

## Department of Leather Technology Anna University, Chennai-25

## **Vision of the Department**

 To become a premier center of learning and research in Leather and Allied Technology

## **Mission of the Department**

- To provide quality education in the area of Leather Technology with high professional values.
- To share and disseminate expertise to provide solutions for the problems faced by the Leather industry.
- To build an expertise based capsule of delivering technology to leather and allied sectors.
- To provide a learning ambience for innovators, researchers and technologists.

# **PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)**

**PEO 1**-To demonstrate core competency in basic mathematics, scientific and engineering fundamental to design, formulate, analyze and solve the problems of leather and allied sectors.

**PEO 2**-To pursue lifelong multidisciplinary learning as professional engineers, researchers and scientists and effectively communicate technical information.

**PEO 3**-To practice values and exhibit leadership qualities and team spirit to promote entrepreneurship and indigenization.

## **Academic Programmes**

S. N.	TITLE	CVLLADIAND CUDDICULUM		
5. N.		ELIGIBILITY	DURATION	SYLLABI AND CURRICULUM
1	B.Tech. (Leather Technology)	10+2 (School Higher Secondary course) MPC (Academic Stream)	4 Years (8 Semesters)	https://cac.annauniv.edu/PhpProject1/uddetails/udug_20 19/technology/B.Tech%20Leather%20Technology.pdf
2	B.Tech. (Leather Technology) (Part Time)	Diploma in Leather Technology	3.5 years (7 Semesters)	https://cac.annauniv.edu/PhpProject1/uddetails/udug_20 17pt/PT%20Syl%20_R-2017_%20Revised- Leather%20II%20-VII.pdf
3	M.Tech. (Leather Technology)	<ul> <li><u>B.E./B.Tech</u>.</li> <li>1. Leather Technology</li> <li>2 Chemical Engineering</li> <li><u>M.Sc.</u></li> <li>3. Chemistry</li> <li>4. Applied Chemistry</li> <li>5. Environmental Chemistry</li> </ul>	2 years (4 Semesters)	https://cac.annauniv.edu/PhpProject1/uddetails/udpg_20 19/tech/10.Leather.pdf
4	M.Tech. (Footwear Engineering & Management)	<ul> <li><u>B. E/B. Tech.</u></li> <li>(4 Years UG Programmes)</li> <li>1. Leather Technology</li> <li>2. Mechanical Engineering</li> <li>3. Industrial Engineering</li> <li>4. Production Engineering / Technology</li> <li>5. Manufacturing Engineering</li> <li>6. Biomedical Engineering</li> <li>7. Polymer Technology</li> <li>8. Materials Science and Engineering</li> <li><b>B.E/B.Tech./B.Des</b></li> <li>(4 Years UG Programmes)</li> <li>9. Footwear Technology</li> </ul>	2 years (4 Semesters)	https://cac.annauniv.edu/PhpProject1/uddetails/udpg_20 19/tech/11.Footwear.pdf
5	Ph.D in Leather Technology Ph.D in Footwear Engineering & Management Ph.D in different streams of science & chemical engineering	Master's Degree in the concerned discipline A Pass in NET, JRF or GATE conducted by UGC and CSIR	Min: 2 years Max: 6 years Min: 2 or 3 years Max: 6 years	

## **Genesis-Department of Leather Technology**

- Prior to independence, tanning activity in India was limited and controlled by a few British managed tanneries.
- The first tanning school was established at Madras in 1914. Then came other schools at Kanpur, Kolkata, Jalandhar etc.
- University of Madras felt the need for a professional degree in leather technology.
- With the munificent donation of Rs.5 lakhs (in 40s) from the great philanthropist Dr. Alagappa Chettiar, the University of Madras established Alagappa Chettiar College of Technology in 1944, to offer different courses in technology.
- Courses in leather and textile technologies were introduced from 1945 in the University of Madras.
- Council of Scientific and Industrial Research, New Delhi supported the leather technology program by offering a block grant of Rs.60000/- from 1945 onwards.
- As the college buildings were not ready yet, the classes for leather subjects were held at the institutes of leather technology premises at Washermanpet, Madras.
- CLRI was born on 24 April 1948.
- The leather technology department shifted its head quarters from Washermanpet to CLRI in 1951.
- Ever since, the Department of Leather Technology of ACTech is housed at CLRI. Currently, it is under Centre for Academic and Research Excellence (CARE) division of CSIR-CLRI.



First abode of CLRI on 24 April 1948. A house in Coral Merchant Street is the place from where CLRI commenced activities. Shri OM Raju, the oldest administrative staff of the institute is seen near the moped in front of the building



Central Leather Research Institute





Shri TT Krishnamachari cutting the ribbon to mark the opening of CLRI in 1953

Department of Leather Technology of AC Tech. is housed at CLRI under Centre for Academic and Research Excellence (CARE) division

## **Department of Leather Technology - Milestones**

- 1944- Establishment of Alagappa Chettiar College of Technology, Guindy
- 1945- 2 year post B.Sc. (PG) programme in Leather Technology, known as B.Sc. (Tech.) introduced
- 1955- The first Ph. D. in Leather Technology presented to Dr.E.C.Mathews
- 1956- Commencement of the 1st M.Sc. (Tech.) by research degree
- 1957- 4 year B.Sc. (Tech.) programme in Leather Technology introduced
- 1961- 5 years B. Tech. Integrated degree programme in Leather Technology
- 1963- 2 year M. Tech. degree program in leather technology introduced
- 1978- Anna University was established, A.C. College of Technology became part of the same
- 1980- 4 year B. Tech. degree programme in Leather Technology introduced
- 1983- 3 semester M. Tech. degree in Leather Technology introduced
- 1987- M. Tech. degree in Footwear Science and Engineering introduced
- 1996- M.S. (by research) programme commenced in the Department of Leather technology
- 2000- 7 semesters B. Tech. (part time) degree programme in Leather technology was introduced
- 2002- M. Tech. degree programme were converted into a four semester course
- 2013- M.Sc. (Chemistry/Environmental Science), B. Tech. (Leather/ Biotech / Chem. Engg) are included under the eligibility list for applying M. Tech. in Leather Technology & B.E./B. Tech. (Mechanical/Leather/Production/Industrial) included for M. Tech. (Footwear Science & Engineering)
- 2014- B. Tech. degree strength increased to 65 per batch
- 2019- M. Tech. (Footwear Science & Engineering) renamed as M.Tech. (Footwear Engineering & Management)

## **List of Head of the Department of Leather Technology**

S.N.	NAME	PERIOD	РНОТО
1	Prof. Seshachalam Choudhary	1945-1951	
2	Mr. Siviah Choudhary	1951-1953	
3	Prof B M Das	1953-1956	
4	Dr Y Nayudamma	1958-1973	
5	Dr M Santappa	1973-1981	
6	Dr N Ramanathan	1981-1983	

S.N.	NAME	PERIOD	РНОТО
7	Dr G Thyagarajan	1984-1987 1990-1993	
8	Prof R B Mitra	1988-1990	
9	Dr KV Raghavan	1994-1996	
10	Dr T Ramasami	1996-2000	
11	Dr S Sadulla	2000-2008	Encore

S.N.	NAME	PERIOD	РНОТО
12	Dr B Chandrasekaran	2008-2016	
13	Dr J Raghava Rao	2016-2021	
14	Dr K J Sreeram	2021- Till date	

## **Core Faculty Members of CARE**

Dr K J Sreeram	Director, CSIR-CLRI and Head, Department of Leather Technology
Dr B Madhan	Senior Principal Scientist, Honorary Faculty, Anna University
Dr Bindia Sahu	Senior Scientist, Honorary Faculty, Anna University
Dr G C Jayakumar	Scientist, Honorary Faculty, Anna University

### DEPARTMENT OF LEATHER TECHNOLOGY, A.C. TECH, ANNA UNIVERSITY LIST OF STAFF HANDLING THEORY CLASSES

S. N.	Name	Educational Qualification	Designation CLRI	CLRI Department
1.	Dr SREERAM K J HOD, DEPT. OF LEATHER TECHNOLOGY, AC TECH CAMPUS, ANNA UNIVERSITY	M. Tech., PhD	Director	
2.	Dr MADHAN B	M. Tech, PhD	Senior Principal Scientist	Centre for Academic and Research Excellence (CARE)
3.	Dr BINDIA SAHU	M.Sc., PhD	Senior Scientist	Centre for Academic and Research Excellence (CARE)
4.	Dr JAYAKUMAR G C	M.S., PhD	Scientist	Centre for Academic and Research Excellence (CARE)
5.	Dr SARAVANAN P	M.S., PhD	Chief Scientist	Leather Process Technology Department
6.	Dr SANJEEV GUPTA	M. Tech., PhD	Chief Scientist	Unit For Science Dissemination (USD)
7.	Dr. SUBHENDU CHAKRABARTI	M. Tech, PhD	Chief Scientist	Project Planning & Business Development
8.	Dr KANAGARAJ J	M.Tech., PhD	Chief Scientist	Leather Process Technology Department
9.	Dr JAISANKAR S N	M.Tech., PhD	Chief Scientist	Polymer Science & Technology
10.	Mr MATHIVANAN S	M.Tech	Senior Principal Scientist	Shoe & Product Design Centre (SPDC)

S.N.	Name	Educational Qualification	Designation CLRI	CLRI Department
11	Dr KRISHNARAJ K	M.S., PhD	Chief Scientist	Shoe & Product Design Centre (SPDC)
12	Dr THANIKAIVELAN P	M.Tech., PhD	Senior Principal Scientist	Advanced Materials Laboratory
13	Dr NISHAD FATHIMA N	M.Tech., PhD	Senior Principal Scientist	Inorganic & Physical Chemistry
14	Mr SURESH KUMAR P S	M.E.	Senior Principal Scientist	Shoe & Product Design Centre (SPDC)
15	Dr MOHAN R	M.Tech., PhD	Senior Principal Scientist	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)
16	Dr PHEBE AARON K	M.Sc., PhD	Senior Principal Scientist	Shoe & Product Design Centre, Project Planning, Monitoring And Evaluation Department
17	Dr SRI BALA KAMESWARI K	M.E., PhD	Senior Principal Scientist	Environmental Engineering Department
18	Dr SRINIVASAN S V	M.E., PhD	Senior Principal Scientist	Environmental Engineering Department
19	Dr KAMINI N R	M.Sc., PhD	Senior Principal Scientist	Biochemistry & Biotechnology
20	Dr SIVAKUMAR V	M. Tech., PhD	Senior Principal Scientist	Catalysis Science Laboratory
21	Dr AYYADURAI N	M.Sc., PhD	Principal Scientist	Biochemistry & Biotechnology
22	Mr NITHIYANANTHA VASAGAM S	MCA	Principal Scientist	Knowledge Portfolio Management Department
23	Dr GANESH S	M.Sc., PhD	Principal Scientist	Organic & Bio-organic Chemistry
24	Dr ARAVINDHAN R	M.Tech., PhD	Principal Scientist	Leather Process Technology Department
25	Dr SUJATA MANDAL	M.Sc., PhD	Principal Scientist	Centre for Human and Organizational Resources Development (CHORD)

S.N.	Name	Educational Qualification	Designation CLRI	CLRI Department
26	Dr EASWARAMOORTHI S	M.Sc., PhD	Principal Scientist	Inorganic & Physical Chemistry
27	Dr DEBASIS SAMANTA	M.Sc., PhD	Principal Scientist	Polymer Science & Technology
28	Dr MD SAYEM ALAM	M.Sc., PhD	Principal Scientist	Polymer Science & Technology
29	Dr MURUGAN D	M.Tech., PhD	Principal Scientist	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)
30	Dr SHAKILA SHOBANA T	MBA, PhD	Senior Scientist	Project Planning, Monitoring And Evaluation Department
31	Mr KARTHIKEYAN K	M. Des	Senior Scientist	Shoe & Product Design Centre (SPDC)
32	Dr SARASWATHY G	M.E., PhD	Senior Scientist	Shoe & Product Design Centre (SPDC)
33	Dr SWARNALATHA S	M.Sc., PhD	Senior Scientist	Environmental Science Lab
34	Dr SURESH KUMAR D	M. Tech, PhD	Scientist	Shoe & Product Design Centre (SPDC)
35	Mr AKSHAYARAMAN M	M.Tech	Scientist	Design And Fashion Studio
36	Dr SATHYARAJ G	M.Sc., PhD	Scientist	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)
37	Dr RAVIKUMAR B	M.Sc., PhD	Scientist	Knowledge Portfolio Management Department
38	Mr GOVINDARAJAN N	B.E., M.S.	Principal Technical Officer	Shoe & Product Design Centre (SPDC)
39	Mr SATHIAMOORTHY G	MCA	Senior Technical Officer	Centre for Human and Organizational Resources Development (CHORD)
40	Mrs B KANIMOZHI	MBA	Technical Officer	Project Planning, Monitoring And Evaluation Department

### DEPARTMENT OF LEATHER TECHNOLOGY, A.C. TECH, ANNA UNIVERSITY LIST OF STAFF HANDLING LABORATORY CLASSES

S.N.	Name	Educational Qualification	Designation CLRI	CLRI Department
1	Dr JOHN SUNDAR V	M.S., PhD	Principal Technical Officer	Leather Process Technology Department
2	Mr. RAMANAIAH B	M.S.,	Principal Technical Officer	Leather Process Technology Department
3	Dr SHANMUGAVEL M	M.Sc., PhD	Senior Technical Officer	Microbiology Lab
4	Mr RAJAGOPAL G	M.Sc.	Senior Technical Officer	Leather Process Technology Department
5	Mr SURESH S	M.Sc.	Technical Officer	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)
6	Mr MURUGAN L	MSC	Senior Technician	Shoe & Product Design Centre (SPDC)
7	Mr GNANA PRABHU K	B.E	Senior Technician	Shoe & Product Design Centre (SPDC)
8	Mr R PRASANNA	B.Tech	Technical Officer	Leather Process Technology Department
9	Mr MOHAMMED ABU JAVID	B.Tech	Technical Assistant	Leather Process Technology Department
10	Mr RAVI BANOTHU	MSc.	Technical Assistant	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)
11	Dr MAHESHKUMAR J	PhD	Technical Assistant	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)

### LIST OF HONORARY FACULTY FROM CSIR – CLRI RECOGNIZED AS RESEARCH SUPERVISORS BY ANNA UNIVERSITY

S.N.	Name	Educational Qualification	Designation AU/CLRI	CLRI Department
1.	Dr SREERAM K J HOD, DEPT. OF LEATHER TECHNOLOGY, AC TECH CAMPUS, ANNA UNIVERSITY	M.Tech., PhD	Director	
2.	Dr MADHAN B	M.Tech., PhD	Senior Principal Scientist	Centre for Academic and Research Excellence (CARE)
3.	Dr KANAGARAJ J	M.Tech., PhD	Chief Scientist	Leather Process Technology Department
4.	Dr ARAVINDHAN R	M.Tech., PhD	Principal Scientist	Leather Process Technology Department
5.	Dr SANJEEV GUPTA	M.Tech, PhD	Chief Scientist	Unit For Science Dissemination (USD)
6.	Dr SWARNA V KANTH	M.S., PhD	Senior Principal Scientist	Centre for Human and Organizational Resources Development (CHORD)
7.	Dr TAMILSELVI A	M.FSc., PhD	Senior Principal Scientist	Unit For Science Dissemination (USD)
8.	Dr KRISHNARAJ K	M.S., PhD	Chief Scientist	Shoe & Product Design Centre (SPDC)
9.	Dr PHEBE AARON K	M.Sc., PhD	Senior Principal Scientist	Shoe & Product Design Centre, Project Planning, Monitoring And Evaluation Department
10.	Dr SARASWATHY G	M.E., PhD	Senior Scientist	Shoe & Product Design Centre (SPDC)
11	Dr SUJATA MANDAL	M.Sc., PhD	Principal Scientist	Centre for Human and Organizational Resources Development (CHORD)
12	Dr THANIKAIVELAN P	M.Tech., PhD	Senior Principal Scientist	Advanced Materials Laboratory
13	Dr NISHAD FATHIMA N	M.Tech., PhD	Senior Principal Scientist	Inorganic & Physical Chemistry
14	Dr EASWARAMOORTHI S	M.Sc., PhD	Principal Scientist	Inorganic & Physical Chemistry
15	Dr SUGUNA LAKSHMI M	M.Sc., PhD	Senior Principal Scientist	Polymer Science & Technology
16	Dr JAISANKAR S N	M.Tech., PhD	Chief Scientist	Polymer Science & Technology

S.N.	Name	Educational Qualification	Designation AU/CLRI	CLRI Department
17	Dr DEBASIS SAMANTA	M.Sc., PhD	Principal Scientist	Polymer Science & Technology
18	Dr MD SAYEM ALAM	M.Sc., PhD	Principal Scientist	Polymer Science & Technology
19	Dr KAMINI N R	M.Sc., PhD	Senior Principal Scientist	Biochemistry & Biotechnology
20	Dr AYYADURAI N	M.Sc., PhD	Principal Scientist	Biochemistry & Biotechnology
21	Dr SRI BALA KAMESWARI K	M.E., PhD	Senior Principal Scientist	Environmental Engineering Department
22	Dr SRINIVASAN S V	M.E., PhD	Senior Principal Scientist	Environmental Engineering Department
23	Dr SWARNALATHA S	M.Sc., PhD	Senior Scientist	Environmental Science Lab
24	Dr SURIANARAYANAN M	MSc., PhD	Senior Principal Scientist	Cell For Industrial Safety & Risk Analysis (CISRA)
25	Dr SIVAKUMAR V	M.Tech., PhD	Senior Principal Scientist	Catalysis Science Laboratory
26	Dr MURUGAN D	M.Tech., PhD	Principal Scientist	Centre for Analysis, Testing, Evaluation and Reporting Services (CATERS)
27	Dr SHANMUGAVEL M	M.Sc., PhD	Senior Technical Officer	Microbiology Lab
28	Dr. VAIDYANATHAN VG	M.Sc., PhD	Principal Scientist	Advanced Materials Laboratory
29	Dr. S.M JAIMOHAN	M.Sc., PhD	Scientist	Advanced Materials Laboratory
30	Dr SURESH KUMAR A	M.Sc., PhD	Senior Scientist	Biochemistry & Biotechnology
31	Dr. UTHIRAPPAN MANI	M.Sc., PhD	Senior Technical Officer	Biochemistry & Biotechnology
32	Dr SHANMUGAM P	M.Sc., PhD	Senior Principal Scientist	Organic & Bio-organic Chemistry
33	Dr.UMA MAHESWARI N	M.Sc., PhD	Principal Scientist	Organic & Bio-organic Chemistry

S.N.	Name	Educational Qualification	Designation AU/CLRI	CLRI Department
34	Dr. SHANMUGAM P	M.Sc., PhD	Senior Principal Scientist	Environmental Science Lab
35	Dr. LAJAPATHI RAI C	M.S., PhD	Senior Principal Scientist	Catalysis Science Laboratory
36	Dr SIVASAMI A	M.Sc, PhD	Chief Scientist	Catalysis Science Laboratory
37	Dr RAMES CHANDRA PANDA	M.Tech., PhD	Senior Principal Scientist	Chemical Engineering
38	Dr SIVARAJAN M	M.E., PhD	Principal Scientist	Cell For Industrial Safety & Risk Analysis (CISRA)
39	Dr VEDARAMAN N	M.Sc., PhD	Principal Technical Officer	Catalysis Science Laboratory
40	Dr GNANAMANI A	M.Sc., PhD	Senior Principal Scientist	Microbiology Lab
41	Dr PURNA SAI K	M.Sc., PhD	Senior Principal Scientist	Biological Material Laboratory
42	Dr UMA TS	M.Sc., PhD	Principal Scientist	Biological Material Laboratory
43	Dr KIRAN MS	M.Sc., PhD	Principal Scientist	Biological Material Laboratory
44	Dr YASMIN KHAMBHATY	M.Sc., PhD	Senior Scientist	Microbiology Lab
45	Dr G C JAYAKUMAR	MS., PhD	Scientist	Centre for Academic and Research Excellence (CARE)

# **Temporary Teaching Staff**

S. N.	Name	<b>Educational Qualification</b>	Designation
1.	DR. DALIYA SINHA	M.Sc, Ph.D	Teaching Fellow
2.	MRS VINULAXMI. H	B. Tech, MBA	Teaching Fellow

# **Non Teaching Staff**

S. No.	Name	Designation
1.	MRS N PARIMALAM	Stenographer Grade II (S.G.)
2.	MRS R DIVYA	Professional Assistant I
3.	MR V INDRA BABU	Professional Assistant II
4.	MR S VASANTH	Professional Assistant III
5.	MR SHOAIB KHAN	Professional Assistant I

# Faculty Publications for the period 2019 - 2020

Authors	Title	Publisher	Impact Factor
Pandurangan, S; Meganathan, I; Ragavan, S; Ramudu, KN; Shanmugam, E; Shanmugam, G; <b>Niraikulam, A</b>	Engineering of a skin-fiber-opening enzyme for sulfide-free leather beam house operation through xenobiology	Green Chemistry, 21 (8), 2070-2081, 2019	9.405
llamaran, M; Janeena, A; Valappil, S; Ramudu, KN; Shanmugam, G; <b>Niraikulam,</b> <b>A</b>	A self-assembly and higher order structure forming triple helical protein as a novel biomaterial for cell proliferation	Biomaterials Science, 7 (5), 2191-2199, 2019	6.183
Thamaraiselvi, P; Duraipandy, N; Kiran, MS; <b>Easwaramoorthi, S</b>		ACS Sustainable Chemistry & Engineering, 7 (11), 9865-9874, 2019	7.03
Kaushik, M; Niranjan, R; Thangam, R; <b>Madhan, B</b> ; Pandiyarasan, V; Ramachandran, C; Oh, DH; Venkatasubbu, GD	Investigations on the antimicrobial activity and wound healing potential of ZnO nanoparticles	Applied Surface Science, 479, 1169-1177, 2019	5.27
Nagaraj, S; <b>Easwaramoorthi,</b> S; <b>Rao, JR; Thanikaivelan, P</b>	Probing visible light induced photochemical stabilization of collagen in green solvent medium	International Journal of Biological Macromolecules, 131, 779-786, 2019	5.162
Tamilselvi, A; Jayakumar, GC; Charan, KS; Sahu, B; Deepa, PR; Kanth, SV; Kanagaraj, J	Extraction of cellulose from renewable resources and its application in leather finishing	Journal of Cleaner Production, 230, 694-699, 2019	7.1
Jaganathan, M; <b>Easwaramoorthy, S</b> ; Dhathathreyan, A		International Journal of Biological Macromolecules, 137, 1268-1277, 2019	5.162
Rasheeda, K; Samyuktha, D; <b>Fathima, NN</b>	ISelf-association of type I collagen directed by thymodilinone through alteration of molecular forces	International Journal of Biological Macromolecules, 140, 614-620, 2019	5.162
Serge, EJ; Alla, JP; Belibi, PDB; Mbadcam, KJ; <b>Fathima, NN</b>	Clay/polymer nanocomposites as filler materials for leather	Journal of Cleaner Production, 237, 2019	7.1
Prabhu, J; Velmurugan, K; Raman, A; Duraipandy, N; Kiran, MS; <b>Easwaramoorth</b> i, S; Tang,	Pyrene-phenylglycinol linked reversible ratiometric fluorescent chemosensor for the detection of aluminium in nanomolar range and its bio-imaging	Analytica Chimica Acta, 1090, 114-124, 2019	5.31
Mukherjee, M; Gurusamy-Thangavelu, SA; Chelike, DK; Alagumalai, A; Das, BN; <b>Jaisankar, SN</b> ; Mandal, AB		Applied Surface Science, Proceedings Paper, 499, 2020	6.182

Authors	Title	Publisher	Impact
			Factor
Yoseph, Z; <b>Christopher, CG</b> ; Demessie, BA; <b>Selvi, AT</b> ; <b>Sreeram, KJ; Rao, JR</b>	Extraction of elastin from tannery wastes: A cleaner technology for tannery waste management	Journal of Cleaner Production, 243, 2020	7.1
Matuszek, Karolina; Vijayaraghavan, R; Forsyth, Craig M; <b>Mahadevan,</b> Surianarayanan;Karmega; MacFarlane, Douglas R	IPVrazolium phase change materials for solar-thermal energy storage	ChemSusChem, Energy and Materials, 13 (1), 159-164, 2020	7.35
Srivastava, R; <b>Alam, MS</b>	Influence of micelles on protein's denaturation	International Journal of Biological Macromolecules, 145, 252-261, 2020	5.162
Selvi, AT; Brindha, V; Vedaraman, N; Kanagaraj, J; Sundar, VJ; Khambhaty, Y; Saravanan, P	Eco-friendly curing of hides/ skins using phyto based Citrus limon leaves paste	Journal of Cleaner Production, 247, 2020	7.1
Kumar, CS; Thangam, R; Mary, SA; Kannan, PR; Arun, G <b>; Madhan, B,</b>	Targeted delivery and apoptosis induction of trans-resveratrol-ferulic acid loaded chitosan coated folic acid conjugate solid lipid nanoparticles in colon cancer cells	Carbohydrate Polymers, 231, 2020	6.23
Inbasekar, C; <b>Fathima, NN,</b>	I ollagen stabilization using ionic liquid functionalised cerum oxide nanonarticle	International Journal of Biological Macromolecules, 147, 24-28, 2020	5.162
Ariram, N; <b>Madhan, B</b>	Development of bio-acceptable leather using bagasse	Journal of Cleaner Production, 250, 2020.	7.1
Vedhanayagam, M; Anandasadagopan, S; Nair, BU; <b>Sreeram, KJ</b>	Polymethyl methacrylate (PMMA) grafted collagen scaffold reinforced by PdO-TiO2 nanocomposites	Materials Science & Engineering C-Materials for Biological Applications, 108, 2020	5.88

# Faculty Publications for the period 2018 - 2019

Authors	Title	Publisher	Impact Factor
Chatterjee, Kuntal; Ashokkumar, Meiyazhagan; Gullapalli, Hemtej; Gong, Yongji; Vajtai, Robert; <b>Thanikaivelan,</b> <b>Palanisamy</b> ; Ajayan, Pulickel M.	Nitrogen-rich carbon nano-onions for oxygen reduction reaction	Carbon, 130, 645-651, 2018	7.082
Thankaswamy, Shiny Renitha; Sundaramoorthy, Sundarapandiyan; <b>Palanivel, Saravanan</b> ; Ramudu, <b>Kamini Numbi</b>	Improved microbial degradation of animal hair waste from leather industry using Brevibacterium luteolum (MTCC 5982)	Journal of Cleaner Production, 189, 701-708, 2018	5.651
Janeena, Asuma J.; Ilamaran, M.; George, A.; George, S. A.; Raghavan, Sriram S.; Lakshmi, Surya P.; Aarthy, M.; <b>Kamini, N.</b> R.; Gunasekaran, K.; <b>Ayyadurai, N</b>	Biomimetic strategies to design metallic proteins for detoxification of hazardous heavy metal	Journal of Hazardous Materials, 358 (92), 100, 2018	6.434
Raman, Arunachalam; Augustine, George; <b>Ayyadurai,</b> Niraikulam; Easwaramoorthi, Shanmugam	Gated photochromism in azobenzene-appended rhodamine cassette: through-bond energy transfer - a universal strategy towards "Lock and Unlock" system	Journal of Materials Chemistry C, 6 (39), 10497-10501, 2018	5.976
Perumal, Ramesh Kannan; Gopinath, Arun; Thangam, Ramar; Perumal, Sathiamurthi; Masilamani, Dinesh; Ramadass, Satiesh Kumar; <b>Madhan, Balaraman</b>	Collagen-silica bio-composite enriched with Cynodon dactylon extract for tissue repair and regeneration	Materials Science & Engineering C-Materials for Biological Applications, 92, 297-306, 2018	5.08
Velmurugan, Krishnaswamy; Prabhu, Jeyaraj; Raman, Arunachalam; Duraipandy, Natarajan;Kiran, Manikantan Syamala; <b>Easwaramoorthi, Shanmugam</b> ; Tang, Lijun; Nandhakumar, Raju	Dual Functional Fluorescent Chemosensor for Discriminative Detection of Ni2+ and Al3+ Ions and Its Imaging in Living Cells	ACS Sustainable Chemistry & Engineering, 6 (12), 16532-16543, 2018	6.14
Arivizhivendhan, K. V.; Mahesh, M.; Murali, R.; Mary, R. Regina; <b>Thanikaivelan, P</b> .; Sekaran, G	Prodigiosin-Iron-Oxide-Carbon Matrix for Efficient Antibiotic-Resistant Bacterial Disinfection of Contaminated Water	ACS Sustainable Chemistry & Engineering, 7 (3), 3164- 3175, 2019	6.14
Sathish, Murali; Dhathathreyan, Aruna; Rao, Jonnalagadda Raghava	Ultraefficient Tanning Process: Role of Mass Transfer Efficiency and Sorption Kinetics of Cr(III) in Leather Processing	ACS Sustainable Chemistry & Engineering, 7 (4), 3875-3882, 2019	6.14
Pandi, Ajitha; Kuppuswami, Gowthaman Marichetti; Ramudu, <b>Kamini Numbi; Palanivel,Saravanan</b>	A sustainable approach for degradation of leather dyes by a new fungal laccase	Journal of Cleaner Production, 211, 590-597, 2019	5.651
Selvaraj, Sowmya; Jeevan, Vigneshwar; <b>Jonnalagadda, Raghava</b> Rao; Fathima, Nishter Nishad	Conversion of tannery solid waste to sound absorbing nanofibrous materials: A road to sustainability	Journal of Cleaner Production, 213, 375-383, 2019	5.651
Gupta, Sandeep Kumar; <b>Gupta, Sanjeev</b>	Closed loop value chain to achieve sustainable solution for tannery effluent	Journal of Cleaner Production, 213, 845-846, 2019	5.651

# Faculty Publications for the period 2017 - 2018

Authors	Title	Publisher	Impact Factor
Vairapperumal, Tamilmani; Duraipandy, Natarajan; Syamala, Kiran Manikantan; Janardhanan <b>, Sreeram Kalarical</b> ; Unni, Nair Balachandran	Catechin caged lanthanum orthovanadate nanorods for nuclear targeting and bioimaging applications	Sensors and Actuators B-Chemical, 242, 700- 709, 2017	5.401
Sundarapandiyan, Sundaramoorthy; Renitha, Thankaswamy Shiny; Sridevi, Janardhanam; <b>Saravanan, Palanivel;</b> Chandrasekaran, Bangaru; Raju, Guntamadugu Bhaskar	Photocatalytic degradation of highly refractive phenolic polymer Mechanistic insights as revealed by Electron Spin Resonance (ESR) and solid-state C-13 NMR spectroscopy	Chemical Engineering Journal, 313, 1112- 1121, 2017	6.216
Ramalingam, Sathya; <b>Rao, Jonnalagadda Raghava</b>		ACS Sustainable Chemistry & Engineering, 5 (6), 5537-5549, 2017	5.951
Selvaraju, Sharmila; Ramalingam, Sathya <b>; Rao, Jonnalagadda</b> <b>Raghava</b>	Preparation and application of biodegradable nanocomposite for cleaner leather processing	Journal of Cleaner Production, 158, 225-232, 2017	5.715
Balasubramanian, Pandian; Ramalingam, Sathya; <b>Rao,</b> Jonnalagadda Raghava		ACS Sustainable Chemistry & Engineering, 5 (8), 7020-7029, 2017	5.951
Vadivelu, M.; Sugirdha, S.; Dheenkumar, P.; Arun, Y.; Karthikeyan, K.; Praveen, C	Solvent-free implementation of two dissimilar reactions using recyclable CuO nanoparticles under ball-milling conditions: synthesis of new oxindole-triazole pharmacophores	Green Chemistry, 19 (15), 3601-3610, 2017	9.125
Prasad, S. Krishna; Baral, Marlin; Murali, Adhigan; <b>Jaisankar,</b> Sellamuthu N.	Carbon Nanotube Reinforced Polymer-Stabilized Liquid Crystal Device: Lowered and Thermally Invariant Threshold with Accelerated Dynamics	Applied Materials & Interfaces, 9 (31), 26622-26629, 2017	7.504
Alla, Jaya Prakash; Rao, <b>Jonnalagadda Raghava; Fathima,</b> Nishter Nishad	Integrated Depilation and Fiber Opening Using Aqueous Solution of Ionic Liquid for Leather Processing	ACS Sustainable Chemistry & Engineering, 5 (10), 8610-8618, 2017	5.951
Masilamani, Dineshkumar; Srinivasan, Vijayaraghavan; Ramachandran, Ramya K.; Gopinath, Arun; <b>Madhan, Balaraman; Saravanan, Palanivel</b>		Journal of Cleaner Production, 164, 885-891, 2017	5.715
Yuvaraj, P.; <b>Rao, J. Raghava; Fathima, N. Nishad</b> ; Natchimuthu, N.; <b>Mohan, R.</b>		Journal of Cleaner Production, 170, 446-450, 2018	5.715

\*Only selected list with impact factor greater than 5

# Faculty awards for the year 2017-2020

#### Team Award





Congratulations to the inventors of Waterless Chrome Tanning Technology



eam WCTT receiving the NRDC National Meritorious Invention Award for the year 2017 from Dr.





Council of Scientific & Industrial Research Anusandhan Bhawan, Rafi Marg, New Delhi-110001 TECHNOLOGY AWARD FOR PHYSICAL SCIENCES INCLUDING ENGINEERING 2020 Presented Jointly to

CSIR-National Metallurgical Laboratory, Jamshedpur

Developing indigenous technology to extract cobalt and gold from black cathode material of Li-Co batteries and gold coated surface of e-wastes

Team : Manis Kumar Jha, Jhumki Hait, Ranjeet Kumar Singh, Pankaj Kumar Choubey and Archana Kumari and

**CSIR**-Central Leather Research Institute, Chennai

for Developing Zero Formaldehyde High Performance Chromium - Melamine Synthetic Tanning Agent for Greener Leather Manufacturing

Dr. Shekhar C. Mande

Director General, CSIR

Team : J.Raghava Rao, B.U Nair, K.J. Sreeram, R. Aravindhan, M. Sathish

Dr. Harsh Vardhan Union Minister for Science and Technology, Earth Sciences, Health & Family Welfare and Vice-President, Council of Scientific and Industrial Research, Government of India

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CSIR-Central Leather Research Institute Council of Scientific & Industrial Research (CSIR)

CSIR - CLRI technology Zero Formaldehyde High Performance Melamine - Chromium Tanning Agent for Cleaner Leather Manufacture selected for the NRDC National Meritorious Invention Award

PMA is pleased to convey that the below mentioned Project of 'Central Leather Research Institute' has been selected for the prestigious 'National Project Excellence Award' of PMA for 2016.

"Twinning Project at LIDI, Ethiopia"

#### Individual award



#### FACILITIES EQUIPMENT FACILITIES AT DEPARTMENT OF LEATHER TECHNOLOGY







High Performance Liquid Chromatography



Fast Performance Liquid Chromatography

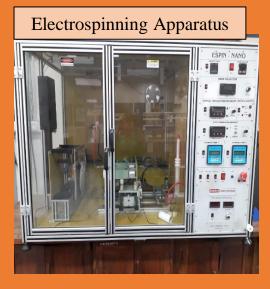


UV-Visible Sectrophotometer



Fluorescence Inverted Microscope







#### FOOTWEAR DESIGN AND TESTING LAB



Gait analysis system





Gait Laboratory for fabricating customized footwear



Digital Softness Tester



Universal Testing Machine





Sewability Tester

Drape meter

### **ADVANCED INSTRUMENTATION LAB**



Fast Protein Liquid Chromatography



Gas Chromatography-Mass Spectroscopy (GC-MS-MS)



High Performance Liquid Chromatography- Photo Diode Array



Liquid Chromatoraphy-Mass Spectrometer



Powder X-Ray Diffractometer



Particle Size Analyser/ zeta potential



Fourier-transform infrared spectroscopy-Attenuated total reflection



Differential Scanning Calorimeter

## LAB PHOTOS





















## Learning Management Systems



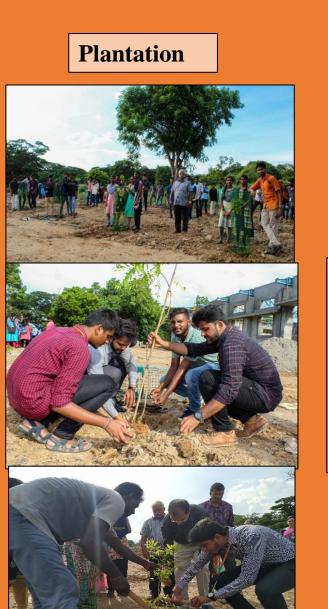












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## **Student Induction Program**







### Workshop







### **Industrial Visit**







## **CARE - INFRASTRUCTURE**

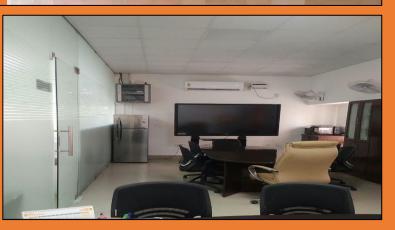






शैक्षाणक और अनुसंधान उक्तृष्ट केंद्र Centre for Academic and Research Excellence

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#### **MEMBERS**

All past students and faculty of the Department of Leather Technology, Anna University, are eligible to become Life Members of the Association.

The objectives of the Association is to bring the former students of the Department of Leather Technology, Anna University under one forum for the dissemination and exchange of experience, knowledge and talent amongst its members the students of the department

Important links-www.actechalfa.com Email address-actechalfa@gmail.com

## **REACH US**

**ADDRESS DETAILS** 

Dr K J Sreeram

Director CSIR-CLRI and Head,

#### **DEPARTMENT OF LEATHER TECHNOLOGY**

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AC TECH CAMPUS, ANNA UNIVERSITY

CHENNAI 600025,INDIA

Video Link of the Department of Leather Technology: <u>https://www.youtube.com/watch?v=4YGEIFBNTIo</u>

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