

| Theme: Process technologies: Opportunities (PTO) | | | | | |
|--|---|---|---------|--|------------------------|
| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
| 1 | Raghava Rao J | Central Leather Research Institute, Chennai, India | India | LEATHER PROCESSING: NEW AVENUES | 161 |
| 2 | Liu jie, Li yan-chun, Du yi, Chen xing-jun, Zhou meng | School of Light Chemistry and Environmental Engineering, Shandong Institute of Light Industry, Jinan 250353 | China | RESEARCH ON PREPARATION HAYDITE USING TANNERY SLUDGE AS ADDITIVE | 28 |
| 3 | Yan Bao, Jianzhong Ma, Tao E | College of Resource and Environment, Shaanxi University of Science and Technology, Xi'an, 710021 People's Republic of China | China | Synthesis and Properties of Methacrylic Acid-co-Modified Maleic Anhydride/Montmorillonite Nanocomposite | 21 |
| 4 | Biswajit Debnath(1), Goutam Mukherjee(1), Chanchal Mondal(2) | (1) Govt. College of Engg. & Leather Technology, Kolkata; (2) Department of Chemical Engineering, Jadavpur University | India | ENERGY EFFICIENT DEVICES FOR LEATHER INDUSTRY | 77 |
| 5 | V. Godwin Jenifa(1), Y. Lakshminarayana(1), S. N. Jaisankar(1), C. Rose(2), P. Saravanan(3), N. K. Chandrababu(3), A. B. Mandal | (1) Polymer Laboratory, (2) Biotechnology Lab, (3) Leather Process Technology, Central Leather Research Institute, Chennai Central Leather Research Institute, Adyar, Chennai 600 020 | India | ENZYMATIC HYDROLYSIS OF TANNERY BIOWASTES AND GRAFT COPOLYMERIZATION OF METHACRYLIC ACID ONTO COLLAGEN HYDROLYSATE AS TANNING AID FOR LEATHER APPLICATIONS | 90 |

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| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
|------|---|---|---------|---|------------------------|
| 6 | Goutam Mukherjee (1), Sanjoy Chakraborty (1), Gopal Krishna Biswas (2) | (1) Department of Leather Technology, Government College of Engineering and Leather Technology, Salt Lake City, West Bengal, Kolkata – 700 098, India; (2) Department of Chemical Engineering, Jadavpur University, Jadavpur, West Bengal, Kolkata – 700 032, India | India | GREENER CHROME TANNING PROCESS | 78 |
| 7 | Swarna V Kanth (1), Nandhini Ashok (1), A. Yasothai (1), S. Deepa (1), P. Ramesh Kannan (1), R.Venba (2), B. Chandrasekaran (1) | Centre for Human and Organizational Resources Development; *Tannery Division; Central Leather Research Institute, Council of Scientific and Industrial Research, Adyar, Chennai-600 020, India | India | COLORING OF LEATHER USING PIPER BETLE AND ARECA CATECHU - NATURAL ALTERNATIVE MATERIAL FOR DYEING | 115 |

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| Theme: Chemicals - Challenges and opportunities (CCO) | | | | | |
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| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
| 1 | Kalarical Janardhanan Sreeram, Jonnalagadda Raghava Rao, Bangaru Chandrasekaran and Balachandran Unni Nair | Central Leather Research Institute, Council of Scientific & Industrial Research, Adyar, Chennai 600 020 | India | REACHING NEW TARGETS THROUGH CHEMICALS: CHALLENGES AND OPPORTUNITIES FOR LEATHER CHEMICALS SECTOR | 99 |
| 2 | Ding Zhiwen, Pang Xiaoyan, Ma Zhaoguo, Xu Yanlin | China Leather & Footwear Industry Research Institute, Beijing 100016 | China | SYNTHESIS OF POLYURETHANE MODIFYING COLLAGEN AND ITS APPLICATION IN LEATHER CHEMICALS | 71 |
| 3 | QIANG Tao-tao, WANG Xue-chuan*, REN Long-fang, YUAN Xu-zhang | Key Laboratory of Aids Chemistry & Technology for Light Chemical Industry, Ministry of Education, Shaanxi University of Science & Technology, WeiYang Distric. Xi'an 710021, China | China | APPLICATION OF A CHROME-TANNING ASSISTANT OF HYPERBRANCHED POLYMER WITH CARBOXYL END-GROUP | 147 |
| 4 | S. N. Jaisankar (a), Sanjeev Gupta (b), Y. Lakshminarayana (a), J. Kanakaraj (b), A. B. Mandal | (a) Polymer Lab, (b) Tannery, Central Leather Research Institute, Adyar, Chennai 600 020 | India | A NOVEL ANIONIC CONDENSATE OLIGOMER AS RE-TANNING AGENT FOR LEATHER PROCESSING | 83 |
| 5 | SivarajSudhahar (a), S.Prabhakar (b) and SanjeevGupta (c) | (a) Department of Leather Technology, Anna University, Chennai.; (b) National Centre for Nano Sciences and Nano Technology, University of Madras, Chennai; (c) Central Leather Research | India | PREPARATION AND APPLICATION OF NANO PARTICLES IN LEATHER COATING | 118 |

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| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
| | | Institute(CLRI), Chennai. | | | |
| 6 | V.Vijayabaskar (1), S.R.K.Subramanian (1), J.K.Basu (1), Gunjan (1), Animesh Chattopadhyay (1), S. Ravikumar (1) and S. Ramakrishnan (2) | (1) Product Development Centre, Balmer Lawrie & Co Ltd., Manali, Chennai (2) Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore | India | A NOVEL POLYMERIC FATLIQUOR AND ITS APPLICATION IN LEATHER | 163 |
| 7 | Eric Kientz (1), Daniela Iordache (2) and Milind Parkhi (3) and Jens Fennen (1) | (1) TFL Leather Technology Ltd, Klybeckstr. 15, CH-4057 Basel, Switzerland (2) TFL Italia SpA, Via Lungochiampo snc, VI-36054 Montebello, ITALY (3) TFL Quinn India pvt. Ltd., TFL Estate, Bachupally Village, Near Miyapur, Hyderabad, India | SWITZERLAND/ Italy/ India | LEATHER TOPCOATS WITH ANTI-SOILING AND NON-SQUEAK PROPERTIES | 86 |
| 8 | Stephen D. Bryant, Elton L. Hurlow, and Marilyn S. Whittemore | Buckman International, 1256 North McLean Blvd., Memphis, Tennessee 38108-1241. | U.S.A. | A New Antifungal Agent for the Leather Industry: S-Hexyl-S'-Chloromethyl-cyanodithiocarbamate (CHED) | 84 |

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Theme: Environmental challenges: New developments (ECND)

| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
|------|--|---|---------|--|------------------------|
| 1 | Dr. S Rajamani | Chairman, International Union of Environment (IUE) Commission of IULTCS, Chennai, India | India | RECENT DEVELOPMENTS IN CLEANER PRODUCTION AND ENVIRONMENT PROTECTION IN WORLD LEATHER SECTOR | 100 |
| 2 | Gao Zhongbai (1), Chen jie, Li Xiaoxing | China Leather & Footwear Industrial Research Institute (CLFI), Beijing, China | China | THE DESIGN OF ANAEROBIC WASTEWATER PURIFICATION SYSTEMS | 70 |
| 3 | He-wei Ma, Liang Zhang, Xin-Xia Huang | State centre of quality supervision and test for leather, Haining, P.R. China 314400 | China | DETERMINATION OF ETHOXYLATED NONYLPHENOL AND OCTYLPHENOL IN LEATHER BY CLEAVAGE TREATMENT COMBINED WITH GC-MS | 14 |
| 4 | Jie Liu, Yikun Wang, Keyong Tang | College of Materials Science and Engineering, Zhengzhou University, Henan 450052, P. R. China | China | PREPARATION AND CHARACTERIZATION OF HYBRID SUPER ABSORBENT MATERIALS BASED ON COLLAGEN HYDROLYSATE FROM TANNERY WASTES | 59 |
| 5 | WANG Ya-juan (1,2), SHAN Zhi-hua (1,2), YANG Li-hua (1), SHAO Shuang-xi (1)* | (1)Key Lab of Biomass Green Transformation, Institute of Applied Chemistry, Ningbo University of Technology, Ningbo, 315016, (2) National Engineering Laboratory for Clean Technology Leather Manufacture, Sichuan University, Chengdu 610065 | China | THERMOMECHANICS AND RHEOLOGY OF THERMOPLASTIC GLUTINIZED OXIDIZED STARCH | 151 |

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|------|---|---|---------|--|------------------------|
| 6 | Anulipi Aich (1), B. Chattopadhyay (1), S. Datta (2) and S. K. Mukhopadhyay (3) | (1) Govt. College of Engineering and Leather Technology, LB-III, Salt Lake, Kolkata-700 098, West Bengal; (2) Department of Chemical Engineering, Jadavpur University, Kolkata-700 032, West Bengal; (3) Department of Zoology, Hooghly Mohsin College, Chinsurah-712 101, West Bengal. | India | TOXICITY STUDY OF TANNERY EFFLUENTS USING A FISH MODEL (Poecilia reticulata) | 3 |
| 7 | Sekaran. G*, Boopathy. R, Gnanamani. A, and Mandal. A. B | Environmental Technology Division, Central Leather Research Institute, (Council of Scientific and Industrial Research), Adyar, Chennai – 600 020 | India | SALT RECOVERY FROM INORGANIC AND ORGANIC MIXTURE (SRIOM) - REVERSE OSMOSIS REJECTS STREAM MANAGEMENT IN LEATHER SECTOR | 136 |
| 8 | S. V. Srinivasan, R.Suthanthararajan, K. Sribalakameshwari and E. Ravindranath | Department of Environmental Technology, Central Leather Research Institute, Chennai - 600 020 | India | LIFE CYCLE ASSESSMENT IN TANNERY WASTEWATER TREATMENT | 113 |

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Theme: Collagen stabilization: New leads (CSNL)

| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
|------|--|---|---------|--|------------------------|
| 1 | Shangzhi Pu, Wenhua Zhang, Qiang He, Xuepin Liao, Bi Shi | College of Chemistry, Sichuan University, Chengdu, 610064; National Engineering Laboratory for Clean Technology of Leather Manufacture, Sichuan University, Chengdu, 610065 | China | Molecular Level Understanding the Mechanism of Vegetable-Aldehyde Combination | 75 |
| 2 | Guo Jun, Chen Hui, WANG Ya-juan, Shan Zhi-hua | Biomass and leather engineering department, Sichuan University, Chengdu; National Engineering Laboratory for Clean Technology Leather Manufacture, Sichuan University, Chengdu 610065 | China | Study on Fe(II)-THPS Tannage | 50 |
| 3 | Lihong Fu, Yinglin Zhang, Wei Kuang, Huilin Tian, Qing Wang | Shandong Institute of Light Industry, Jinan 250353 | China | Exploring Stability of Vegetable Tanned Leathers Resistance to Acids, Bases and Salts | 61 |
| 4 | Ying Gong, Kang Cheng, Weite Yang, Wuyong Chen | National Engineering Laboratory for Clean Technology of Leather Manufacture, Sichuan University, Chengdu 610065 | China | Automated clean leather dyeing— Assisted by wringing, ultrasound and microwave | 25 |
| 5 | Dipankar Chaudhuri*, Pinaki Bhattacharya and Ratna Chakraborty | Regional Centre for Extension and Development (Central Leather Research Institute), 3/1C, Matheswartala Road, Kolkata 700 046; Department of Chemical Engineering, Jadavpur University, Jadavpur, Kolkata 700 032 | India | Stabilization of Chromium (III) in Leather by Different Vegetable Tanning Extracts and Superior Performance of Myrobalan | 91 |

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|------|--|---|---------|---|------------------------|
| 6 | Gladstone Christopher Jayakumar, Swarna Vinodh Kanth, Jonnalagadda Raghava Rao, Bangaru Chandrasekaran | Centre for Human and Organizational Resources Development; Chemical Laboratory, Central Leather Research Institute, Council of Scientific and Industrial Research, Adyar, Chennai-600 020 | India | INFLUENCE OF SCLERALDEHYDE IN STABILIZATION OF COLLAGEN | 101 |
| 7 | V Punitha, S Sundar Raman, V Subramanian, J Raghava Rao, B U Nair | Chemical Laboratory, Central Leather Research Institute, Council of Scientific Industrial Research, Adyar, Chennai 600 020 | India | An Approach to Stabilize Collagen through L→D Configurational Changes | 96 |
| 8 | N.SOMANTHAN, M.D.NARESH and V. ARUMUGAM | Central Leather Research Institute, (Council of Scientific and Industrial Research), Adyar, Chennai – 600 020 | India | Visco-elastic model for the mechanical behavior of skins/leather | 139 |

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Theme: Leather products: New avenues (LPNA)

| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
|------|--|---|---------|---|------------------------|
| 1 | Liu Yishan (1), Huang Xin (1), Guo Peipei (2), Liao Xuepin (1,2) and Shi Bi (2) | (1) Department of Biomass Chemistry and Engineering, Sichuan University, Chengdu 610065, China; (2) National Engineering Laboratory for Clean Technology of Leather Manufacture, Sichuan University, Chengdu 610065, China | China | COLLAGEN FIBER: POTENTIAL APPLICATION IN THE RADAR WAVES ABSORBING MATERIALS | 30 |
| 2 | Bhabendranath Das, Gautham Gopalakrishna, Mohamed Sadiq, Asit Baran Mandal | Shoe Design & Development Centre, Central Leather Research Institute (Council of Scientific and Industrial Research), Adyar, Chennai 600 020 | India | OPTIMIZATION OF SAFETY SHOE TOE-CAP USING FINITE ELEMENT TECHNIQUE | 112 |
| 3 | Gautham Gopalakrishna, Mohamed Sadiq, Bhabendranath Das, Gnanasundaram Saraswathy, Asit Baran Mandal | Shoe Design & Development Centre, Central Leather Research Institute (Council of Scientific and Industrial Research), Adyar, Chennai 600 020 | India | BIOMECHANICAL FOOTWEAR DESIGN FOR PRESSURE OFFLOADING BASED ON RISK CATEGORIZATION IN A DIABETIC FOOT | 111 |
| 4 | K Krishnaraj, P Thanikaivelan, K Phebe, PS Sureshkumar, G Sathiamoorthy and B Chandrasekaran* | Centre for Leather Apparel & Accessories Development Central Leather Research Institute (Council of Scientific and Industrial Research), Adyar, Chennai 600 020 | India | DOES SEWING AFFECT THE DRAPE OF APPAREL LEATHERS? | 104 |

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Theme: Leather products: New avenues (LPNA)

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|------|---|---|---------|--|------------------------|
| 5 | N Nishad Fathima, K J Sreeram, J Raghava Rao, B U Nair | Chemical Laboratory, Central Leather Research Institute, Council of Scientific and Industrial Research, Adyar, Chennai-600020 | India | SMART LEATHER FOR SMART FUNCTIONAL APPLICATIONS: NEW AGE MATERIAL | 94 |
| 6 | Perumal Singaraj Sureshkumar*, Palanisamy Thanikaivelan, Kavati Phebe Aaron, Kaliappa Krishnaraj, Ramasamyreddy Jagadeeswaran, Bangaru Chandrasekaran | Centre for Leather Apparel & Accessories Development, Central Leather Research Institute, Adyar, Chennai 600020, India | India | COMBINING LEATHERS WITH NATURAL FIBER BASED FABRICS: POTENTIAL OF PINEAPPLE LEAF FIBER AND NON-MULBERRY SILK BASED FABRICS | 92 |

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Theme: Human resources and management: Opportunities (HRMO)

| S.No | Authors | Organisation(s) | Country | Title (As submitted) | Paper No. As Allocated |
|-------------|--|---|----------------|--|-------------------------------|
| 1 | Mohamed Sadiq, Gautham Gopalakrishna, Bhabendranath Das, D Chandramouli, Asit Baran Mandal | Shoe Design & Development Centre, Central Leather Research Institute (Council of Scientific and Industrial Research), Adyar, Chennai 600 020 | India | CUSTOM MADE SHOES – THE NEW AGE RETAILING “APPLYING TECHNOLOGY TO BENEFIT HUMANITY” | 108 |
| 2 | Masami Sugita (1) and Toshinori Inatsugi (2) | (1) NPO Japanese Leather Technology Association (JLTA), 129, Toyosawa-cho, Himeji, Hyogo 670-0964; (2) Technology Research Institute of Osaka Prefecture, Leather Testing Center, 1-18-3, Kishibenaka, Suita, Osaka. 564-0002 | Japan | CURRENT SITUATION AND CERTIFICATION SYSTEM OF | 85 |
| 3 | D Chandramouli | Central Leather Research Institute, India | India | JAPAN ECO LEATHER STANDARD (JES) | 162 |

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