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दि लेदर पोस्ट
The Leather Post

सीएसआईआर-केन्द्रीय चर्म अनुसंधान संस्थान
CSIR-Central Leather Research Institute

Director, CSIR-CLRI Meets Chairman, CLE

International Women's Day Celebrations 2026

Director's Message

Greetings and Namaskar to the Stakeholders of the leather sector

Dr P Thanikaivelan
Director, CSIR-CLRI

लेदर पोस्ट के प्रिय पाठको,

हमें "द लेदर पोस्ट" का मार्च अंक आपके लिए प्रस्तुत करते हुए अत्यंत प्रसन्नता हो रही है। संस्थान में कई उल्लेखनीय गतिविधियाँ और पहलें की गई हैं, जो अनुसंधान, उद्योग सहयोग, संधारणीयता और सामाजिक पहुँच के प्रति इसकी प्रतिबद्धता को दर्शाती हैं। सीएसआईआर–सीएलआरआई के निदेशक ने भारतीय चर्म क्षेत्र को मजबूत बनाने के लिए सहयोगात्मक प्रयासों पर चर्चा करने हेतु चर्म निर्यात परिषद के अध्यक्ष से मुलाकात की।

संयुक्त अनुसंधान और शैक्षणिक सहयोग को बढ़ावा देने के लिए एक प्रतिष्ठित शैक्षणिक संस्थान के साथ समझौता ज्ञापन हस्ताक्षर किए गए, जबकि संस्थान द्वारा विकसित एक प्रौद्योगिकी को कारीगर समूहों की आजीविका को बेहतर बनाने के उद्देश्य से सफलतापूर्वक हस्तांतरित किया गया। संस्थान ने 'राष्ट्रीय सुरक्षा दिवस' पर व्याख्यान का आयोजन किया और 'अंतरराष्ट्रीय महिला दिवस 2026' मनाया, जिनमें कर्मचारियों तथा शोधकर्ताओं ने सक्रिय रूप से भाग लिया। हमने मॉड्यूरॉप कलर कॉन्फ्रेंस में भी हिस्सा लिया, जिसमें चमड़े और फैशन के उभरते रुझानों पर प्रकाश डाला गया। सीएसआईआर स्मार्ट ग्राम पहल के तहत हमारे क्षेत्रीय केंद्रों ने ग्रामीण आउटरीच कार्यक्रमों का संचालन किया। चर्म क्षेत्र के लिए 'सतत विज्ञान और इंजीनियरी' पर आयोजित एक सेमिनार तथा 'सेवा संकल्प' प्रस्ताव का पालन किए जाने से, संधारणीयता और सामाजिक उत्तरदायित्व पर संस्थान का फोकस और भी अधिक सुदृढ़ हुआ है। हम आपको इस अंक को पढ़ने के लिए आमंत्रित करते हैं, ताकि आप अद्यतन जानकारी से अवगत रह सकें।

Greetings!

We are delighted to bring you the March 2026 issue of *The Leather Post.* The institute witnessed several notable activities and initiatives reflecting its commitment to research, industry collaboration, sustainability, and societal outreach. The Director of CSIR-CLRI met with the Chairman of the Council for Leather Exports to discuss strengthening the Indian leather sector through collaborative efforts. An MoU was signed with an established academic institution to promote joint research and academic cooperation, while a technology developed by the institute was successfully transferred to artisanal groups for uplifting their livelihood. The institute organized the National Safety Day Lecture and celebrated International Women's Day 2026 with active participation from staff and researchers. We also participated in the ModEurop Colour Conference, highlighting emerging trends in leather and fashion. Under the CSIR SMART Village Initiative, rural outreach programs were led by our regional centers. A seminar on Sustainable Science and Engineering for the Leather Sector and the observance of the *Seva Sankalp* resolution further reinforced the institute's focus on sustainability and social responsibility. We invite you to peruse this issue to stay updated.

Happy Reading!

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Mixed Metal Oxide Catalysts for the Removal of Volatile Organic Compounds in Wastewater

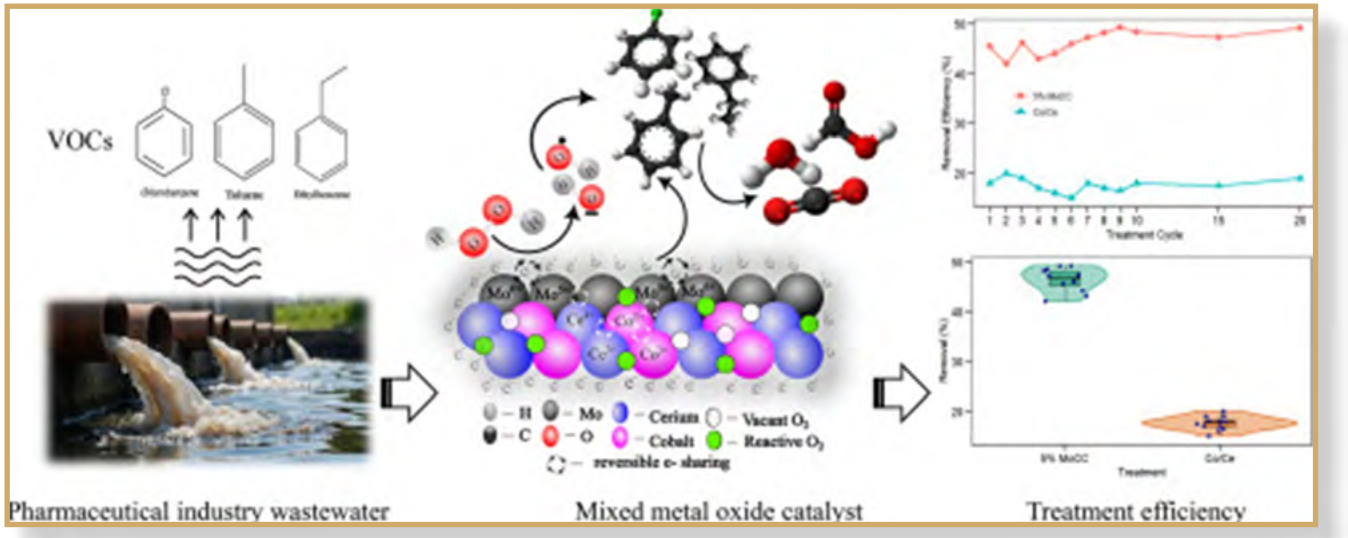
Air pollution poses one of the most critical global threats to living organisms, predominantly exacerbated by Volatile Organic Compounds (VOCs) originating from industrial processes. VOCs are diverse organic chemicals that can readily volatilise under ambient conditions. VOCs released into the environment are often associated with intense odours that adversely impair human health and ecosystems. Many VOCs are known to exhibit mutagenic, carcinogenic and teratogenic potential, thereby exerting a profound effect on both aquatic environments and public health. The escalating industrial demands, have led to extensive solvent consumption and the discharge of the VOC-laden wastewater, often released without adequate treatment. The effluents typically contain hydrophobic and recalcitrant organic compounds, such as toluene, benzene derivatives, dichloromethane, chloroform, alicyclic, heterocyclic, and sulfur-bearing compounds. The discharge of unspent solvents and organic compounds in wastewater necessitates the implementation of proper treatment techniques. Liquid-phase VOC oxidation in real time wastewater scarcely addressed.

Researchers from CSIR-CLRI reported the synthesis of reusable Molybdenum-Cobalt-Cerium oxide (MoCC) catalysts for VOC removal. The catalytic performance of the MoCC having different weight percentage of Molybdenum was evaluated for the oxidation of model aromatic VOCs, specifically toluene, ethylbenzene, chlorobenzene, and pharmaceutical VOC mixtures, using hydrogen peroxide as a oxidant. Among these, the 5%MoCC catalyst exhibited the moderate to good VOCs removal efficiencies for toluene, ethylbenzene, chlorobenzene, and pharmaceutical VOCs. The catalyst exhibited significant durability and consistent stability over 20 operational cycles, with no significant loss in activity. This study highlights the development of a Mo-incorporated Co–Ce ternary oxide system optimised for the liquid-phase oxidation of PVOCs, offering a sustainable approach to industrial effluent remediation.

Prabhakaran Natarajan, Vinayagamoorthy Nadimuthu, Agalya Prabhakaran, Swarnalatha Somasundaram*

Liquid-phase catalytic oxidation of volatile organic compounds using molybdenum incorporated cobalt–cerium mixed metal oxide catalysts

Journal of Water Process Engineering, 82 (2026), 109505.
https://doi.org/10.1016/j.jwpe.2026.109505



Cold resistance of leather! A new property? Yes, yours extremely!

Innately, leather with its high degree of thermo-regulation, suits cold countries as a clothing. Also, along with the conventional surface coatings, it passes the cold crack resistance and cold insulation tests easily under normal circumstances. However, conventional leather used in cold-climate garments and footwear tends to stiffen and crack at sub-zero temperatures, thus bothering the aesthetics and durability. This altogether fuzzy behaviour of the conventional surface coatings at sub-zero, like anti-matters travel back in time, fails leather as a material/commodity! This is the challenge that has received little research attention and the pain point that scientists at CSIR-CLRI choose to tender! In the process, they have replaced multiple single-object unit operations with incremental or minimal value addition. Mainly, they eliminated the dependency on non-renewable, petroleum-based surfactants, thus ruling out aquatic toxicity, poor biodegradability, and high chemical oxygen demand (COD) in wastewater. Yes, the scientists at CSIR-CLRI designed cholinium oleate ([Cho][Ole]), a bio-based ionic liquid (IL) derived from choline and oleic acid, as a green replacement for petroleum-based surfactants. This IL was used to emulsify silicone oil, and the resulting emulsion was encapsulated within silica nanocapsules using a sol-gel process. The multifunctional nanocapsules served simultaneously as retanning agents, fatliquors, fillers, and phase-change materials — consolidating multiple processing steps into one. Like a super-hero tackling the sub-zero!

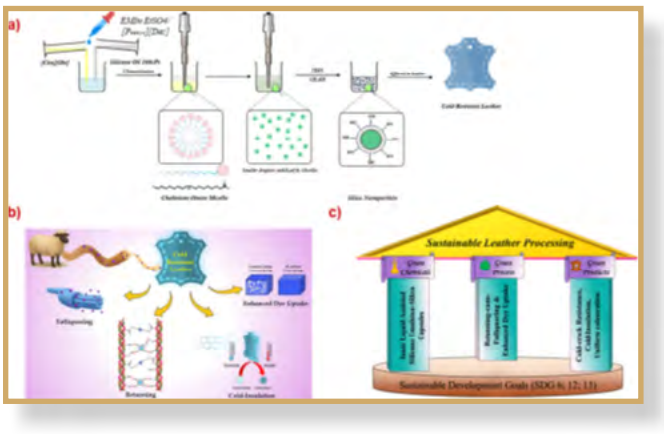
Key performance improvements over conventional systems included: Surfactant dosage reduced by 57.69%; Water usage reduced by 41.22% at the process level; Energy consumption reduced by 29.3%; Reaction mass efficiency improved to 99.23%; CO_2 emissions reduced by approximately 29% per kg of leather. With an Eco-Scale score of 98 and reduction of production cost from ~$2,295 to ~$1,619 per tonne of leather, the innovation aligns with UN Sustainable Development Goals 6 (Clean Water), 12 (Responsible Consumption), and 13 (Climate Action). Treated leathers demonstrated cold insulation down to –20°C and no surface cracking at that temperature. IL-emulsion silica capsule system penetrates the leather matrix with ease, for cold resistance, like electric current passes through a superconductor, facing zero resistance! Hence, the game changer was turning the surface property into a bulk property of leather! This study is the first to report such an innovation.

When greenwashing or green wishing is the fad across sectors, CSIR-CLRI stands for green pushing and the integration of green chemicals, clean processes and green products i.e., three pillars will surely create copious green collars in the leather sector! To quote Walt Disney: In the pursuit of a major goal, you may actually "find something that is even more rewarding" than the original target! Green innovations, such as the above, are exactly that!

Keerthivason Selladurai, Madhan Kumar Meganathan, Sathya Ramalingam, Nishad Fathima Nishter and Raghava Rao Jonnalagadda

Ionic liquid capsules for cold-resistant leathers: connecting the three pillars of green chemicals, clean processes and green products

Green Chem., 2026, 28, 3731–3744
DOI: 10.1039/d5gc05035a; rsc.li/greenchem



Publications from CSIR-CLRI

March 2026

1	Roshini, N; Kumar, S; Dixit, M; Mandal, S, In Situ-Grown Zeolitic Imidazolate Framework-8@Mg-Fe Layered Double-Hydroxide Heterostructure with Enhanced Adsorption Properties: Insights from Experimental and Computational Investigations, Langmuir, 2026, 42 (10), 7371-, 7385, 10.1021/acs.langmuir.5c06728
2	Ravindran, E; Poonguzhali, B; Ali, PMMV; Jeevarathinam, AS; Murugan, P; Ryu, SY; Jung, JW, A Hierarchical Self-Assembly-Induced Solid-State White-Light Emission from a Solution-Processed Single Polymer, Macromolecules, 2026, 59 (5), 2835-2845, 10.1021/acs.macromol.5c02557
3	Jayashree, S; Sheyara, RTB; Gunasekaran, B; Samanta, D, Kombucha bacterial cellulose as a sustainable leather alternative via tanning-like chromium coordination and “post-tanning” treatments, Journal of the Indian Chemical Society, 2026, 103 (3), 10.1016/j.jics.2026.102423

Director, CSIR-CLRI Meets Chairman, CLE

Dr P Thanikaivelan, Director, CSIR-CLRI, held a meeting with Mr Ramesh Kumar Juneja, Chairman of the Council for Leather Exports (CLE), and members of the Calcutta Leather Complex Tanners Association (CLCTA) on 6 March, 2026, at Kolkata. During the meeting, R&D and technical support were provided for the growth of the Eastern Leather Sector. Stakeholders were emphasized. Further, a broad range of topics such as: the need for assistance in Carbon Footprint quantification and reduction, TDS reduction in effluents, Solid Waste Management, and the development of leather auxiliaries from leather solid waste—signifying a collaborative move towards sustainability, innovation, and environmental responsibility in the leather industry were also discussed.

MoU Signed

Collaborative Research and Academic Partnership Between CSIR-CLRI and SRM Institute of Science and Technology (SRMIST)

CSIR-CLRI and SRM Institute of Science and Technology (SRMIST), Tamil Nadu, signed a Memorandum of Understanding (MoU) on 4 March, 2026. The MoU aims to foster collaborative research and academic partnerships between the two institutions. The collaboration will facilitate joint R&D initiatives, exchange of faculty, scientists, and students, and access to advanced research facilities. The partnership will promote interdisciplinary research in areas such as advanced materials and nanotechnology, artificial intelligence and data science, energy and sustainability, biomedical sciences, cognitive science, and chemical and biological systems engineering. CSIR-CLRI and the SRM Institute of Science and Technology signed and exchanged the memorandum in the presence of Dr P Thanikaivelan, Director, CSIR-CLRI, Prof. C. Muthamizhchelvan, Vice Chancellor and members from CSIR-CLRI and SRM Institute.

Technology Transfered

CSIR-CLRI Transfers Technology on Leather for Musical Instruments to the Artisanal Community

CSIR-CLRI has successfully transferred technology developed under the CSIR Fast Track Translational (FTT) research project, *'Leather for Musical Instruments,'* to the artisanal community. FTT projects of CSIR are for achieving national goals, including problems of the common man. These projects are oriented towards technology/product development, with relatively short-term outcomes achievable within 18 to 24 months. They are driven by a business plan with clear solutions to pre-defined problems and challenges. M/s Infinity – Art to Heart, Chennai, fabricated various types of musical instruments using the leather developed under CSIR-CLRI's technology. The artisan team showcased their performance with these newly developed instruments at the XIII Asia International Conference of Leather Science and Technology- 2026, held in Kolkata on 9 March 2026.

The National Safety Day Lecture

at CSIR-CLRI

The National Safety Day is celebrated every year on 4 March to promote safety awareness and practices across workplaces, homes, and communities. It was on this day that the National Safety Council of India (NSCI) was established in 1966. Over the years, a theme was finalised to highlight the importance of active participation, continuous learning and empowerment of people at all levels to build a proactive safety culture and prevent accidents. In this 55th year, the campaign is organised on the theme "*Engage, Educate, & Empower People to Enhance Safety*"

At CSIR-CLRI, a lecture was held on 4 March 2026 to commemorate National Safety Day at the Triple Helix Auditorium. Dr P. Thanikaivelan, Director of CSIR-CLRI, addressed a gathering of scientists and scholars and emphasised the importance of adhering strictly to laboratory safety protocols. He reminded everyone that safety is not just about rules and regulations, but a responsibility that must be practiced consciously every day in the laboratory.

Dr M. Surianarayanan, Senior Principal Scientist (Retd.), gave a lecture on Laboratory Safety Excellence. He informed the need to carefully read and understand MSDS, thoroughly review experimental procedures from start to finish, and responsibly use emerging tools, such as artificial intelligence, to enhance laboratory safety practices.

As part of the programme, short tutorial lectures were also organized on important themes:

- Digital Safety by Dr. Nithiyanantha Vasagam
- Biological Risk Management and Precursor Regulation by Dr. A. Suresh Kumar
- Minor Oversights Lead to Serious Incidents by Dr. Samrat Ghosh

CSIR-CLRI at ModEurop Colour Conference

CSIR-CLRI presented the Leather/colour proposal from Indian Tanners/Companies in the ModEurop Colour Conference: Autumn / Winter 2027/28 season. The conference was held from 18 to 19 March 2026, Bamberg & Haßfurt, Germany. Based on the colour selection, the Colour Card for the season AW27/28 will be released in May 2026.

International Women's Day Celebrations 2026

CSIR-CLRI celebrated International Women's Day on 11 March 2026 with great enthusiasm and participation. To mark the occasion, an event was organised at CSIR-CLRI. The event began with the welcome address by Dr Nishad Fathima N, Scientist G. She highlighted the importance of celebrating the achievements and contributions of women across all fields. This was followed by the Presidential Address by Dr P. Thanikaivelan, Director, CSIR-CLRI, who emphasised the significance of gender equality and remarked that every individual, irrespective of gender, is a human being created by nature with a specific purpose. He further noted that the accomplishments of numerous women role models serve as powerful sources of inspiration and motivation for society.

A keynote session featured a talk by Mrs Mahalakshmi Saravanan, a TEDx speaker, in her inspiring talk focused on the challenges faced by women in professional and personal spheres. She spoke about the tendency among many women to step back due to self-doubt, the financial and societal barriers they often encounter, and the growing contributions of women in

STEM fields. Through real-life examples of women entrepreneurs and achievers, she encouraged women to recognize their potential, overcome limitations, and pursue leadership and innovation with confidence. Dr Purna Sai, Scientist G, proposed the formal vote of thanks.

In observance of International Women's Day 2026, a series of games and a fitness walkathon were organised for all women staff and girl students on 02 March 2026 to promote women's health and wellness. Many staff and students enthusiastically participated and won prizes in various games. The winners were later honoured by the Director during the International Women's Day Program held on 11 March 2026.

As part of the International Women's Day celebrations, a POSH (Prevention of Sexual Harassment) Awareness Programme was conducted on 11 March 2026. A debate under the theme "*Empowerment vs Environment: What Really Holds Women Back*?" was also organized as part of the programme. Mrs Rama Haran, PoSH Practitioner and External Member empanelled by the Ministry of Women & Child Development, Government of India, as a PoSH Trainer, participated in the Women's Day celebration and conducted a POSH Awareness Video Programme titled "*Building a Culture of Dignity*." Dr P. Thanikaivelan, the Director, presented awards to the winners.

A special skit titled "*பெண்கள் நாட்டின் கண்கள்*" (Women are the Eyes of the Nation) was performed by the staff of CSIR-CLRI on 11 March 2026 as part of the International Women's Day celebrations. The performance highlighted the vital role of women in society, emphasising their strength, leadership, and invaluable contributions to nation-building. The skit was well-received and added a meaningful cultural touch to the celebrations at CSIR-CLRI.

To honour the diverse talents of women in CSIR-CLRI, a vibrant "*Talent Show*" was held on 12 March 2026 as part of the International Women's Day 2026 celebrations. The event saw a remarkable turnout, with enthusiastic participation from both women staff and girl students. The participants showcased a wonderful variety of skills, from singing and dancing to playing the flute. It was truly inspiring to witness the incredible talents displayed by CSIR-CLRI staff and students.

International Women's Day Celebrations 2026

CLRI-RC, Kolkata

CCSIR-Central Leather Research Institute RC Kolkata staff and students celebrated International Women's Day on March 9th 2026, where women shared their inspiring journeys in Science.

CSIR SMART Village Initiative by CSIR-CLRI

A four-day training programme under the CSIR SMART Village initiative was organised at Sawaipura, Distt - Pali, Rajasthan by CSIR-CLRI during 9 - 21 March 2026. In the Program, 14 women participated in theoretical training on theoretical concepts, followed by hands-on pattern-making for ladies' handbags under the guidance of experts from CSIR-CLRI.

Some of the salient features of the training programme on Leather Goods are:

- Cutting practice on traced lines sheets under the pattern development process.
- Pattern making of Pencil pouch and
- Fabrication of Pencil pouch

Seminar on Sustainable Science and Engineering for the Leather Sector

CSIR-CLRI organised a Seminar on Sustainable Science and Engineering for the Leather Sector on 23 March 2026 in recognition of the distinguished service and contributions of Dr P. Saravanan, Scientist-G & Head, Leather Process Technology Division, on his superannuation. The event featured invited talks by Dr Bhaskar Raju, Retd. Scientist G, CSIR-NML; Dr B. Chandrasekaran, Distinguished Scientist and Former Director, CSIR-CLRI; Dr Bhaskar Narayan, Director, CSIR-IITR; Mr Robi Redda, Director, SouthSouthNorth; Ms Elzette Henshilwood, Project Manager, SouthSouthNorth; and Mr Wondu Legesse Gizaw, Former Director General, Leather and Leather Products Industry Research and Development Centre (LLPIRC), Ethiopia. Mr Zulfikar Abajihad, Manager, LLPIRDC, Ethiopia. Industry representatives from Ranipet, Erode, Dindigul, Kanpur, and Kolkata clusters, members of other allied industries, and staff of CSIR-CLRI and other CSIR institutions felicitated Dr P. Saravanan and acknowledged his impactful contributions to sustainable leather technologies.

"Awareness for Life Wellness" Program at CSIR-CLRI

CSIR-CLRI conducts a series of health awareness Program for the benefit of staff and students, delivered by a renowned medical specialist. In this series, a health awareness talk on Kidney Health was delivered by Dr Karthik Subash N, Nephrologist, on 13 March 2026. Dr Karthik highlighted the importance of maintaining kidney health, early detection of kidney-related diseases, and preventive lifestyle practices. The talk created valuable awareness among the participants and encouraged them to adopt healthy habits for better kidney care.

Seva Sankalp
Resolution and Implementation

Dr P Thanikaivelan, Director, CSIR-CLRI, along with the Team CSIR-CLRI, read the *Seva Sankalp* resolution and discussed its effective implementation for the benefit of the Indian Leather and its allied sectors, reaffirming the commitment to responsive and efficient services.






CSIR-CLRI Conducts Workshop at NID, Gandhinagar

A team of two experts (Shri Jitendra Kumar Verma, Technical Assistant – Leather Process Technology, and Shri Ashish Singh, Technical Assistant – Shoe & Product Design and Development Centre) from CSIR-CLRI, Chennai, was invited to conduct a 1-week workshop from 16-20 March 2026 at the National Institute of Design, Gandhinagar (Gujarat). The aim of the workshop was to provide practical experience in simple footwear design and to develop an understanding of leather processing, leather properties, and footwear design for their master-level design students.

The workshop consisted of lectures & Hands-on Skill Training to the batch of 17 students about the '*Leather manufacture processing',* including the leather properties, finishes, and the origin.

Another lecture on '*Footwear Designing*' covered understanding Foot Anatomy, the History and Evolution of footwear, Ergonomics, and Future Trends in Footwear Design.

Students also underwent a practical/workshop on design methodology and prototype-making of simple open-type footwear (Slippers & Sandals) using available lasts at their premises.

A study visit was arranged for the benefit of the students at the CLRI-Regional Centre, Ahmedabad. During the visit, various machineries involved in leather goods manufacturing, and the machineries/drums involved in the leather manufacturing process were shown.

International Leather Conference

CROSSLINX'26 at CSIR-CLRI

CROSSLINX'26 was held at CSIR-CLRI on 30 March 2026. Organised annually by the Association of Leather Technologists, Dept. of Leather Technology, Anna University, Chennai CROSSLINX provided a platform for students to enhance their technical skills by conducting various events like technical paper presentation, poster presentations, debates, lectures, oratorical contests, and workshops. The objective of the conference is to help students to gain knowledge on the recent trends in leather processing and on leather products.

At CROSSLINX'26, held at the Triple Helix Auditorium, CSIR–CLRI, Chennai, Mr. P. S. Suresh, President of the Indian Shoe Federation (ISF), and Chief Guest addressed the gathering. He stated that while India has emerged as a trusted, value-added global exporter (>USD 5 billion), powered by knowledge, research, and adaptability, the next decade will be shaped by four structural shifts:

- Sustainability as a strategic differentiator
- Material innovation expanding product frontiers
- Digital & smart manufacturing enabling data-driven operations
- Changing consumer behaviour (casualisation & athleisure)

He also stated that true synergy will enable India not just to grow—but to define the future of the global leather & footwear industry.

The event was graced by Dr. P. Thanikaivelan, Director, CSIR-CLRI and Dr. K. J. Sreeram (Scientist H & Head, Department of Leather Technology) along with distinguished members from the industry ;Mr. Ateequr

ISF at CROSSLINX, CSIR-CLRI, 30th March 2026

Rahman (Chairman, IFLMEA), Mr. Yavar Dhala (Vice President, ISF), Mr. C. Anbumalar (Vice Chairman, PA Footwear), Mr Raja Babu (President, ALFA), Mr Manoj Bhaiya (Chairman, C & E Ltd).

Special Invited Lecture (Online Mode) on the following topics was also organised during the event:

"*Sustainability in Leather Making: Opportunities & Challenges"* by Mr. Ashokkumar Baskar, Senior Scientist, PACT, The United Kingdom.

"*The Global Trends of The Leather Industry*" by Dr. Luis A Zugno, Secretary, International Union of Leather Technologists and Chemists Societies (IULTCS)


ISF at CROSSLINX, CSIR-CLRI, 30th March 2026


ISF at CROSSLINX, CSIR-CLRI, 30th March 2026

XIII Asia International Conference of Leather Science and Technology

Asia International Conference of Leather Science and Technology (AICLST) titled "*Leather 2050: Challenges and Opportunities*" was jointly organized by Indian Leather Technologists Association (ILTA) and CSIR-Central Leather Research Institute (CSIR-CLRI) along with the Principal Associate, Council for Leather Exports (CLE) and Partners, Government College of Engineering and Leather Technology (GCELT), Indian Leather Products Association (ILPA) and Calcutta Leather Complex Tanners Association (CLCTA) between 6-8 March 2026, at The Stadel, Kolkata, India.

Dr P Thanikaivelan, the Director of CSIR-CLRI, addressed the gathering during the Inaugural Ceremony, followed by a Plenary session titled "*Asia in Changing Leather World: Opportunities and Challenges*" by Padma Bhushan Dr T. Ramasami. The conference featured Theme-wise Oral and Poster presentation sessions categorized under:

- Livestock Analysis & Quality Appropriation,
- AI and productivity, Carbon Capture & Utilization,
- Innovative Process Technology,
- Footwear-Future & Roadmap and
- Marketing Policy & Strategy.

Several of these sessions were chaired by CSIR-CLRI scientists Dr P Thanikaivelan, Dr B. Chandrasekaran, Dr J. Raghava Rao, Dr N. Nishad Fathima, and Dr K. Krishnaraj. They enriched the discussion with their valuable insights and suggestions. The research scholars, scientists, Leather Technologists of CSIR-CLRI, and B. Tech Leather technology students of Anna University, Chennai, were noteworthy for their active participation, with 19 oral presentations and 24 poster presentations.

A refreshing evening with soulful music, vibrant Parai, and a graceful dance program was organized on Day 2 of the conference. The cultural program enhanced participant experience by showcasing culture and heritage, along with the encouragement of networking and interaction.

Overall, the conference served as an excellent platform to exchange knowledge, present innovative ideas, and discuss emerging trends and challenges in the field of Leather and Footwear. Additionally, it promoted the necessity for future leather research to be strictly sustainable.


XIII Asia International Conference of Leather Science & Techn
6 - 8 MARCH 2026
LEATHER 2050: CHALLENGES AND OPPORTUNITIES


nternational Conference of Leather Science & Technology
6 - 8 MARCH 2026
LEATHER 2050: CHALLENGES AND OPPORTUNITIES


XIII Asia International
Science & Technolo
SESSION
LIVE STOCK ANALYSIS
Session Chair: ILTA
Session Co-Chair: CLRI


Asia International Conference of Leather Science & Technology


PROCEEDINGS

Launching of CSIR-SMART VILLAGE Project

by CSIR-CLRI in Odisha

The CSIR-SMART Village Project was officially launched in Kusunpur Village, Odisha, on 16 March 2026. Shri Raghuram R. Iyer, IAS, District Magistrate of Kendrapara District, Odisha, graced the occasion. Launched by the Government of India as a Mission Mode Project, the "*Smart Village*" is aligned with the Prime Minister's vision of "*Viksit Bharat @ 2047*."

Under this initiative, six villages located in different climatic regions of India have been identified, namely Sawaipura (Pali District, Rajasthan), Janakpur (Raisen District, Madhya Pradesh), Junakimandal (Jorhat District, Assam), Kusunpur (Kendrapara District, Odisha), Chumathang (Leh District, Ladakh), and Bhada (Kachchh District, Gujarat). This pilot project focuses on integrated village development by improving key development indicators through indigenous CSIR technologies, following the guiding principle of '*Lab to Land*'.

On the occasion of launching the project, the scientific and technical team from the CSIR-CLRI briefed the gathering on the initiatives to be implemented in the village. The team also show-cased various products made from fish and chicken feet leather, combined with local ethnic fabrics. The event was well attended by the residents of the village with over 200 of them actively participating in the event.

Foot Assessment Using Gait Analysis – Early Diabetes Detection

With rising diabetes prevalence, there is an urgent need for non-invasive, accessible, and preventive screening methods. A research initiative funded by CSIR bridges healthcare and technology with the aid of gait analysis and plantar pressure to identify early signs of diabetes and its complications through walking patterns. Subtle biomechanical changes in the foot, which often precede visible symptoms, can reveal risks such as neuropathy and ulcers. The study builds India-specific gait-based biomarkers for diabetic foot risk.

The diabetes foot screening study was conducted at the CLRI Dispensary during 23-27 March, 2026.

This non-invasive scientific foot screening helps to provide:

- Early diabetes risk detection
- Personalized insights (flat foot, high arch, pressure imbalance)
- Guidance on footwear and preventive care
- Know your feet. Understand your risk. Walk towards a healthier future.

Activities at **Regional Centre,** Jalandhar

Workshop on Footwear Designing

Under the supervision of the Department for Promotion of Industry and Internal Trade (DPIIT) of the Government of India, CSIR-CLRI conducted a two-day workshop on footwear designing during 11-12 March 2026 at the CLRI Regional Centre, Jalandhar. The workshop was aimed at promoting design knowledge of All India footwear and related products. About 25 participants from the Jalandhar Footwear Cluster participated in the workshop. During the event, participants were introduced to the basic and advanced concepts, techniques, and tools used in footwear designing.

Regional Centre, Kanpur

Workshop on Footwear Designing

A two-day Workshop on Footwear Designing was successfully organized by CSIR–CLRI under the aegis of DPIIT, Ministry of Commerce & Industries (GoI) during 24-25 March, 2026, at the KLC Complex, Banthar (Unnao), U.P. The workshop brought together footwear designers, entrepreneurs, academicians, and startups from the Kanpur–Unnao Leather Cluster. It provided a valuable platform to explore innovative, functional, and aesthetic approaches to footwear design. Participants gained practical tools and insights to enhance their creative process, fostering fresh ideas and strengthening design capabilities within the cluster.

From Tradition to Transformation: AI in Leather Handbag Design

CSIR-CLRI Regional Centre, Kolkata, in association with the MSME&T Department, Government of West Bengal, successfully concluded its two-day Design Workshop titled "*From Tradition to Transformation: AI in Leather Handbag design*" during March 16-17 2026. During the workshop, working professionals explored how AI can elevate traditional handbag design, learning to transform a simple sketch into a market ready product. The certificate distribution ceremony held on 18 March 2026 was graced by Mr Gautam Gosh, Additional Secretary MSME&T, who applauded CSIR-CLRI for thoughtfully designing the training Program that empowers professionals with next-gen design skills.

PARTICIPATION

The Director, CSIR-CLRI, delivered the Graduation Day address at the Institute of Petrochemical Technology

The Central Institute of Petrochemicals Engineering & Technology (CIPET), Institute of Petrochemical Technology - Chennai, conducted the 19th Graduation Day on 27 March 2026. Dr P Thanikaivelan, Director, CSIR-CLRI, delivered the Graduation Day address on the occasion of the 19th Graduation Day on 27 March 2026 at the Institute of Petrochemical Technology – Chennai - Central Institute of Petrochemicals Engineering & Technology (CIPET). During the event, he handed over the certificates to the graduates. He also handed over the degree certificate and mementoes to Anna University 1st Rank holder Ms J. Ivanjaline Christina Malar, B.E. (Mfg. Engg.).

National Exhibition-Cum-Technical Meet, New Delhi

CSIR-CLRI participated in the National Exhibition-Cum Technical Meet under the Mission SANKALP (Science and Advanced Networks for Knowledge-Driven Action for Livelihood Promotion) on 18 March 2026 at Dr Ambedkar International Centre, New Delhi, spearheaded by the Office of the Principal Scientific Advisor to the Government of India, with the Department of Science and Technology serving as the nodal implementing agency.

Director, CSIR-CLRI, Participated in the Empowered Committee meeting of IFLDP Projects.

Dr P. Thanikaivelan, Director, CSIR-CLRI, participated in the Empowered Committee meeting of the Indian Footwear and Leather Development Programme (IFLDP) projects, chaired by Shri. Amardeep Singh Bhatia, Secretary, DPIIT, at New Delhi on 23 March 2026. During the meeting, extension projects for the CETP upgradation were also discussed with Ms Nidhi Kesarwani, Joint Secretary, DPIIT. Further, the Director of CSIR-CLRI briefed on current developments in the leather sector and related activities at CSIR-CLRI.

Director, CSIR-CLRI Visits CLRI Regional Centre, Kolkata

Dr P. Thanikaivelan, Director, CSIR-CLRI, visited the CLRI Regional Centre in Kolkata and interacted with the staff and research scholars. He emphasized that the Regional Centre Kolkata should focus on technology transfer, training, and testing support to meet the needs of the Eastern Region.

Students of Leather Design at NIFT Raebareli Visit CLRI RC-Kanpur

The 4th-semester students of Leather Design at the National Institute of Fashion Technology (NIFT) Raebareli, accompanied by their faculty members, visited the CSIR-CLRI Testing Laboratory in Banthar (Unnao), U.P., on 23 March 2026. During the visit, the students gained valuable exposure to mechanical and chemical testing procedures, along with the testing requirements for leather and various leather products. They were also introduced to the concept of restricted substances in leather and leather goods, providing them with important insights into industry standards and compliance practices.

Dr Rajani Kumar Borah, PhD student of Dr Amit Ashok Vernekar, Scientist D, Inorganic and Physical Chemistry Laboratory, was adjudged as a National Winner at the Asian Paints Alchemy Conclave 2026. Teaming up with a student from IISER Bhopal, his team, "*Sustainable Spectrum*," developed a fluorine-free, easy-clean architectural coating that repels dust, dirt, mud, and stains and enables self-cleaning even after abrasion.

Happy Retirement!

Dr. Saravanan P
Scientist G
Leather Process Technology Department

The Director and Staff wish him a happy and healthy retired life !

CSIR-Central Leather Research Institute

(CSIR Integrated Skill Initiative Training Programme)

CSIR-CLRI announces the commencement of the following placement oriented courses

Leather Processing

- Post Graduate Diploma Programme in Leather Technology
- Diploma in Leather Processing
- Short Term Executive Skill Development Programme in Leather Processing
- Integrated Skill Development on Quality Control Methods in Leather Manufacture
- Computerized colour Matching for Leather manufacturing

Leather and Leather products

- Post Graduate Diploma Programme in Leather Products Technology
- Quality and Visual Inspection of Leather and Leather Products
- Skill Training Programme in Leather and Leather-like materials for Emerging Entrepreneurs
- Short Term Executive Skill Development Programme in Leather Upholstery Manufacture
- Course in Fashion Design and Development for Leather Lifestyle Products

Leather Goods and Garments

- Diploma in Leather Goods Manufacture
- Short Term Executive Skill Development Programme in Leather Goods Manufacture
- Training Programme in Leather Goods Design (Manual and CAD)
- Diploma in Leather Garment Manufacture
- Short Term Executive Skill Development Programme in Leather Garments manufacture
- CAD for Garments

Allied Science courses

- Bioinformatics Associate/ Analyst
- Quality Control Chemist – Microbiology
- QA Chemist Equipment Validation - Life Sciences
- Nuclear Magnetic Resonance (NMR) Spectroscopy Analyst
- Quality Assurance Chemist
- Leather Biotechnologist
- Enzyme Technologist
- Structural Analytical Technologist
- rDNA Technologist

Leather Allied Sectors

- Short Term Executive Training Programme on Occupational Health and Safety for Leather and Allied (Product) Industries
- Short Term Executive Training Programme on Testing and Calibration for Leather Sector
- Repair, restore and maintenance of leather products
- Short Term Executive Training Programme on Waste Management for

Footwear

- Diploma in Footwear Manufacture
- Short Term Executive Skill Development Programme in Footwear manufacture
- Training programme in GAIT Analysis
- CAD for Footwear

Please visit https://clri.org/training.aspx for online / offline submission of duly filled in application

CSIR-CLRI 75

For more info:

Website : https://clri.org/training.aspx

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