, P-37
15. Review on Colour Control and Matching, by A.K. Samanata, **Indian Textile Journal**, May 1995, P-50.
- 16.* Human Resource Development : Different aspects of Training, Design, Delivery, Evaluation and Application to Jute/Textile /Industry, by A.K. Samanta, **Textile Trends**, Dec. 1997, P-32.
17. A Glimpse on Recent developments on man-made fibre world and chemical processing of textiles, (A.K. Samanta), **Mantra Bulletin**, June, 1997, p-3.
18. Tencel :ecofriendly cellulosic fibre (A.K. Samanta & S.K. Malkhandi) **Mantra Bulletin**, July,1997,p-11.
19. Care in making and use of overhead transparencies for better presentation (A.K. Samanta), **Mantra Bulletin**, august, 1997, p-12.
20. Highlights on current research work on production/ modification of Man-made fibres (A.K. Samanta), **Mantra Bulletin**, September, 1997, p-9.
21. Controls required for better presentation in a seminar (A.K. Samanta), **Mantra Bulletin**,October,1997, p-8.
22. Dyeing of microdenier polyester fabric (A.K. Samanta and B.R. Rao), **Mantra Bulletin**, Nov,1997, p-3.
23. Water conservation in Textile wet-processing (A.K. Samanta and P. Patil),**Mantra Bulletin**, Dec,1997,p-6.
24. Some highlights on current research progress on chemical processing of textiles (A.K. Samanta), **Mantra Bulletin**, January, 1998, p-18.
25. Fibre reinforced composites as wood substitute, an overview (A.K. Samanta) **MANTRA Bulletin**, February, 1998, P2.
26. Enzymes & their applications in Textile Wet Processing : (P. Patil & A.K. Samanta) **MANTRA Bulletin**, March, 1998, P3.
- 27.* Planning future HRD for Centralised and Decentralised Jute Sector : Need of Multitier/ vocational and refresher courses, by A.K. Samanta, **Textile Trends**, Sept. 1999, P-22.

- 28.* Lubricants : Chemistry, Properties, Evaluation and Application in textile Machinery, by A.K. Samanta and A. Konar, **Textile Trends**, June 1999, P-21.
- 29.* Eco-friendly processing of jute for fulfillment eco-criteria and pollution control norms, by A.K. Samanta, **Institute of Jute Technology- Annual Number**, Aug. 1999, P-40-57.
- 30.* Eco-criteria and eco-friendly Processing of Jute : An overview, by A.K. Samanta and D. Roy, **Textile Trends**, Feb. 2000, P-39.
31. How to make a better presentation in a Seminar or Training Programme, by A.K. Samanata, **Institute of Jute Technology- Annual Number**, Jan. 2000, P-19-27.
32. Benefits of Tencel Fibre, by A.K. Samanta, **Indian Textile Journal**, March 2000, P-16.
33. Recent Developments in Chemical Processing of Jute, by A. K. Samanta & T. K. Guha Roy, In 'Indian Jute- a new Symphony ', 2003.p-250-270 in the book published by JMDC , MOT ,GOI during International seminar held at Hotel Taj- Bengal, Kolkata, on 22-24th February,2003.
34. A review on use of spinning additives and chemical pretreatments on jute fibres aimed at improved spinnability and yarn properties, by A K Samanta, **Annual Number of IJT**, Feb, 2004, p-33.
- 35.* Merits of Jute Woven Sacks Over Polyolefin Woven Sacks, by Dr. A K Samanta, Kristy, 2004,p-39, Revised version entitled 'Comparative Merits and Demerits of Jute Woven Sacks and Polyolefin Woven Sacks (by A K Samanta) ,Re-printed in **Annual Number of IJT**, published in Re-Union, Jan, 2005,p-
- 36.* An Investigation of Productivity in Few Jute Mills of India and Bangladesh and Suggested Measures for Productivity Improvement in Weaving Section , (S K Ghosh and A K Samanta) **Man made Textiles In India, October** , 2006, p-382-402.
- 37* Introduction of Natural Dyes and Some studies on Its Application on Jute Substrate: (A K Samanta), **Annual Number of IJT**, Jan, 2007, p-31-39.
38. Application of Natural Dyes on Textiles : an Eco-Friendly Concept: A Review ((A K Samanta and Priti Agarwal), **Indian Science Cruiser**, vol-22, no-1, January-2008, p-28-44.
39. Application of Natural Dyes on Textiles : Review Article ((A K Samanta and Priti Agarwal), **Indian J. Fibre & Text Res.**, Vol-34,Dec, 2009, 384-399.
40. Chemical pretreatments and dyeing of jute : An Overview , (A K Samanta) , **Institute of Jute Technology- Annual Number**, Jan. 2009, P-23-48.
41. Fundamentals of Dyeing Natural Fibres with Natural Dyes, (A K Samanta & A Konar) , **Krishty-09**, 2009, 23-29.
42. Fundamentals of Computer aided Colour Matching and its possible use in Jute industry- **Institute of Jute Technology- Annual Number**, Jan. 2010, P- 35.
43. An overview on Flame Retardant Finishing of Jute.(A K Samanta), **Krishty-2011**,
44. Career Opportunity of B Sc Pass students in Jute and Allied Fibre Industry (A K Samanta) , In Book of Paper of Explorations in career counselling (edited by Chanchal Guha Roy and Kaberi Bhattacharyya) , published by Netaji Nagar Day College and Netaji Nagar College –Kolkata,30th Oct ,2014., Vol-1 , page 16-22.
45. Standardization of Methodologies for application of Natural dyes on Jute, Published in **Standards India Journal** of BIS, India Vol-28, no- 5, Dec2014 -Jan -2015, (ISSN 0970-2628) pp 22-40,
46. Property Advantages of Jute as Potential Natural Bast Fibre Suitable for different Technical Textiles (by A K Samanta) **Institute of Jute Technology- Annual Number**, Jan. 2016, pages 33-46,
47. Advantages of Jute as Natural Bast Fibre for different Technical Textiles (by A K Samanta) On Line Journal –Fibre 2 Fashion (www.fibre2fashion.com) –page 1-12, published on 31st March -2016.
48. Physical and Chemical Interventions in Cotton Muslin Fabric for Improvement in Dyeability with re-active dyes and anti-microbial properties (A K Samanta, Asis Mukhopadhyay and Tapas Ranjan Kar) Book of Paper and annula Number of B. Tech Alumni Association of Institute of Jute Technology, 24th January, 2016 - Ballygunge Science College Auditorium. p-9-40.
49. Fundamental of Natural Dyeing of Textiles Pros and Cons : Mini Review (A K Samanta, P Samanta and D Singhee) **Current Trends in Fashion Technology & Textile Engineering (Juniper Publishers) Vol. 2(4),2018:CTFTTE.MS.ID 555593(2018), pp. 01-08.**
50. Fibre Reinforced Composites: Multiplicity of Application (A K Samanta) :A review , **Latest Trends in Textile and Fashion Designing (Lupine Publishers), Vol. 1(3), 2018:LTTFD.MS.ID 000112, pp-1-3.**

Total List of Papers Presented in Seminars / Conferences by Prof. Dr A K Samanta (1988-June 2019)

[Total no. of seminar/conference papers: 88; Total no. of papers in international seminars/ conference: 13, Total no. of papers in national seminar/conference: 75 ;Total no. of seminar/conference papers on jute (marked by *) : 58]

- 01) "Dielectric heating application in Textile processing"-(A.K.Samanta), Annual paper meeting and National Seminar, by Institution of Engineers, Textile Engineering Division, Vadodara, 24th June, 1988.
- 02) "Some Studies on dyeing of polypropylene with basic dyes after its modification"-(A.K.Samanta, D.N.Sharma), National Seminar on Recent development of jute, synthetic and cotton and Annual day celebration programme of Textile Association (India), West Bengal Chapter, Calcutta, 24th September, 1989.
- *03) "Some studies of quality performance of handloom woven jute/cotton union fabric"- (A.K.Samanta, P.Chakraborty, D.Das), All India Seminar on Appropriate technology in handloom for cotton, jute and synthetics and their blends, Institution of Engineers (I), WBSC, Calcutta, 1st September, 1990.
- *04) "Studies on some variables for creating efficient database for computerized color matching of jute fabric with direct dyes"-(A.K.Samanta, D.Das), All India seminar on sickness and revival of Jute and Textile Industries through automation etc., Institution of Engineers (I), WBSC, Calcutta, 30-31st October, 1992.
- *05) "Caustic pre-treatment of Rotor spun Jute/Cotton blended yarn"- (A.K. Samanta, D. Das and S.K. Sett), All India seminar on "Process diversification for Jute and Textile Industries", Institution of Engineers (I), WBSC, Calcutta, 17-18th September, 1993.
- *06) A.K. Samanta, D. Das, P. Chakraborty, A. Chakraborty and S.K. Ghosh, "Some practical aspects of handloom weaving and in use quality performance of Jute/Cotton furnishing fabrics", All India Golden Jubilee Celebration Seminar on diversification of Jute Textiles and its specially product under UNDP-GOI project at TITS, Bhiwani, 4th December, 1993.
- *07) A.K. Samanta and D. Das, "Chemical processing of jute diversified products : HRD and R&D activity of IJT in this field, "National Workshop on Jute diversification under UNDP-GOI project on national jute programme at IJIRA, Calcutta, 1st November, 1996.
- 08) A.K. Samanta , B.R. Rao and S. R. Naik, "Problems and care in dyeing of microdenier polyester", 39th Technological Conference of NITRA-ATIRA-BTRA & SITRA, held at IIT Delhi in March, 1998, p-173.
- *09) A.K. Samanta and T.V.K. Srivastava, "Fibre reinforced composites as wood substitute : Multiplicity of Applications: Use of jute reinforced composites as picking stick in silk loom", National Seminar on Technical Textiles at SASMIRA, Mumbai, 31st January, 1998, p-115.
- *10) Eco-criteria and Eco-friendly Chemical Processing of Jute by Dr. A.K. Samanta and D. Roy. JMDC's National Workshop on Scouring , Bleaching &Dyeing of Jute for export market, Warangal, 23-25 September, 1998, at Hotel Ratna, Warangal.
- *11) Eco-friendly Chemical processing & Dyeing of Jute : a critical appraisal Dr. A.K. Samanta & D. Ray, Diamond Jubilee Celebration- National Seminar of TA(I), W.B. Unit, at Kennedy Hall, Institute of Jute Technology, Kolkata, 28th February, 1999.
- *12) Ecofriendly Chemical Processing and Reactive Dyeing of Jute : A.K. Samanta, D.K. Sinha, D. Das & D. Ray. NCJD's National Workshop in Jute bleaching & Dyeing. Kolkata 27-29th May, 1999.
- 13) Dyeing of Microdenier Polyester Fabric : A. K. Samanta, Conference of Textile Association (W.B.Unit) on Emerging Trends in Textiles at IE(I) Hall,Kolkata, on 17.02.2000.
- *14) Safety in Jute Mill : A. K. Samanta, Seminar on 'Safety & Occupational Hazards' at Ludlow Jute Mill, in Collaboration with Directorate of Factories, W.B.Unit on 29.07.01.
- *15) HRD on Maintenance practices of Jute Mills and Workers' Training by IJT : A. K. Samanta, JMDC's Workshop on Maintenance Practices by Jute Mills, at IJT, on 24.03.2001.
- 16) Application of single & mixture of Natural dyes on cotton fabric, A.K. Samanta, Dipalee Singhee & Mitu Sethia, Proceedings in 2nd National Convention on Natural dyes at IIT-Delhi, 17-18th December, 2001, p-20
- *17) HRD Training programmes for jute Mill workers : Present status & feed back analysis : by P.Ray & A.K. Samanta, Presented in National workshop on development on jute, under UNDP-CCF1-GOI –National jute subprogramme, held at IJIRA, on 5th January, 2002.

- *18) Application of “Selective UV absorber/antioxidant compounds on all-jute & jute/cotton union fabric aimed at reduction in sunlight fading/ yellowing by A.K. Samanta & Deepali Singhee, Proceedings of National Convention of Textile Engg.” Dt 5th –6th January, 2002, at WBSC, IE(I).
- *19) HRD Profile of Institute Of Jute Technology, by A.K. Samanta, in a workshop for all Jute Organizations held at IJIRA on 26.07.02 and the same presented further in Jute Commissioner’s Office on 16.08.02.
- 20) Challenges in wet processing of micro denier polyester fabrics : by A. K. Samanta, paper presented in TC Seminar 2003 on current challenges in Textile Processing, held at Textiles & Clothing Dept., J. D. Birla Institute, Kolkata – 700 020, on 1st Feb, 2003. Proceedings of the seminar, (Edited by D. Singhee), 1st feb, 2003, P – 43.
- 21) Recent Developments in Chemical Processing of Jute, by A. K. Samanta & T. K. Guha Roy, In the Book of Paper of International Seminar on ‘Indian Jute- a new Symphony ’, organized by JMDC , MOT ,GOI held at Hotel Taj- Bengal, Kolkata, on 22-24th February, 2003.p-250-270.
- 22) Employment Potential and HRD aspects of Indian and Bangladesh Jute Industries, by A.K. Samanta, Proceedings of the International Textile Conference organized by FAPTA and TAI, at World Habitat Centre, New Delhi, held on 1-3th December, 2003.
- 23) Productivity Improvement in Loom Shed, by A.K. Samanta and S. K. Ghosh, Proceedings of International Workshop on Productivity Improvement of Jute Industry, organized by International Jute Study Group, Dhaka, Bangladesh, held on 6-7th December, 2003 at IJSG-Auditorium, Dhaka.
- 24) Enzyme Treatment of Jute-Cotton Fabric Aimed at Improved Aesthetics and Textile Related Properties, by A.K. Samanta and Deepali Singhee, Proceedings of All India seminar of WBSC of IE(I), Textile Engg. Division, at Kolkata on 26-27th March,2004, p-J1.
- 25) Virtue of Jute Fibre In The Global Technical Textile Market, by P Ray, A K Samanta and M Datta, Proceedings of International Symposium cum Exhibition on jute-2004, at Technical University of Liberech, Checkoslovakia (Check-Republic), 28th & 29th May,2004, p-6. (Reprinted in the Proceedings of Annual Reunion of Institute of Jute Technology, Kolkata, on 11th January ,2006, p19-29)
- 26) Eco-safe Natural Dyes and its application on Textiles, Invited Seminar Lecture for B.Tech Students and Alumni of College of Textile Technology, Serampore , 28th August,2004.
- 27) Selective Softening Treatment of Jute Fabric, A K Samanta & Sunanda Mitra , Proceedings of the seminar of Textile Association (India), W.B.Unit, on ‘Role of textiles in the growth of agro-based industrial economy in eastern India’held at R N Mukherjee Hall of WBSC of IE(I) ,Kolkata, on 29th December,2004
- 28) Scope of Product Specific Applications of Jute in Diversified Sector, A K Samanta, S Bhattacharyay,& S K Ghosh and Proceedings of the 5th All India People’s Technology Congress held at Science City Auditorium , Kolkata, on 19-20 Feb-2005.
- 29) High Potential Jute Diversified Products : product specific application in rural sector , A K Samanta, S K Ghosh and S Bhattacharyay, Book of Paper of 18th National Convention of Textile Engineers and National Seminar on Innovative and Diversified Jute Products, held at Sir R N Mookerjee Hall, WBSC,IE(I), on 16-19th March,2005
- 30) Low Temperature Eco-friendly Bleaching of Jute and Jute-Cotton Union Fabric , A K Samanta & D Singhee, Book of Paper of 18th National Convention of Textile Engineers and National Seminar on Innovative and Diversified Jute Products, held at Sir R N Mookerjee Hall, WBSC,IE(I), on 16-19th March,2005, p-21
- 31) Dyeing of Jute Fabric with Selective Natural Dyes , A K Samanta, Priti Agarwal & S Dutta, Book of Paper of 18th National Convention of Textile Engineers and National Seminar on Innovative and Diversified Jute Products, held at Sir R N Mookerjee Hall, WBSC,IE(I), on 16-19th March,2005, p-85
- 32) Concurrent Acid Dyeing and Resin Finishing of Jute Fabric, by A K Samanta and Deepali Singhee, Proceedings of the 26th biennial conference on Globalisation: Impact on Family and community , 27-29th December ,2005, P- 66,& 74 (Organized by Home science Association of India, Pune Chapter, held at SNDT College of Home Science, Pune)
- 33) Wet Processing of Jute Yarns and Fabrics in Handloom Sector , By A K Samanta , in NCJD’s Awareness Workshop and Technical Workshop & Demonstration on Small Scale Entrepreneurship Development in Diversified Jute Products held at Circuit House Meeting Hall, Berhampore, Murshidabad, West Bengal, on 31st January,2006.& on 30.5.06 at Kolkata.

- 34 Study of Thermal Behaviour of Jute and Chemically Modified Jute Based Protective Technical Textiles, By Dr A K Samanta & Dr S K Biswas, Presented in the Workshop and Awareness Programme on Technical Textiles , Organised by IJT at Kennedy Hall , IJT on 7.2.2006.
- 35 Dyeing of Cotton Fabric with Single and Mixture of Natural Dyes , By A K Samanta, Priti Agarwal and Sidhartha Dutta , Proeedings of Technological Conference on Emerging Scenario in Textile Sector in the 55th Anniversary of The Textile Association (India), W B Unit , held at Kennedy Hall, IJT, on 19th Feb,2006,p-5
36. Application of single and mixture of natural dyes on jute fabric with selective mordants : Newer shade development and improvement in light and wash fastness aiming at export marketability ,by A K Samanta, Priti Agarwal and Siddhartha Datta, Book of paper of the All India Seminar of Textile Engg. Division of Institution of Engineers at Kolkata, on 29-30th March,2006, p-14
37. Application of Single and Mixture of Chemical Softeners on Bleached and Citric Acid Treated Jute-Cotton Union Fabric For Improved Softening and Crease Resistant Finish for better Export Market acceptability, by Dr A K samanta & Sunanda Mitra, Book of paper of the All India Seminar of Textile Engg. Division of Institution of Engineers at Kolkata, on 29-30th March, 2006, p-20
38. Wet Processing of Jute Yarns and Fabrics in Handloom Sector , presented by A K Samanta in NCJD's 1st, 2nd, 3rd, 4th and 5th Awareness and Technical Workshop on Small Scale Entrepreneurship Development in Diversified Jute Products consecutively held at Circuit House Meeting Hall, Berhampore, Murshidabad, West Bengal, on 31-01-06, at Middleton Chamber , Kolkata, on 30-05-2006, at Bihar Industry Association, Patna, on 23-06-06 and at Hotel Nihar , Bhagalpur ,Bihar, on 03-08-06 and at Hotel Satkar, Katihar, Bihar on 7th September, 2006 respectively.
- 39 Studies on Compatibility of the mixtures of Red sandal Wood and Other Natural Dyes Applied on Jute Fabric, by A K Samanta and Priti Agarwal , Proeedings of Technological Conference on Multidisciplinary Approach in Textiles in the 56th Anniversary of The Textile Association (India), W B Unit , held at Kennedy Hall, IJT, on 18th Feb,2007,p 6
- 40 Build Textiles and Eco-Textiles From Jute and Allied Fibres:Need Major Thrust, by Prof. A K Samanta, Book of Paper of All India Seminar on Technical Textiles in Civil Engg. held on 13th and 14th Sept, 2007 at Sir R N Mookerjee Hall of WBSC, IE(I), Kolkata., p70-77.
- 41 A Comparative study on the Buying Behaviour of Females of Various Age Groups towards selection of Clothings , By A K Samanta , Smita Parekh and Deepali Singhee, in the Book of Paper of XXVII Biennial Home Science Conference held at Indore on 27th to 29th December-2007, p5
- 42 Dyeing of Jute Fabric with selective single and Mixture of Natural Dyes: an Eco-Friendly Approach , by A K Samanta and Priti Agarwal , in the Book of Paper of International Symposium on Jute and Allied Fibre Production , Utilisation and Marketing jointly organized by Indian Fibre Society, CRIJAF and NIRJAFT(ICAR) ,held at Bhasa Bhavan , National Library, Kolkata on 9th to 12th January,2008 , P-104 (T-14).
- 43 Single and Mixture Dyeing of Jute Fabric with Jackfruit Wood and other Selective Natural Dyes : an Eco-Friendly Approach by A K Samanta and Priti Agarwal , in the Book of Paper of Young Researchers' Conference held at MUICT , Mumbai , on 22nd and 23rd January , 2008, P10.
- 44 Dyeing of Jute Fabrics using Tesu Extract: Effect of Mordant and Dyeing Process Variables in colour yield and colour fastness Properties , By A K Samanta , A Konar , Sarmishtha Chakrabarti and S Datta, Proceedings of the Seminar of The Textile Association (India) , W B unit, held on 21st February , 2009 at NIRJAFT , Kolkata.-P-12
45. Dyeing of Jute fabric with Manjishtha, A Natural Dye by A K Samanta, A Konar and Siddhatha Datta, in Book of Papers of All India Seminar on Challenges in Technology and market Development of Jute and Other Natural Fibre Industry held on 13-14th November , 2009 at Sir R N Mookherjee auditorium of WBSC, IE(I), Kolkata, organized by Textile Engg. Divn.,2009, WBSC, IE(I), p-15
46. Latest Innovation in the Finishing Scenario of Textile materials for its acceptability in Export market by S Mitra and A K Samanta , in Book of Papers of All India Seminar on Challenges in Technology and market Development of Jute and Other Natural Fibre Industry held on 13-14th November , 2009 at Sir R N Mookherjee auditorium of WBSC, IE(I), Kolkata, organized by Textile Engg. Divn., WBSC, IE(I), p-18
47. Natural Dyes for Dyeing Natural Fibres, by A K Samanta and A Konar, National Seminar on developing Trends in Natural Fibres and their applications (To observe the year 2009 as the International Year of Natural Fibres) , organized by Institute of Science, Education and Culture (ISEC), Kolkata-17, on 21st November, 2009, at the auditorium of Birla Industrial and Technological Museum, Kolkata.,p-2.

48. Studies on Dyeing Process Variables and Quantitative Colour Interactions for reactive dyed Jute Fabrics in relation to Computerised Colour Matching (A K Samanta , Sarmishtha Chakrabarti & T K Guharoy), National Seminar on 59th Anniversary celebration of The Textile Association (India) on 20th February 2010, at Kennedy Hall of IJT, Kolkata-19, p22.
49. Eco-friendly Application of Natural Dyes on Jute for Biotechnological Processing(A K Samanta and A Konar), p-174, Proceedings of International Seminar on Strengthening of collaboration for jute, kenaf and allied fibres research & development, on **8-9 June, 2011**, organized by International Jute Study Group (IJSG), Dhaka, Bangladesh.
50. Eco-friendly fashion in todays life, By A K Samanta and Sunanda Mitra Roy, Textile Association of India (W B Unit) Seminar on 24-9-2011 at Kennedy Hall , DJFT, IJT, CU
51. Application of natural dye for colouration of jute and cotton textiles (A K Samanta and A Konar), 2nd and 4th December, 2011 at National Workshop and Seminar. Silpa-sadan, Sriniketan, Visva-Bharati.
52. Simultaneous dyeing and fire-retardant finishing of jute fabric using an acid dye and FR finishing chemicals(A K Samanta and K Bhattacharya), National seminar on **26th Indian Engineering Congress, IE(I), _on 15th to 18th December 2011 at Bangalore.**
53. Todays trend in chemical finishing of garments, __By A K Samanta and Sunanda Mitra Roy, Textile Association of India (W B Unit) Seminar on 10-3-2012 at Kennedy Hall , DJFT, IJT, CU
54. Recent Progress in R & D of Chemical Processing of Jute for Development of Low Temperature Bleaching, Natural Dyeing, Computer aided Colour matching and Fire Retardant Finishing (A K Samanta & A Konar), Submitted to Engg. Science Section in Indian Science Congress, to be held on **3-7 th Jan,2013 at Kolkata , January' 2013, Page-71.**
55. Eco-friendly Salt free dyeing of amino acid modified cationised jute with reactive dyes (A K Samanta & A Konar and Sarmishtha Chakraborty) National Seminar –“Jute and allied Fibres in Changing times:issues and strategies” **in platinum jubilee of NIRJAFT,ICAR, to be held on 3-5 th January-2013 at NIRJAFT , Kolkata** January 2013, page-(Cp-06) -105.
56. Application on Natural dye on Jute Textiles for its Diversified Application - Book of abstract (**Proceedings**) of **National Seminar on ‘jute and allied fibres in changing times: issues and strategies’** published by NIRJAFT, ICAR, Kolkata, January 2013 page-(Cp-08) -107
57. Green Processing of Jute and other Textiles for fulfilment of Eco-Criteria and Pollution Control Norms ,(A K Samanta and A Konar) , Book of Paper and Conference Proceedings of International Conference on Environment and its Impact on Society held on **18-20th August,2013 , ISBN No. 978-93-5126-892-5 ,** at J D Birla Institute , Jadavpur University, Kolkata, , **2013, page 183-199.**
58. Studies on Fire Retardant and Rot Resistant Protective Chemical Finishing of Jute based Textiles ,(A K Samanta, A Bagchi , Reetuparna Bhattacharya and Ranjana Chowdhury) , Book of Paper and Conference Proceedings of International Conference on Environment and its Impact on Society held on **18-20th August,2013 , ISBN No. 978-93-5126-892-5;** at J D Birla Institute , Jadavpur University, Kolkata, , **2013, page 164-172. (* This paper received Best Paper award in this International seminar and award was given by Sri Abdul Kalam Azad, Ex – President of Govt. of India).**
59. Green Wet Processing of Jute and Other Textiles ,By Prof A K Samanta and Dr A Konar, IE(I) Seminar cum Buyer Seller Meet on Jute based Green Textile Products and its Environmental Impact on 28th Sept, 2013 at R N Mukherjee Hall ,WBSC,Institution of Engineers(India) Kolkata, **Proceedings of Book of Paper /Abstract , page no -9 , 2013.**
60. A study on acceptability of Jute fabrics for Diversified Household Textiles , By Dr A K Samanta, Dr Deepali Singhee and Saadgi Sanganeria , IE(I) Seminar cum Buyer Seller Meet on Jute based Green Textile Products and its Environmental Impact on 28th Sept, 2013 at R N Mukherjee Hall ,WBSC, Institution of Engineers(India) Kolkata, Proceedings of Book of Paper /Abstract , page no -10 , 2013.
61. Today’s Scenario of Garments and its environmental Impact , By Dr A K Samanta and Dr Sunanda Mitra Roy , IE(I) Seminar cum Buyer Seller Meet on Jute based Green Textile Products and its Environmental Impact on 28th Sept, 2013 at R N Mukherjee Hall ,WBSC,Institution of Engineers(India) Kolkata, Proceedings of Book of Paper /Abstract , page no -12, 2013.
62. Futuristic Natural and Manmade fibres for Technical Textiles, **by Prof. (Dr) A K Samanta, 28th Engineering Congress, Chennai by IE(I)-20-22 Dec,2013, Book of Paper of the said seminar, 2013, p-182 .**
63. Effect of Different Mordants, Extraction Condition and Dyeing Process Variables on colour Interaction Parameters and Colour Fastness Properties in dyeing of Jute Fabric with Catechu, (by A K Samanta , A Konar,

Mahadeb Datta and Siddartha Datta) A Natural Dye - Book of Papers & **Conference Proceedings of International Workshop** published by IWND (NAIP); ISBN : 978-93-83635-00-9, held on 5-7th March 2014 at NIMSME –ANGRU for NAIP (ICAR) -VCND College of Home Science, Hyderabad, AP., 2014, Page 133-144.

64. Poster Presentation on Application of Natural Dyes from Eucalyptus bark on Silk Fabrics and its different Characteristics , (By Dr Deepali Singhee, Dipika Baid and A K Samanta), In International Workshop on natural dyes (IWND)-NAIP held on 5-7th March 2014 at NIMSME –organized by ANGRU for NAIP (ICAR) -VCND College of Home Science, Hyderabad, AP.,(This poster received 2nd Best Award in IWND -2014 at Hyderabad).

65. Presented Invited lecture on **Application of Natural Dyes to Cotton and Jute Textiles : Science and Technological Aspects** and also **Co-Chaired one Technical session** at International Workshop on Natural Dyes (IWND) held on 5-7th March 2014 at NIMSME –organized by ANGRU for NAIP (ICAR) -VCND College of Home Science, Hyderabad, AP

66. Futuristic Natural and Manmade fibres for Technical Textiles-a Key Note Address given By Prof. (Dr) A K Samanta in the **Seminar of TA(I)-W B Unit On 29-03-2014 at Kennedy Hall , Dept. of Jute and Fibre Technology, IJT, Calcutta University.**

67. Property advantages of Jute as geotextile materials –A Special introductory lecture given by By Prof. (Dr) A K Samanta in the **two days** Continuing Educational Course cum Awareness workshop for Civil Engineers of West Benagal and other States sponsored By National Jute Board, MOT ,GOI, On 24th & 25th April-2014, held at Kenneday hall, **Dept. of Jute and Fibre Technology, IJT, Calcutta University.**

68. Fire Retardant Finish of Jute Fabric using Nano-Zinc Oxide : (by A K Samanta, Seiko Josh, Reeyuparna Roy And G Bose) , Proceedings of the **Indo-Czech International Conference (ICIC-2014)** held at Coimbatore at Kumarguru College of Technology , Coimbatore in collaboration with Technical University , Liberec(Czech Republic) on 29th and 30th April -2014, pp 157 -161.

69. Application on Natural dyes and Colouration of Textiles as a Biotechnological Processing for Home and Human Envelop –(by A K Samanta and A Konar) NIRJAFT and Indian Natural Fibre Society’s International Seminar on **Jute & Allied Fibre** at Kolkata on 1-3 August 2014 , published in **Book of abstract (OPT-28, pp.-160) and Proceedings of International Conference on Natural Fibres (Theme : Jute & Allied Fibre).**

70. **Fire Protective Chemical Finishing of Jute Fabric as Industrial Textiles using Sulphamate –Urea Synergism , (By A K Samanta , Reetuprna Bhattacharyay(Roy) and Ranjana Chowdhury) Special Lecture in plenary Session-VI, in 2nd International Conference on Industrial Textiles-Products, Applications and Prospects ,22 & 23rd August -2014 at PSG College , Coimbatore, Organised by PSG College , Coimbatore, India , HOF university ,Germany and IFM, DEAKIN University, Australia. Book of Abstract and Proceedings of the said Intl. Seminar , , Aug-2014, p-32**

71. Eco-Friendly Fire Resistance and Rot Resistance Chemical Finishing of Jute Fabrics for its use as Respective Protective Technical Textiles ,(By A K Samanta , Reetuprna Bhattacharyay(Roy) and Arindam Bagchi)– **International Conference on Technical Textiles and Nonwovens (ICTN-2014) at IIT-Delhi, 6-8th Nov -2014, Book of Abstract , CD and Proceedings of the said Intl. Seminar, Nov-2014.**

72. **Preparation of TEFRs and Bankable Proposal of R & D Project on Development of Fire Retardant Jute Fabric (By A K Samanta and Ajit Mathai and Dhruba Goel(Delloite) in Two Days Jute Convention cum workshop organized by NJB,MOT ,GOI and Indian Chamber of Commerce (ICC) on 23-24th Dec-2014 at Lalit Great Eastern Hotel,Kolkata,**

73. **Preparation of TEFRs and Bankable Proposal of R & D Project on Application of Natural Dyes on Jute Textiles (By A K Samanta and Ajit Mathai and Dhruba Goel(Delloite) in Two Days Jute Convention cum workshop organized by NJB,MOT ,GOI and Indian Chamber of Commerce (ICC) on 23-24th Dec-2014 at Lalit Great Eastern Hotel,Kolkata.**

74. **Delivered Key Note Address in Seminar of Textile Association,W B Unit on “Nano Technology Applications on Textiles ” By A K Samanta in One Day National Seminar Organised by Textile Association,W B Unit, at Kennedy Hall of Dept. of Jute and Fibre Technology, Calcutta University.**

75. **“Fire Retardant Finish of Jute Fabric using Zinc Oxide Nano Particle”, By A K Samanta, Reetuparna Roy, R Chowdhury , Seiko Jose and G Basu) Presented Paper and published Full Paper in Book of Technocal papers, 23-25th April-2015, pp -171 -182, in 3 days International Conference and Programme on**

Applications of Nano Materials in Textiles, , organized by Anchor Institute (Textile Sector) – Dept of Textile Engg , M S University of Baroda , Vadodara .

76. “Science and Technological Interventions in Cotton Muslin Fabric to Improve Physical properties and Dyeability” By A K Samanta, Tapas Ranjan Kar, Asis Mukherjee and Debasis Shome , **Paper presented in National Seminar on Indian Handloom Textiles in the Context Globalization , Textile Section , Silpa Sadana, Visva Bharati, 27th -28th June -2015. Book of Paper and abstract, p- 20.**

77. “Fire Retardant Finishing of Jute –Newer formulation developed and their F R performance : Need for Standardizations” presented by A K Samanta in Technical Session –II on 20th July at BIS-Manak Bhavan Auditorium , New Delhi , in BIS Seminar on Standardization of Technical Textiles- gateway to Make in India on 20th July followed by TXDC meeting on 21st July -2015.

78. “ Present Scenario of HRD for Jute Industry and Action Needed ” paper presented by A K Samanta and S K Ghosh jointly in **HRD Workshop for Jute Industry for an Industry-Institute Interaction on HRD need of Jute Industry, Organized by DJFT,IJT,CU in collaboration with NJB, MOT,GOI and held on 28th July - 2015.**

79. “Analytics of Natural Dyes : Test Protocol “ Paper Presented by Padma S Vankar and A K Samanta and Y A Shah, in **ISO-TC-38 International Meeting at Lyon, France on 12-15th Oct -2015.**

80. “Standard Course module for Mill Side and factory side workforce for Jute Sector” paper presented by A K Samanta and S K Ghosh jointly in **Textile Sector Council’s Workshop for Occupational mapping and functional analysis of all category of workforce of Jute Industry , Organized jointly by Textile Sector skill council and DJFT,IJT,CU in collaboration with Industry partners and held on 24th November at DJFT,IJT,CU and 11th Dec-2015 at Elluru at Hotel Athidi , Elluru ,AP**

81. Eco Friendly Interventions in Cotton Muslin Fabric to Retain its Strength and Improvement in Antimicrobial Properties Along with its Dye-Ability paper presented by A K Samanta, A. Mukhopadhyay and T R Kar , Book of paper (ISBN:978-1-5136-0951-5) in 3rd International Conference on Emerging Trends in Textiles, Fibre & Apparel Engg., Feb. 19-21, 2016, pp-52-70 organised by Govt. College of Engg. & Textile Technology, Berhampore, West Bengal,

82. 'Prospect of Jute as Potential Natural Bast Fibre suitable for Different Technical Textiles' by Prof. A K Samanta at the 29th (NCTX) National Convention of Textile Engineers scheduled to be held on 26-27, February, 2016-Institution of Engineers (India), Karnataka State Centre, Bangalore, 3, Dr. B R Ambedkar Veedhi, Bengaluru – 560 001, Karnataka.

83. “Application of Natural Dyes to Cotton and Jute Textiles: Science and Technological Issues” to be presented by Prof A K Samanta at RTCT-2016, Conference Proceedings (ISBN No – 978-93-5254-0980-1) on ‘REDEFINING TEXTILES: CUTTING EDGE TECHNOLOGY OF THE FUTURE (RTC T-2016), April 8-10, 2016, p-34 , organized by Textile Technology Dept. NIT, Jalandhar.

84. “Application of Natural Dyes on Cellulosic and Ligno-cellulosic Textiles: Scientific Analysis (A K Samanta) Book of Papers for two days National Workshop on Natural Dyeing of Textiles-in Batik and Shibori Styles, Kennedy Hall, DJFT, C.U., 16 & 17 Sept. 2016, p-XIII-1 to 31

85. “Compatibility of Natural Dyes vs Synthetic Dyes for Compound Shades (A Konar, A K Samanta, A N Roy and N S Bhaumik) Book of Papers for two days National Workshop on Natural Dyeing of Textiles-in Batik and Shibori Styles, Kennedy Hall, DJFT, C.U., 16 & 17 Sept. 2016, p-V-1 to 6

86. “Nano Particle Finish on Jute Textiles using Freshly prepared Nano-ZnO dispersed in Polymethyl Siliconate (PMS) (A K Samanta, Reetuparna Bhattacharya (Roy), Seiko Jose, G. Basu & Ranjana Chowdhury), Book of Paper (ISBN 978-93-84923-15-0) International Conference on Textiles and Clothing – Present and Future trends, Technology Campus of Calcutta University, Salt Lake, organized by DJFT, CU, January, 03-05, 2017, p-189-195

87. “Effect of Amino Acid Modification of Jute on dyeing for application of Anionic Dyes (by A K Samanta, A Konar, A N Roy and N S Bhaumik), Book of Paper (ISBN 978-93-84923-15-0) International Conference on Textiles and Clothing – Present and Future trends, Technology Campus of Calcutta University, Salt Lake, organized by DJFT, CU, January, 03-05, 2017, p-46-51

88. “A complete package of practice for accelerated retting of coconut fibre (G. Basu, Leena Mishra, Seiko Jose & A K Samantsa), Book of Paper (ISBN 978-93-84923-15-0) International Conference on Textiles and Clothing –

- Present and Future trends, Technology Campus of Calcutta University, Salt Lake, organized by DJFT, CU, January, 03-05, 2017,p-77
89. Fire Retardant Finish of Jute Fabric by using Nano ZnO dispersed in Poly Methyl Siliconate (PMS) , (Authored By A K Samanta, Reetuparna Bhattacharyay, Seiko Jose & Ranjana Chowdhury) **Presented by Ashis Kumar Samanta**, DJFT,IJT, CU, in Technical Seminar of Textile Association(India)-W B Unit, on its 66th Annual Day at Academy of Fine Arts auditorium, Kolkata, on 25th February-2017. Report Published in Journal of Textile Association, March –April issue -2017, Vol-77,(6), 2017 , p 420-421.
90. Simultaneous Cationization and Antimicrobial Treatment of Cotton Khadi Fabric with Potassium salt of Hydroxy Methyl Amino Silliconate and Poly Ethylene Glycol (PEG) to achieve improved microbial resistance and dyeability with reactive dye, (by Ashis Kumar Samanta, Tapas Ranjan Kar, Runali Kaware & Mohammed Sajid), **Presented by Ashis Kumar Samanta on 22nd June -2017 in 3rd International Conference on Natural Fibers (ICNF-2017)** on Advanced Materials for a Greener World, on 21-23 June 2017, at Hotel Melia Braga, Braga, Portugal, **June - 2017**.
91. Standardization by Statistical Optimisation of the Flame Retardant Finish Formulation with Nano-Particles of Zinc Oxide and Potassium Salt of Hydroxy Methyl Amino Siliconate (PHAMS) Ccombination by Using User Defined Quadratic Model (UDQM), Authored By A K Samanta, Reetuparna Bhattacharyay, Arindam Bagchi & Ranjana Chowdhury) and **Presented by Ashis Kumar Samanta**, DJFT,IJT, CU, in Technical Textiles and Clothing **-FTC-2018 International Seminar at IIT –Delhi** in collaboration with World University of Design-Sonepat and PSG college -Coimbatore. 9th -12th Feb -2018.
92. Transfer of Technology applicable in Cotton Khadi Sector , **Invited Special Lecture presented by Prof A K Samanta at MGIRI, for Scientist of MGIRI** (A Khadi Research Institute under MSME ,Govt of India) Wardha., 20th Feb-2018.
93. Simultaneous Dyeing and Fragrance Finishing of Jute Fabric , by A K. Samanta and Kashmita Bhattacharya, **Presented by A K Samanta at TINFS National Seminar**, Feb -22nd and 23rd -2018, NIRJAFT auditorium, ICAR ,Kolkata, Proceeeding of National Seminar on Market Driven Innovation in Natural Fibres, **Feb -22nd and 23rd , 2018, pp 144 -161**.
94. Imperatives for Technology Transfer in Natural Fibre Sector, **Invited lead paper Presented by A K Samanta at TINFS National Seminar**, Feb -22nd and 23rd -2018, NIRJAFT auditorium, ICAR, Kolkata., Proceeeding of National Seminar on Market Driven Innovation in Natural Fibres, **Feb -22nd and 23rd , 2018, pp 94 - 106**
95. Eco friendly Natural Dyeing and Finishing of Cotton , Silk and Jute textiles , **Invited Lecture presented by Prof Ashis Kumar Samanta in TEXCON -2018 National Seminar** at SVV ,Indore, SVVIT, Indore , 9th -10th March -2018.
96. Recent Trends in Eco-Textiles & Sustainable Fashion, **Key Note Lecture delivered by Prof A K Samanta on 27th March -2018 at JDBI (Under JU)** , Kolkata in 2 days National seminar on Recent Trends in Eco-Textiles & Sustainable Fashion held at JDBI auditorium , Kolkata on 27th -28th March-2018.
- 97 .Test Protocol of Identification of catechu, punica , Lac , Rheum Emodi and natural Indigo as Natural dyes, **presented on 18-10-2019 in plenary International Meeting of ISO TC-38 -2019 at Ponzano, Veneto, Triveso, Italy held on 13th Oct -18th Oct -2019 , on behalf of BIS as Indian Delegate and Expert member .**
98. Apllication of Natural dyes onTextiles : Scientific nalysis: **A special invited Guest Lecture Presented by Prof Ashis Kumar Samanta on 11-12-2019 in ICAR-NINFET (Erstwhile ICAR-NIRJAFT), Rani Kuthi, Tollygunge , Kolkata, in ICAR approved Winter School on Advances in Product Diversification and waste Utilization of Natural Fibres 3rd to 23rd December-2019.**
99. Sustainable Textile Processing , dyeing and finishing , **a key note address (as invited Special Guest’s lecture) by Ashis Kumar Samanta , Presented on 18-12-2019 in International Technical Seminar and Town Hall Discussion** on Textile Testing and processing Equipment for Quality Improvement, at Hotel Sector-7, Uttara, Dhaka, Bangladesh. Under chairmanship of Prof Ayub Nabi Khan, Pro-VC, BGMEA University of Fashion and Technology, Dhaka.
- 100. Sustaianable Dyeing with natural dyes : Scientific analysis – by Ashis Kumar Samanta , a paper Presented on 19-12-2019 on 2nd day of International Technical Seminar and Town Hall Discussion on Textile Testing and processing Equipment for Quality Improvement , at Hotel Sector-7, Uttara, Dhaka, Bangladesh.** Under chairmanship of Prof Md Abdul Kashem , Vice Chancellor, Bangladesh University of Textiles, Dhaka.
- 101. Standardization by Statistical Optimisation of the Flame Retardant Finish Formulation Using Ammonium Sulphamate and Urea Ccombination with User Defined Quadratic Model (UDQM), Authored By A K Samanta, Reetuparna Bhattacharyay, Arindam Bagchi & Ranjana Chowdhury) and Presented by Ashis Kumar Samanta, DJFT,IJT, CU, in Functional Technical Textiles and Clothing -FTC-2020 International Seminar at IIT –Delhi** in collaboration with World University of Design-Sonepat and PSG college -Coimbatore. **7th -9th Feb -2020.**
-

Patents Filed and and Invited Lectures delivered:

A) No of Patents filed by Prof A K Samanta : One : in 2018 (details are as given below :)

*One patent is filed for DJFT 'S TC-natural dyeing and finishing research project on 22/05/18 (Application No-20183109080 and application receipt no-8818) on “Method For Dyeing A Textile Product Using Extract Of Eucalyptus Leaves And The Extract Dye Thereof” to the Controller General of Patent Design & Trade Marks, Patent Office Govt. Of India, Kolkata through M/s Datta and Associates , Kolkata (Law firm cum consultant for IPR) under the following research project :

Title of the Project :: **Development of Eco-friendly Natural Fibre Based Textile (OEKO-TECH products) with simultaneous Natural Dyeing and Natural Finishing and to Establish Natural dye/finish Mark, Funding Authority : Ministry of Textiles , Govt. Of India. Patent Filed Jointly By A K Samanta(DJFT, CU) and P S Vankar(IIT-Kanpur)**

Name of the PI: Prof. A K Samanta, Professor & Former HOD, DJFT, IJT, CU and

Name of Consultant cum Co-PI: Dr. Padma S Vankar on behalf of FEAT, IIT- KANPUR, (Presently Sr part Time Consultant, Natural Dye Project of DJFT,IJT,CU)

Name of Collaborating Technical Research Partner: FEAT/ Chemistry Dept, IIT-KANPUR, KANPUR, UP (Represented by DR P S Vankar as Co Pi)

Name of Collaborating Industry Partner: M/S AMA Herbal Laboratories Pvt. Ltd. 352/116-G, Talkatora Road, RajajiPuram, Industrial Area, Lucknow – 226 017

B) Invited lectures Delivered :

- (i) Delivered invited lectures on special topics of Fibre Science and Chemical Finishing and Eco-friendly processing of Textiles at J D Birla Institute under Jadavpur University from 2009 to 2014.
- (ii) Simultaneous Cationization and Antimicrobial Treatment of Cotton Khadi Fabric with Potassium salt of Hydroxy Methyl Amino Siliconate and Poly Ethylene Glycol (PEG) to achieve improved microbial resistance and dyeability with reactive dye, (by Ashis Kumar Samanta, Tapas Ranjan Kar, Runali Kaware & Mohammed Sajid), , Presented by Ashis Kumar Samanta on 22nd June -2017 in 3rd International Conference on Natural Fibers (ICNF-2017) on Advanced Materials for a Greener World, on 21-23 June 2017, at Hotel Melia Braga, Braga, Portugal, June -2017.
- (iii) Standardization by Statistical Optimisation of the Flame Retardant Finish Formulation with Nano-Particles of Zinc Oxide and Potassium Salt of Hydroxy Methyl Amino Siliconate (PHAMS) Ccombination by Using User Defined Quadratic Model (UDQM), Authored By A K Samanta, Reetuparna Bhattacharyay, Seiko Jose & Ranjana Chowdhury) and Presented by Ashis Kumar Samanta, DJFT,IJT,CU, in Technical Textiles and Clothing -FTC-2018 International Seminar at IIT –Delhi in collaboration with World University of Design-Sonepat and PSG college Coimbatore. 9th -12th Feb -2018.
- (iv) Eco friendly Natural Dyeing and Finishing of Cotton , Silk and Jute textiles , Invited Lecture presented by Prof Ashis Kumar Samanta in TEXCON -2018 National Seminar at SVV ,Indore, SVVIT, Indore, 9th -10th March -2018.
- (v) Transfer of Technology applicable in Cotton Khadi Sector, Invited Special Lecture presented by Prof A K Samanta at MGIRI, for Scientist of MGIRI (A Khadi Research Institute under MSME, Govt of India) Wardha., 20th Feb-2018.
- (vi) Imperatives for Transfer of Technology in Natural Fibre Sector, Invited lecture Presented by A K Samanta at TINFS National Seminar, Feb -22nd & 23rd -2018, NIRJAFT auditorium, ICAR, Kolkata.

- (vii) Recent Trends in Eco-Textiles & Sustainable Fashion, Key Note Lecture delivered by Prof A K Samanta on 27th March -2018 at JDBI (Under JU), Kolkata in 2 days National seminar on Recent Trends in Eco-Textiles & Sustainable Fashion held at JDBI auditorium, Kolkata on 27th to 28th March , 2018.
- (viii) Test Protocol of Identification of catechu, punica , Lac , Rheum Emodi and Natural Indigo as Natural dyes, **presented on 18-10-2019 in plenary International Meeting of ISO TC-38 -2019 at Ponzano, Veneto, Triveso, Italy held on 13th Oct -18th Oct -2019 , on behalf of BIS –Txd-07 as Indian Delegate and Expert member.**
- (ix) Application of Natural dyes on Textiles : Scientific analysis: **A special invited Guest Lecture Presented by Prof Ashis Kumar Samanta on 11-12-2019 in ICAR-NINFET (Erstwhile ICAR-NIRJAFT), Rani Kuthi, Tollygunge , Kolkata, in ICAR approved Winter School on Advances in Product Diversification and waste Utilization of Natural Fibres 3rd to 23rd December-2019.**
- (x) Sustainable Dyeing with natural dyes : Scientific analysis – by Ashis Kumar Samanta , **a paper Presented on 19-12-2019 on 2nd day of International Technical Seminar and Town Hall Discussion on Textile Testing and processing Equipment for Quality Improvement , at Hotel Sector-7, Uttara, Dhaka, Bangladesh.** Under chairmanship of Prof Md Abdul Kashem , Vice Chancellor, Bangladesh University of Textiles, Dhaka.
- (xi) Sustainable Textile Processing , dyeing and finishing , **A key note address (as invited Special Guest's lecture) by Ashis Kumar Samanta , Presented on 18-12-2019 in International Technical Seminar and Town Hall Discussion** on Textile Testing and processing Equipment for Quality Improvement, at Hotel Sector-7, Uttara, Dhaka, Bangladesh. Under chairmanship of Prof Ayub Nabi Khan, Pro-VC, BGMEA University of Fashion and Technology, Dhaka.

List of Books / Manuals and Book Chapter Authored Edited & Published up to 2019 by Prof. A.K.Samanta :**(01) . No. of Books Published as author /co-author: Five (5)**

- (i) Technical Hand Book On Natural Dyes and Colouration - Authored by A K Samanta and A Konar Published by Dept. of Jute and Fibre Technology, IJT , Calcutta University , November ,2012.
- (ii) Training Manual/ Book on “Short Course on Bleaching, Dyeing, Printing and Finishing of Jute” By D. K. Sinha, A. K. Samanta, D. Das. This Manual/ Book brought out by IJT in June, 1994, in its UNDP-GOI sponsored project on HRD for Jute Sector, 1993-1998.
- (iii) Technical Hand Book on Energy Management for Jute Mills- Authored by A K Samanta, S K Bandopadhyay & M K Lahiri, Published by IJT, June, 2010.
- (iv) Managing Behavioural Aspects for effective use of Human Resources- Authored by A K Samanta and S K Banerjee, Published by IJT , Jan-2011,10 chapters and total pages-1-169).
- (v) One Laboratory manual as Practical Guidelines for Textile Chemical Processing Practical –III on Chemical Finishing and allied Processes and their evaluation for Part-4 Students of B Tech in Jute and Fibre Technology Course No. 453 under the University of Calcutta, March, 2006., 53 pages.

(02) Contributed for Book Chapter of International /National books: Ten (10)

- (i) Contributed one special chapter on ‘*Recent Developments in Chemical Processing of Jute*’ By A K Samanta and T K Guha Roy in the Book ‘Indian Jute-a new symphony’ Published by JMDC, Ministry of Textiles, GOI on, Feb’2003,P-250-270
- (ii) Contributed One Special chapter on “*Chemical Processing of Jute*” By A K Samanta and T K GuhaRoy in the Book ‘Jute-basics “ edited by D Sur, as an International Core Book on jute published by IJSG, Dhaka –May-2010 at IJSG, Dhaka., P- 91-107
- (iii) Contributed One Special chapter on “*Dyeing of Textiles with Natural Dyes* ” By A K Samanta and A Konar, in the International Book on ‘Natural Dyes “edited by E Perrin Akcakoca Kumbassar and published by In-Tech International Publisher , Croatia , October , 2011, (ISBN-978-953-307-783-3) , P- 29-56. (Surpassed 41000 downloads worldwide from Publisher’s website)
- (iv) Contributed One Book chapter on “*Eco Friendly Chemical Processing of Jute* ” By A K Samanta in the Book on “Extraction , Processing and Diversification of Jute and Allied Fibres, Edited by A N Roy and L K Nayak, and published by NIRJAFT,ICAR., August -2015, chap-14, page 141-168.
- (v) Contributed one Book Chapter on “Application of Natural Dyes to Cotton and Jute Textiles: Science and Technology and Environmental Issues” , by Prof. Ashis Kumar Samanta in Handbook of Renewable Materials for Coloration and finishing , Ed by Prof Md Yusuf, John Wiley & Sons - SCRIVENER publishing : **July – 2018**, Chapter – 11, pp 213 – 278
- (vi) Contributed and published one Book Chapter on “ Study of Dyeing Process Variables on Soyabean Extract treated Cotton and Jute Fabrics authored by H Baite, Ashis Kumar Samanta, N S Bhaumik, P Mallik and K K Samanta, in a Book on Natural Fibre Resource Management for sustainable

development 'chief Editor –A N Roy , Published by Creative Incorporate and TINFS, Kolkata, India , April-2019, ISBN-9788194100904, pp-188-197.

(vii) Contributed and published one Book Chapter on “Statistical Optimisation of Nano Zinc Oxide based Fire Protective Finish Formulation on Jute Fabric , by Ashis Kumar Samanta, Reetuparna Bhattacharyay (Roy) , Arindam Bagchi and Ranjana Chowdhuri, Published as a Chapter in a Book on Functional Textiles and Clothing. Edited by Majumdar A.,Gupta D.,Gupta S, published by Springer-Nature, Singapore, Part–VIII (Textile Chemical Processing), **June 2019**,P.167 – 191 , DOI No. <http://doi.org/10.1007/978-981-13-7721-1>

(viii) Contributed and published One book chapter entitled **Processing of Jute Fibre and its Applications --authored by Prof. A K Samanta, Prof. A Mukhopadhyay and Prof. S K Ghosh**, in **Handbook of Natural Fibres,Vol-2: processing and application, 2nd edition, Chapter 2, p-49-120, Jan-2020**, Ed by R M Kozlowsky & Maria M Talarczyk and published by Elsevier, Woodhead publishing and The Terxtile Institute , UK jointly in Jan-2020.

(ix) Contributed and published One book chapter entitled as BIO-DYES, BIO-MORDANTS AND BIO-FINISHES : SCIENTIFIC ANALYSIS FOR ITS APPLICATION ON TEXTILES (by Ashis Kumar Samanta) in a Book on Chemistry and Technology of Natural and Synthetic Dyes and Pigments , Published by In Tech Open publisher, London and Croatia, UK, **Edited by Prof A K Samanta (Chief Editor) and Prof Naseer Awwad and Dr Hamed Majdooa Algarni (Jt Editors) , June-2020 (2020-21) , ISBN-: 978-1-78985-998-0 : Print ISBN: 978-1-78985-997-3.**

(x) Contributed and published One book chapter entitled **Statistical Optimisation of Ammonium Sulfamate and Urea Based Fire Protective Finishing of Jute Fabric by User Defined Quadratic Model (UDQM)**, (by Samanta Ashis Kumar, Bhattacharyya (Roy) Reetuparna, Bagchi A and Chowdhury Ranjana),Proceedings of FTC-2020 International Seminar (at IIT-Delhi) held on 7th to 9th Feb-2020, being published by Springer-Nature, Singapore as book chapter in Book of Functional Textiles and Clothing-vol-2,. Ed by Majumdar A.,Gupta D.,Gupta S, (Communicated in Feb-2020 and Accepted in May- 2020).-Under Process of publication

(3) Book Edited by Prof A K Samanta

(i) Edited and published one international book on “Chemistry and Technology of Synthetic and Natural Dyes and Pigments” published by In Tech-Open Publisher, London and Croatia, U.K. Edited by Prof A K Samanta(Chief Editor) and Prof Naseer Awwad and Dr Hamed Majdooa Algarni (Jt Editors) , June-2020(2020-21), ISBN-: 978-1-78985-998-0 :Print ISBN:978-1-78985-997-3. ISBN: 978-1-78985-997-3.

05) No. of Training Manuals/ Monograph / Book Edited : Eleven (11)

Followings eleven Training Manual / Books were edited by Prof A K Samanta for Workers' Trg.- on Jute Processing (Mill Side & Factory Side) , for Training of Weaving Sardars & also for Maintenance of Jute Mill Machinery), authored by IJT-faculty Members (**In English/ Bengali**) during December, 2000- March, 2004, **under UNDP-CCF1-FAHP-JUTE SUB-PROGRAMME:**

The Followings are the details of those Training Manuals **Edited and Compiled by A. K. Samanta :**

- a) **A.K.Samanta and A. Mukherjee jointly Compiled and Edited Four Workers' Training Manuals Part-A1-A4:Mill Side (4 parts in Bengali and 1 combined volume in English):** Jute Batching/ Selection to Jute Spinning: December- 2000- March 2003, authored by Institute's Faculty-Members (as mentioned below) :
 1. Training Manual on Jute Selection & Batching (Beng.& Eng): **A. Mukherjee & K.K. Dalapati**
 2. Training Manual on Jute Carding (Beng.& Eng): **A. Chowdhury**
 3. Training Manual on Jute Drawing (Beng.& Eng): **A. Chowdhury**
 4. Training Manual on Jute Spinning (Beng.& Eng): **S. K. Sett & K.K. Dalapati**
- b) **A.K.Samanta, P.Ray and A. Mukherjee jointly Compiled and Edited another Four Workers' Training Manuals Part-B1-B4: Factory Side (4 parts in Bengali and 1 combined volume in English):** Jute Winding to Jute Sack-Sewing &Finishing : December- 2000- March 2003, authored by Institute's Faculty-Members (as mentioned below):
 1. Training Manual on Jute Winding (Beng.& Eng): **P. Ray & S.C.Ray**
 2. Training Manual on Jute Sizing & Beaming (Beng.& Eng): **A. K. Chakraborty**
 3. Training Manual on Jute Weaving (Beng.& Eng): **A. K. Chakraborty**
 4. Training Manual on Jute Sack Sewing & Finishing (Beng.& Eng): **S. K. Ghos**
- c) **A.K.Samanta and P.Ray jointly edited one Training Manual in Bengali & English version for Training of Weaving Sardars** of Jute Mills: in **March-2003**, authored by Institute's Faculty.
 1. (a) Training Manual for **Weaving Sardars** of Jute Mills :(**Beng. & Eng. Version**) :by **S. K. Ghosh**
(b) Training Manual for **Weaving Sardars** of Jute Mills :(**Hindi Version**) edited by **A K Samanta**
- d) **A.K.Samanta, Compiled & Edited Two Training Manuals On Maintenance of Machinery of Jute Mills (in English): March-2003 & March-2004** authored by Institute's Faculty-Members and Industry Experts (as mentioned below) :
 1. Training Manual On Maintenance of Mill Side Machinery of Jute Mills (English) :
B.N. Mukherjee, D. N. Samanta, A. Bhattacharaya & K.K. Dalapati.
 2. Training Manual On Maintenance of Factory Side Machinery of Jute Mills (English) :
B.N. Mukherjee, D. N. Samanta & S K Ghosh

06) A K Samanta is the Translating Author and Editor of above said **Nine (4a to 4b & 4c) Training Manuals in Hindi version** for **Eight Workers' Training Manuals** - on Jute Processing (Mill Side & Factory Side) :Jute Batching/ Selection to Jute Finishing during December- 2000- March 2003 and also for one Training Manual for Weaving Sardars of Jute Mills, during March-2004.

(A) Nos. of PhD Scholar Guided : 15 nos.

Ph. D. research Programme Guided by Dr.A.K.Samanta (1999-2018) : Total Twelve (12 Completed as per list given below and & 3 Continuing, at present ,)

Srl No.	Title of the Thesis	Name of Ph.D. Student /Researcher	Dept./ Faculty & University	Guided by	Status of Completion / degree Award
01.	Effect of Selective treatments of Jute on its Processibility. (PhD. Regdn. date 03-10-2000)	Gautam Basu NIRJAFT, Kolkata	Dept. of Polymer Sc. University of Calcutta	Dr.A.K.Samanta & Prof. P.Ghosh	PhD degree awarded in December -2004
02.	Studies on Selective Chemical treatments of Jute, Cotton and Jute/Cotton union fabrics. (PhD. Regdn. date 01-9-1999)	Deepali Singhee, J.D.B.Inst., Kolkata	Dept. of Chemistry Jadavpur University	Dr.A.K.Samanta & Prof. K.K Mahalanabis	PhD degree awarded in May-2005
03.	Chemical modification on Jute and Jute/ Cotton Union furnishing fabric (PhD. Regdn. date 01-02-2002)	Sunanda Mitra . Faculty.ATDC,Kolkata AEPC, MOT,GOI Lecturer,RBGC,CU	Dept. of Chemistry, Jadavpur University	Dr.A.K.Samanta & Prof. K. K Mahalanabis	PhD degree awarded in April-2007
Srl No.	Title of the Thesis	Name of Ph.D. Student /Researcher	Dept./ Faculty & University	Guided by	Status of Completion / degree Award
04.	Studies on Dyeing of Jute and Cotton Textiles with Selective Natural Dyes (PhD. Regdn. date 17 th November, 2004)	Priti Agarwal Full time research Scholar and later Lacturer , RBGC, CU	Dept. of Chemical Engineering, Jadavpur University	Dr.A.K.Samanta & Prof. Siddhartha Dutta	PhD degree awarded in April -2008
05	Studies on Protective Chemical Finishing of Jute based Textiles	Arindam Bagchi , TRF ,IJT & later Master Trainer,,ISDS , IJT	DJFT, IJT, University of Calcutta	Prof. A K Samanta	PhD Degree Awarded in Jan-2013.
06	Physico-chemical studies on colour related parameters for dyeing of Jute and chemically modified Jute Textiles	Sarmistha Chakrabarti (Mukherjee), Fellow ,IJT and later Lecturer, RBGC, CU	DJFT, IJT, University of Calcutta	Prof. A K Samanta and Dr A Konar (Associate Supervisor)	PhD Degree awarded in Dec-2014
07	Chemical Pretreatments and Dyeing of Jute Fabric with Natural dyes	Mahadev Datta, Asst Director (Tech) , NJB	Dept of Chemical Engg., Jadavpur University	Prof. A K Samanta & Prof Siddhartha Datta	PhD Degree awarded in Oct -2015
08	Studies on Effect of Physical and Chemical Intervention on the Properties of Cotton Muslin Fabric	Tapas Ranjan Kar , Dy Director, MGIRI,Wardha	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta & Dr Asis Mukhopadhyay And Dr M Bhagwat (Asasociate Supervisor)	PhD Degree awarded in May-2016
09	Study on Physico-Chemical Parameters for Sequential and Concurrent Dyeing and	Mrs Kashmita Bhattacharya, SRF/Project Officer,IJT /NTC	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta	PhD Degree awarded in June-2017

	Finishing of Jute Fabric				
10	Effect of Different Chemical treatments for development of Fire Retardant jute fabric	Reetuparna Bhattacharyya(Roy), JRF & later P O , ISDS	Dept of Chemical Engg., Jadavpur University	Prof. A K Samanta & Prof Ranjana Chowdhury	PhD Degree awarded in December 2017
11	Effect of selective Treatments of Coconut Fibre on its Processibility	Leena Mishra ,Fellow ,NIRJAFT	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta & Dr Gautam Basu ,NIRJAFT	Regdn. Done on Dec, 2012 and PhD Degree awarded in Dec2018
12	Eco-friendly Chemical Processing of Jute and Blended Jute Substrate	Nilendu Sekhar Bhaumik , Fellow NIRJAFT	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta And Prof A Konar & Dr A N Roy, NIRJAFT (Asasociate Supervisor)	Regdn. Done on Feb- 2012, Thesis Submitted in Feb - 2017. PhD Degree Awarded in Jan 2019

(B) Nos. of Phd Scholar Continuing at present :

Srl No.	Title of the Thesis	Name of Ph.D. Student /Researcher	Dept./ Faculty & University	Guided by	Status of Completion / degree Award
13	Simultaneous Dyeing And Chemical Finishing of Silk and Cotton Textiles With Selective Natural Dyes and Finishing Agents	Yamini Dhanania, Asst. Professor, JDBI, JU, Kolkata	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta, DJFT, IJT, CU and Dr. Deepali Singhee, Principal-JDBI	Ph.D Regdn. Submitted on Dec 2018 and PhD Regdn obtained in Dec-2019
14	Chemical Treatments of Cotton and Jute Fabrics for Imparting Thermo-Regulating and Fire Retardant Finish	Ayan Pal, Quality Assurance Officer, Textiles Committee, Salt Lake, Kolkata	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta, DJFT, IJT, CU and Dr. Tapas Ranjan Kar, Dy. Director, MGIRI, Wardha	Ph.D Regdn. Submitted on Dec 2018 and PhD Regdn obtained in Dec-2019
15	Studies on Extraction, Characterization and Application of Selective Natural Dyes on Jute Textiles	Ritwik Chakraborty, Scientist, IJIRA	Dept of Jute & Fibre Tech, IJT, University of Calcutta	Prof. A K Samanta, DJFT, IJT, CU and Dr. P S Vankar, Ex-Scientist, IIT Kanpur	Ph.D Regdn. Submitted on Dec 2018 and PhD Regdn obtained in Dec-2019

(C) External PhD Thesis adjudicated: Five (5)

Srl No.	Title of the Thesis	Name of Ph.D. Student /Researcher	Dept./ Faculty & University	Date / Year of Adjudication
01	Studies on Natural Colorants ---- and their chemical Characterization	Salini Dixit	Applied Chemistry Chhhatrapati Shahuji Maharaj University Kanpur	2011-12
02	Studies on Application of Natural Dyes -----on Cotton and Silk Fabrics	M Kumaresan	Chemistry Dept. Anna University , Chennai	April -2012 and viva taken on 18 th June -2012
03	Synthesis , characterization and application of Nano particles for enhanced Performance of Textiles	Bharat H Patel	Dept. of Textile Chemistry, MS University, Vadodara	Dec-2012.
04	Removal of textile dyes from aqueous solutions using activated carbon and polymer coated sawdust prepared from cordia sebastena plant –a comparative	Ms. Geetha A	Chemistry Dept. Anna University , Chennai	March-2016

	study			
05	Studies on the performance of stainless steel and aluminum electrodes in the removal of textile dyes from aqueous solution using electrochemical method	Sakthisharmila P ; Ref.No: 1424769727/Ph.D ./AR8,	Chemistry Dept. Externanl Evaluation of the Ph.D Thesis of Anna University, Chennai	Dec-2018

**Total No. of MASTERS (M.Sc. or M. TECH.) DISSERTATION/ THESIS AND PhD RESEARCH WORK
GUIDED BY PROF. (DR.) A.K. SAMANTA (1995-2018)**

(A) **M. Tech/ M. Sc. Dissertation Guided by Dr.A.K.Samanta (1995-2018): 19(nineteen) (as given below)**

No.	Year	Name of the Project	Done by	Name of Guide	Name of Jt Guide or Co-Guide
01	1995	Some studies on Characteristics of Chemically textured/ untextured Jute/polypropylene blended blanket fabric.	B. Mitra M.Tech Thesis TITS,Bhiwani,M DU,	K.N.Chattopadhyay A.Mukherjee	A.K.Samanta
02.	1996	Studies on single and mixed solvents pre-treatments on textured PET multifilament yarn to improve its dyeability & dye uniformity.	T.N.Patra M.Tech Thesis TITS,Bhiwani,M DU	R.K.Singh D.P.Chattopadhyay	A.K.Samanta
03.	1997	A Comparative Study on the Buying Behaviour of female of various age groups towards selection of clothings.	Smita Parikh M.Sc.Thesis J.D.B.Inst. Kolkata	Deepali Singhee	A.K.Samanta
04.	1998	Studies on washing performance of -a few Selective Surfactants	Sunanda Mitra M.Sc.Thesis J.D.B.Inst.,Kolkata	Smita Parikh & Deepali Singhee	A.K.Samanta
05.	1999	Studies on Chemical pre & post treatments of Polyester microdenier fabric for improved dyeability.	A.Konar M.Tech Thesis TITS,Bhiwani,M DU	D.N.Sharma & D.P.Chattopadhyay	A.K.Samanta
06.	1999-2000	Application of Single & Mixed Natural dyes on cotton fabric.	Mitu Sethia M.Sc.Thesis J.D.B.Inst.Kolkata	Deepali Singhee	A.K.Samanta
07	2007-2008	Studies on colour parameters for standardizing dyeing process variables and colour matching problems for selected natural dyes for jute based home textiles.	Sarmishtha Chakrabarty (ne : Mukherjee), IJT,CU	A K Samanta	-----
08	2007-2008	Effect of fabric construction and different chemical treatments for development of fire protective jute fabric .	Bidhan Gangopadhyay ,IJT,CU	A K Samanta	Swapan Kr Ghosh
09	2008-2009	Studies on Fire retardant Finishing of Jute and Cotton Fabrics	Nilendu Bhowmick, IJT,CU	A K Samanta	Dr S K Biswas
10	2010-2011	Studies on Rot Resistance Finishing of Jute Based fabrics	Sangita Sikdar , IJT,CU	A K Samanta	-----
11	2011-2012	Life Cycle Analysis of Jute – Study of Carbon Balance in different stages of Jute Processing	Soumaydipta Datta , DJFT,IJT,CU	A K Samanta	-----
12	2014-15	Simultaneous Dyeing and Aroma finish and other Multiple Finishing of Jute Fabric	Anowar Hossain DJFT,IJT,CU	A K Samanta	-----
13	2016-17	Fire Retardant Finishing of Jute and Jute-Cotton Union Fabrics	Raj Sarkar DJFT,IJT,CU	A K Samanta	A Bagchi
No.	Year	Name of the Project	Done by	Name of	Name of Jt Guide or

				Guide	Co-Guide
14	2017-18	Studies on the physical properties of fire protective cotton fabric	Subrata Patra	A K Samanta	A Mukhopadhyaya
15	2017-18	Study of Simultaneous reactive dyeing and fire retardant Finishing of Cotton and Jute/Cotton Union Fabrics	Yamini Tibrewal	A K Samanta	A Bagchi
16	2017-18	Studies on Dyeing Process Variables for application of Red sandal wood dye on Cotton Fabric	Ankan Mondal	A K Samanta	N S. Bhaumik
17	2017-18	Simultaneous dyeing and Finishing of Silk Fabric with catechu dye	Shruti Rai	A K Samanta	N S. Bhaumik
18	2017-18	Simultaneous Fire Retardant and Rot Resistant Finishing of Cotton and Jute Fabric	Bhavani Shankar Mishra	A K Samanta	A Bagchi
19	2017-18	Studies on Dyeing Process Variables for application of Manjistha Dye on Cotton Fabric	Ankan Mondal	A K Samanta	N S. Bhaumik
20	2018-19	Simultaneous Dyeing and finishing with Natural materials for textiles	Shreya Banerjee and Nibedita Sarkar	A K Samanta	-
21	2018-19	Standardization of Fire retardant Finishing of Jute and Cotton Fabrics	Prasanta Das And Rinkilata pal	A K Samanta	A Bagchi
22	2018-19	Optimization of natural dyeing of Textiles with selective natural dyes	Shreepati sundar Upadhyaya and Birendra Meher	A K Samanta	N S. Bhaumik

Annexure –AKS/9

Notable academic /Social achievements

List of Notable Academic /Social achievements :

- (i) **Contributed to develop two important National Standards under BIS for identification of Natural Dyes from Natural Dyed Textiles for Natural Indigo (IS 17084 : 2019) and Rubia (Maddar) – (IS 17085 : 2019) approved, Gazetted and published by Bureau of Indian Standards (BIS) in January 2019**
- (ii) Contributed to develop another one important National Standards under BIS for **FLAME RETARDANT JUTE BASED DECORATIVE AND COVER FABRIC FOR TEMPORARY STRUCTURE – SPECIFICATION [DOC : TX 32 (12786)]** which is approved in the TXD-32 Meeting of Bureau of Indian Standards (BIS) , for final publication after required editorial correction to be published by Bureau of Indian Standard soon.
- (iii) Under ISDS Program sponsored by Ministry of Textiles, Govt. of India during 2011 to 2014 in first phase (Pilot Phase) total 26800 persons of Jute mill Workers, Supervisors for jute processing and Artisans for JDP Manufacture were trained by short term training courses in four States of India under Joint PI ship of Prof. A K Samanta on behalf of Department of Jute and Fibre Technology (erstwhile IJT) under University of Calcutta and further in 2nd Phase of ISDS Program during 2014-2017, total 5800 persons were further trained on the same trade.

Total sponsored projects undertaken as Project Co-ordinator/ Principal Project Investigator (1988-to 2019) by Prof A K Samanta either As Pi /Jt Pi or Co-PI at IJt and later at DJFT, IJT CU.

Project Duration	Project Details	Fund attracted (Lakh Rs.)
A. MHRD/AICTE/MOT-GOI Project		
1	Duration: 2 yrs (1988-89) Modernization for Improved Infrastructure Facilities in Textile Science Divn.' of IJT (Text. Sc., Fund-I), Sponsored by MHRD, Govt. of India	Rs. 10 lakhs,
2	Duration: 2 yrs (1989-1991) 'Modernization of Textile Science Division of IJT' (Text. Sc., Fund II), Sponsored by MHRD, Govt. of India,	Rs. 5 lakhs
3	Duration: 2 yrs (1990-91) 'Modernization of Fibre Science & Technology Lab', Sponsored by MHRD, Govt. of India,	Rs. 10 lakhs
4	Duration: 3 yrs (1990-93) 'Special Jute Development Fund for National Jute Diversification Programme' Sponsored by the Ministry of Textiles, Govt. of India,	Rs.62.9 lakhs including Rs. 4.5 lakhs for Textile Chemistry Lab.
5	Duration: 3 yrs (1993- 1996) 'Modernization of Fibre Chemistry and Analytics Lab', Sponsored by MHRD/AICTE, Govt. of India ,	Rs. 10 lakhs
B. Sponsored R&D projects (at MANTRA, Surat) handled as principal investigator		
6	Duration: 2 yrs (1996-97) 'Production Methodology for Fibre Reinforced Composite Materials out of Synthetic Fibres Waste and Natural Fibre (Jute) and their In-use Performance Analysis as Textile Machinery Parts', Sponsored by Ministry of Textiles, GOI, to MANTRA, Surat.	Rs. 24.9 lakhs
7	Duration: 2 yrs (1996-98) 'Standardization of Chemical Processing of Microdenier Polyester Fabrics and Attempt to Improve Depth of Shade and Dye Fastness', aided by Ministry of Textiles Govt. of India to MANTRA, Surat.	Rs. 17.3 lakhs

Project Duration	Project Details	Fund attracted (Lakh Rs.)
C. UNDP sponsored Institutional HRD Project to IJT		
8	Duration: 3 yrs (2000- 2004) UNDP-CCF1 (FAHP) HRD Project for Workers' Training for Jute Mill Sector Sponsored by UNDP & Min. of Textiles, GOI, through N.C.J.D. (Govt. of India), as Nodal Agency,	Rs. 74.00 lakhs,(11,000 persons were trained in Jute industry)
D. AICTE sponsored TAPTEC/RPS (R&D)/NCP Projects to IJT		
9	Duration: 3 yrs (2000-2003) 'Computer-aided Print Design System for Creating Novel Print Designs', Sponsored by AICTE, GOI, under TAPTEC Scheme	Rs. 11.00 lakhs
10	Duration: 3 yrs (2004-2007) ' Study of Thermal Behaviour of Jute and Chemically Modified Jute Aimed at Developing Thermal Protective Technical Textiles', Sponsored by AICTE, GOI, under RPS Scheme	Rs. 14.00 lakhs
11	Duration: 3 yrs (2007-2010) Development of Coated Textiles In Collaboration with IIT-Kharagpur as co-partner Sponsored by AICTE, GOI , under NCP scheme	Rs15.00 Lakhs

	Later Extended up to 2011-12.	(Initially Dr D Das was PI for this project , but after one year he went to lien and it was entrusted to Prof A K Samanta for rest of the period to complete.	
Project Duration	Project Details		Fund attracted (Lakh Rs.)
E. Sponsored Institutional Technical Collaborative Project to IJT			
12	Duration: initially one year for preliminary work with NCJD (2007-2008)	Technical partner of NCJD (for two units of wet processing part) for international project on ‘Small Scale Entrepreneurs Development in Diversified Jute Products for Technical Collaboration on Setting up of Six Handloom Units and Two Wet Processing Plants’, Sponsored by CFC Through IJSG,Dhaka and NCJD. Ias mplementing agency in India.	Grant of 1000 US \$ initially . [Later Sactioned US\$ 17,500 (Rs 8.0 lakhs) , but NCJD has not executed this through us.]
F. JTM-JMDC-R&D Projects under National Program of Jute Technology Mission , MOT,GOI			
13	Duration: 3.5yrs (2008-09 to 2012-13)	‘Standardization of Application of Natural Dyes on Jute Based Textiles for Eco-Friendly Jute Decorative and Diversified Products (for decentralized Jute Sector only)’, Sponsored by JTM-JMDC (NJB) under Jute Technology Mission under Ministry of Textiles, GOI	Rs 40.00 lakhs (Completed)
14	Duration-4 yrs (2008-09 to 2012-13)	‘Development of Appropriate Computer Aided Colour Matching Data-Base And Print Design Library For The Use In Production of Jute Diversified Products’’ (for Both Decentralized and Centralized Jute Sector), Sponsored by JTM-JMDC (NJB) under Jute Technology Mission (JTM) under Ministry of Textiles, Govt. of India,	Rs 38.00 lakhs (Completed)
15	Duration: 3.5yrs (2008-09 to 2012-13)	‘Development of Fire Retardant Jute Fabric’ Sponsored by JTM-JMDC (NJB) under the National Programme on Jute Technology Mission (JTM) under Ministry of Textiles, Govt. of India,	Rs 32.00 lakhs (including Rs 5 lakhs for SITRA as collaborating Institute) Completed

G. HRD PROJECTS SPONSORED BY MINISTRY OF TEXTILES, GOVT OF INDIA			
or NATIONAL JUTE BOARD, MINISTRY OF TEXTILES, GOVT OF INDIA			
16	Duration: Initial 3 yrs for Pilot Phase (2011- 2014)	INTREGTED SKILL DEVELOPMENT SCHEME (ISDS) –DPR-I –Pilot Phase , HRD Project for New Entrant Workers and Junior Supervisor Training for Jute Sector Sponsored by Ministry of Textiles, GOI, at DJFT,IJT, CU as a Nodal Implementing Agency,	Rs. 19.29 Crores (26,600 persons) are to be trained for skill up gradation in Jute sector. STATUS : COMPLETED
17	Duration: 2 nd Phase ISDS Project for another 3 yrs (2014- 2017)	INTREGTED SKILL DEVELOPMENT SCHEME (ISDS)-DPR-II HRD Project for Workers and Supervisor Training for Jute Sector Sponsored by Ministry. Of Textiles, Govt. of India), DJFT,IJT, CU as a Nodal Implementing Agency,	Target trainees 3940 + 5000= 8940 (Sanction : 15.31 Crore) (Released Rs 15.31 crores in 2014) : Almost completed.
Project Duration	Project Details		Fund attracted (Lakh Rs.)
18	Duration: PGDJTM Project : Initial for 5 yrs (2012-13 to 2016-17)	National Jute Board (NJB), Ministry of Textiles, Govt. of India Sponsored “Industry oriented courses and related activities” including PGDJTM and other Short Term JLS courses” for sustainable human resource development for Jute industry from 2012-13 to 2016-17.	Rs 6.84 crores in five years including 2011-12 as preparatory year. (Rs.. 72.82 Lakhs +4.49 Lakhs +126.04 Lakhs +136.04 up to 2015-16 + Rs 125.04 lakhs for 2016-17

			so far) and 1 st phase of 5 yrs is Completed , and may be renewed for another five yrs.
19	Duration – total 5 Yrs , (2015-16 to 2019-20)	DCH HRD Project for 2015-16 for Short and Long Term Training on Jute Diversified Products and handicrafts Through Established HRD Institution Under DCH of Ministry of Textiles , Govt.of India,	Rs 193,00 lakhs (released Rs 33.50 lakhs is released so far)
20	Duration -1yr (2015-16)	Survey of Artisan and other persons for Their Working conditions and Livelihood and their need identification etc as DCH R & D Project for 2015 on Jute Diversified Products in Murshidabad Region , Under DCH of Ministry of Textiles , Govt.of India,	Rs 15,00 lakhs (released Rs 7.50 lakhs is released so far)
21	Duration -1yr (2015-16)	DCH Handicraft Training Project for 2016-17 on Jute Diversified Products in Murshidabad Region , Under DCH of Ministry of Textiles , Govt.of India,	Rs 5.42 lakhs (released Rs 2.71 lakhs is released so far)
22	Duration -1yr (2016-17)	DCH Handicraft Training Project for 2016-17 on Manufacture of Jute Diversified Products and Jute Handicrafts (stitched, dyed, printed and other) in Kalna, Burdwan Region , Under DCH of Ministry of Textiles , Govt.of India,	Rs 5.429 lakhs (released Rs 2.714 lakhs is released so far)
23	Duration -1yr (2017-18)	AICTE –PMKVY Skill Dev. Training Project -1st Phase for Two Modules of Textiles Processes: (a) Beaming and Beam carrier loading (b) Handloom Weaving	Rs 10,000/- per trainee for 25x2 =50 trainees i.e Rs 5.00 lakhs , (Released – 1.83 lakhs so far

Project Duration	Project Details	Fund attracted (Lakh Rs.)
On Going R & D PROJECTS OF PROF A K SAMANTA AS PI (Nearly to be COMPLETED Soon)		
24	Duration:2 Yrs. (2016-17 & 2017-18) + later 1 yr Extended up to Feb/March-2019	“Standardization of Fire Retardant Finish for Jute Fabrics” Sponsored by Ministry of Textiles, Govt. of India under R & D Schemes on Jute and Textiles (Plan) -Through Jute Commissioner’s office , Kolkata
25	Duration : 2 yrs (2017-18 & 2018-19) + 1 Yr Extended later. Sanctioned from Jan-2017 to Dec -2018 and later was extended to Sept/Dec2019.	Development of Eco-friendly Natural Fibre Based Textiles (OEKO-TECH Products) with simultaneous Natural Dyeing and Natural Finishing and to establish Natural dye/finish Mark, Sponsored by Ministry of Textiles, Govt. of India under R & D Schemes on Jute and Textiles (Plan)-Through Text. Commissioner’s office , Mumbai (Industry partner : Ama Herbals Pvt Ltd , Lucnow, Research Collaborator : FEAT, IIT –Kanpur/ Allexe College, Kanpur : Co-Pi- & part Time Consultant: Dr P S Vankar , Ex Scientist,FEAT,IIT Kanpur .
		Rs. 36.34 Lakhs (Rs.12.72 + 7.268 Lakhs released so far) - On Going but on the verge of completion
		Rs 55.00 Lakhs (Govt Share = Rs 38.50 lakhs and Estimated Industry /Institute Share = 16.50 lakhs . (Rs.15.40 Lakhs + Rs 11.50 released so far) – On Going but on the verge of completion .

(03). No. of Conference Proceedings / Journal/ Bulletin Edited: Ten (10)

No. of Conference Proceedings edited: Four (4)

(a) National Convention of Textile Engineers and All India Seminar on Sustainable Developments of Jute and Textile Industry , held at Kolkata, on 26-27th March, 2004,,

(b) National Seminar on Innovative and diversified jute products held on 16-17th March –2005,

(c) All India Seminar on Exportable Jute and Textile Products, on 29th March 2006 and

(d) All India seminar on Technical Textiles in Civil Engg held on 13-14th Sept, 2007,

All the above seminars were Organised by Textile Engg. Division, WBSC, IE (I). under the chairmanship of Prof A K Samanta.

(04) No. of Journals /Bulletin Edited as editor or Assistant Editor: Five (5)

(i) Prof. Dr.A.K. Samanta held the responsibility of Asst. Editor of ‘MANTRA BULLETIN’, a monthly Journal of MANTRA during 1997-98, when was in lien to MANTRA from IJT.

(ii) Member of Editorial Advisory Board for Journal of Institution of Engineers: E2: Chemical and

Textile Engg., Published by Springer Publication and IE(I) jointly. (Time to time reviewing & editing)

(iii) Member of Editorial Board, Indian Journal of Natural Fibres, since -2016 , Published by Indian Natural Fibres Society , C/O NIRJAFT, ICAR, Kolkata.

(iv) Member of Editorial Board , SCIREA Journal of Textile Science , SCIREA publication,

(v) Member of Editorial Board, International Journal of Textile Sc and Engg, Gavin publisher

No. of Books Edited as Academic Editor or Co- Editor: One (1)

(i) *Presently editing Elsevier Published one book on Natural Dyes and Pigments being published by In-Tech Open Publisher, 2019-2020*

TOTAL LIST OF SPECIAL PROFESSIONAL TRAINING UNDERTAKEN BY DR. A.K. SAMANTA:.(1981-2014)

SL. NO.	ORGANISATION	FROM	TO	PURPOSE & DETAILS OF TRAINING AND VISITS
1	Bally Jute Co. Ltd. (Soorah Jute Mill), Mill No. 2, Narkeldanga Calcutta 700 054	Oct. 1980 1.6.81 1.6.81	Jan. 1981 30.6.81 30.6.82	Student apprentice Training for five months in production and Qc, PPC, Raw Jute Inspection and Production management & maintenance, etc.
2	Jayashree Textiles, Rishra, W. Bengal	June '84 (one month).		In-plant training for supervisory work.
3	Technological Institute of Textiles, Bhiwani 125021	15.1.86	14.2.86	Entrepreneurship development programme for Sc. & Tech. Personnel and project preparation,
4.	Electronic & Engg. Co., Bombay 58	27.7.89	7.8.89	Operation & Maintenance lab wet processing m/c
5	Lab India Instruments P. Ltd.	19.3.90	24.3.90	Computer application for colour matching problem in colour lab software system.
6	*Macbeth (Div. Of Kollmorgen Instruments Corpn.) USA & UK (one week training in USA 1 week in UK)	May, 1990, 2 weeks study tour & training		Training on computerized colour matching instrument and database management course.
7	*Bradford University Research, Bradford U.K.	1-2 June, 1990		Training on Lab. Man-Made fibre extrusion equipment.
8	*Visited- Textile Industry Department, UMIST, Manchester, UK and Polymer Engg. Lab, UMAS, Massachusetts, USA	May, 1990		Acquaintance with the courses and teaching pattern and lab design and research work trend, etc.
9	*Dept. of Textile Industries and CCDU, Leeds University, UK and BTTG, UK	Nov.18 to Dec.13, 1996, UNDP-GOI sponsored Fellowship		Modern developments of Textiles and Human Resource Development / Training management,
10	Agaram Industries Madras (Agent of M/s BOMEM INC, CANADA)	March, 1996, one week		Training on MB-104 model of FTIR instrument including Quantitative IR, Liquid and Solid
11	IIT-Delhi, New Delhi 110016	5.12.88	15.12.88	Production, structure-properties & application of Man-Made fibres (QIP/CEP'88-winter school);
12	NCUTE, IIT- Delhi NCUTE, IIT- Delhi NCUTE, IIT- Delhi NCUTE, IIT- Delhi	19.2.99 16.3.00 13.3.00 28.1.00	21.2.99 18.3.00 14.3.00 29.1.00	NCUTE COURSE' on ManMmade Fibre-I NCUTE COURSE' on ManMmade Fibre-II NCUTE COURSE' on Prep.Chem Processing. NCUTE COURSE' on Industrial Issues on Chem. Proces & Computer Colour Matching.
13	Aurobytes, Kolkata	1.11.00	19.02.01	C++ Course our computer Application.
14	Premier Colour Scan Instruments Ltd., Thane	11.9.01	15.9.01	Use of Portable BYK-Gardner portable Spectro Photometre & Colour lab plus Software
15	Techmen System, Pune	18.09.01 & 25.02.02	22.09.01 01.03.02	Cadvantage Printex & Texture-mapping, Textile Print Design CAD Software
16	Q Lab Corporation, Sanghai, China and Visit to Donguah University, Sanghai, and Hong-Kong University, Hong-Kong.	8 th July 2014	16 th July, 2014	Training on Weather-O-Meter and Study Tour visit to Textile Dept of Donguah University, Sanghai, and Textile and Fashion Dept of Hong-Kong University, Hong-Kong for Development of Textiles and Clothing Tech.
17	Attended ISO-TC-38 Meeting on behalf of BIS for Stds.of Textiles at Lyon, France.	12-10-15	15-10-15	Attended and presented Test Protocol Analytics on Natural Dyes:, by P S Vankar & A K Samanta and Y A Shah jointly on Natural Dye.
18	Visited University of Minho Braga, Portugal for attending Intl. Conference on Natural Fibers (ICNF) at portugal	21 st June 2017	23 rd June 2017	Attended 3rd International Conference to present research paper at ICNF-2017 on 21-23 June 2017, at Hotel Melia Braga, Portugal & visited U Minho.
19	Attended ISO-TC-38 -2017 Meeting on behalf of BIS for Stds.of Textiles at New Orleans, USA	8 th Oct 2017	13 th Oct, 2017	Attended and presented Test Protocol Analytics on Natural Dyes:, by A K Samanta and Y A Shah jointly on Natural Dye with WG-31 e-committee.
20	Visited Q Lab Corporation-HO and International Testing Lab at Cleveland	14 th Oct, 2017	17 th Oct, 2017	Visited and done some collaborative Testing Related work for ISO Std on natural dyes.
21	Visited Textile and Apparel Tech Dept of East Michigan University, USA	18 th Oct- 2017	One day	To be Acquainted with the courses and teaching pattern and lab design and research work trend
	Attended ISO-TC-38 -2019 Meeting on behalf of BIS for Stds.of Textiles at Ponzano, Triveso, Italy	13 th Oct 2019	18 th Oct, 2019	Attended and presented Test Protocol Analytics on Natural Dyes:, by A K Samanta on behalf of BIS delegate member and Expert in the Field..

List of Important Meetings in Participating policy formulation or Attended Research Advisory Committee IRC Meeting /Meeting of Selection Committee at different Institute /University as Advisor or similar position:

Srl No.	Type of Committee/ Meeting	Name of the Organisation	Subject of Meeting	Capacity in which attended the meeting	Date / Year of attending the same
01	Selection Committee of Public Service Commission (PSC) , WB and PSC, Odissa in Jan -2015	Public Service Commission, (PSC) Govt.of WB and PSC, Odissa	Selection of Professor/Asst Prof , /Associate Prof, /Dyeing Expert and Asst Director etc	Expert member	2005-06 onwards and again in 2013-14 and in 2014.-15.
02	IRC- EXPERT Meeting for All Groups,	NIRJAFT,ICAR	Proposal of R & D Projects on Jute	Expert Member	24 th and 25 th Sept ,2011
03	Departmental Promotional Committee	NIRJAFT,ICAR	Promotion of Technical staff	Outside Expert	05-7-2010
04	Selection of Marketing Manager/Dy Marketing Manager in JCI , Govt of India Undertaking	JCI, Kolkata	Selection of Dy Marketing Manager in JCI	Expert Member	13-1-2011
05	Selection of Lab Technician (T-1 & T-3 posts	NIRJAFT,ICAR	Selection of Lab Technician	Expewrt Member	28 th & 29 th July,2011
06	Departmental Promotional Committee	NIRJAFT,ICAR	Promotion of Technical staff	Outside Expert	20-4-2012
07	Pre –IRC- EXPERT Meeting for Chemical Processing Group	NIRJAFT,ICAR	Proposal of R & D on Chemical Processing of Jute	Expert Member	3-05-2012
08	IRC- EXPERT Meeting for All Groups for two days	NIRJAFT,ICAR	On going and new Proposal of R & D Projects on Jute	Expert Member	15 & !6 May-2012
09	Selection Committee of SSC, GOI, Kolkata	Staff Selection Commission,GOI Kolkata	For Selection of Handcraft promotion Officer	Advisor in selection Committee	29 th June-2012
10	Selection Committee of SSC, GOi, Kolkata	Staff Selection Commission GOI, Kolkata	For Selection of Scientific Assistant	Advisor in selection Committee	16 th July -2012 And 21 st March-2016
11	Member of TXDC of BIS	BIS,New Delhi	As Member for Textile DivisionCouncil	Member for Textile DivisionCouncil	2010 -2014 and continuing
12	Member of TXD-03 –Jute Sectional Comm.,- BIS	BIS,New Delhi	As Member for TXD-03-Jute Sectional Comm	Member for TXD-03-Jute Sectional Comm	2010 -2014 and continuing
13	Chairman of TXD-07 – Textile Dyes & Chemicals Sectional Comm.,- BIS	BIS,New Delhi	For Chairing TXD-07 :Speciality Chemicals & Dyes Sectional Committee of BIS	Chairman of TXD -07 on Textile Dyes & Chemicals Sectional Committee.,- BIS	March-2014-2017 and again continuing since April-2017 on –wards for 3 yrs.
14	Member in global directory of ISO-TC-38 on behalf of BIS , India	ISO, Geneva	As Chairman of TXD-07 of BIS and expert member	Expert member and BIS nominated delegate in ISO	Ocvt -2015 to Oct 2019 and Continuing

TOTAL NUMBER. OF B. TECH PROJECTS GUIDED BY PROF. (DR.) A.K. SAMANTA (1987-2014)**(A) B. Tech. Level Projects guided: Thirty Three (34 as given below) :**

1. Solvent pretreatment of nylon multi-filament yarns and its acid dyeing.1987
2. Chemical modification of viscose and Jute by grafting acrylonitrile.(alongwith Dr. P.K. Ganguly as Jt. Guide) 1988
3. Bulking of Rotor spun Jute blended yarns. 1989
4. Chemical Texturing & Bleaching of jute and jute/ synthetic blended rotor spun yarns.1990
5. Solvent pretreatment and atmospheric dyeing of solvent pretreated polyester filament.1990
6. Dyeing and resin finishing of jute and jute blended textiles through different pretreatments.1991
7. Resin finishing and simultaneous dyeing and Finishing of cellulosic and lignocellulosic blended textiles.1992
8. Studies on some important variables of computerized colour matching for jute fabric1993.
9. Effect of disperse dyeing conditions and variables and conditions on mechanical properties of polyester staple fibre (along with Mr. D.K. Sinha as Jt. Guide). 1993
10. Effect of some pretreatment, pH and type of auxiliaries on acid dyeing behavior of jute and wool.
11. Studies on some chemical softener finishes on jute and its blended textiles.1994
12. Effect of Selected additives on DMDHEU & NMA resin on cotton & jute fabric.1995
13. Comparative evaluation of dyeing behaviour for basic dyes & acid dyes on Jute and Wool.1996
14. Studies on the effect of different Chemical/ Bio-chemical pretreatments on Physical properties & dyeing behaviour of ramie and Polyester/ ramie blended yarn.1998
15. Dyeing behaviour of normal denier and microdenier Polyester fabric under the influence of Selective single and mixed solvent pre-treatments.1999
16. Effect of Selective Chemical & Bio- chemical treatments on Jute yarns , Jute and Jute/ Cotton union fabrics & Polyester fabrics., 1999
17. Effect of different pretreatments and mordanting on Performance of natural dyes applied on Cotton & Jute Textiles.(**This Project Work received “Best Project Award 2001” awarded by Alps Industries, Ghaziabad, winning 3rd prize award at All India level.**), 2000.
18. Effect of Selective Chemical & Bio- chemical treatments on Jute yarns,2001
19. Simultaneous dyeing and Crease Resistant finishing of unmodified/ modified Jute and Cotton fabric.-pt-1 , 2002
20. Development of Newer Print Designs on Jute and Cotton Fabrics Using Computer Aided Textile Print Design System.2003
21. Some Chemical and Bio-Chemical Pretreatments and Finishing Treatments of Jute & Cotton Fabric.2004
22. Application of Selective Natural Dyes on Jute and Cotton Fabrics-pt-1 ,2005
23. Studies on Flame Retardant Finish of Jute and Jute-Cotton Union Fabric,Part-1, 2006
24. Studies on Flame Retardant Finish of Jute and Jute-Cotton Union Fabric,Part-2, 2007
25. Computerised Colour Matching on Jute and Cotton Yarns with Direct/ Vat Dyes-pt-1, 2007
26. Application of flower based natural dyes on jute and cotton textiles-Pt-2 , 2008
27. Fire Retardant Finishing of Jute and jute-cotton union Fabrics-Pt-3 , 2009-10
28. Computer Aided Colour Matching Of Jute and Cotton Fabrics and Acid Dyes-Pt-II , 2009-10
29. Eco-Friendly Dyeing of Jute and Cotton Fabrics with Natural Dyes-Pt-3, 2009-10
30. Application of Natural Dyes on Jute Textiles=Pt-4 , 2010-11
31. Fire Retardant Finish of Jute Fabric –Pt-4- 2010-11
32. Computer aided colour matching of Jute Fabric with Vat /Basic dyes –Pt-III -2011-12
33. Simultaneous dyeing and Fire Retardant finishing of Jute Fabrics pt-II : 2011-12
34. Application of Natural dyes on Jute and cotton Textiles,-Pt-III,2012-13

Total List of HRD/Research/Project Reports & Course Design Under the Leadership of Prof. (Dr.) A.K. Samanta

A. Lab Development Project/ R & D Projects / HRD Projects / Reports prepared :

1. Prepared total 18 Project proposals / Reports for MHRD/AICTE/SJDF (MOT, GOI) Lab Development Projects/UNDP-CCF-1/IJSG-Manpower training Projects , AICTE- RPS/R & D Projects / JTM(JMDC/NJB R & D Projects and MOT-GOI Sponsored ISDS Training Project , and received grants for all the submitted Projects, as mentioned in detail in Annexure- 7

B. HRD – REPORTS/ PROJECTS/ CURRICULAM DEVELOPMENT REPORT PREPARED

1. (a) Perspective Project Proposal Five Year Plan for infrastructure and Lab development of Institute, April- 1992. Submitted to- AICTE, GOI., in 1992. No. of pages : 19 + Annexures.
- (b) Compliance Report on conditional approval of IJT's diploma and Degree Courses, 1996. Both submitted to AICTE, GOI. No. of pages : 6 + Annexures.
- (c) Compilation of syllabus and AICTE Proposal for 3 years B. Tech. Course in Fibre Technology at IJT, 1995-96. Compiled and prepared by Dr. A.K. Samanta & Dr. S.C. Ray. No. of pages : 20 + Annexures.
- (d) Compilation of syllabus and AICTE Proposal for 4 yrs. B.Tech Course for Jute & Fibre Technology, 1998. Compiled & prepared by Dr. A.K. Samanta, Dr. S.C. Ray, Dr S K Sett & Dr. P. Ray.
- (e) Compilation of AICTE Proposal for 3 Semester. M.Tech Course for Textile Technology(Technical Textiles), 1999-2000. Compilation of syllabus for 4 Semestar. M.Tech Course for Textile Technology(Technical Textiles), 2003-04.
Compiled & prepared by Dr. A.K. Samanta & Dr. S.C. Ray(in consultation with Dr. P. Ray.)
2. Report on Fellowship Programme on HRD and Modern Development in Textiles' at Leeds University, UK for UNDP-GOI sponsored short-term (1 month) Fellowship. Submitted to : UNDP-GOI Jute- HRD Project authority and Ministry of Textiles, GOI. No. of pages : 25. Year : 1997 Jan, Co-authors : Other five Participants in Fellowship.
3. (a) Project Proposal for HRD- Training for Jute Sector through Short Term refresher courses for existing technical personnel and workers' training in Jute Mills (3 years Plan). Pages : 9 Submitted to : Ministry of Textiles, GOI , UNDP & Indian Jute Mills Association, Calcutta for UNDP-GOI assistance. Prepared Revised this project proposal as UNDP-CCF1-FAHP-HRD Project for Workers' Trg. for Jute Mill Sector for 2 yrs.(1999-2001). Rs. (55+12) lakhs Sanctioned to IJT.
- (b) Also prepared extension proposal for this project for 1 yr. with budget of 25.00 lakhs. Also prepared an Integrated/ Multitier HRD Plan for Jute Sector (10 years plan) and this was sent finally to Jute Technology Mission.
Submitted to : Ministry of Textiles, GOI (Sathyam Committee) and Indian Jute Mills Association, Calcutta. Pages : 19. Prepared jointly by : Dr. P. Ray & A.K. Samanta
4. A Report on Institute of Jute Technology (Including Potentiality of Upgradation and Requirement etc.). Submitted to NCUTE-IIT-Delhi.
Jointly prepared by : Dr. A.K. Samanta and Mr. D.K. Sinha; Pages : 22
5. A Plan for upgradation of existing facilities of Higher Technical Education at IJT. (Upgradation of Higher Technical Education under World Bank Assisted Scheme).
Submitted to : World Bank Project Authority, MHRD, GOI., through Directorate of Technical Education, Govt. of West Bengal. Page : 28
Jointly prepared by : Dr. Prabir Ray and Dr. A.K. Samanta.
6. Prepared Syllabus and Regulations of M. Tech Course in Textile Technology (Technical Textiles), in 2002 and revised in 2004 and structured Report for implementation of M Tech course with all details for IJT in 2005. Jointly prepared by : Dr. S C Ray and Dr. A.K. Samanta.
7. Taken leadership for designing PhD-course work for PhD research in Textile Technology of Calcutta University during April-May-2010 as per new PhD rules of CU.

8. Took special drive and leadership for first time accreditation of B.Tech course of IJT by NBA, AICTE during 2005-06 and successfully accredited :Total work done Jointly by : Prof. P Ray, Dr. S C Ray, Dr. S K Sett and Dr. A.K. Samanta.
9. Taken positive role and acted as expert committee member to prepare the revised and new formatted syllabus of B Sc (Hons) and M.Sc. degree course in Textiles and Clothing Science for J D Birla Institute under Jadavpur University in January 2008 and May –2009 respectively..
10. Taken positive role and acted as expert committee member to prepare the new syllabus for bachelor degree course in Fashion and Apparel Design and its regulations on behalf of the University of Calcutta for introducing this course at Rani Birla Girls' College in April-May 2008-09.
11. Taken positive role and acted as expert committee member to prepare the revised and new formatted syllabus of B Tech degree course in Jute and Fibre Technology and new B Tech degree course in Jute Technology for Institute of Jute Technology under Calcutta University in 2008–2009.
12. Acted as external expert committee member for physical assessment and inspection of ARTSVILLE – Institute of Arts and Design, Salt lake , Kolkata-91, for study of its infrastructural facilities, course curriculum, faculty positions and other academic matters for suitability of running a certificate course in Textile Design and also for SDV Institute , Palasi, Murshidabad for affiliation of Advanced Diploma in Tailoring and Dress Designing course under affiliation to the West Bengal State Council of Technical Education, Govt. of West Bengal, in August, 2008 and 2009 respectively.

C. Lab Development Project/ Reports prepared :
(for lab/ infrastructure development of IJT)

- 1 Prepared total seventeen Project proposals/ Reports for MHRD/AICTE/SJDF (MOT, GOI)/ UNDP-CCF-1/ IJSG /JTM(JMDC) R & D Projects, and received grants for all the submitted Projects, as mentioned in detail in Annexure- 8

D. Research Reports Prepared :

- 1 Report on R&D Progress (1996-97) of MANTRA, Pages : 62, June-1997, For circulation to : Ministry of Textiles, TRAs, HRD Instruments etc. and project review Committee.
2. R & D Progress and New Project Report (for 1990 –95, Volume- II), of MANTRA, Submitted to Ministry of Textiles, GOI and Members of Project Review Committee, A & MMT Section, MOT, GOI, (2 research report was drafted and finalized by Dr. A.K. Samanta and others report are compiled and edited by Dr. A.K. Samanta.), Page : 41, Prepared in year : 1997.
3. R&D Progress and Final proposals for 1997-99 for MANTRA submitted to MOT, GOI, was partly prepared & compiled by Dr. A.K. Samanta along with preparation of two new research proposals as well as Progress Report for ongoing R&D Projects, 1997-98, Pages-60, 1997.
4. Annual Reports (1996-97) of MANTRA, particularly Technical & Administrative Report & R&D Progress Report part, was prepared by Dr. A.K. Samanta, as Asst. director, MANTRA.
5. Prepared Comprehensive Reports (2009-10) on (a) Literature Review , (b) Need Assessment and (c) Market potential for (i) Dyeing of Jute with Synthetic Dyes and Colour Matching Problems , (ii) Dyeing of Jute with Natural Dyes and Associated Constrains & (iii) Fire Retardant Finishing of Cellulosic and Ligno-cellulosic Textiles, for Three JTM R & D Projects undertaken and being Continued at present.

A BRIEF NOTE ON RESEARCH/ DEVELOPMENT WORK DONE IN LAST 27 YEARS
by Prof. (Dr.) A.K. Samanta

A. Details of important R&D work, outcome, technology development and transfer (if any) through R&D and HRD activity.

Through In- House and sponsored R&D Work, more than **76 research papers (46 National, 30 International)** have been published (besides contribution of 12 review papers, 28 technical articles and 48 seminar & Conference papers). Some important R&D work in the field of Textile Chemical Processing and their outcome are as follows:

- 1) Low formaldehyde releaseable crease resistant finishing of jute and jute blended and unionized furnishing fabrics has been established and standardised utilising bifunctional (Vinyl and Methylol) groups of N- Methylol- Acrylamide resin (i.e. Acrylamide-Formaldehyde or AMF-resin) using a mixed dual catalyst system ($K_2S_2O_8$ presoaking + $MgCl_2$ in resin bath) after varying pretreatments. AMF-resin finishing of Jute and Jute blended textiles rendered better balanced property development in those fabrics, which are superior in certain aspects than conventional DMDHEU resin- finish. Three papers have been published in national and international journals on this aspects. AMF resin is now commercialized by one reputed textile chemical manufacturer and supplier.
- 3) Bulked jute/ polyester yarns & soft jute/cotton blended yarns of improved property parameters have been prepared by chemical texturing of rotor spun jute/ polyester yarns and jute-cotton blended yarns of nearly 4 lbs/ spy (approx. 140 tex). These type of yarns are found application as weft in denim cloth with 100% cotton warp. The first part is published in Journal of Textile Institute, UK and the 2nd part is published in the Journal of Instn. of Engrs. (India)-Textile Engg. which received Dr. Triguna Charan Sen memorial award for best research paper during 1995-96, awarded by IE(I).
- 4) A series of studies have been carried out on problem and remedy of dyeing of microdenier polyester fabrics, through study of different pretreatments, dyeing factors, and finishing treatments for improved depth of shade and uniform dyeing etc. during working on this aspects at MANTRA, Surat, and IJT, Kolkata.
- 5) Compatibility of binary mixtures of natural dyes for development of compound shades on jute fabrics and Kinetics of dyeing jute with different natural dyes have been studied.
- 6) An instrument for measuring flexural rigidity of jute fibre has been developed and accordingly a simple method of measuring this important parameter of jute fibres has been established. The design of the testing equipment developed and efficacy of the method is published in a reviewed journal. Subsequently data generated by measurement of flexural rigidity of raw and chemically modified jute fibres in this equipment has been accepted in other research paper even in international publications.,
- 7) Improving dyeability of Polypropylene fibres by chemical modification of the fibres via chlorination (Published three papers on it). Solvent pre-treatment of nylon and polyester (both normal denier and microdenier) have been studied and results are published. These Chemical treatment/ modifications threw some light for improving the dye uptake within the limitation of the processes. Six research papers are published in this area.
- 8) Computerised database for colour matching of jute fabric using direct dyes has been prepared and standardized for providing service to the Jute Industry. Total colour difference value for level/ unlevel decisions for dyed jute fabrics has been standardized (which is a first time work in the field of jute textiles). One research paper is published on this.

- 9) Through intensive research, it is now established that sequential chemical texturing cum mercerization followed by hydrogen peroxide H₂O₂ bleaching to jute/ cotton union fabric and Jute/ viscose blended fabric with N-methylol acrylamide resin post-treatment rendered better property development for diverse nature applications for jute blended /unionized jute textiles. Two research papers have been published on this aspects.
- 10) Formaldehyde free crease resistant finish of jute fabrics has been established and standardised using citric acid in presence of sodium phosphate as catalyst. One paper is published in international journal.
- 11) Chemical modification of jute and cotton fabrics have been studied effecting graft-co-polymerisation of single and mixtures of different vinyl monomers (acrylamide), choline chloride, Acrylamide formaldehyde(AMF), Ethylene diamine etc for making the fabrics suitable for certain specialized applications and improved dye-ability. Four research papers have been published on these in international journals.
- 12) Different chemical modifications of Jute fibres have been investigated to improve its processibility (bleachability, spinability & dyeability). (Guided one PhD Thesis on this which is completed and degree awarded to the candidate from Calcutta University)
- 13) Whiteness stability against photo-exposure to uv-light for jute goods bleached under different bleaching systems with or without application of UV- absorbers/antioxidant compounds with or without application of different resin systems were extensively studied . one paper published. (Guided one PhD Thesis on this aspect.).
- 14) Mixed Enzyme treatment of Jute/Cotton union fabric has been studied and standardised for biopoishing and softening. One paper has been accepted for publication in a reputed journal.(Guided one PhD Thesis on this).
- 15) Low (Room) Temperature Bleaching of Jute and Jute-Cotton union fabrics has been developed with cost and energy saving purpose and the mechanism of such process has been established.
- 16) Extraction of selective natural dyes and dyeing jute fabrics with different selective natural dyes and their mixture have been standardized along with newer processes developed for improving their colour fastness etc. From the series of studies on dyeing cotton and jute textiles with different natural dyes, more than 15 papers have been published on this aspect.
- 17) Developed medium cost indigenous Fire retardant finishing formulations (non-durable, semi-durable and durable) for jute based fabrics.
- 18) Studied Process Standardisation of dyeing process identifying light fast and wash fast synthetic dyes for Jute fabric and developed computer aided Colour matching database for those dyes for use of industry .
- 19) Developed Print Design Library for Jute Based diversified Products (Prepared CD and Distributed to user industry).
- 20) Taken leadership as Chairman of TX-07 Committee of BIS on Speciality Dyestuff and Chemicals for Textile Processing, for preparation and editing and submission of draft standards on Identification of two natural dyes (Indigo and madder –BIS draft for wide circulation in BIS website bearing No –11693 dt 18-7-2017 for indigo and 11694 dt 21-07-2017 for madder) and also for identifying such natural dyed textiles by characterization of their test protocol working with DR P S Vankar (research collaborator , Co-Pi and part time Sr consultant) and Mr Y A Shah (industry partner from Ama Herbals, Lucknow) as team member and as an positive output for national contribution in the Ministry of Textiles, Govt. of India 's sponsored R & D Project on N atural dyed ecofriendly oco-tech product development with establishing natural dye testing and Natural dye and finsh mark standard.

List of Specific Industrial Training & Short Courses Conducted and Co-ordinated:

Trainings conducted (Title)	Year	Duration	Number of beneficiary	Co-ordinator/ associated
1) Bleaching and dyeing of jute yarns for handloom dyers at held at Katwa; Bankura; Chowduar; Warangal and at IJT premises etc.	1994-98.	Duration- 5 days	10-15 in batches X 4-5 times (Total 60)	Co-ordinator : Dr. A K Samanta
2) Bleaching and dyeing of jute yarns and fabrics for dyers on behalf of NCJD at IJT	May'99	Duration- 5 days	Total 40	Co-ordinator : Dr. A K Samanta
3) Fibre identification, Colour measurement and Chemical Testing for Manipur Handloom Society & Eskaps.	Oct-Nov'2000	Two weeks	10	Co-ordinator : Dr. A K Samanta and Mr. D K Sinha
4) Bleaching, Dyeing & Printing of Jute Yarns & Fabrics for 86 NGO representatives nominated by NCJD, Govt. of India, at IJT	Jan'2003	Five days	86	Co-ordinator : Dr. A. K. Samanta. Associate D. Roy
5) Bleaching, Dyeing, Printing & Finishing of Jute under UNDP-GOI sponsored HRD Project of IJT. (Published one Book of Paper for this course)	June 1994	Two weeks	15 industry personnel	Co-ordinator : Prof. (Dr.) A K Samanta, Dr. D Das and Mr. D K Sinha
6) Designed, planned, organized & co-ordinated workers' training course for Mill side and Factory side Workers for 5-6 times repeat in a year for different jute mills in nine-centre / sub-centre established, under UNDP-CCF1-HRD-Workers' Training Project under National Jute Programme Sponsored by Ministry of Textiles, Govt. of India, Total 125 modules of courses delivered during 2000-2004, covering 50 jute mills in West Bengal establishing nine Training Centres in different Zones).	2000-2004	16 days each module (Two weeks)	20-25 workers per module per centre X 125module/year x10 centres ; covering 50 jute mills x 2 main module courses x 4years + 1000 supervisors attended =11,000 Workers & Supervisors,	Project Co-ordinator: Dr. A K Samanta With associated Centre InCharges : Other IJT Faculties
7) Training on TQM; Behavioural Aspects - Motivation, Team Work, productivity Improvement ; Eco-Criteria, Energy Management and Diversified Jute Products at two mills of Bangladesh (Supreme Jute and Knitex Mill, Savar, Near Dhaka and Jute Spinner's Ltd, Shiromani, Khulna, Bangladesh); organized by Shams Group, Bangladesh and IJT.	May'2004	Five days (One Week)	20 (covering two mills)	Dr. A K Samanta

8) Training on Bleaching and Dyeing of Jute ,Total Quality Management, Quality Circle; Behavioural Aspects-motivation, Team Work, Productivity Improvement ; Eco-Criteria, Energy Management and Diversified Jute Products etc.at two mills of Bangladesh (Janata Jute Mills, Narsinghdi, and Sadat Jute Mill, Devidwar(Commilla)	July-August' 2004	Five days	20 (covering two mills)	Dr. A K Samanta
9) Training on behavioral Aspects, motivation, productivity improvement, energy management in different mills of india. Ganges mills, Howrah Mills etc	2004-2008 & 2009-2010	Two days each	5 mills on chargeable basis and in more than 15 mills under JTM HRD Project	Dr. A K Samanta and other faculty and resource person
10) Conducting Training at IJSG Dhaka, For Skill Development Programme for Supervisors and Technologists of the Jute Industry organized by PSCB of IJSG , Dhaka on Spinning on 24 th Oct -27 th October,2010 and on Weaving and Product Development from 31 st Oct to 3 rd November,2010	2010-11	Four days each section	About 38 participant in spinning and 28 participant in weaving attended the course	Prof A K Samanta for Behavioural Science , Dyeing and Printing after weaving etc along with Faculty from Spinning and weaving delivered this training
11) Conducting Training at IJSG Dhaka, For Skill Development Programme for Supervisors and Technologists of the Jute Industry organized by PSCB of IJSG , Dhaka on Spinning on 4 th Sept ,2011 to -8 th Sept -2011 and from 11 th Sept .2011 to 15 th Sept ,2011 on Weaving and Product Development etc .	2011-12	Five days each section	About 28 participant in spinning and 22 participant in weaving attended the course	Prof A K Samanta for Behavioural Science , Dyeing and Printing after weaving etc along with Faculty from Spinning and weaving delivered this training
12) Training in “Raw Jute Grading “ for JCI Staff – Four Batches (25-30-30-30)=115 persons organized at IJT during Oct -Dec -2010 to Jan- March ,2011	2010-2011	Each course is of 2 weeks duration	25-30 trainees per module x4 times =100 Trainees	Academic In Charge Prof. A K Samanta Course Coordinator Dr Atin Chaudhuri

<p>13) Designed, planned, organized & co-ordinated 10 courses of one month duration for workers' training in jute mills , 4 courses of Training on Manufacture of Jute Diversified Products (JDP) of one month duration and 4 courses of Junior Level Supervisory (JLS) Training courses of three months duration (all approved by CU) for no. of times repeated in a year for different jute mills in mill wise nine-centre / sub-centre established, and at eight /nine places for decentralized sector under MOT –GOI Sponsored Integrated Skill Development Scheme (ISDS) project - Total target is to train total 26,600 persons during five years 2011-2016</p>	<p>2011-2016 Under ISDS Programme sponsored by MOT,GOI</p>	<p>Each course is of one Month Duration except JLS courses , which are three months duration</p>	<p>30-35 trainees per module per centre X 6-8 cycle/year covering 10 places in Jute Mills Centres and 10 centres in decentralized sector and 3 –4 JLS Courses of 3 months x 2 times per year at IJT X 5years =25,000-26000 Trainees</p>	<p>Project Co-ordinator: Prof. A K Samanta And Drv S K Ghosh With associated Centre In-Charges : Other IJT Faculties</p>
<p>11) Conducted International Training at IJSG Dhaka, For Skill Development Programme for Training of Trainers (TOT) for Supervisors and Technologists of the Jute Industry of Bangladesh organized by PSCB of IJSG , Dhaka on Spinning on 26th Oct ,2013 to 30th Oct -2013 and on Weaving and Product Development etc . from 3rd Nov-2013 to 7th Nov ,2013</p>	<p>2013-14</p>	<p>Five days each section</p>	<p>About 38 participant in spinning and 36 participant in weaving attended the course</p>	<p>Prof A K Samanta conducted training for Behavioural Science , Technical Textiles of Jute , Dyeing and Printing after weaving etc. along with Faculty from DJFT,IJT,CU</p>

List of Courses Taught /being Taught by Prof (Dr.) A.K. Samanta**1. For B.Tech. (Fibre Tech.) Course (Post-Diploma and Post BSc) at IJT. (1987-2000)**

A. Textile Chemistry covering the followings :-

Chemistry of jute fibre and chemical processing, Other Natural Textile fibre.

Polymer Chemistry, Production technology of Man-made fibres, Chemistry and uses of speciality and high-tech fibres. General preparatory chemical processing and chemistry and technology of textile finishing. Theory of dyeing, Dyeing Mechanism, Dyeing of cellulose & jute. Dye chemistry, colour Science, colour and constitution of dyes, colour fastness tests, colour chemistry, colour measurement and computerized colour matching etc. Part of pigment printing and printing of cellulose and synthetics with different class of dyes. Dyeing and printing defects and troubleshooting. Transfer Printing etc.

B. Advances in Textile Chemical Processing (Advanced wet processing) as special paper :-

Advances in methods of dyeing, printing of cellulose and synthetic textiles and their blends.

Advances in Textile finishing processes, their chemistry & technology.

Energy saving, Low add-on techniques and water conservation approaches. Effluent treatment for textile process house, Eco-criteria for Textiles and eco-friendly chemical processing.

Process control in Textile chemical processing. Evaluation of scoured/ bleached, dyed/ printed and finished textiles.

C. Advances in Man Made fibre Technology and speciality Man-made fibres as special paper.

2. For P.G. Diploma in Jute Tech. Level at IJT (1987-1999) :-

A. Textile Chemistry covering the following:

Chemistry and properties of cellulose and lignocellulosic fibres, starch, sizing chemicals, different textile auxiliaries & surfactants. (emulsifier, wetting agents).

Preparatory chemical processing of cotton, jute and jute blends, woolenisation, stabilised bleaching, chemical dehairing of jute.

Dyeing, printing and finishing of cotton and jute yarns and fabrics and their blends.

3. Four Year B. Tech. in Jute & Fibre Technology Course. (Post-XII class) at IJT (1999-2010):-

A. Chemistry covering the followings :

Polymer Chemistry, Fibres as Polymers & Physical Chemistry part.

B. Textile Fibres & Man Made Fibres covering the followings :

Different aspects of cellulose & lignocellulosic fibres their chemistry, structure & properties. Chemistry and properties of other Natural fibres.

Chemistry of Synthetic fibres & their properties Production of Man Made fibres, - Polymerisation, spinning & post-spinning operation, Texturing etc.

C. Part of Process Control related to Chemical Processing : Various process control measures in preparatory,

Dyeing, printing & finishing chemical Processing Testing & evaluation of Product Quality and standardisation of a Science & colour chemical processing etc., colour measurement of dyes- Textiles etc.

D. Part of Technical Textiles covering the followings :

High performance/ speciality fibres like- Nylon-6T, Aramid, High Tenacity Polyester, Glass, Carbon, Spandex, Microdenier Polyester, Ionomeric polyester etc.

E. Textile finishing & Allied Process :

Chemistry & Technology of textile finishing of cotton, jute, wood, silk and manmade fibres

F. Environmental Awareness :

Different sources of air, water and noise pollutions and Pollution Control their control measures. Limits of Pollution parameters. Measure and their estimation. Effluent treatment plant design. Eco-criteria of textile and jute products & Eco-mark scheme.

G. Advances in Textile chemical Processing : Advances in textile finishing and allied processes. Computerised colour Matching & Print design. Advances in Textile Printing.

4. For M Tech in Technical Textiles (2005-06 onwards)

- a) High Performance Fibres in 1st semester.
- b) Advances in Textile Chemical Processing, Protective Textiles, Eco-Textiles in 3rd semester.
- c) Industrial polymers and composites (Bio-composites)
- d) Clothing Science and Computer application in Dyeing and Printing etc
- e) Minor and Major M Tech Dissertation / Projects in 3rd and 4th Semesters.

5) Practical training courses conducted at IJT for Neighbouring Institutes

- (i) Organised Two days Practical Demonstration cum training programme for B. Sc (Hons) students of JD Birla Institute (under Jadavpur University), Kolkata for every year from 1999-2010, at IJT on following dates: 27-28th March, 1999; 28-29th March, 2000; 31.3.01 & 01.04.01; 9-10 th March, 2002; 28.3.03 & 30.3.03; & 20-21th March, 2004, 6th & 7th September, 2005, 25-11-2006 & 26-11-2006 , 1-12-2007 & 2-12-2007 , 26-11-08 and 27-11-08 , 21.04.2010 and 22.04.2010 (M.Sc Students).
- (ii) Organised Four days Practical Demonstration cum Training on Textile Chemistry practicals for P G diploma Course on Textile Design & Development of NIFT, Kolkata at IJT on 21-4-2001 to 22. 04.2001 & 28th to - 29.04.01, 11-11-06 , 12-11-06 & 18-11-06., , 27th and 28th November 2007.
- (iii) Organised Two /three days Practical Demonstration cum training programme for BFAD students of Rani Birla Girls' College (under Calcutta University), Kolkata for every year from 2009-2010,,2010-11 1nd 2011-12 , 2013-14 at IJT on following dates: -, 5-5-2010, 5-4-2011 , 16-4-2011 & 17-4-2011 , -23-3-12(Working day) and 24-3-12 & 5-5-12 , 29th and 30th March -2014.

6. Courses taught outside as Invited / Guest faculty (Part-time/ Guest/ Visiting Faculty) :

- A) Fibre Science & Production of Man Made fibres for B.Sc. Tech (Textile) students of College of Textile Technology, Serampore, 1987-88 as part time Lecturer.
- B) Textile finishing and Evaluation of finished textiles ; for B.Sc. (Hons) in Textile & Clothing students of JD Birla Institute of Home Science, 1999-2000 and advancement of Bleaching of Natural Fibres in March,2005..
- C) Colour Science, Colour measurement and Computerised Colour Matching of Textiles; for NIFT Students of CAFTI Course in 1999-2000.
- D) Invited Guest Faculty for Two Papers (a) Polymers and Fibres and (b) Colour Science , in M Sc Course in Textiles and Clothing of J D Birla Institute Under Jadavpur University in Nov-Dec-2009 & Feb-May-2010 .
- E) Taught the students of Food Science of Bengal Engg. and Science University, Sibpur, for special coaching classes for UGC-NET examination in Home Science for Textiles and Clothing subjects. April-May-2010.
- F) Gave a TV-Talk in Tara Bangla Channel on scope of career building for students of Institute of Jute Technology and about the B.Tech Course of IJT on 25.08.01.
- G) Delivered a special invited lecture on Eco-friendly Bleaching and Dyeing of Jute in short course cum orientation programme on Bleaching and dyeing of jute fabric held at NIRJAFT on 12-01-09 for training and orientation of Scientist and educationist. And also on Natural dyeing of Textiles and Paper on another short course on handmade paper making held at NIRJAFT on 5th March-09.
- H) Delivered a special invited lecture as a member of Institution of valuers on “ Valuation of Plant, Machinery and equipment with special reference to jute and textile manufacturing units” held at BESU on 5th & 6th June--09.

- D) Delivered special lecture and taken regular part time classes in M Sc Course in Textiles and Clothing at J D Birla Institute, under Jadavpur University on High Performance Fibres, Advances in Chemical processing, Eco-Textiles, Colour Science and Instrumental analysis etc. in 2009-10 & 2010-11 and still continuing.
- (J) Delivered a series of lectures as invited Guest Faculty in B FAD Course of Calcutta University at Rani Birla Girls' College in 2009-2012 On Man made Fibres, Dyeing and Ecofriendly Textiles Processing and Chemical Finishing .
- (K) Delivered Special invited Lecture in June -2012 at B Sc (Hons) in Textiles , Clothing & Fashion Studies -3rd year –on Quality control of Textiles and apparels and Ecofriendly Textiles .
- (L) Delivered Special Lecture in NIRJAFT on Life Cycle assessment of Jute : Carbon Balance for Jute Processing on 23rd June-2012 in the workshop of Carbon Footprint –a step towards eco-friendliness .
- (M) Delivered Special Lecture in NIRJAFT on Ecofriendly Processing of Jute for Fulfilment of Eco-Criteria and Pollution Control Norms on 13th July -2012 in the Summer School cum Orientation Programme for Scientist and College and University Teachers (approved by ICAR & UGC) on the theme of Processing, value addition and waste utilization technologies for Jute and other allied Fibres Technology (from 26th June to 16th July - 2012) at NIRJAFT , ICAR , Kolkata.
- (N) Taking Classes as Visiting Faculty/Guest Faculty in B FAD Course at Rani Birla Girls' College (2009-2014) , affiliated to Calcutta University and in BSc and M Sc In Textiles and Clothing at J D Birla Institute (2009-2014) affiliated to Jadavpore University

-: SUMMARY OF THE ACHIEVEMENT MADE SO FAR (1987-2014) :-

For Prof. (Dr.) A. K. Samanta, B Sc (Hons), B Tech, M Tech, PhD (Tech), DJT, DPM, DMSM, FIE, FIC, FIV.
Total Experience: Industrial – 2.5 Yrs; Teaching and Research: 25 Yrs [including 8 Yrs as Asst. Professor, 6 Yrs as Professor at IJT and 1 Yr in Professor equivalent post at MANTRA, Surat as Asst Director-I (RMP)]

1. Publications : Number of Paper Published & Books /Manuals/Journal/Bulletin Edited: Total – 186

Total Paper Published: 187 + 7 (under process) (Annexure AKS/1,2,3)			Books/Chapters (Annexure AKS/4)			Books /Manuals/Journals Edited (Annexure –AKS-4)			
Foreign/ International	National	Under Process	Review Papers	Other Technical & popular Articles	Seminar & Conference Papers	Books ^b / Book Chapters ^c , Teaching Manual ^d	Training Manuals ^e Edited (Published by IJT) : Total 11	Edited Seminar Proceedings ^f	Journal/ Bulletin Edited ^e

^a**Research and other Publications:** Total 76 + 9 (under process) research papers published (besides other type of papers) in the following reputed journals (as first author in most of them except a few): —

J Text. Inst., UK (3), J Apl Polym Sc., USA (4), J Nat Fibres, Poland (5), International Dyer, USA (2), American Dyestuff Reporter (1), J Polym Mater (10), Industrial Crops and Products (1), Indian J Fibre Text Res, India (more than 26), J Inst Eng(I)-Text. Engg.-E (more than 10) and rest in other journals, besides 12 review papers, 31 technical articles and 55 seminar and conference papers.

^b**Books and ^cChapters of Books :** Authored individually or jointly 4 books (One book on Short course on Bleaching, Dyeing, Printing and Finishing on Jute authored jointly with other faculty published by IJT in 1994, another 2nd book on Energy Management published by IJT on May 2010. and the 3rd book on Managing Human Resources published also by IJT on Jan-2011 and one book -**Technical Hand book on Natural Dyes and Colouration**, By A K samanta and A Konar, Nov, 2012, published from DJFT,IJT, CU from JTM R & D Project.-8.,.

Authored individually or jointly : Three Chapters of International Books i. e. One chapter on Recent Developments in Chemical Processing of Jute in ‘Indian Jute – a new Symphony published by JMDC in Feb, 2003, and **another one chapter** in International book on ‘Jute-basics” published in May-2010 by International Jute Study Group, Dhaka, Bangladesh, **both the chapters authored by Dr A K Samanta & Dr T K GuhaRoy** and also Contributed One another Special chapter on “*Dyeing of Textiles with Natural Dyes* ” By A K Samanta and A Konar, in the International Book on ‘**Natural Dyes** “**edited by E Perrin Akcakoca Kumbassar** and published by In-Tech International Publisher, Croatia, October, 2011, (ISBN-978-953-307-783-3), P- 29-56.

^c**Training Manuals authored / edited: edited individually or jointly 4 Books / 2 Manuals** in English and **9 Training Manuals in three languages** (Hindi, English and Bengali)

^d**Teaching Manuals/ Aids developed: One manual on Practical Guidelines** for Textile Chemical Processing Practical on Finishing for Part-4 Students of B Tech in Jute and Fibre Technology under the University of Calcutta, 2006.

^e**Edited Research Journal /Bulletin/Report : Edited Six Issues of Mantra bulletin** during '97-98 & Edited Two R&D Reports for MANTRA. And Edited 3 issues as **Editorial Board Member (2012-14 & Continuing) for J IE(I) –Series-E-Textile & Chemicals-published by Springer Publications and IE(I) jointly .**

^f**Edited conference proceedings: Jointly Edited four Book of Papers** of National Convention of Textile Engineers and All India Seminar of Textile Engg Divn. , WBSC, Institution of Engineers (India) in 2004, 2005, 2006 and 2007.

2. Number of B.Tech/ M. Tech or M.Sc Dissertation & Ph.D Guided/Guiding : (Annexure – 9)

B. Tech Dissertation	M.Tech/ M.Sc. Dissertation	PhD Thesis Guided -.	
		PhD guidance Completed & Degree awarded	PhD Guidance Presently Continuing
34	11	6(3 from JU and 3 from CU)	Total 6(4 in CU & 2 in JU)

3. Any special awards/ recognition, etc.:

- **Dr. Triguna Charan Sen Memorial National Award** in **1995-96** for best research paper in IE (I) Text. Engg. Journal.
- IE (I) Special Subject Paper Award on current topic in **2006** in IE (I) Text. Engg. Journal.
- **Special Merit Award** by Institution of Engineer (India) in **2007** in IE (I) Text. Engg. Journal.
- **All India Best Project Award** from Alps Industries, Ghaziabad in **2001** for Guidance of B Tech Project on Natural dyes.
- **“Certificate of Excellence”** from AICTE for TAPTEC Project on Computer aided Colour Matching and Print Design, **2004**.
- **Best Practice award of NAAC** in National Seminar on NAAC Accreditation processes etc at J D Birla Institute on **5-6 th April-2013** .
- **Best Paper award in this International seminar and award was given by Sri Abdul Kalam Azad, Ex – President of Govt. of India in the International Conference on Environment and its Impact on Society held on 18-20th August, 2013** , at J D Birla Institute , Jadavpur University, Kolkata.
- **Dr. Triguna Charan Sen Memorial National Award, 2013 for the best research paper of the year in Textile Engineering, awarded by Institution of Engineers (India) in 28th Engg Congress-2013.**
- **2nd Best Poster presentation award** for Poster paper on Application of Natural Dyes from Eucalyptus bark on Silk Fabrics and its different Characteristics , IWND-NAIP International Seminar cum Workshop held on **5-7th March 2014** at NIMSME–organized by ANGRU for NAIP (ICAR) -VCND College of Home Science, Hyderabad, AP.

4. Experience in Academic and Research Administration :

- * **Presently Holding The Position of Head of The Dept, Dept of Jute and Fibre Technology , IJT, University of Calcutta**
- * Worked as **Professor In-charge (Academic)** since **August-2009 to June-2011 (Approx 2 yrs)** at IJT.
- * Worked for **1 year as Asst. Director (Grade – 1) in Research Management Position in MANTRA, Surat.**
- * Worked as **Section In-charge of Textile Chemistry Section of IJT since Feb’1991 to 2009 (18 yrs)**
- * **Chairman, BIS- Sectional Committee on Dyes and Chemicals(National Committee) –TXD-07 from March -2014.**
- * **Member, BIS Committee for National Standards on Jute (TX-03) and also for other committees of BIS for Textiles etc**
- * **Expert Member of National Board of Accreditation , For Accrediatatting Engg Degree Courses in India ,by NBA.**
- * **Chairman , Board of Studies/ Experts in BFAD Course of CU at Rani Birla Girls’College , since 2008 to till Continuing**
- * **Member of Research Advisory Committee of NIRJAFT under ICAR 2010-11 to 2012-13**
- * **Member of Board of Studies, SILPASADAN, BISHWABHARATI (a Central University).-2011 -12, 12-13 and 13-14**
- * **Member of Ph.D Committee in Textile Technology, Calcutta University, 2009 onwards to till continuing**
- * **Member of Syllabus Revisional Expert Committee for Textile Engg, for IE (I), Textiles 2009, BSc and M Sc Course in Testiles & Clothing and Fashion Studies etc. JDB Inst, JU and Bachelor of Fashion & Apparel Design Course, RBGC, CU .**
- * **Chairman, Board of Studies for B Tech, M Tech and PGDJTM course , DJFT, CU from 2014 -2016 and For Last 25 yrs Member of Board of Studies, B Tech & M Tech Course of IJT under CU & Examiner (Jute & Fibre Tech/ Textile) & Moderator of CU, WBUT, BU, NSOU etc. for different Degree and Diploma courses of these Universities.**
- * **Member of Governing Council of IJT for 4 terms and Member of Governing Body of R.K. Mission Silpamandir, Belur.**
- * **Member and Jt. Convener in 1998-2000, Convener in 2000-2004 & State Committee Member & Chairman of Textile Engg.Divn.WBSC, in 2004-08 and Co-Chairman for 2008-14, for Textile Engg. Divn.,WBSC of IE (I).**
- * **Expert member of CU for Inspection Team before affiliation of BFAD Course under Rani Birla Girls’ college ,**
- * **Expert Member /Advisor for State Technical Council of Education for pre-affiliating inspection of Textile Design and Fashion Design related Diploma courses.**

- *Expert member/Advisor of Staff Selection Commission for Recruitment of Technical Officers/ Personnel in Textiles
- *Member of Editorial Advisory Board, Journal of Institution of Engineers(I)-E-Textile and Chemical Engg.

5. Technology / Process Developed :

- * Process developed for Low formaldehyde finishing (using developed AMF resin and its special application process) and formaldehyde free crease resistant finishing (using citric acid) of jute fabrics. : The AMF resin is now commercialized by one of the leading textile chemical manufacturer.
- * Development of finer and chemically textured / bulked jute-polyester & jute-cotton blended yarns: Used by Arvind Mills as weft in special quality denim fabric.
- * Developed a special process for pretreatment, dyeing and finishing of micro denier polyester fabrics to overcome its challenges. The dyeing process recommended by us is now being practiced in several chemical processing units of Surat zone.
- * Development of a simple and newer method of measuring compatibility rating of two or more dyes: Experimented in Dyeing unit of Associated Exports, Madhyamgram, West Bengal and result was satisfactory.
- * Developed a simple method of measurement of flexural rigidity of jute fibre: published in national level refereed journal
- * Standardized the processes of natural dyeing of Jute with a special process using a natural catcher to enable jigger dyeing technoeconomically feasible under JTM R & D Project
- *Prepared standardized database for computerized colour matching of jute fabrics by development of suitable CCM software system for jute using Synthetic dyes under JTM-R & D Projects.
- * Developed Indegeneous newer eco friendly recipe for Fire protective Chemical Finishing of Jute fabrics with LOI value up to 36 under JTM R & D Project .

6. Contribution to HRD development through Special Training Programme for Jute Industry :

- * During 1995-1998, Conducted on-site training in chemical processing of jute in different small scale sector under MOT-GOI Sponsored Project for HRD on Jute .
- * During -2000-2004, as a Project coordinator for the first time in the history in Jute, Planned, Designed and organized structured training of jute mills workers by establishing 8 – sub-centres in jute mills during 2000-2004 and above 11000 workers were trained and 29 manuals were published under UNDP-CCF-1-MOT-GOI sponsored Project :
- * During 2004-2010, Conducted training for behavioural aspect / Motivation etc for supervisors of jute mills.
- * During 2011 to presently guiding as Project Coordinator and running a HRD Project on Jute for Skill Development under MOT, GOI sponsored ISDS Project

7. Industry – Institute Interaction :

- * Created **close link with Jute Mills and IJMA** to create **Eight Workers Training Centres** in Jute Mills to conduct regular training under UNDP-CCF-1-MOT-GOI sponsored Project during 2000-2004.
- * Created **close link with AJHEEI** and Decentralized Jute Sector for implementing output of 3 JTM R & D projects of IJT during 2008-2012.
- * Created **relational excellence and contacts with 50 different jute mills, IJMA for implementation of UNDP-CCF-1-GOI HRD Projects for Jute Sector during 2000-2004 and with AJHEEI and small scale diversified jute units for implementation of output of three JTM R & D Projects and with neighbouring Universities and Institutes for collaborative R & D Work during 2008-2011 as well as again with more than 20 Jute Mills and relevant NGOs for implementation of ISDS Skill Development HRD Project for Jute Sector during 2011 onwards and presently continuing.**

8. Specialised knowledge developed and Specialized training under taken :- Details given in Annexure –AKS/5

9. Fund Mobilisation Through Sponsored Projects :

- Consistent Mobilization of External Funding in every year from Projects : Total Fund attracted is Rs 3.14 crores in IJT and Rs 42.2 lakhs by in MANTRA, Surat).during 22 years of service in teaching and research, where during last three years the fund attracted is Rs 1.10 crore in three JTM R & D Projects , Rs 19.29 crores in ISDS Project in five years(2011-2016) and Rs 6.84 crores in NJB sponsored PGDJTM and JLS type industry oriented

courses and related activities for 2012-13 to 2016-17. Thus total fund attracted in last 26 years of service is about Rs30 crores.

b) Sponsored Projects Undertaken as Principal Investigator/ Project Co-Ordinator /Co-PI: Total-17 amounting Rs 357 lakhs up to 2010-11+ 687 lakhs in 2011-12 .

→National Level :

* MHRD/AICTE Laboratory Development Projects (**5 projects**)-**Total-97.9 lakhs**, Successfully completed (1988-98)

* AICTE/MOT R & D Projects (**2 MOT Projects** in MANTRA in 1997-98 and **2 AICTE TAPTEC/RPS Projects** in IJT in 2000-2007)-**Total- 67.2 lakhs**, Successfully completed in 2000-2007.

* Jute Technology Mission MM-IV-Scheme 7.1 R & D Projects (**3 Projects in IJT**)-**Total -1.10 Crore** – Almost completed , 2008-2012.

* **ISDS Project for Skill Development for Jute Sector (for new entrant workers and Jr Supervisors) Total : 19.29 crore for five years (Received Rs 6.87 Crore for First Year) –ongoing**

→International Level :

* **UNDP-CCF-1 Project on HRD on Jute for Workers' Training in Jute Mills : Total 74 lakhs-2000-2004**

* **Technology Transfer Project of IJSG, Dhaka** (International Body on Jute)-1project-**Rs8.00 lakhs-2006-2009.**

*NJB sponsored PGDJTM and JLS type industry oriented courses and related activities for 2012-13 to 2016-17,
Rs 684 lakhs in five years.

10. Contributions to Institutional Development (Physical and Infrastructural Development of the Institute)

* Developed **Four new Laboratories (Colour Chemistry Lab , Thermal Protective Technical Textile lab and Modern Chemical Processing Lab** at IJT and One **Environment Affairs Lab** at MANTRA, Surat with latest art of technology and equipment bringing funds through different Projects, 2000-2010.

* Developed **Environmental Affairs Lab in MANTRA, Surat.** & Built up Environmental Audit Team for income generation,1997-98.

* Taken Special Initiative as Project Coordinator for bringing funds of Rs 170.8 Lakhs for extension of IJT's New Building from 2 storied Building to Five Storied New Building under ISDS Project and another Rs 241 Lakhs for newer Machinery for Infrastructure development (capex) under ISDS Project.

11. Contribution of Promoting Research / Interdisciplinary / Collaborative Research and HRD Programme and related implementation :

* Created link for multidisciplinary research activities in collaboration with Faculty/Scientist of **TITS, Bhiwani, J. D. Birla Institute, Kolkata, Rani Birla Girls' College , Kolkata , Dept of Polymer Science, Calcutta University, Chemistry & Chemical Engg. Dept of Jadavpur University, NIRJAFT, Kolkata and also with SITRA, Coimbatore etc**

* Undertaken Collaborative Research work on Dev. of Fire Retardant Jute Fabrics sponsored by JMDC/NJB, Ministry of Textiles as JTM-R & D –Project -10 under JTM –Scheme 7.1. .

* Initiated Ph.D Research work at IJT, by infrastructure development & taking part time and full time Ph.D Research Fellow.

* **As a Member of Research Advisory Committee of NIRJAFT, ICAR, initiating research on jute in newer areas with advanced technology.**

12. Special Efforts and Contributions for increasing credibility of IJT & Growth of the HRD in Jute /Textile sector:

(Annexure – 10)

* Taken instrumental role and leadership for first time **accreditation to NBA under AICTE in 2006** for IJT.

* Initiated, formulated & executed plan for **introducing M. Tech. Course in Textile Technology (Technical Textiles)** at IJT.

* Initiated **Constitution of PhD Research Committee** under Calcutta University in Textile Technology Branch from IJT.

* Formulated and implemented **Bachelor of Fashion and Apparel Design Course, CU & M Sc in Textiles and Clothing, JU.**

*Taken leadership in introducing new course in **B Tech in Jute Tech.** and Semester System in Existing B Tech Course of IJT

* Designed Apprenticeship Trade course in Textile processing (spinning , weaving and chemical processing) for CSTRI, MOL, GOI, as a member of syllabus framing committee of CSTRI, MOL, GOI.

13. Other Professional Work and Contributions in Extension Services :

* **Motivated all the Faculty and Technical staff of IJT in introducing newer extension activity of IJT for workers Training Programme in Jute Mills, where about 125 training modules were organized in 4 years for workers training in Jute Mills covering 50 jute mills during 2000-2004 and finally more than 11,000 workers were successfully trained by IJT, besides organizing 5 other short training courses at IJT and conducting refresher courses for supervisors and managers in different jute mills of India and Bangladesh.**

***Motivated all the Faculty ,Technical staff and 62 project staff of ISDS Project of this department and established / created 10 newer satellite centres in different jute mills in West Bengal and 2 at North East States for workers Training Programme in Jute Mills having good employability and reintroduced four JLS Courses at this department of CU as well as created 12 newer satellite centres in different parts of West Bengal for Training on Jute Diversified Products (JDP) and also established another 12 +6 satellite centres in North East States of India, during 2011-12 and 2012-13 continuing for MOT, GOI Sponsored ISDS Project creating huge self employment/ job opportunity**

14. International Exposure :

Country	Purpose/Subject / Title	Year	Duration
USA & UK	Training on computerized colour matching USA & UK, and visit to UMIST, UMAS, Bradford Univ.	May 1990	2+1 weeks
UK	Fellowship Training at Dept. of Textile Industries, Leeds University and CCDU, Leeds and BTTG, UK	Nov-Dec-1996	1month
Bangladesh	Project/ steering committee meeting and International seminars at International Jute Study Group, Dhaka, and also for Conducting training in different mills of Bangladesh by IJT.	Dec-2003, May-July-'04, Nov-06	Total 3-4 weeks
GENEVA	Enlisted as international expert/ educationist in jute / textiles in UNIDO (GENEVA) ROSTER.	Individual Capacity	1996 onwards
ISO TC-38	Enlisted in ISO global directory as Member of ISO Tc 38 having confidential access to ISO Tc 38 website and news for members from 2017 onwards and attended International Bi annual Meeting of ISO Tc 38 for Last three Consecutive meeting in Layon France in Oct 2015, in New Orleans , USA in Oct 2017 and in Ponzano, Venneto, Italy in Oct 2019 and presented our Indian developed methods of Test of natural dyes under WG-31 group.	As BIS nominated Indian Delegate and expert Member from TXd-07	2015 onwards till date
International Seminar and Conferences	Attended many international Conferences and presented papers in Italy, Portugal, USA, Bangladesh etc ...	As Paper presenter and invited lecture also.	2006 onwards

15. Major Other Technical Contributions :

15.1. Special Areas of Experiences/ Techniques known :

- More than 25 yrs. Teaching and Research experience on Jute and Textile Fibres/ Man Made Fibres/ Chemical Processing of Jute & Textiles (Preparatory/ Dyeing/ Finishing/ Colour Sc.& Process Control in Textile wet processing)
- 1 yr. Special assignment in Textile Research Management and administration Position as Asst. Director at MANTRA, Surat. Also looked after Eco-Lab, Environmental affairs Lab, Fibre Science Lab, Chemical Processing & Testing Section & Edited Monthly Mantra bulletin Journal.

- c) Worked about 1.5 years in Jute Industry in SQC, Modernisation and Renovation Cell and in Production unit of NJMC Ltd, unit-Khardah and unit-Kinnision.
- d) Handled more than 17 National & International Level Projects (MHRD/ AICTE/ Ministry of Textiles/ Spl. Jute Development fund/ UNDP-CCF1-HRD Project & JTM-R & D Projects and ISDS Project).
- e) Set up of one colour chemistry and one chemical Processing Lab at IJT & one Environmental Affairs Lab at MANTRA.
 - (1997) Specially trained and worked in computerized colour measurement & Matching and Computer Aided Textile Print Design System.
 - (1998) Edited MANTRA Bulletin (monthly) for one year and edited 11 workers' Training Manuals for jute mill sector (nine in English/ Bengali & Hindi version and two in English only).
- f) Member of Editorial Advisory Board, Journal of Institution of Engineers(I)-Textile and Chemical Engg.

15.2 Referee/Reviewer of Different National and International Journals

- (ii) Chemical Engineering Communications , USA
- (iii) International Journal of Tea Science, International Society of Tea Science, New-Delhi, India.
- (iv) Indian Journal of Fibre & Textile Research, (NISCAIR, CSIR) , New-Delhi
- (v) Indian Journal of Chemical Society, Indian Chemical Society, Kolkata
- (vi) Journal of Institution of Engineers(India)-Textile Engg. , IE(I), Kolkata
- (vii) Indian Science Cruiser, Kolkata
- (viii) Natural Product Radiance, (NISCAIR, CSIR) , New-Delhi
- (ix) Textile Research Journal, USA
- (x) TLIST-Journal

16.3 Major areas of R&D work handled :

1. Solvent texturing of nylon- partially oriented yarns and Organic solvent pre-treatment of nylon, polyester, to study the effect of swelling on dye-uptake and change in mechanical properties.
2. Atmospheric dyeing of polyester yarns with disperse dyes through solvent pre-treatment route.
3. Dyeing of polypropylene with basic dyes and disperse dyes of basic character via chlorination route.
4. Dyeability of Microdenier Polyester fabrics; effect of solvent pretreatment & application of silicone finish & UV- absorbers.
 - (1997) Low formaldehyde finishing (using developed AMF resin and its special application process) and formaldehyde free crease resistant finishing (using citric acid) of jute fabrics.
6. Transfer printing of polyester/cotton blended fabric with new type of disperse plus reactive dyes synthesized.
7. Caustic treatment and chemical texturing/ bulking of jute blended yarns/ fabrics and thereby manufacture of speciality/ high valued jute diversified products.
8. Sequential texturing, bleaching/ Resin finishing/soft polymeric finishing of jute and jute/viscose, jute/ cotton, jute/ polyester blended textiles.
9. Standardization of color measuring variables and database to use for computerized color matching of different textiles including jute.
10. Graft- co polymerization of acrylamide /acrylamide- MMA/acrylamide-ethylene glycol mixture on Jute and acrylamide monomer on cotton and corresponding changes/improvement in their textile properties.
11. Manufacture of jute fibre reinforced composites, for its use as picking stick in silk-loom (at MANTRA)
12. Problem and care in Weight reduction treatment and dyeing of microdenier polyester fabric (at MANTRA, Surat) and Improving dyeability and of microdenier polyester fabric.
13. Wash- Performance of Cotton and jute/ cotton union furnishing fabric.
14. Photo fading □ ebruary of differently bleached (with or without use of UV-absorbers) and resin finished jute and jute/cotton fabrics in reducing their Photo-yellowing character.
15. Chemical and bio-chemical softening/ modification of jute fibres for better Processibility viz. Spinnability/ Bleachability & Dyeability.
16. Selective Chemical and Bio-Chemical Finishing of Jute and Jute/Cotton union fabrics.

17. Standardisation of Energy Efficient Low Temperature Hydrogen Peroxide and Potassium-per-oxo-disulphate combined Bleaching of Jute, Cotton and Jute-Cotton Union Fabrics
18. Application of single and mixture of Natural dyes on cotton and jute textiles.
19. Development of a simple and newer method of measuring compatibility rating of two or more dyes:
20. Developed a simple method of measurement of flexural rigidity of jute fibre: published in national level journal
21. Standardization the processes of natural dyeing of Jute with a special process using a natural catcher to enable jigger dyeing techno-economically feasible process under JTM R & D Project
22. Preparation standardized database for computerized colour matching of jute fabrics by development of suitable CCM software system for jute using Synthetic dyes under JTM-R & D Projects.
23. Development of Indegenous newer eco friendly recipe for Fire protective Chemical Finishing of Jute fabrics with LOI value up to 36 under JTM R & D Project .

Annexure-AKS/19

16.5. Major additional responsibilities held/Work done:

- (1998) Remained **Section In-charge of Textile Chemistry Section** since Feb-1991 to till date .
- (1999) Moreover, held additional Responsibility of **Professor In Charge (academic)** since Aug-2009 to June-2011 at erstwhile IJT (Approx -2 Years)
- (2000) Initiated better Chemical Testing & Technical Service facilities from Textile Chemistry Section for more revenue generation.
- (iv) Handled Following Sponsored Projects :
 - (2001) Project Co-ordinator for four MHRD/AICTE sponsored projects and partly for one Jute R&D project (SJDF) Government of India sanctioned to I.J.T. during 1988-1995.
 - (2002) Acted as Principal Investigator of two sponsored R&D projects at MANTRA, during 1997-98;
 - (2003) Worked as Project co-ordinator of UNDP- CCF1-HRD Workers' Training Project and Principal Project Investigator of one AICTE Project on Computer aided textile print design .
- (d) Worked as PI for Three JTM R & D Project-8.10 and 17 for R&D Work on Chemical Processing of Jute
- (e) Worked as Project Coordinator for 2 years (in place of Dr D Das, when he was in lien) for Development of Coated Jute Products , Sponsored by AICTE under NCP-II scheme.
 - (2004) Working as Project Cordinator For ISDS Project sponsored by MOT,GOI-2011-12-2016-17
- (A detail List is given in **ANNEXURE-AKS/5**).
- (2005) **FORMER MEMBER** (as Techers' representative) of the Governing Body of I.J.T. for two years (1992-93 and 1993-94) and **MEMBER** (as teacher member) in the House Committee (Internal Administrative Committee of IJT) for two terms. Worked as Member Secretary, for work load committee, IJT, 1994. Remained Member, Finance –Sub –Committee,IJT for 2002-04. Remained **MEMBER**(as Techers' representative) of the Governing Council of I.J.T. for 2003-04 and presently **MEMBER**(as Techers' representative) of the Governing Council of I.J.T. for 2009-10 and 2010-11.

- (vi) Remained Asst. Editor of Mantra Bulletin, a monthly journal for 1997-98.
 (2006) Initiated R&D work in Textile Chemistry Section of IJT, after developing two new labs.
 Enlisted in Jadavpur University & Calcutta University as □ebruary□d guide for Ph.D. research
 (2007) Initiated and developed the new Environmental Affairs Lab and environment Audit Group in
 MANTRA, Surat.
 (2008) Under UNDP- GOI Sponsored Project to IJT for HRD in jute sector during 1993-98, myself
 was actively engaged in conducting, organizing & coordinating training of mill personnel and personnel of decentralized sector in chemical processing of Jute/ Textiles and their evaluations. Designed and delivered short training courses and prepared training materials.
- (x)* MEMBER of Board of Examiners, paper setter, moderator of B.Sc. (Textile & clothing), B.Sc. Tech/ B.Tech/ AIC/ M.Tech. and M.Sc. (Textile clothing) exam. Of different Indian Institutes/ Universities. Also student liaison officer at IJT for Textile Institute (Manchester), U.K. for last eight years.
- (xi)* Member Board of studies, in Jute & Fibre Technology Branch of University of Calcutta since- 1999.
- (xii)* Enlisted as an UNIDO EXPERT SCIENTIST/ EDUCATIONIST, since JUNE, '96 for Chemical processing of textiles, in Roster of UNIDO- International Centre at Viena, Austria.
- (xiii) Former member of BIS-Sectional Committee on Chemical Test Methods- TX-05, 1997-98, (from MANTRA). Alternate member of BIS Sectional Committee –Tx-03-from IJT .
- (xiv) Referee/ Reviewer of Indian J. Fibre Text. Res; J. Indian Chemical Society and J. of IE(I) Text. Engg. And many other journals
- (xv) Remained Jt. Convener & Member of Textile Engg. Divisional Committee, of WBSC, IE(I) during 1988-92., Remained Convener and Organising Secretary of Textile Engg. Divn. Of WBSC of IE(I) during 2002-2004. Remained Chairman of Textile Engg. Divisional Sub-committee and member of State Committee of West Bengal State Centre of IE(I) for 2004-2006 and 2006-08 .Presently remained as Co-chairman of Textile Engg. Divisional Sub-committee of West Bengal State Centre of IE(I) for 2009-2011.
 (2009) No. of HRD/ Research/ Technical/ Misc. Reports prepared – General 10, Research report-6 and Project Report-14) (A detailed list is given in **Annexure-AKS/7**)
- (xvii) Invited Part time/ Visiting/ Guest Faculty : At college of Textile Tech., Serampore (1987-88), J.D. Birla Institute (1998-99,2002,2004, 2010) & NIFT,Kolkata (1999-2000) etc.
- (xviii)* Jointly coordinated preparation of proposal and syllabus for 3 yr. B.Tech course (post B.Sc.)-1995-96
 * Remained Jt. Co-ordinator for Syllabus Restructuring Committee for IJT's new 4 yr. B.Tech course, during 1998 (Later approved by AICTE).
 * Prepared and Co-ordinated the entire responsibility for preparation of Syllabus of M.Tech in Textile Technology (Technical Textile) Course for IJT, during 2000-2001 (Later approved by AICTE , dated –12-22nd □ebruary,2002). Compiled and prepared the revised syllabus of 4 Semester M.Tech in Textile Technology (Technical Textile) course, finally approved by Calcutta University in August ,2005.
- (xix) Guided Industrial Training cum Tour of Final Year B Tech Students in different Textile Mills of Northern India twice (1998 and 2005) and in Western India (1997 and 2002) twice and also to CFCL, Haldia (1990) and Orissa synthetics (1990), Dhenkanal, Orissa once.
- (xx) Taken instrumental role on introducing semester system for existing B Tech in Jute and Fibre Technology Course of IJT under Calcutta university and introducing a new 8 semester B Tech Course in Jute Technology instead of post B Sc Diploma in Jute Technology in 2008-09
- (xxi) Taken instrumental role and acted as Member of the Experts Committee as External Expert in the Syllabus Committee meeting held on 7th Sept, 2005 for preparation of Draft syllabus for M Sc in Textiles and Clothing Course introduced at J D Birla Institute and also as Member of the Experts Committee as External Expert in the Syllabus Committee meeting held on 1st February, 2008 for

Revision of B Sc (Honours) Course in Textiles, Clothing Science and Fashion Studies in the Dept. of Sciences of J D Birla Institute, Kolkata ,under the affiliation of Jadavpur University.

(2010) Taken instrumental role in planning , designing the Bachelor degree course in Fashion and Apparel Design under the University of Calcutta in 2008-09. Presently remained ad chairman , Board of Expert of BFAD course of CU.

- (xxiii) Taken instrumental role and leadership as Chairman of TX-07 Committee of BIS on Speciality Dyestuff and Chemicals for Textile Processing, for preparation and editing and submission of draft standards on Identification of two natural dyes (Indigo and madder –BIS draft for wide circulation in BIS website bearing No –11693 dt 18-7-2017 for indigo and 11694 dt 21-07-2017 for madder) and also for identifying such natural dyed textiles by characterization of their test protocol working with DR P S Vankar (research collaborator , Co-Pi and part time Sr consultant) and Mr Y A Shah (industry partner from Ama Herbals, Lucknow) as team member and as an positive output for national contribution in the Ministry of Textiles, Govt. of India ‘s sponsored R & D Project on N atural dyed ecofriendly oco-tech product development with establishing natural dye testing and Natural dye and finsh mark standard.

Annexure-AKS/20

Brief Note on Experience for (i) Academic and Administrative Management, (ii) Proven Leadership for Policy Planning, (iii) Monitoring and Evaluation of Academic and Research Activities and (iv) Promotion of Industry Institute Interaction and R&D Work.

A. Experience of academic and administrative Management

i) Professor Incharge (Academic) Since August' 2009 to June-2011	2009 to 2011 2 yrs	Looking after entire academic, administration, examination, student matters, training and placement etc.	Individual Capacity
ii) Section Inchage of Textile Chemistry section, IJT since February' 1991	1991 to till date	Looking after entire departmental work in textile chemistry section including academic, administration and day to day activities and staff control	Individual Capacity
iii) Chairman, Board of Experts for Bachelor Fashion and Apparel Design course, C.U. (Conducted in Rani Birla Girls College) since June, 2009	2009	Controlling, Monitoring and looking after the entire academic matters, course design, examination and all academic matters of this course as chairman BOE.	Individual Capacity
iv) Chairman of Textile Engg Division,WBSC, Institution of Engineers (India), i.e. [IE(I)]	2004-2008	Looking after entire divisional work for development of the members and professional expertise and organizing National seminar / convention etc.Textile Engineering division, WBSC, Institution of Engineers (India)	Individual Capacity
v) Member of governing council of IJT	1992-94 2002-04 2009-11	Looking after entire co-ordination of Teachers' view and related administrative work, contributing to the policy decision and monitoring/evaluation of academic work by participating in G. C. of IJT as Teachers'	As Teachers' Representative.

		representative.	
vi) Member, Governing council of Ramkrishna Mission Shilpamandir, Belur	2006-2008	Member of governing council of a polytechnic on behalf of IE(I) for contributing Policy decision and academic administration for education in this level.	Individual Capacity
vii) Member PhD Committee (Text.Tech), C. U.	2009	Contributing for advancement of education by PhD research programme monitoring and evaluation.	Individual expertise
viii) Recognised PhD Guide of Calcutta University and Jadavpur University	1999-2012 and continuing	In the discipline of chemistry, Chemical Engineering, (JU) and Polymer Science & Tech. and Textile Technology, (Calcutta University) contributed in collaborating research by guiding PhD research work.	Individual Capacity
ix) International expert in Jute / Textile chemical processing field enlisted in UNIDO ROSTER.	1996 onwards	Enlisted as international expert in Jute / Textile chemical processing field in the UNIDO (GENEVA) ROSTER.	Individual Capacity
x) Worked in research management position at MANTRA, Surat for one year and seventy research were controlled successfully.	1997-98	As Assisstant Director- Grade –I, worked in MANTRA, Surat in senior administrative position succesfully	Individual Capacity
xi) Chairman of Bos/Boe of BFAD Course of Calcutta university	2009 onwards	Academic guidance and change of new syllabus and control of exam and other matters for BFAD	CU Nominated
xii) Chairman, TXD-07 Committee of BIS , for Textile Speciality Chemicals and Dyestuff	2014 to 2017 (First term , and 2018-to 2021(second term)	Guding and advising and adjudicating Standardization jobs in Textile Speciality Chemicals and Dyestuff under TXD 07 Committee as chairman and Dealing international ISo Tc 38 mirror work for global standardization and related technical control.	BIS TXDC Nominated

B.Proven Leadership of Policy Planning and Implementation

1) Formulation and Implementation of HRD Programme/ Training for jute Industry:

For the first time in the history of jute industry, formulated structured worker's training and its implementation in 50 jute mills covered by establishing 9 centers for onsite training in jute mills in different zones.

2) Designing of course curriculum in university education system

- i) Designing of syllabus and prepared AICTE Proposal for 4 yrs. B.Tech Course for Jute & Fibre Technology, 1998. Designed, compiled & prepared by Dr. A.K. Samanta, Dr. S.C. Ray, Dr S K Sett & Dr. P. Ray jointly.
- ii) Designing, compilation and initiative through initial proposal for 3 Semester. M.Tech Course for Textile Technology (Technical Textiles) submitted to AICTE in 1999-2000 and further Compilation of syllabus for 4 Semester. M.Tech Course for Textile Technology (Technical Textiles), 2003-2004. Compiled & prepared by Dr. A.K. Samanta & Dr. S.C. Ray (in consultation with Dr. P. Ray.) Prepared final Revised Syllabus and Regulations of M. Tech Course in Textile Technology (Technical Textiles), in 2004 and Structured Report for implementation of M Tech course with all details for IJT in 2005. Jointly prepared by: Dr. S C Ray and Dr. A.K. Samanta.

- iii) Taken positive role and acted as expert committee member to prepare the revised and newly semester system of syllabus of B Tech degree course in Jute and Fibre Technology and new B Tech degree course in Jute Technology for Institute of Jute Technology under Calcutta University in 2008.
- iv) Taken positive role and acted as expert committee member to prepare the revised and new formatted syllabus of B Sc (Major) degree course and M.Sc Degree course in Textiles and Clothing Science for J D Birla Institute under Jadavpur University in January 2008 and May –2008 respectively.
- v) Taken positive role and acted as expert committee member to prepare the new syllabus for B A (Major) degree course in Fashion and Apparel Design and its regulations on behalf of the University of Calcutta for introducing this course at Rani Birla Girls' College in April-May 2008.

2) Policy Planning and Monitoring in Academic Administration

- i) **Member of governing council of IJT** : 4 times with two years span, contributing policy decision and monitoring/evaluation of academic work participating in G. C. as Teachers' representatives.
- ii) **Member, Governing council of Ramkrishna Mission Shilpamandir, Belur** : Member of governing council of a polytechnic on behalf of IE(I) for contributing Policy decision for education in this level.
- iii) **Chairman, Textile Engg. Divn. of Institution of Engineers (India), WBSC**, during 2004 -2008, contributing policy decision and academic development of the division

C. Monitoring and Evaluation of Academic and research activities

Institute of Jute Technology was first time accredited to NBA of AICTE in the year 2006 under the initiative and instrumental role was taken by Prof P Ray, Prof A K Samanta , Prof S C Ray and Prof. S K Sett jointly.	Accredited to NBA of AICTE	All documents required for accreditation were prepared by leadership of Prof A K Samanta.
Institute of Jute Technology was raised to Post Graduate level by introduction of M Tech Course in Textile Technology (Technical Textiles) by special initiative from Prof A K Samanta.	Introduced new M Tech Course at IJT under CU	Initiated, formulated and prepared the syllabus and regulation and finally implemented.
Presently working as Nodal officer of three JTM R&D projects Sponsored by JTM-JMDC (presently National Jute Board) under the National Programme on Jute Technology Mission (JTM) under Ministry of Textiles, Govt. of India	Monitoring ongoing JTM R&D Projects of IJT	Initiated, formulated, prepared and executed R&D Projects and attracted funds for the institute.
As Asst. Prof. during 1998-2006 and as Professor during 2006-12 of IJT, (presently DJFT,CU) , developed sufficient infra-structure for promotion of PhD level research and initiated to constitute one separate PhD Committee under CU for PhD Level Research at IJT (presently Dept. of Jute and Fibre Technology, Calcutta University).	Member of PhD Committee in Textile Technology and member of PG Faculty Council of Technology,CU	Initiated PhD research work at IJT by creating facilities for that. (Already guided 5-PhD and presently guiding 7-PhD)

B. Promotion of Industry-Institute interaction and R&D Work

Promotion of Industry collaborative extension programs / Training Programs

Centralised Jute Sector

- (a) In Collaboration with few Jute Mills and IJMA as a whole, establishing eight centres in different zones, Trained 11,000 workers in 50 jute mills during 2000-2004 , in jute selection & batching to jute finishing in each stage of unit operation for jute processing under UNDP-CCF-1-FAHP National Jute HRD Programme sponsored by UNDP & MOT, GOI. Prof A K Samanta was Project Co-ordinator and Project leader for this huge activity. To popularize this training activity and to have a good impact on mill's working nine different technical manuals were prepared in three different languages (English, Bengali and Hindi) and distributed free to each participants and each mill management. 30 Resource persons were also trained and prepared for delivery of training in sustainable mode. Total fund attracted was Rs. 74 lakhs.

b) Training Services to the Industry: -

Training Services : Since 1994 -99 Trained Village level Handloom Dyers for efficient low cost bleaching and

dyeing of Jute at Katwa; Bankura; Chowduar; Warangal and at IJT premises etc. during 1994-98 under National Jute Programme sponsored by UNDP and MOT, GOI. and also conducted short term on-site training programme in Bleaching and dyeing of jute yarns and fabric at different places within and outside of the states on behalf of IJT or NCJD for different duration and coordinated the same at Patna, Murshidabad, Katihar, Bhagalpur etc . Organised special training programme of Bleaching , dyeing and printing of jute for industry personnel at IJT

During 2004-07 conducted training short term on behavioral aspect motivation team work eco-criteria and energy management etc for existing supervisors of jute mills in India and Bangladesh.

During 2007-09 conducted training short term on behavioral aspect motivation team work eco-criteria and energy management under JTM HRD Project of IJT in different mills in the sates and outside the states

(c) Consultancy and Technical audit Services :

- (a) Provided leadership for technical audit valuation of machinery for NTC mills of Eastern India along with others faculty of IJT as entrusted to IJT.
- (b) Provided leadership for technical audit valuation of machinery for NJMC mills along with others faculty of IJT as entrusted to IJT
- (c) Time to time provided consultancy services to small entrepreneur and large jute mills for improving colour fastness, uniform dyeing and finishing of jute products on behalf of IJT
- (d) **Consultancy At MGIRI ,Wardha :** Continued consultancy assignment as Part-time Sr. Research Consultants for MGIRI (Mahatma Gandhi Institute of Rural Industrialization) , Wardah, Maharashtra , under Ministry of MSME, Govt. of India, and University Share for this Consultancy work by Prof. A K Samanta, DJFT, IJT, CU in 2016-17 was deposited to CU.
- (e) **Consultancy At MGIRI ,Wardha :** Prof. A K Samanta, DJFT, IJT, CU also received consultancy assignment as Part-time Sr. Research Consultants for MGIRI (Mahatma Gandhi Institute of Rural Industrialization) , Wardah, Maharashtra , under Ministry of MSME, Govt. of India, and University Share for this Consultancy work by Prof. A K Samanta, DJFT, IJT, CU in 2017-18 was deposited to CU.

c) Two Workshop cum Dissemination Seminar on Industry-Institute interactions i. e. (i) first one for MIDTERM ASSESMENT of JTM R & D PROJECTS of IJT, was organised on 26-03-2010 and (ii)Second one as Final Dissemination seminar of JTM R & D PROJECTS of IJT was initiated ,planned and organized on 26th June -2012 , both at the Kennedy Hall of Institute of Jute Technology, Kolkata with the objective of Industry-Institute interaction to disseminate the midterm results/ final findings of the four research project among the jute mills, JDP manufacturers /exporters and entrepreneurs, to interact with industry's representatives and to receive their valuable opinions / views for delivering and implementing the useful project outputs to both organised and decentralised jute sectors for finding way forward for industry's application/commercialisation.

Bith the first and second workshop cum dissemination seminar was attended by about **75 delegates and 67 delegates respectively** including representatives of NCJD, JMDC(merged as NJB), , IJMA, AJHEEI, individual jute mills, jute diversified product manufacturers / exporters and scientists/ technologists of TRAs, CU, NIRJAFT and IIT, Kharagpur etc .

d) Promotion of Collaborative liaison work with de-centralised jute sector has been made through AJHEEI for implementation JTM R & D Project output.

e) Popularizing jute diversified Product and Entrepreneurship Developer: For NCJD, participated in different regional seminars at Berhampore, Bihar, Kolkata and many other places to educate and popularize the technology of colour fast bleaching and dyeing of jute for the Consultancy cum Research project of IJSG on Small scale entrepreneurship development in jute sector (NCJD as Nodal Agency and IJT as Technical Collaborator), during 2006-2008.

f) Promotion of Industry oriented HRD & R&D Work:-

- i) Vouched for multitier training need of jute sector (published).
- ii) Taken special initiative for students' scholarship in jute mills alongwith Late Mr. H. N. Ghosh of IJMA.
- iii) Taken initiative for award of students' scholarship from JCI under JCI-CSR scheme for IJT students
- iv) Promoted R&D work for jute industries need undertaking three JTM R & D undertaking three JTM R & D Projects.
- v) Collaboration made with SITRA in JTM-R & D Project -2008-2012 and successfully completed
- vi) Collaboration made with M/S Ama Herbals Pvt Ltd , Lucknow , natural dye manufacturer in our MOT, GOI R & D project on natural dyeing and finishing of cotton and silk to develop oeko-tech products and establishing natural dye identification test protocol in collaboration with FEAT- IIT-Kanpur and Allexe College Through Dr P S Vankar , Co-Pi and Part Time Sr Consulatnt of this project.

Seminar Organised

Name of the programme organized	Level of participation	Title	Year	Duration	Funding agency	
1) National Convention of Textile Engineers For IE(I)	As Convener and organizing Secretary and also presented research paper	National Convention of Textile Engg.” Dt 5 th –6 th January, 2002, at WBSC, IE(I).	2002	4 days	JMDC, MOT and IE(I)-HQ	
2) All India Seminar of Textile Engg. Divn. WBSC, of IE(I)	As Chairman, Textile Engg Divn , WBSC, IE(I) and Chairman, Organising Committee.	(2) All India Seminar on Sustainable Developments of Jute and Textile Industry , held at Kolkata, on 26-27 th March,2004,	2004	3 Days	JMDC, MOT and IE(I)-HQ	
3) National Convention of Textile Engineer and All India Seminar at Kolkata	*All these four seminars were organised by Textile Engg. Division, WBSC, IE (I), under the chairmanship of Prof. A K Samanta, Textile Engg. Division, WBSC, IE(I), 2004-08 and also presented paper in each seminar Prof A K Samanta as Co-Chairman of WBSC, Text Divn 2016-17 was convener of national advisory committee with Prof S K ghosh, as chairman.	(3) National Convention of Textile Engineers and All India Seminar on Innovative and diversified jute products held on 16-17 th March –2005,	2005	2 Days	NCJD, MOT , and IE(I)-Hq	
4) All India Seminar		(4) All India Seminar on Exportable Jute and Textile Products, on 29 th -30 th March 2006	2006	2 Days	JMDC, MOT, IE(I)-HQ	
5) All India seminar		(5) All India seminar on Technical Textiles in Civil Engg held on 13-14 th Sept, 2007	2007	2 Days	JMDC, MOT and Industry and I E (I) Hq	
6) National Conventof Textile Engineer		(6) NationalConvention and seminar on Technical Textiles held on 5-7 March, 2017	2017	3days	NJB, MOT,GOI and Industry and I E (I) Hq	
7) Two no. of Industry – Institute interactive Local		Prof A K Samanta was main Organiser with the help of Dr S k Ghosh for four major JTM R & D Projects and	(i)First Mid term Local Industry –Institute interactive dissemination seminar for feed back on four major JTM R & D Projects	Mid term Disseminat ion Seminar on 26-3-2010	1 day at IJT	JMDC/ NJB sponsored JTM R & D Project Fund

Technology Dissemination Seminar	presented the outcome of 3 R&D projects .	(ii) Final and second Local Industry –Institute interactive dissemination seminar for awareness on Technology developed in four major JTM R & D Projects	And Final Dissemination Seminar on 26 th June-2012	1 day at IJT	JMDC/ NJB sponsored JTM R & D Project Fund
8) Two days National workshop & Seminar on Natural Dyes –Shibori and Batik Style	Prof A K samanta was Convener of this national Seminar of DJFT,IJT, CU	National workshop & Seminar on Natural Dyes –Shibori and Batik Style At Kennedy Hall and DJFT, IJT, CU	Sept-2016	2 days	TEIQIP fund from CU and delegatiuon fee and institutional seed money from CU grants.