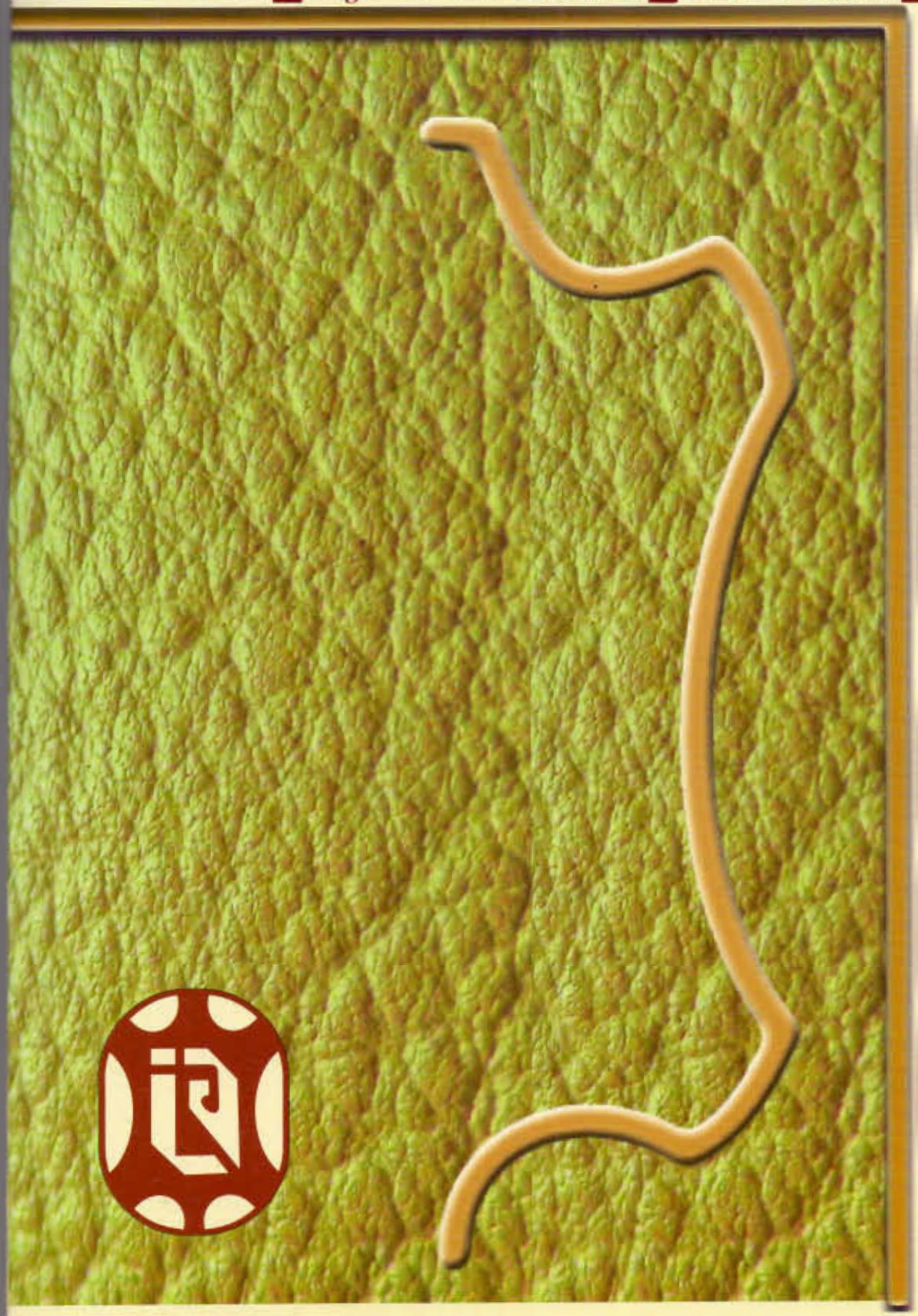
JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION

Registration No. KOL RMS/074/2016-18
Price Rs. 50/-
Date of Publication : 6th

Vol. LXVI No. 04 ■ Regd. No. ISSN 0019-5738 ■ RNI No. 2839/57 ■ April 2016



JILTA

Indian Leather Technologists' Association

[A Member Society of International Union of Leather Technologists' and Chemists Societies (IULTCS)]

'SANJOY BHAVAN', 3rd Floor, 44, Shanti Pally, Kasba, Kolkata – 700 107
Telephone : (033) 2441-3459/7320 • TeleFax : (033) 2441-3429
E-mail : admin@iltaonleather.org / mailtoilta@rediffmail.com
Website: www.iltaonleather.org

Mission & Vision

- An Association with over 600 members from India and abroad working since last 64 years for the growth and development of Leather and its allied industries.
- Organize seminars, symposiums, workshops in order to share information, knowledge & latest development and interactions for the benefit of all concerned.
- Organize Human Resource Development programmes on regular basis.
- Publish for over 60 years, a technical monthly journal namely "Journal of Indian Leather Technologists' Association" (JILTA), widely circulated through out the World.
- Publish books for the benefit of the students at various levels of study, for the Research Scholar and the Industry.
- Work as interface between Industry and the Government.
- Assist Planning Commission, various Government Institutions, Ministry and autonomous bodies to formulate appropriate policies for the growth of the Industry.
- Assist small and tiny leather goods manufacturers in marketing their products by organizing LEXPOs in Kolkata and different parts of India.

ILTA PUBLICATIONS

Now available

Sl. No.	Title of the Book	Author	Price per Copy*	
			Inland (INR)	Foreign (USD)
01.	Treatise on Fatliquors and Fatliquoring of Leather	Dr. Samir Dasgupta	` 1500.00	$ 60.00
02.	Comprehensive Footwear Technology	Mr. Shomenath Ganguly	` 500.00	$ 50.00
03.	An Introduction to the Principles of Leather Manufacture (New Edition)	Prof. S. S. Dutta	` 800.00	$ 50.00
04.	Analytical Chemistry of Leather Manufacture	Mr. P. K. Sarkar	` 300.00	$ 10.00
05.	Synthetic Tanning Agents	Dr. Samir Dasgupta	` 900.00	$ 30.00
06.	Hand - Book of Tanning	Prof. B. M. Das	` 750.00	$ 25.00
**** Packing & Forwarding Charge Extra***				

Send your enquiries to :-

Indian Leather Technologists' Association
'SANJOY BHABAN'
3rd Floor, 44, Shanti Pally,
Kolkata-700 107
Phone : 91-33-24413459 / 24417320,
Telefax : 91-33-24413429
E-mail : admin@iltaonleather.org / mailtoilta@rediffmail.com

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

APRIL' 2016 VOL.: LXVI NO.: 04 RNI NO.: 2839/57 REGD.NO.: ISSN 0019-5738

Contents

Hony. Editor :

Dr. Goutam Mukherjee

Communications to Editor through E-mail :

jiltaeditor@gmail.com; admin@iltaonleather.org

Cover Designed & Printed by :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Published & Printed by :

S. D. Set, on behalf of Indian Leather Technologists' Association

Published from :

Regd. Office : 'Sanjoy Bhavan', 44, Shanti Pally

3rd Floor, Kasba, Kolkata - 700 107

Printed at :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Subscription :

Annual	Rs.(INR)	400.00
Foreign	**$** (USD)	45.00
Single Copy	Rs.(INR)	50.00
Foreign	**$** (USD)	4.00

All other business communications should be sent to :

Indian Leather Technologists' Association

'Sanjoy Bhavan', 3rd floor, 44, Shanti Pally

Kasba, Kolkata - 700 107, WB, India

Phone : 91-33-2441- 3429 / 3459

Telefax: 91-33-2441- 7320

E-mail : admin@iltaonleather.org;
mailtoilta@rediffmail.com

Web site : www.iltaonleather.org

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION [JILTA]

Indian Leather Technologists' Association is a premier organisation of its kind in India was established in 1950 by Late Prof. B.M.Das. It is a Member Society of International Union of Leather Technologists & Chemists Societies (IULTCS).

The Journal of Indian Leather Technologists' Association (JILTA) is a monthly publication which encapsulates latest state of the art in processing technology of leather and its products, commerce and economics, research & development, news & views of the industry etc. It reaches to the Leather / Footwear Technologists and the decision makers all over the country and overseas.

Advertisement Tariff

Full Page / per month

Black & White	` 5,000.00 /-	for 03 months ` 20,000/-
Colour (3 plans)	` 10,000.00/-	for 06 months ` 35,000/-
Colour Insert (One side) (Provided by the Advertisers)	` 5,000.00 /-	for 12 months ` 60,000/-

Full Page / per anum

Front inside (2nd Cover)	` 96,000 /-
3rd Cover	` 84,000 /-
Back Cover	` 1,20,000 /-

Printing & Processing charges extra

Mechanical Data

Overall size: 27cm × 21 cm
Print area : 23cm × 17 cm

A/c. Payee Cheque to be drawn in favour of :
Indian Leather Technologists' Association
and Payable at **Kolkata**

Send your enquiries to :
Indian Leather Technologists' Association
'SANJOY BHAVAN'
3rd floor, 44, Shanti Pally, Kasba, Kolkata – 700 107
Phone : 91-33-24413459/7320, Telefax : 91-33-24413429
E-mail : admin@iltaonleather.org / mailtoilta@rediffmail.com
Website : www.iltaonleather.org

INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION

(Member Society of International Union of Leather Technologists and Chemists Societies GENEVA)

Executive Committee (2015-17)

Central Committee

President:
Mr. Arnab Kumar Jha

Vice-Presidents:
Mr. Asit Baran Kanungo
Dr. K. J. Sreeram
Mr. P. K. Bhattacharjee

General Secretary:
Mr. Susanta Mallick

Joint Secretaries:
Mr. Jiban Dasgupta
Mr. Shiladitya Deb Choudhury

Treasurer:
Mr. Kaushik Bhuiyan

Committee Members:
Mr. Aloke Kr. De
Mr. Aniruddha De
Mr. Bibhas Chandra Jana
Mr. Kanak Kr. Mitra
Mr. Mrinal Kanti Chakraborty
Mr. Pradipta Konar
Mr. Sudhansu Kumar Biswas
Mr. Deepak Kr. Sharma
(Secretary of Northern Region)
Dr. J. Raghava Rao
(Secretary of Southern Region)

Ex-Officio Member
Dr. Goutam Mukherjee

Regional Committees

Southern Region :

President:
Mr. N. R. Jaganathan

Vice-President:
Dr. B. Chandrasekaran

Secretary:
Dr. J. Raghava Rao

Treasurer:
Dr. Swarna V Kanth

Committee Members:
Mr. S. Govardhan
Dr. S. V. Srinivasan
Mr. R. Mohan
Dr. Subendhu Chakraborty
Dr. J. Kanakaraj

Northern / Western Region :

President:
Mr. Jai Prakash Saraswat

Vice-President:
Mr. Kamal Sharma

Secretary:
Mr. Deepak Kr. Sharma

Treasurer:
Mr. Jaswinder Singh Saini

Committee Members:
Mr. Mohinder Lal
Mr. Rajeev Mehta
Mr. Sudagar Lal
Mr. Sunil Kumar

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION [JILTA]

Emotions in Profession

Emotions and moods are part of our lives where people react emotionally to events that happen in their working environment. However, people are expected to be professional and refrain from displaying emotions at their workplaces. As emotional persons, we do often bring our emotions everywhere – to school, work and play. This seems like a tension between the need to express our emotions and being professional. Hence, this leads to some questions. Why is it considered unprofessional to bring emotions to the workplace? Should we allow emotions at workplace?

Accordingly to Martha Steward, a successful businesswoman, "Society dictates that we are supposed to put on a different mask at work and indifferent look at our lives. People who show signs of vulnerability or display emotions at work undermine their professionalism." This was supported by Dr Kinman's research where crying at workplace is perceived as a loss of control, especially for woman. She explained that the workplace and professionalism had been based on masculine norms that did discourage display of emotions.

Upon further self realisation, it can be realized that it was not solely a yes-no question of whether should emotions be allowed at workplaces. Professionals can express emotions at work which are dependent on, a) type of emotions that are being expressed and b) reasons for displaying a particular emotion. For example, constructive anger, as opposed to destructive anger, due to having a passion or concern about a certain issue at work can motivate an individual to do more/ expression of emotion against a decision/movement which may ruin workplace.

With an increasing proportion of women in the workforce, perceptions on workplace norms are changing. Today's definition of expression emotion states that "It's Always Personal: Emotion in the New Workplace", showing emotions at work are viewed as speaking from the heart and it does not affect a person's chances of promotion.

While accepting or discarding emotion from referring to our jurisprudence in administrative affairs we can review from following angles:

1) Decision making

To have a complete picture for decision-making, we should consider both facts and emotions. Emotions are signals and we should listen to it by figuring out its origin and sincerity. For example, if working on a particular type of project makes you happy, this could be a signal of new job direction.

2) Leaders

Managing people with sincerity also means understanding and responding to their emotions. Different people have different emotional reactions to the same event /work environment. Emotions can help us understand workplace related behaviors and subsequent performances. Hence, we have to understand and discuss these feelings openly, and align individuals towards a common goal. A true leader never discards emotions arising out of its employees but screens it and redirects it for attaining a higher velocity with newer direction aimed at procreativity.

3) Customer

Employers may want to encourage positive emotions at their workplaces, especially for service jobs which requires employees to deal with customers most of the time. Studies on emotional contagion have found that when an employee exhibits positive emotions, customers tend to catch the positive emotions and shop longer. Therefore, rather than a robotic professionalism to be displayed to customers such positive emotions pay dividends.

4) Employees

It is unhealthy for employees to suppress their negative emotions under administrative pressure. When we suppress our emotions, it accumulates and may eventually lead to outburst. Hence, it is suggested that we should opt to release our emotions but to a right place.

Here is a list of procedures that may be used to release negative emotions.

Step 1: Detract yourself from your negative emotions

1) Do a mathematics problem in your head. The right lobe of brain controls emotions. Hence, you can circumvent your emotions by doing math, which activates the left brain. Then hyperactive right lobe will be in equilibrium if activities along with left lobes.

2) Take a nap. Once asleep, you will stop thinking about your problems, and this prevents you from over-thinking about your perennial problems.

Step 2: Once your initial emotions are not as strong, you can move on to release it.

1) Go for an intense physical workout session. This helps to release the tension in your body and refreshes your mind.

2) Write in a journal and describe how you feel now. Writing down emotions helps you to process your emotions out from your head and heart onto the paper.

In conclusion, it may be said that we should not, nor we can, remove emotion from the workplace. Since we are unable to remove emotion from the workplace, it seems unfair to judge those who are emotional but highly expressive as unprofessional. Thus, it is advocated that instead of ignoring and suppressing emotions, we should acknowledge other's emotions and express our own emotions constructively. Instead of judging this issue from a single angle, i.e. professionalism, we should also view it from other perspectives. Therefore, an administrator should possess jurisprudence to judge emotion of its employees but should neither be averse to it nor nourish it.

Goutam Mukherjee

Goutam Mukherjee

A. 5th Moni Banerjee Memorial Lecture

As communicated through individual invitation cards posted on 29.02.2016, the 5th Moni Banerjee Memorial Lecture was organized at 3.00 PM on Tuesday the 15th March, 2016 at the auditorium of Freya Design Studio, ILPA Leather Goods Park, Calcutta Leather Complex, Bantala.

The programme commenced with garlanding the portrait of Late Prof. Moni Banerjee by the President, ILTA a Senior member of ILTA, Son-in-law of Late Prof. Moni Banerjee, representatives from GCELT, CFTC, CLRI, FDDI, Alumni Association of GCELT, Mr. Tapan Nandi & Mr. Mukund Kulkarni – the Guests of Honour and Prof. Somenath Mukherjee, the Chief Guest.

After garlanding was over, G. S. Invited Mr. Arnab Jha, Prof. Somenath Mukherjee, Mr. Tapan Nandi and Mr. Mukund Kulkarni to the dais. Mr. Arnab Jha, President, ILTA was then requested to deliver his welcome address. Mr. Jha while welcoming all present, briefly touched upon the life and achievements of Late Prof. Moni Banerjee and also his contributions as the Founder Secretary of ILTA.

Prof. Somenath Mukherjee was then greeted with a bouquet by Mr. Arnab Jha, Mr. Tapan Nandi by Mr. Asit Baran Kanungo, Vice President of ILTA and Mr. Mukund Kulkarni by Mr. Gopal Chatterjee, son-in-law of Late Prof. Moni Banerjee.

On request to say a few words Mr. Tapan Nandy recollected the contribution of Late Prof. Moni Banerjee to leather industry. Mr. Kulkarni stated that his family has been associated with leather industry for nearly 105 years and his father's guidelines must have been picked up from Late Prof. Moni Banerjee. He also stated that Late Prof. Moni Banerjee believed in working with his own hands and followed his heart.

G.S. then read out the names of the recepients of "Moni Banerjee Memorial Medals" and they were presented the medals in the following order :-

1) Mr. B. Prashanth, Topper, Diploma in Leather Technology Examination, 2015, Govt. Institute of Leather Technology, Hyderabad, A.P. by Mr. Arnab Jha.

2) Mr. S. Koteswara Rao, Topper, Diploma in Footwear Technology Examination, 2015, Govt. Institute of Leather Technology, Hyderabad, A.P. by Prof. Somenath Mukherjee.

3) Mr. Purnendu Adhya, Topper, Diploma in Footwear Technology Examination, 2015, Central Footwear Training Centre, Budge Budge, West Bengal by Mr. Mukund Kulkarni.

4) Mr. Nilotpal Roy Chowdhury , Topper, Diploma in Leather Goods Technology Examination, 2015, Central Footwear Training Centre, Budge Budge, West Bengal by Mr. Tapan Nandi.

5) Mr. Karampal Singh, Topper, Diploma in Leather Technology Examination, 2015, Govt. Institute of Leather & Technology, Jalandhar, Punjab by Mr. Arnab Jha.

6) Ms. Sangeeta Rani , Topper, Diploma in Footwear Technology Examination, 2015, Govt. Institute of Leather & Technology, Jalandhar, Punjab by Prof. Somenath Mukherjee.

Short presentation/speech were then made by two of the recepients of the Moni Banerjee Memorial Medal namely Mr. B. Prashanth & Ms. Sangeeta Rani.

Mr. Jha then introduced Prof. Somenath Mukherjee to the gathering and requested him to deliver the 5th Moni Banerjee Memorial Lecture titled "PARADIGM OF TANNERY AND LEATHER HOUSE WASTE POLLUTION PROBLEMS AND ITS ABATEMENT".

Question – Answer session followed after which a Memento was presented to Prof. Somenath Mukherjee by Mr. Susanta Mallick.

While offering vote of thanks, Mr. Mallick stated that we had the very first 'Moni Banerjee Memorial Lecture' delivered on 13th August, 2011 along with the Valedictory Programme of Diamond Jubilee Celebration of ILTA.

Moni Banerjee Memorial Lecture has now become one of our annual events like B. M. Das Memorial Lecture and Sanjoy Sen Memorial Lecture. On this occasion we felicitate the toppers of Diploma in Footwear / Leather / Leather Goods Technology Examinations from various Institutes all over India running such courses.

ILTA would remain grateful to Dr. Somnath Mukherjee for kindly delivering the Moni Banerjee Memorial Lecture titled "PARADIGM OF TANNERY AND LEATHER HOUSE WASTE POLLUTION

PROBLEMS AND ITS ABATEMENT" and to Mr. Tapan Nandi & Mr. Mukund Kulkarni for gracing the occasion as the Guests of Honour.

He expressed heartfelt thanks to all members and guests who have attended the Memorial Lecture, prayed for good healthy of Mrs banerjee and invited all present for tea and refreshment

B. LEXPO Siliguri – XXII

At the time of going to press (30.03.2016) as scheduled, the Inauguration Ceremony will he held on Thursday the 31st March, 2016 at 5.00 PM at Kanchunjungha Krirangan adjacent ground. Swami Akshayananda' Ji Maharaj, Secretary, Ramkrishna Mission Ashrama, Jalpaiguri has been requested to inaugurate the fair as the Chief Guest.

Mr. Anshuman Chakraborty, General Secretary, Journalist Club (North Bengal). Siliguri has been requested to grace the occasion as the Guest of Honour.

Detailed report will be published in the next issue of JILTA.

C. Formation of Various Committees / Sub-Committees

The present Executive Committee has so far formed two committees as detailed below :-

LEXPO Siliguri – XXII Committee

1. Mr. Jiban Dasgupta
2. Mr. Mrinal Kanti Chakraborty
3. Mr. Paresh Ch. Mukherjee
4. Mr. Sudhansu Kumar Biswas
5. Mr. Bani Prasad Garai
6. Mr. Bibhas Chandra Jana
7. Mr. Prabir Kr. Dasgupta
8. Mr. Debasish Chakraborty
9. Mr. Aniruddha De

Ex-Officio Members will be the following :-

1. Mr. Arnab Jha
2. Mr. Asit Baran Kanungo
3. Mr. Susanta Mallick
4. Mr. Kaushik Bhuiyan

Library Committee

1. Mr. Jiban Dasgupta
2. Mr. Shiladitya Deb Choudhury
3. Mr. Tarak Ch. Saha
4. Mr. Aloke Kumar Dey

Some more committees/sub-committees are proposed to be formed in the next Executive Committee Meeting tentatively scheduled on Thursday the 21st April, 2016.

D. IULTCS Congress 2017

Under the theme "Science and Technology for Sustainability of Leather", IULTCS Congress – 2017 will be organized in February, 2017.

ILTA has already announced the following dates :

- March 1, 2016 – Abstract submission open
- October 31, 2016 – Close of abstract submission
- November 15, 2016 – Result announcement
- November 30, 2016 – Full paper submission

Abstracts and full papers must be submitted in English and will be reviewed by an International Scientific Committee. Further details of the event will be communicated to you in due course of time.

You are requested to :-

a) Kindly inform us your '**E-Mail ID**', '**Mobile No**', '**Phone No**', through E-Mail ID: admin@iltaonleather.org or over Telephone Nos. : 24413459 / 3429 / 7320. This will help us to communicate you directly without help of any outsiders like Postal Department / Courier etc.

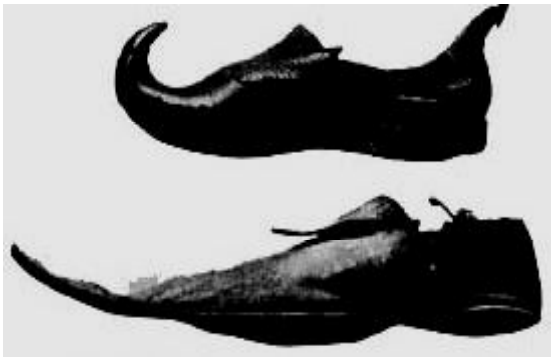
b) Kindly mention your **Membership No. (If any)** against your each and every communication, so that we can locate you easily in our record.

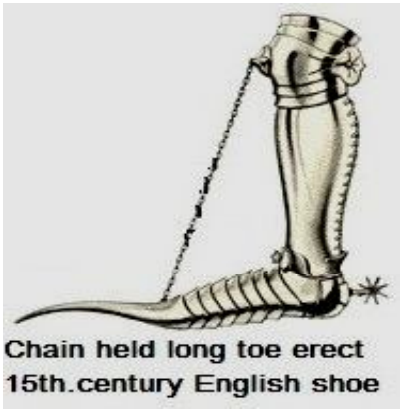
c) **Kindly obtain an Acknowledgement Slip (available at ILTA Office) for any document handed over to ILTA Office.**

Susanta Mallick
General Secretary

Executive Committee Members meet every Thursday at 18-30 hrs. at ILTA Office.
Members willing to participate are most welcome.

This fashion trend in Europe lasted over three hundred years before it was eventually legislated against. The pointed portion of the shoe gradually became longer and longer until it reached so long which made their walking almost impossible. Young generation started to stuff wool and moss in the extensions to keep the toe erect. Obviously the long shoe became 24 inches longer than the foot. They were using chain attachments from toe to the knee to prevent tripping. A popular offensiveness was to paint the extensional portion with flesh coloure, allowing them to excitement with realistic mobility. Sometime small bells were sewn to the end of the shoe to indicate the wearer was a willing partner.





The Church was aware of the audacity of too long pointed shoe and shocked at the evident and rude obscenity of the habit of wearing them. Sumptuary legislation was introduced (a law common in the 13th.– 15th. Century to prevent extravagance in private life by limiting expenditure for food, clothing & furniture) to stop men from wearing that type of shoe. It was felt necessary to introduce a law because the shoes physically prevented men from praying in the Church.

Between 1327 and 1377, during the reign of Edward III (1312-1377), pointed toes of the shoes were prohibited to all who did not have **an income of at least forty pounds a year. W**hile a Prince might wear shoes as long as he liked but pikes could not be more than six inches long for a common people, twelve inches for a landowner (bourgeois) & Knights.

Despite the alternatives, poulaines, the long pointed toe shoe remained popular throughout Europe until in 1367, when **Pope Urban V** eventually banned common people from wearing the **winkle picker shoe** which has a very narrow pointed toe. Winkle pickers are an adaptation of Poulaines.

In England, winkles are a small edible snail, eaten by picking the meat out with a pin or sharp pointed object. The shoe has long, sharp toe, combined with a stiletto heel.

As the fashion re-emerged in France, Charles V (the Wise) (1338-80), prohibit the wearing of "trop ultragueses poulaines". Little notice was taken and in 1386 at the battle of Sempach, Austrian Knights who wished to dismount to fight needed the help of their armourer to snap off the long toes.

The fashion reached its peak towards 1460-70 when Edward IV (1442-1483) enacted a public law prohibiting shoe maker from making shoes with **more than two inch extensions** for under privileged persons.

The end of long toe era may be narrated by two episodes. **The first involved** the **death of Duke Leopold II** of Austria, who died because his long pointed shoes obstructed him from escaping his assassins.

The second was because **Charles VIII** had Polydactylism or **"Six Toes"** on each foot. He required a shoe which could comfort his feet. Then shoe maker developed a wide broad toe shoe for him. This royal broad square-toed shoe actually changed the fashion trend from pointed toe to broad & square toe.

At the **Battle of Nicopolis** in 1396, French Crusaders were forced to cut off the tips of their Poulaines in order to be able to run away.

The High Heel

An aeronautical, civil and military engineer Mr. Leonardo DaVinci (1452-1519) is credited with inventing the high heel for the ladies footwear.

When Catherine d'Medici married in 1533, she wore 2 inch heels to exaggerate her height. Catherine wore gold brocade robes with precious stones in her bodice and hair, plus a gold crown. Mary Tudor (1553 to 1558) also adopted high heels. They stayed in fashion on into the 19th century.

Pumps

In 1904, the pump, or court shoe, became popular. From the early 19th century through today, the British High Court Judges have worn a low cut flat slip-on shoe. It was of black patent leather and had a gross grain bow on the toe. The heel can vary from 1 to 4 inches and are available in many colors.

The Kitten Heel

In the late 1950's, the kitten heel was introduced as an alternative for girls under 13. The stiletto was considered unseemly and too sexy. Also called trainer heels, they had a short, slender heel, less than 2 inches in height and with a slight curve to the heel. They are now classified as a stiletto, as their long, pointed toe and slender heel were found to have sex appeal. By 1960 older teens found them fashionable, then women adopted them as Audrey Hepburn popularized them. Since re-emerging in 2003, they are often found on a sandal.

References:

1. Yue C and Yue D 1997 Shoes: Their history in words and pictures Houghton Mifflin Co : Boston.
2. Athletic Footwear. Mr. Melvin P. Cheskin.
3. History of shoe- A blog dedicated to the history of footwear. Jan-2009.

(Continued to Next Issue)

EXPORTS SHRINK 13.6% IN JAN TO $21 BN

India's exports contracted 13.6 per cent in January – 14th month in a row – to USD 21 billion due to a steep fall in shipment of petroleum products and engineering goods amid tepid global demand.

Imports too shrank 11 per cent to USD 28.71 billion last month, leaving a trade deficit of USD 7.63 billion as against USD 7.87 billion in the same month last year. It is the lowest deficit in 11 months. In February last year, it was USD 6.85 billion.

The deficit would have been lower if gold imports hadn't shot up 85.16 per cent last month to USD 2.91 billion. Overseas shipments of petroleum products shrank 35.18 per cent to USD 1.95 billion in January, while that of engineering goods declined by 27.6 per cent to 4.98 million.

For the first 10 months of the current fiscal, cumulative exports declined by 17.65 per cent to USD 217.67 billion, as against USD 264.32 billion in April-January period of 2014-15.

As per the data released by the Commerce Ministry, imports dipped by 15.46 per cent to USD 324.52 billion for the 10 months, leaving a trade deficit of USD 106.8 billion. The trade gap was USD 119.55 billion in April-January 2014-15. Oil imports last month were valued at USD 5.02 billion – 39.01 per cent lower than the same month last year. Non-oil imports too dipped by 1.4 per cent to USD 23.68 billion.

(Tribune – 09/02/2016)

TAX BENEFITS FOR LEATHER, GEMS & JEWELLERY LIKELY IN BUDGET

Government is considering a package of tax incentives for the labour-intensive leather and gems and jewellery sectors in the forthcoming Budget to provide a boost to manufacturing as well as exports. Leather and leather goods sector is a focus area under the 'Make in India' initiative of the central government and the aim is to increase its exports to USD 15 billion by 2020 from the current USD 6 billion.

The Commerce and Industry Ministry in its suggestions for the Budget 2016-17, has recommended several initiatives including elimination of customs duty on imported leather machinery from about 26.5 per cent currently, sources said.

It has also sought excise duty reduction for all leather and non-leather goods of upto Rs.2,000 and increase in the abatement rate to 35 per cent from 25 per cent. These suggestion, if implemented, will help in assisting technology upgradation, capacity modernization, expansion of manufacturing sector and achieving the USD 15 billion exports target, sources said.

Council for Leather Exports Chairman Rafeeq Ahmed said that the sector employs about 3 million people and support is required to boost the sector.

"Big expansions plans are there in the sector and for that imported machinery is required because 95 per cent of the machinery for tanning and footwear is imported," he said.

Footwear currently attracts an excise duty of 12.5 per cent. For gems and jewellery, which is also the thrust sector under the 'Make in India' programme, the industry has asked to raise customs duty to 15 per cent from the current 10 per cent and abolish the excise duty from the current rate of 6 per cent on imitation jewellery.

The suggestions assumes significance as the popularity of Indian imitation jewellery across the globe is increasing and there is a huge demand in countries including the US and Europe.
"Extending the tax benefits to the sector will enable competitive manufacturing in the country and also boost exports," sources added. Finance Minister Arun Jaitley will unveil the Budget on February 29.

Contracting for the 13th month in a row, India's merchandise exports fell 14.75 per cent in December to USD 22.2 billion due to a steep fall in shipment of petroleum products and engineering goods amid tepid global demand.

(P.T.I. – 01/03/2016)

POOR AIR QUALITY KILLS 5.5 MILLION WORLDWIDE

New research shows that more that 5.5 million people die prematurely every year due to household and outdoor air pollution. More than half of deaths occur in two of the world's fastest growing economics, China and India.

Power plants, industrial manufacturing, vehicle exhaust and burning coal and wood all release small particles into the air that are dangerous to a person's health. New research, presented today at the 2016 annual meeting of the American Association for the Advancement of Science (AAAS), found that despite efforts to limit future emissions, the number of premature deaths linked to air pollution will climb over the next two decades unless more aggressive targets are set.

"Air pollution is the fourth highest risk factor for death globally and by far the leading environmental risk factor for disease," said Michael Brauer, a professor at the University of British Columbia's School of Population and Public Health in Vancouver, Canada. "Reducing air pollution is an incredibly efficient way to improve the health of a population."

For the AAAS meeting, researches from Canada, the United States, China and India assembled estimates of air pollution levels in China and India and calculated the impact on health.

ITALIAN CAMPAIGN TO SELL GOODS IN INDIA

In an attempt to promote Italian goods and services in the Indian Market, the Italian Trade Agency will launch a campaign that would give Indian consumers a glimpse of the best made products of Italy.

Italy is keen to create awareness in Indian of its products and services through a campaign Italy : The extraordinary Commonplace, a celebration of the of best of Made in Italy.

Talking about the campaign, Italian Trade Agency Commissioner Francesco Pensabene said "We're happy to announce the opening of this campaign and we hope that the friendship between India and Italy will go beyond business."

The two year campaign will focus on various sectors such as design, food, food processing, furniture, infrastructure, smart cities and luxury. It will take place all across India and will not be religion specific.

(The Millennium Post – 10/03/16)

NEPALI GOVERNMENT SET TO GIVE LEG UP TO FOOTWEAR PRODUCTS

The government is considering to include the Nepalese footwear products in to the Nepal Trade Integration Strategy (NTIS) – 2010. Citing the growing market, of the locally made footwear, the government has been planning to give it a space in the state programme aimed at promoting the high potential domestic products, said the Commerce Ministry. The NTIS list features the products with a huge potential for exports.

Speaking at the closing ceremony of 12th Nepali Boot and Suit Expo, Commerce Minister Deepak Bohra said the government had planned to focus on the domestic products mainly footwear, on the priority basis. According to him, the government would form a taskforce immediately for the capacity building to promote the products. Nepali shoes are one of the products that have potential to substitute imports," said commerce Secretary Nindra Prasad Upadhyay.

Currently, Nepali footwear holds around 60 percent share in the domestic market while more of such products are being exported. The sector exported products worth an estimated Rs. 2.5 billion last year.

(Indian Leather – Feb' 2016)

Satellite Symposium (LERIG 2016)

Central Leather Research Institute in association with the industry celebrated the Golden Jubilee year (50th Edition) of Leather Research Industry Get-Together. As a part of this celebration, the Regional Centre for Extension and Development (CLRI),Kolkata organized a satellite symposium at Freya-ILPA Design Studio auditorium in Calcutta Leather Complex on 25thJanuary,2016. The programme began with a small inaugural session followed by two technical sessions – one in the morning and another in the afternoon. Council for Leather Exports, Indian Leather Products Association and Chemgems India Private Limited, Kolkata extended their support to this programme. About 130 participants representing various sections of the industry attended this programme. Representatives from the academy, export promoting organization and tanning & leather products manufacturing sectors in the participants' list added value to this programme raising it to a new height.

The inaugural session commenced at 11.10 in the morning, about ten minutes behind the schedule. Dr. Dipankar Chaudhuri, Head, RCED-Kolkata welcomed the gathering and explained the relevance of LERIG. Shri S. S. Kumar, Chairman of the governing Board of the Govt. College of Engineering and Leather Technology was the Chief Guest and Shri Tapan Chattopadhyay, Regional Director; CLE-Eastern Region was present as the guest of honour. ILTA President Shri Arnab Jha presided over the function.

The first technical session, which followed the inaugural session, commenced after a tea break. Chairing the session Shri Tapan Chottopadhyay introduced the speaker Shri S. S. Kumar to the audience and invited him to deliver a talk. The title of Shri S. S. Kumar'stalk was 'Future in Manufacturing: Challenges and Opportunities'. In his talk, Shri kumar highlighted both the challenges and opportunities emerging before the leather industry and made his observations as to how to tackle the emerging challenges. He identifiedissues such as large scale replacement of leather with synthetics in its traditional usages, overall poor environmental performance of leather processing industries and prevailing practice of converting a significant portion of available raw material into low-value items like industrial hand gloves leather as the major challenges for the industry. But, he expressed hope and optimism about the future of leather industry. He pinned his hopes on the synergy between the industry and academy and pointed out that such synergy would assist the industry in reinventing the leather. At the end of his power point presentation, Shri Kumar took few questions from the floor. The session came to an end with the concluding remarks of the chairman, Shri Tapan Chattopadhyay.

The second technical session began after the lunch break. Professor K. Rangarajan, Head, Indian Institute of Foreign Trade, Kolkata Campus was the speaker in this session. Shri Tapan Nandi, Former Regional Chairman, CLE, was in the chair. The title of Prof. Rangarajan's talk was 'Strategizing Exports of Indian Leather Goods'. Shri Tapan Nandi introduced Rangarajan and invited him to deliver his talk. In his presentation, Prof. Rangarajan talked about the strategy formulation and stressed the need for shifting the focus of marketing of leather products from traditional market to new emerging markets. He also opined for manufacturing innovative leather products as apossible alternative strategy for boosting export of Indian leather products. He also recommended an IIFT developed software for identifying the new and emerging markets for Indian leather products. Mrs. Antara Kumar, Executive Director, Freya Design Studio expressed her appreciation for the software and

enquired about the modalities for procuring the software from the speaker. Shri Tapan made his concluding remarks before the end of this session.

Dr. Dipankar Chaudhuri summarized the proceedings and presented a short report covering the symposium. The symposium came to an end with the vote of thanks proposed by Freya-ILPA Design Studio Executive Director Mrs. Antara Kumar. Shri Nayan Sarkar, who is a Technical Officer at RCED, Kolkata did the anchoring for the symposium. The efforts put in by the RCED, Kolkata team made the programme a grand success.

Figure 1. Satellite Symposium poster at the Freya-ILPA design studio entry point

Figure2. Floral reception to ILTA President Shri Arnab Jha.Seen on his left Shri Tapan Chattopadhyay, Regional Director, CLE and on his right Shri Nayan Sarkar, Technical Officer, CSIR-CLRI making the announcement

Figure 3.(*from the left*) Shri Arnab Jha, President, ILTA, Shri S. S. Kumar, Chairman, Board of Governors, GCELT,Shri Tapan Chattopadhyay, Regional Director, Eastern Region, CLE and Dr. Dipankar Chaudhuri, Scientist and Head, RCED(CLRI), Kolkata in the Inaugural Session

Figure 4. Shri S. S. Kumar making presentation titled 'Future Manufacturing: Challenges and Opportunities' in Technical Session I

Figure 5. Shri Tapan Chattopadhyay, RD, Eastern Region, CLE concluding the Technical Session I

Figure 6. (*from the left*) Shri Tapan Nandi, Former President, ILPA and Prof. K. Rangarajan, Head, IIFT Kolkata Campus in Technical Session II

Figure 7. Professor K. Rangarajan making his presentation in Technical Session II

Figure 8. Mrs. Antara Kumar, Executive Director, Freya-ILPA Design Studio proposing a vote of thanks at the end of the Satellite Symposium

Look Back at Indian Economy

(Part - II)

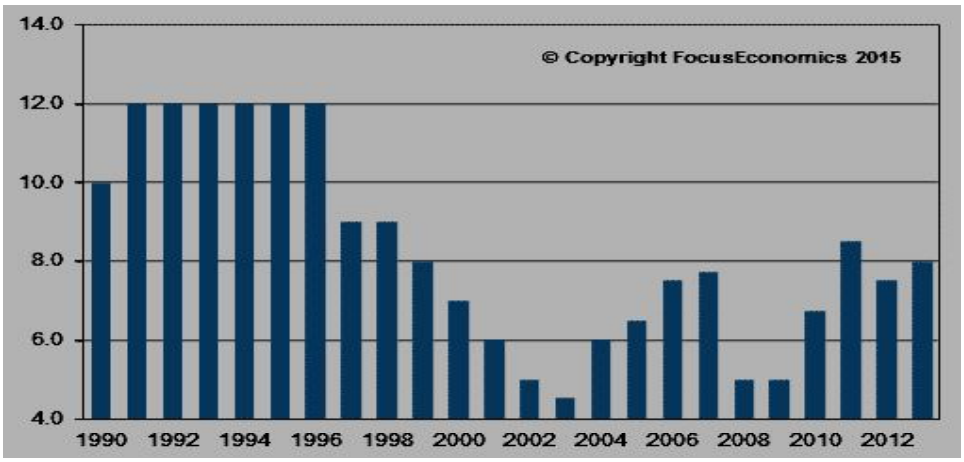
Dr. Goutam Mukherjee[1], Bibhas Ch. Paul[2]

[1]Professor, Govt. College of Engineering & Leather Technology, Kolkata

[2]Officer on Spl. Duty, Indian Leather Technologists' Association, Kolkata

Continued from March' 16 issue

India's Interest Rate Data



Reserve Bank of India Repurchase Rate in %.

Source: Reserve Bank of India.

India's Stock Market Scenario

India's economy accelerated in the July to September period, propelled by strong fixed investment growth and government spending. Despite the positive GDP figure, doubts remain regarding the health of the economy and higher frequency data remains lackluster: industrial production contracted for the first time in one year in November and the manufacturing PMI fell to an over-two-year low in December. Moreover, slowing nominal GDP growth is increasing fiscal pressures on the government ahead of next month's budget presentation. A likely upcoming salary hike for millions of government employees, along with lower-than-expected nominal GDP and the high level of public expenditure needed to keep up growth momentum, have led to speculation that the government will revise fiscal consolidation targets in the upcoming budget.

India's Stock Market Data

Details	2010	2011	2012	2013	2014
Stock Market (annual variation in %)	10.9	-10.5	8.2	18.9	24.9

* Corresponding author's e-mail: gmclt@hotmail.com / gmgcelt@gmail.com

Exchange Rate of Indian Currency

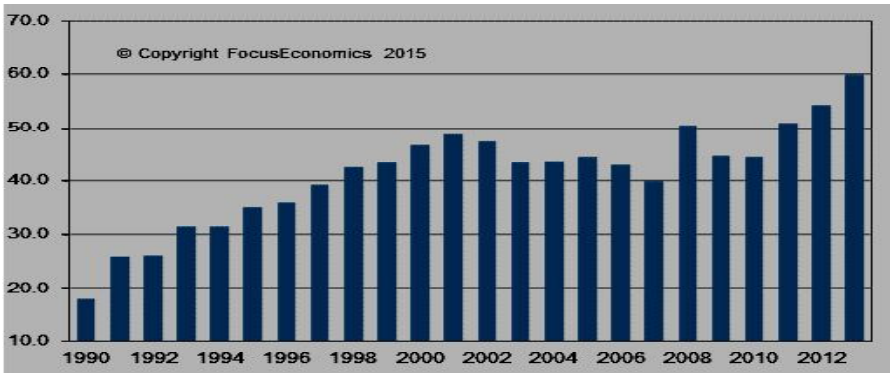
The Indian rupee lost ground in recent months and closed 19 February at 68.5 INR per USD. The figure represented a 1.2% depreciation over the same day of the previous month and a 10.3% depreciation over the same day of last year. The result marks more than a two-and-a-half year low and the currency is approaching its all-time low of 68.8 tallied in August 2013.

The steady decline in value comes against a backdrop of global risk aversion trigged by concerns about the global economy. Heightened global uncertainty has put Indian stock markets under pressure and has led to a broad selloff of Indian stocks at the outset of 2016. In addition, strong demand for the U.S. dollar has fuelled the depreciation. Economics Forecast panellists expect the rupee to end FY 2016 at 67.9 INR per USD. For FY 2017, the panel projects the INR to trade at 67.8 per USD.

Exchange Rate Data

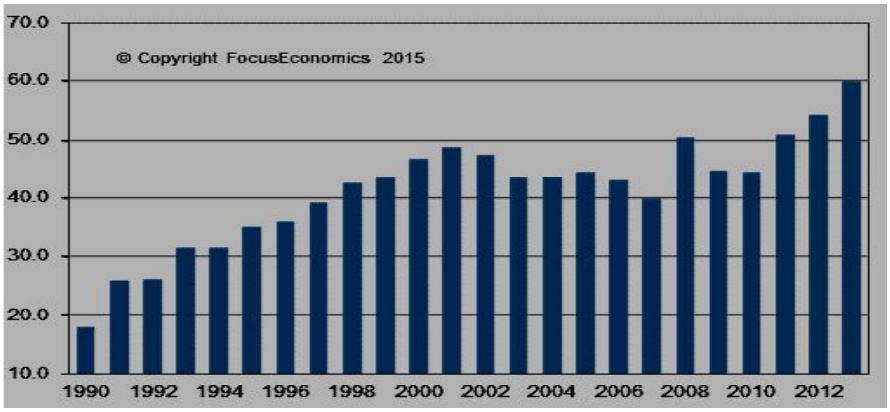
Details	2010	2011	2012	2013	2014
Exchange Rate (vs USD)	44.53	50.88	54.28	60.02	62.29

Exchange Rate Chart



Indian rupee (INR) per U.S. dollar.

Source: Thomson Reuters.



Indian rupee (INR) per U.S. dollar.

Source: Thomson Reuters.

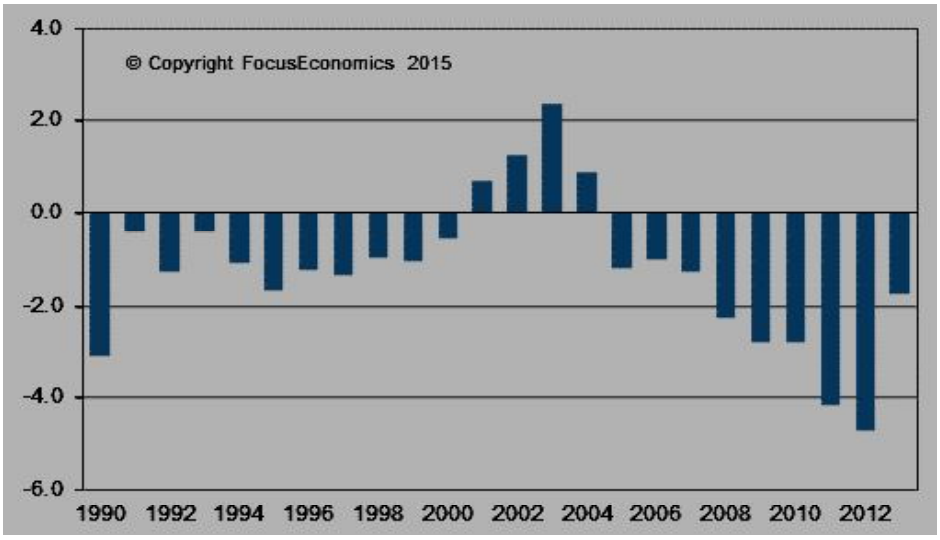
Current Account Scenario in India

India's economy accelerated in the July to September period, propelled by strong fixed investment growth and government spending. Despite the positive GDP figure, doubts remain regarding the health of the economy and higher frequency data remains lackluster: industrial production contracted for the first time in one year in November and the manufacturing PMI fell to an over-two-year low in December. Moreover, slowing nominal GDP growth is increasing fiscal pressures on the government ahead of next month's budget presentation. A likely upcoming salary hike for millions of government employees, along with lower-than-expected nominal GDP and the high level of public expenditure needed to keep up growth momentum, have led to speculation that the government will revise fiscal consolidation targets in the upcoming budget

Current Account Data

Details	2010	2011	2012	2013	2014
Current Account (% of GDP)	-2.8	-4.2	-4.8	-1.7	-1.3

Current Account Chart



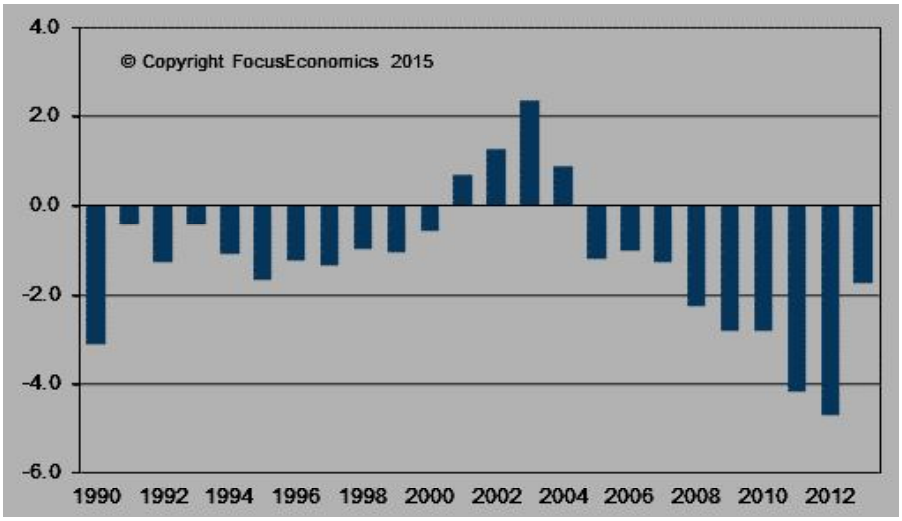
Current account balance in % of GDP.

Source: Ministry of Finance and Focus Economics calculations.

Current Account (USD Bn) Data

Details	2010	2011	2012	2013	2014
Current Account Balance (USD bn)	-47.8	-78.8	-87.4	-32.8	-27.6

Current Account (USD Bn) Chart



Current account balance in % of GDP.

Source: Ministry of Finance and Focus Economics calculations.

India's Trade Balance Scenario

Recently released data related to India's external sector showed that the trade deficit totalled USD 7.6 billion in January, which was a smaller shortfall over the USD 7.9 billion deficit observed in the same month last year. For the 12 months up to January, the trade deficit recorded USD 125.5 billion, which was broadly unchanged from the 125.8 billion gap tallied in the 12 months up to December.

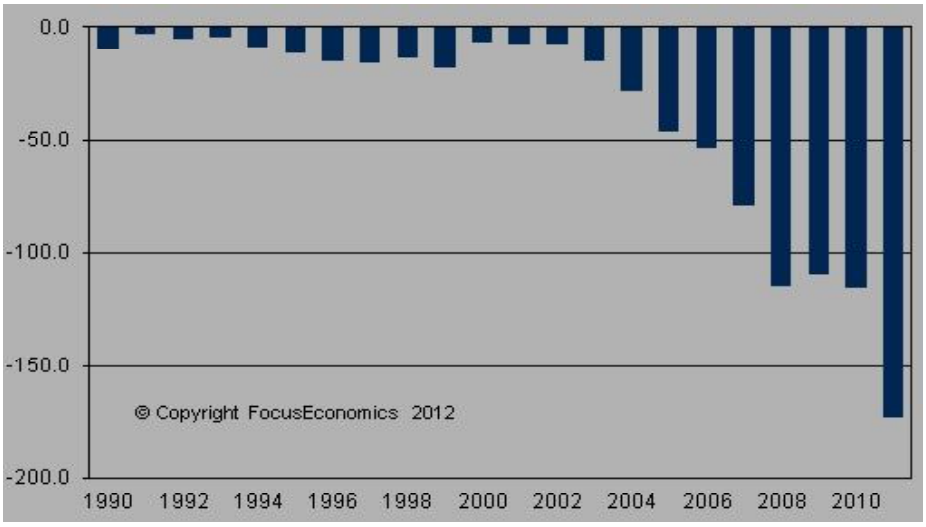
The narrowing in the trade deficit showed that imports contracted 11.0% annually in January, which was a significantly larger drop than the 3.9% plunge tallied in December. January's drop was largely the result of the low-oil-price environment. Accordingly, oil imports totalled USD 5.0 billion, which represented a 39.0% decrease compared to the same month last year.

Meanwhile, exports fell 13.6% in January, which was a smaller fall than December's 14.8% contraction and marked the best result in six months. Focus Economics Consensus Forecast panelists expect exports to contract 10.3% in FY 2015, reaching USD 278 billion. In FY 2016, the panel sees exports expanding 6.0% to USD 294 billion.

India's Trade Balance Data

Details	2010	2011	2012	2013	2014
Trade Balance (USD billion)	-118.7	-183.8	-189.5	-136.6	-137.0

India's Trade Balance Chart



Trade balance in USD billion.

Source: Reserve Bank of India.

India's Export Figure

Recently released data related to India's external sector showed that the trade deficit totalled USD 7.6 billion in January, which was a smaller shortfall over the USD 7.9 billion deficit observed in the same month last year. For the 12 months up to January, the trade deficit recorded USD 125.5 billion, which was broadly unchanged from the 125.8 billion gap tallied in the 12 months up to December.

The narrowing in the trade deficit showed that imports contracted 11.0% annually in January, which was a significantly larger drop than the 3.9% plunge tallied in December. January's drop was largely the result of the low-oil-price environment. Accordingly, oil imports totaled USD 5.0 billion, which represented a 39.0% decrease compared to the same month last year.

Meanwhile, exports fell 13.6% in January, which was a smaller fall than December's 14.8% contraction and marked the best result in six months.

Focus Economics Consensus Forecast panelists expect exports to contract 10.3% in FY 2015, reaching USD 278 billion. In FY 2016, the panel sees exports expanding 6.0% to USD 294 billion.

India's Export Data

Details	2010	2011	2012	2013	2014
Exports (USD billion)	251	306	300	314	311

India's Export (%age) Data

Details	2010	2011	2012	2013	2014
Exports (annual variation in %)	40.5	21.7	-1.8	4.6	-1.2

India's Import Data

Details	2010	2011	2012	2013	2014
Imports (USD billion)	370	490	490	451	448

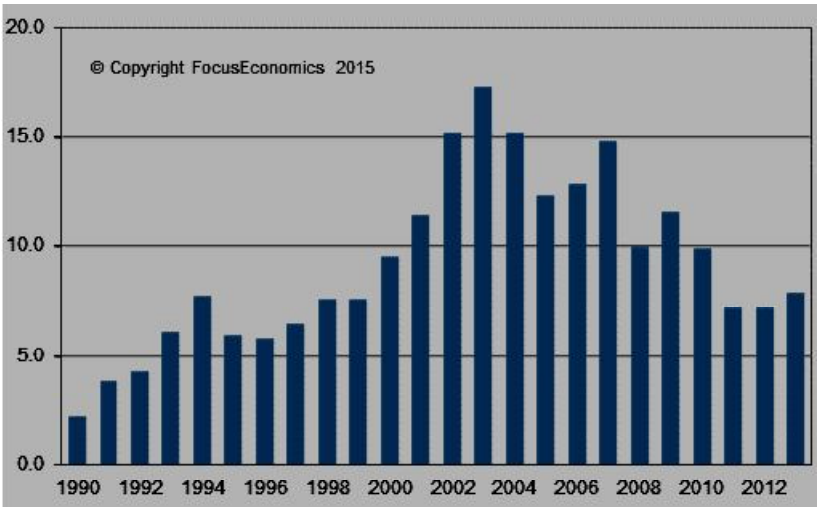
India's Import (%age) Data

Details	2010	2011	2012	2013	2014
Imports (annual variation in %)	28.2	32.4	0.1	-8.0	-0.8

India's International Reserves Data

Details	2010	2011	2012	2013	2014
International Reserves (USD)	305	295	293	296	296

India's International Reserves Chart



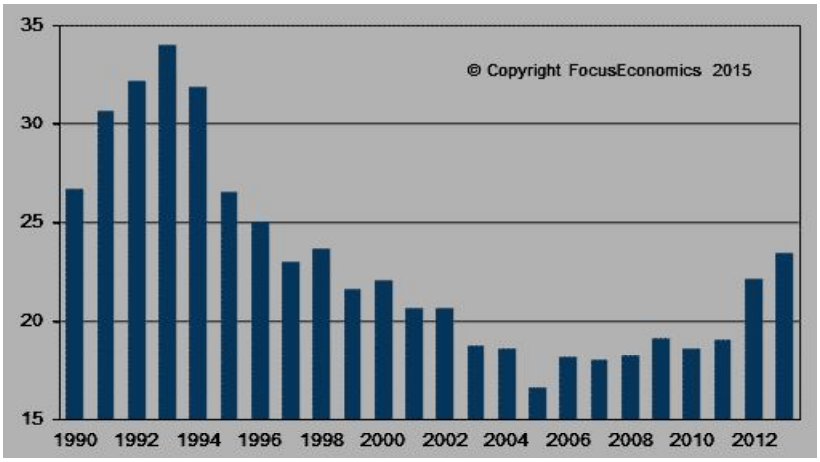
International reserves in months of imports.

Source: Reserve Bank of India and Focus Economics calculations.

India's External Debts Data

Details	2010	2011	2012	2013	2014
External Debt (% of GDP)	18.6	19.4	22.4	23.5	-

India's External Debts Chart

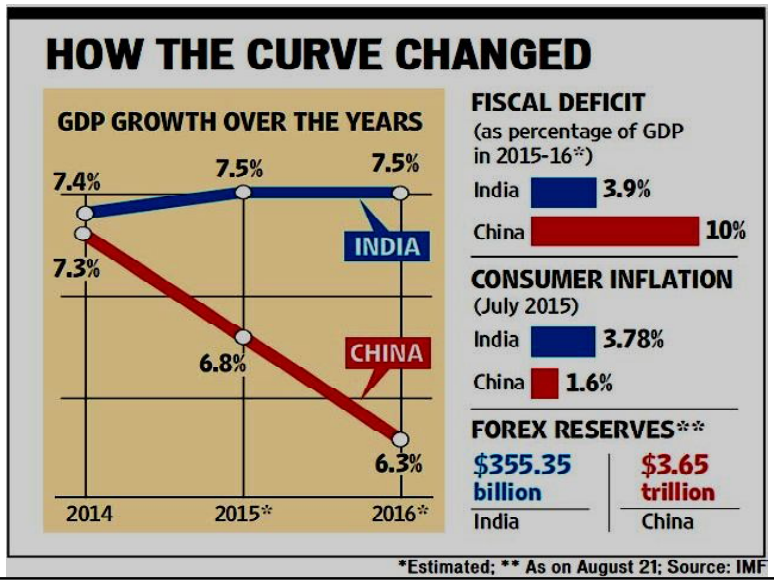


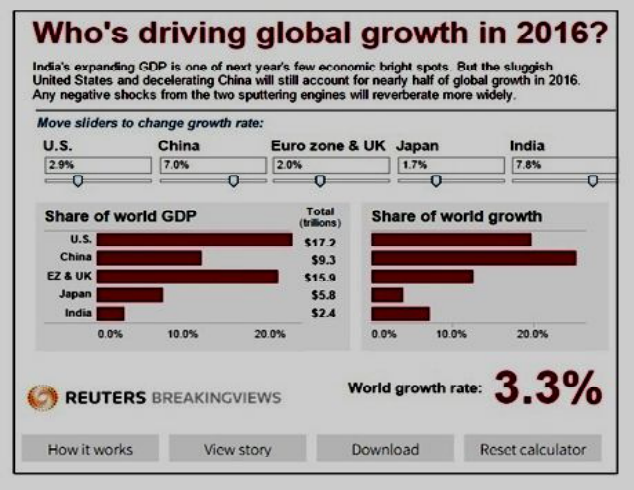
External debt in % of GDP.

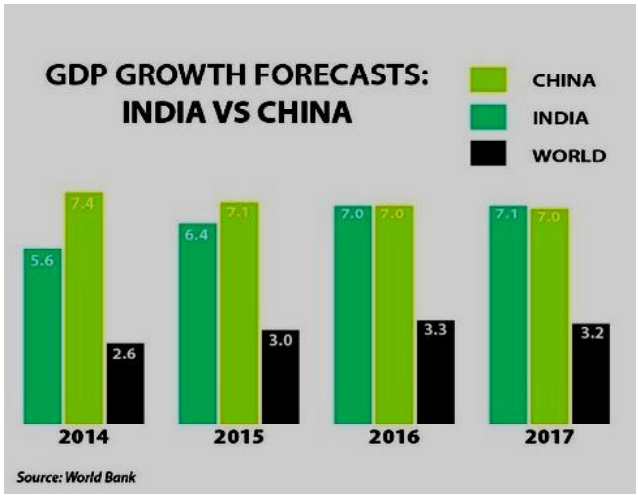
Source: Ministry of Finance and Focus Economics calculations.

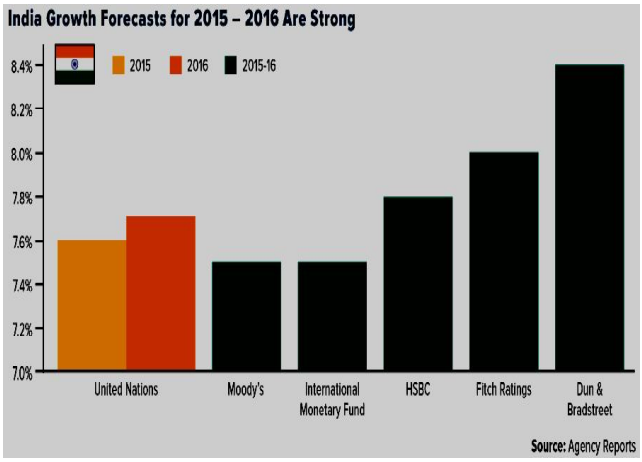
Source: Ministry of Statistics and Programme Implementation (MOSPI) and Focus Economics Consensus Forecast.

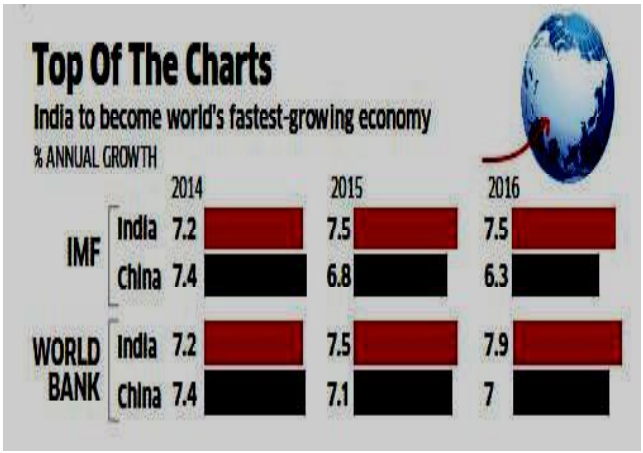
India surging ahead: A diagrammatic view:

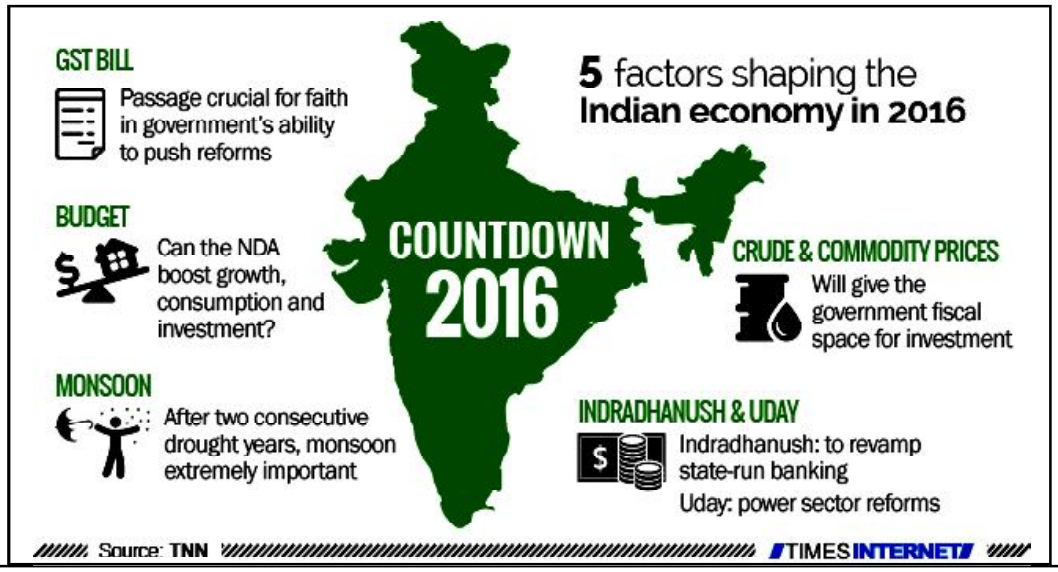


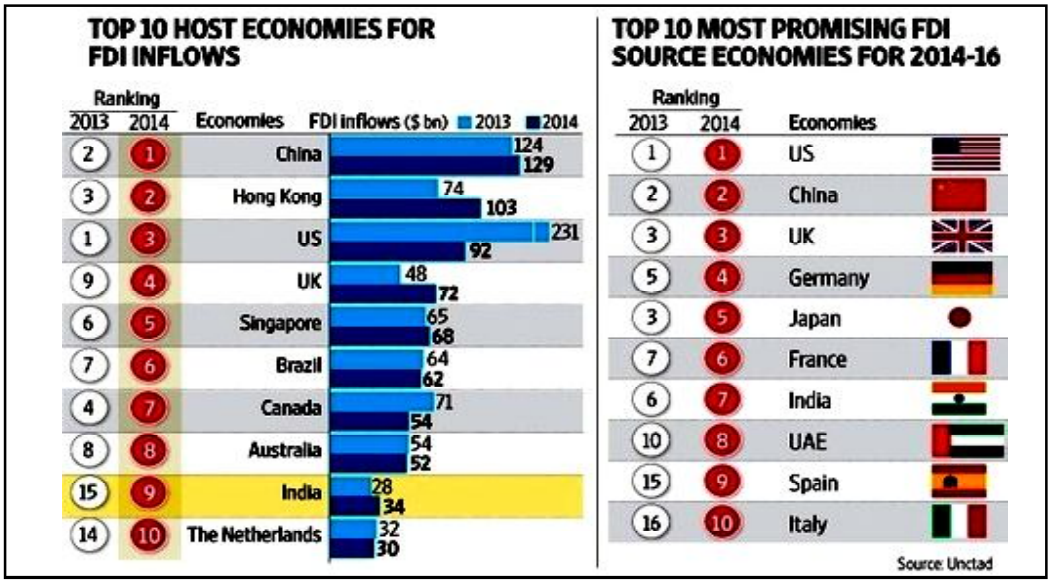

Who's driving global growth in 2016?
India's expanding GDP is one of next year's few economic bright spots. But the sluggish United States and decelerating China will still account for nearly half of global growth in 2016. Any negative shocks from the two sputtering engines will reverberate more widely.
Move sliders to change growth rate:
U.S.
China
Euro zone & UK
Japan
India
2.9%
7.0%
2.0%
1.7%
7.8%
Share of world GDP
Total (trillions)
U.S. $17.2
China $9.3
EZ & UK $15.9
Japan $5.8
India $2.4
0.0% 10.0% 20.0%
Share of world growth
0.0% 10.0% 20.0%
REUTERS BREAKINGVIEWS
World growth rate: 3.3%
How it works
View story
Download
Reset calculator


GDP GROWTH FORECASTS:
INDIA VS CHINA
CHINA
INDIA
WORLD
5.6
7.4
2.6
6.4
7.1
3.0
7.0
7.0
3.3
7.1
7.0
3.2
2014
2015
2016
2017
Source: World Bank


India Growth Forecasts for 2015 – 2016 Are Strong
2015
2016
2015-16
8.4%
8.2%
8.0%
7.8%
7.6%
7.4%
7.2%
7.0%
United Nations
Moody's
International Monetary Fund
HSBC
Fitch Ratings
Dun & Bradstreet
Source: Agency Reports


Top Of The Charts
India to become world's fastest-growing economy
% ANNUAL GROWTH
2014
2015
2016
IMF
India 7.2 7.5 7.5
China 7.4 6.8 6.3
WORLD BANK
India 7.2 7.5 7.9
China 7.4 7.1 7


5 factors shaping the Indian economy in 2016
COUNTDOWN 2016
GST BILL
Passage crucial for faith in government's ability to push reforms
BUDGET
Can the NDA boost growth, consumption and investment?
MONSOON
After two consecutive drought years, monsoon extremely important
CRUDE & COMMODITY PRICES
Will give the government fiscal space for investment
INDRADHANUSH & UDAY
Indradhanush: to revamp state-run banking
Uday: power sector reforms
Source: TNN
TIMES INTERNET



Forecasts for India	2012	2013	2014	2015	2016
GDP Growth (Constant Prices, National Currency)	7.82%	8.17%	8.14%	8.12%	8.13%
GDP (trillion, current prices)	INR 98.4	INR 112.1	INR 126.8	INR 143.1	INR 161.5
GDP (Current Prices, US Billion Dollars)	US$ 1,859	2,061	$2,280	$2,516	$2,777
GDP **Per Capita** (Current Prices, National Currency)	INR 78,728	INR 88,541	INR 98,909	INR 110,175	INR 122,737
GDP **Per Capita** (Current Prices, US Dollars)	US$ 1,488	US$ 1,628	US1,778	US$ 1,936	US$ 2,110
GDP (PPP), US Billion Dollars	US$ 4,863	US$ 5,334	US$5,862	US$ 6,451	US$ 7,106
GDP **Per Capita** (PPP), US Dollars	US$ 3,893	US$ 4,214	US$4,571	US$ 4,965	US$ 5,398
Population (in millions)	1249	1266	1282	1299	1316

Indicator Values for India	2010	2011	2012	2013	2014	2015
GDP Growth (Constant Prices, National Currency)	8.78%	8.43%	8.03%	8.09%	8.10%	8.08%
GDP (Current Prices, Trillion INR)	67.0	76.1	85.4	96.0	107.8	121.0
GDP (Current Prices, Trillion USD)	1.40	1.50	1.64	1.81	1.99	2.19
GDP Deflator	163	171.00	178.00	185.00	192	199.00
GDP Per Capita (Constant Prices, National Currency)	33,751	36,099	38,481	41,052	43,799	46,723
GDP Per Capita (Current Prices, National Currency)	55,063	61,720	68,404	75,809	84,023	93,111
GDP Per Capita (Current Prices, US Dollars)	1,124	1214	1,316	1,430	1,553	1,681
GDP (PPP, Trillion USD)	3.86	4.248	4.67	5.14	5.670	6.24
GDP Per Capita (PPP), US Dollars	3,176	3446	3,739	4,065	4,420	4,804
GDP Share of World Total (PPP)	5.23%	5.38%	5.55%	5.73%	5.93%	6.12%
Implied PPP Conversion Rate	17.34	17.90	18.29	18.65	19.01	19.38
Inflation, Average Consumer Prices (Indexed to Year 2	187	197	205	213	222	231
Inflation (Average Consumer Price Change %)	13.2%	5.5%	4.1%	4.0%	4.0%	4.0%
Inflation, End of Year (Indexed to Year 2000)	190	199	207	215	224	233
Inflation (End of Year Change %)	8.1%	4.6%	4.0%	4.0%	4.0%	4.0%
Population (Million)	1216	1233	1,249	1,266	1,282	1,299
Current Account Balance (Billion USD)	-29.7	-30.4	-32.4	-35.8	-39.8	-42.7
Current Account Balance (% GDP)	-2.2%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%

Ultimate message:

- : The End : -

With the twin objectives of spurring growth in India's realty development and benefiting the end-consumer, the realty sector's expectations of significant policy improvements from the upcoming budget are high and the industry is looking forward to a well-balanced Finance Bill that will keep sustainable development at the core of its focus.

AFTER G20 STALEMET, FOCUS TURNS TO SIGNS OF GROWTH

Investors worried about the risk of a new global recession are hoping that data over the coming week will show that some momentum remains in the world economy, eight years into its slow recovery from the financial crisis.

The Group of 20 economies was unable to agree on a joint push for new stimulus measures at a meeting which ended on Saturday, turning attention instead to upcoming business surveys from China, Japan, Europe the United States.

Central banks in Europe and Japan may inject a little more stimulus into their economies later in March. But the Federal Reserve and the Bank of England look likely to sit tight for now, meaning hopes for a period of calm in the world's volatile financial markets lie largely with the indicators.

"It seems economic data will have to bear the burden of stabilizing sentiment," economists at Barclays said in a note to clients on Friday.

Euro zone inflation

A first reading of inflation in February for the euro zone on Monday will help shape expectations of how much further below zero the European Central Bank is likely to push its deposit rate the following week.

Euro zone inflation picked up in January but is expected to have fallen back to zero in February, according to a Reuters poll of economists.

If there is also a weakening of the monthly purchasing manager indexes for Germany and other leading euro zone countries, the ECB may consider increasing its bond-buying programme as well as cutting rates on March 10.

"There is a growing chance that the ECB will do more at its March meeting than simply lowering its deposit rate," Ralph Solveen, an economist at Commerzbank, said.

U.S. payrolls figures on Friday may help ease fears about the world's biggest economy, which appeared to stumble soon after the Federal Reserve felt confident enough to hike interest rates for the first time in nearly a decade in December.

Solid U.S. job growth and pay growth are seen as the best antidote to the upheaval in global financial markets which has hurt confidence and even raised questions about whether the United tates was heading back into recession.

Since 1950

LESA

LEATHER SCIENCE ABSTRACTS

VOLUME 49 **NUMBER 03** **MARCH, 2016**

NATIONAL INFORMATION CENTER FOR LEATHER & ALLIED INDUSTRIES (NICLAI)
NATIONAL INFORMATION SYSTEM FOR SCIENCE & TECHNOLOGY (NISSAT)

CENTRAL LEATHER RESEARCH INSTITUTE
ADYAR, CHENNAI 600 020, INDIA

Leather Science Abstracts **(LESA)** is published by National Information Center for Leather and Allied Industries **(NICLAI),** Central Leather Research Institute **(CLRI)**, Chennai.

It is a monthly abstracting periodical covering significant papers/articles published in the fields of Leather Science and Technology, Footwear Technology, Leatherware and Leathergoods, Leather chemicals, Leather machinery, Leather economics etc., appearing in about 500 scientific and technical periodicals published all over the world. The abstracts are presented under well defined subject headings and include indexes.

All enquiries for further details should be addressed to: THE DIRECTOR, **(ATTN.: EDITOR, LESA)** CENTRAL LEATHER RESEARCH INSTITUTE, ADYAR, CHENNAI-600 020, INDIA.

CONTENTS

VOLUME 49 **NUMBER 03** **MARCH, 2016**

List of Periodicals covered in this issue :

List of Periodicals Covered in This Issue :

Acad. Manage. J.

Angew. Chem.

Chem. Ind. Dig.

Chem. Wkly.

Indian J. Biotechnol.

Indian J. Exp. Biol.

Indian J. Pure Appl. Phys.

J. Indian Leather Technol. Assoc.

J. Soc. Leather Technol. Chem.

Leather Age

Leather Int'l

Leather News India

Renew. Energy

Spectrosc. Europe

LEATHER SCIENCE AND TECHNOLOGY

LEATHER INDUSTRY. HISTORY. MANAGEMENT. ECONOMICS. EDUCATION

49.14477

Brazilian leather. (Leather Age; 35, 9; 2013, Aug.; 51-2).

Describes briefly about the leather industry in Brazil.

49.14478

Self-love's lost labor : a self-enhancement model of workplace incivility. CHEN (Y), FERRIS (DL), KWAN (HK), YAN (M), ZHOU (M), HONG (Y), (Management Department, School of Business at Hong Kong Baptist University, The Wing Lung Bank Building for Business Studies, No. : 34 Renfrew Road, Kowloon Tong, Kowloon, Hong Kong). (Acad. Manage. J.; 56, 4; 2013, Aug.; 1199-219).

Presents a self-enhancement model, of workplace incivility to account for the effects of exposure to incivility on task performance. Predicts, in particular, workplace incivility that thwarts the ability to self-enhance at work, resulting in employees' divesting their sense of self from work via disengagement processes. Maintaining high levels of task performance subsequently ceases to be a source of self-enhancement for employees who have disengaged their sense of self from work. Examined the extent, to which the desire for self-enhancement(i.e., narcissism) moderated the effect of incivility on engagement. The results of this work have provided full support for the hypotheses of the authors, by using two sets of multiwave, multisource data collected in China and also the new theoretical directions for incivility research. (92 Ref.; 8 Tab.; 4 Fig.).

49.14479

Developing trust with peers and leaders : Impacts on organizational identification and performance during entry. SCHAUBROECK (JM), PENG (AC), HANNAH (ST), (Psychology and Management Department, Michigan State University, Psychology Building, No. : 316 Physics Room 262, East Lansing, Michigan 48824, USA). (Acad. Manage. J.; 56, 4; 2013, Aug.; 1148-68).

This work is an extension of the existing research, about how peers and leaders influence newcomers' adjustment to an organization or profession by examining how specific trust perceptions evolve overtime. Tested a model, of how affect-based trust in a leader and work unit peers, which develops from a basis of cognition-based trust and later influences organizational identification and role-related performance. Examined the United States Army soldiers at the beginning, middle and end of an intensive, 14-week residential entry program of training and collective socialization. Cross-lagged structural equation analyses supported causal relationship of individuals' cognition-based trust with affect-based trust directed towards their unit peers and separately, their leaders. Individuals with high levels of chronic relational identity exhibited a stronger time-lagged relationship between cognition-based trust and affect-based trust for trust in peers but not for trust in a leader. Affect-based trust in the leader had lagged influences an organizational identification and role-related

performance at time 3. Affect-based trust in peers was related over time to organizational identification but not to role-related performance. Discussed the implications, of these findings for understanding the separate influences of social exchange and social identity processes on newcomer adjustment, with distinct roles played by peers and leaders. (55 Ref.; 2 Tab.; 3 Fig.).

49.14480

Looking backward instead of forward : Aspiration-driven influences on the efficiency of the capital allocation process. ARRFELT (M), WISEMAN (RB), HULT (GTM), (Arizona State University, Management Division, No. : 1711 South Rural Road, Tempe, Arizona 85281, USA). (Acad. Manage. J.; 56, 4; 2013, Aug.; 1081-103).

Examined the influence, of backward-looking, reference-dependent decisions on forward-looking capital allocation investment choices across business units within a firm. Developed an integrated behavioural framework for predicting how aspirations for business unit performance affect the efficiency of the internal capital allocation process. Results suggest that, contingent on dispersion in business unit performance and a firm slack, performance aspirations have pervasive effects; current performance above and below aspirations influences the efficiency of the allocation process. Focused the appropriateness of capital allocations with clear implications for allocation efficiency as a contribution by assuming that prior examinations, of aspiration-driven behavior have generally focused on changes in strategic organizational actions (e.g., R&D investment). (83 Ref.; 4 Tab.; 1 Fig.).

49.14481

Lords of the harvest : Third-party influence and regulatory approval of genetically modified organisms. HIATT (SR), PARK (S), (Harvard Business School, Harvard University, Soldiers Field, Boston, Massachusetts 02163, USA). (Acad. Manage. J.; 56, 4; 2013, Aug.; 923-44).

Little is known about the factors that influence regulatory agency decision making. It is posited that regulatory agencies are influenced by the firms they regulate but not exclusively via dyadic exchanges, as is traditionally argued in the regulatory capture and business-government literatures. Instead, regulatory decisions are indirectly shaped via third-party actors who shield agencies from legitimacy threats. Product assessments by powerful stakeholders and peer agencies that influence product approval and that their effects vary under different threats by focusing empirically on the United States Department of Agriculture(USDA)'s approval of genetically modified organisms(GMIs). Discussed the implications of these findings for business-government relations, nonmarket strategy and organization theory. (102 Ref.; 2 Tab.; 3 Fig.).

49.14482

Intelligence inside : Chemical industry's role in ensuring sustainable growth. SHAH (V), (M/s. Dow India; 1st Floor, Block B, 02 Godrej Business District, Piroshanagar, Lal Bahadur Shashtri Marg(Vikhroli Marg), Vikhroli(West), Mumbai – 400 079, India). (Chem. Wkly.; 59, 1; 2013, Aug., 13; 207-8).

It is very strongly believed that the promising emergence of green chemistry-where chemical products are designed to be benevolent to the environment at conception- is the result of the industry's focus on continuous improvement, leading manufacture to deliver products that are functionally better, more efficient and long-lasting. The industry's evolving inner mind will help the business community to address many of the world's problems. The chemical industry is hard at work, looking to tap, store and deliver alternate energy reliably and on a large scale even while one looking into this paper. (3 Photos).

49.14483

Investment intentions in India : Trends. SABNAVIS (M), JARIPATKE (A), (M/s. Credit Analysis & Research Limited (CARE Ratings), 4th Floor, Godrej Coliseum, Somaiya Hospital Road, Off. Eastern Express Highway, Everard Nagar, Sion, Mumbai-400 022, India). (Chem. Wkly.; 59, 1; 2013, Aug., 13; 220-2).

Discussed the investment intentions, that are very low, given the progress of various macroeconomic variables in the past year and also both the sector wise and state wise investments, implemented investment and statewise investment implementation. (7 Tab.; 1 Photo).

49.14484

Skilling Indian youth : A challenge. ACHARYA (DK), (M/s. Council of Leather Exports, STAR HUB, Building 1, Unit No. : 102, 1st Floor, Near Hyatt Regency, ITC Grand Maratha International Airport Sahar Road, Andheri(East), Mumbai-400 099, India). (Leather News India; 4, 9; 2013, Sep.; 52-3).

Discusses that since India depends more on human capital that its peer countries which have a similar level of economic development, closing the skill gaps of its qualified workforce will be more critical in coming years.

49.14485

Factories Act, 1948. BAJPAI (D), (M/s. Bureau Veritas Consumer Products Services Indian Private Limited, No. : C-19, Sector-7, Noida-201 301, Uttar Pradesh State, India). (Leather Age; 35, 9; 2013, Aug.; 31-6 & 45-50).

Defined the terms, namely 'industry' and 'factory'. The entire day-to-day administration of the factories is governed by the principal Act of 1948 amended Act, which is an improvement of 1934 Act. This Act extends to the whole of India. Listed the objectives of this Act. Discussed in detail about the meaning of the term viz. : 'Factory', its manufacturing process, Licensing and registration of factories, Health safety and welfare measures, Health, Hazardous processes, Working hours, Holidays & annual leave, Annual leave with wages, Rules relating to annual with wages which form the different clauses of this Act respectively. Discussed in detail also the summary, Self-assessment questions as well as also the provisions of the Factories Act.

49.14486

Need of energy audit in industry-Part 1. MUKHERJEE (G), DEBNATH (B), MONDAL (C), (Government College of Engineering and Leather Technology, Block-LB, Sector-III, Salt Lake City, Kolkata-700 098, India). (J. Indian Leather Technol. Assoc.; 63, 8; 2013, Aug.; 880-99).

Various studies in different countries have shown that significant energy-efficiency improvement opportunities exist in the industrial sector, many of which are cost-effective. These energy-efficiency options include both cross-cutting as well as sector-specific measures. However, industrial plants are not always aware of energy-efficiency improvement potentials. Conducting an energy audit is one of the first steps in identifying these potentials, but many plants do not have the capacity to conduct an effective energy audit. Government policies and programs aim to assist industry to improve competitiveness through increased energy efficiency. However, usually only limited technical and financial resources for improving energy efficiency are available, especially for small and medium-sized enterprises. Information on energy auditing and practices should, therefore, be prepared and disseminated to industrial plants. Guidelines are provided for energy auditors about the key elements for preparing for an energy audit, conducting an inventory and measuring energy use, analyzing energy bills, benchmarking, analyzing energy use patterns, identifying energy-efficiency opportunities, conducting cost-benefit analysis, preparing energy audit reports and undertaking post-audit activities with the purpose of assisting energy auditors and engineers in the plant to conduct a well-structured and effective energy audit. (2 Tab.; 7 Fig.).

49.14487

Need of energy audit in industry-Part 2. MUKHERJEE (G), DEBNATH (B), MONDAL (C), (Government College of Engineering and Leather Technology, Block-LB, Sector-III, Salt Lake City, Kolkata-700 098, India). (J. Indian Leather Technol. Assoc.; 63, 9; 2013, Sep.; 993-1016).

Explaines the way, in which an earlier described load profile can be used for energy reduction. Then, presents briefly the list of energy-efficiency measures for cross-cutting technologies that can be further analyzed by energy auditors if applicable to the industrial plant being audited. Detailed explanation of specific energy-efficiency measures can be found in the references given for each section. Finally references are given for the publications on sector-specific energy-efficiency measures for various industrial sectors that can be used by energy auditors to go beyond the cross-cutting technologies and identify the energy-saving opportunity in the process. (21 Ref.; 1 Tab.; 1 Fig.).

49.14488

Inside the hybrid organization : selective coupling as a response to competing institutional logics. PACHE (A), (ESSEC Business School, Social Entrepreneurship Department, No. : 3 Avenue Bernard Hirsch 95000 Cergy-Pontoise, France). (Acad. Manage. .J.; 56, 4 ;2013, Aug.; 972-1001).

Explored the way, in which the hybrid organizations, which incorporate competing institutional logics, internally manage the logics that they embody. These organizations, which selectively coupled

intact elements prescribed by each logic instead of adopting strategies of decoupling or compromising, as the literature typically suggests, have been shown by relying on an inductive comparative case study of four work integration social enterprises embedded in competing social welfare and commercial logics. This strategy allowed them to project legitimacy to external stakeholders without having to engage in costly deceptions or negotiations. Referred the specific hybridization pattern as "Trojan horse", whereby organizations that entered the work integration field with low legitimacy is further identified because of their embeddedness in the commercial logic strategically incorporated elements from the social welfare logic in an attempt to gain legitimacy and acceptance. Surprisingly, they did so more than comparable organizations originating from the social welfare logic. These findings suggest that, when lacking legitimacy in a given field, hybrids may manipulate the templates provided by the multiple logics in which they are embedded in an attempt to gain acceptance. Overall, the above findings contribute to a better understanding of how organizations can survive and thrive when embedded in pluralistic institutional environments. (72 Ref.; 6 Tab.; 1 Fig.).

49.14489

Chromium and leather research-A balanced view of scientific facts and figures. TEGTMEYER (D), KLEBAN (M), (Institute for Urban Research(IUR), International Union of Leather Technologists and Chemists Societies(IULTCS), Dr. Campbell Page, IULTCS Secretariat, c/o VESLIC, Postfach 505 CH-4016 Basel, Switzerland). (Leather News India; 4, 9; 2013, Sep.; 41-6).

Expressed a balanced view on concerns, risks and results of scientific studies, that have been taken and put in relation to the potential risks for an application of chrome tanned leather. Indicated the importance, of not belittling or even hiding risks and dangers and also however, all correct and accurate information, that should have to be ensured if one has to manage a risk, so that no false hysteria is generated. Focused the implementation, of procedures to even further reduce even any theoretical risk. (6 Tab.).

49.14490

Support, undermining and newcomer socialization : fitting in during the first 90 days. KAMMEYER-MUELLER (J), WANBERG (C), RUBENSTEIN (A), SONG (Z), (Department of Work and Organization at the Carlson School of Management, University of Minnesota, No. : 321, 19th Avenue South, Minneapolis, Minnesota 55455, USA). (Acad. Manage. J.; 56, 4; 2013, Aug.; 1104-124).

While much organizational socialization occurs through interpersonal interactions, evidence regarding how the processes unfold over time has not been forthcoming. Results from a 14-wave longitudinal study with a sample of 264 organizational newcomers show that support of newcomers from coworkers and superiors declines within the first 90 days of employment. Early support and undermining had more significant relationships with work outcomes assessed after 90 days of employment than did increases or decreases in support and undermining over that time period suggesting early support and undermining may lay a foundation for later work outcomes. Proactive behavior partially mediated the relationship between support and more distal work outcomes, including withdrawal behaviors. Superior undermining was uniquely associated with higher turnover(exit) hazard. (88 Ref.; 7 Tab.; 2 Fig.).

ENZYMOLOGY

49.14491

Enzyme-assisted extraction of bioingredients. RANGANATHAN (TV), (Lead-Sales Application Bioingredients Division, M/s. Synthetic Industries Limited, Ajay Vihar, Mahatma Gandhi Road, Kochi-682 311, Kerala State, India). (Chem. Wkly.; 59, 8; 2013, Oct., 1; 213-24).

Indicated the important role, that has to be played by the bioingredients in different spheres of human life in the modern world and a number of different methods that can achieve the extraction of bioingredients from plant material including solvent extraction, super critical fluid extraction(SCFE) and enzyme assisted extraction. Explains each and every one of these methods. Discusses briefly the enzyme assisted extraction and liquefaction of different bioingredients. (80 Ref.; 8 Photos).

49.14492

Biodegradation of an azo dye by using azoreductase enzyme and its relevance in leather manufacture. SENTHILVELAN (T), KANAGARAJ (J), VINODH KUMAR (M), MANDAL (AB), (Council of Scientific and Industrial Research-Central Leather Research Institute(CSIR-CLRI), Adyar, Chennai-600 020, India). (Leather Age; 35, 11; 2013, Oct.; 13 & 15-9).

Azo dye(C.I. Acid Blue 113) used in leather dyeing generates enormous amount of dye waste water. This necessitates the development of different waste water treatment methods. The azo dye was degraded by Shiella boydii which secretes an extra cellular enzyme of azo reductase. Observed the optimum activity of enzyme was at pH 7 and 32°Centigrade in 76 hours. The maximum activity of enzyme was 0.0014U/ìl under standard assay conditions and protein concentration was found to be 792.3 g/ml of enzyme. The maximum rate of dye degradation was achieved at 96% and 92% for 100 & 200 mg/l of dye. The chemical oxygen demand(COD) and total organic carbon(TOC) values were reduced up to 87 and 88% for the dye sample. The Fourier transform-infrared(FT-IR) analysis of treated sample showed the transformation of azo linkage into N_2(nitrogen) or NH_3(ammonia) or incorporated into complete biomass. The presence of aromatic amine in the degraded sample indicated the presence of azoreductase activity. The mass spectra analysis showed the conversion of the azo dye into new intermediate metabolis such as aniline, naphthalene-1,4-diamine, 3-aminobenzene sulfonic acid, naphthalene-1-sulfonic, 8-aminonaphthalene-1-sulfonic acid, 5,8-diaminonapthane-1-sulfonic acid. The treated waste water was reused for dyeing process of the upper leather and the results indicated comparable leather properties with that of conventional one. (7 Ref.; 5 Tab.; 10 Fig.).

49.14493

Enzymes in clinical medicine : An overview. HEMALATHA (T), UMAMAHESWARI (T), KRITHIGA (G), SANKARANARAYANAN (P), PUVANAKRISHNAN (R), (Department of Biotechnology, Council of Scientific and Industrial Research-Central Leather Research Institute(CSIR-CLRI), Adyar, Chennai-600 020, India). (Indian J. Exp. Biol.; 51, 10; 2013, Oct.; 777-88).

Enzymes are biocatalysts and are extensively used in medical diagnosis because of their remarkable properties. Researchers in the best two decades have concentrated more on enzymes such as creatine kinase-MB, alanine transminase, aspartate transminase, acid phosphatase, alkaline phosphatase etc. for clinical applications. Enzymes are the preferred markers in various disease states such as myocardial infarction, jaundice, pancreatic, cancer, neurodegenerative disorders, etc. They provide insight into the disease process by diagnosis, prognosis and assessment therapy. Even though the literature on the use of enzymes in various disease conditions has accumulated, the lack of a comprehensive analysis has resulted in this review. (94 Ref.; 2 Tab.; 1 Fig.).

49.14494

Immobilization of â–galactosidase from Enterobactor cloacae : Characterization and its use in the continuous production of low lactose milk. GHATAK (A), GUHA (AK), RAY (L), (Department of Food Technology and Biochemical Engineering, Jadavpur University, No. : 188, Raja Subodh Chandra Mullick Road, Kolkata-700 032, India). (Indian J. Biotechnol.; 12, 4; 2013, Oct.; 523-30).

Immobilization of â–galactosidase from Enterobacter cloacae was carried out using barium alginate gel(2%). Maximum activity(39.33 IU/mg) of the immobilized enzyme was observed at pH 9.0 and temperature 50°Centigrade. The immobilized enzyme was found to be stable in pH range 4-50°Centigrade. The enzyme activity was stimulated by only Ca^{2+}(Calcium ions), Mn^{2+}(Managenese ions) and ethylene diamine tetraacetic acid(EDTA) at 0.5mM concentration. Immobilized enzyme was used for the preparation of low lactose milk in a jacketed packed bed column reactor(height 150 mm, internal diameter 22 mm). At 89 mm bed height and dilution rate 4.30 h^{-1}, 61.25 and 46.67% conversion of lactose were observed using lactose(4%) solution and milk(lactose content 4.2%) as substrate, respectively. (25 Ref.; 7 Tab.; 5 Fig.).

49.14495

Effects of fibronectin and type IV collagen on osteosacroma cell apoptosis. INCESU (Z), HATIPOĐLU (I), SIVAS (H), ERGENE (E), CIFCI (GA), (Department of Biochemistry, Faculty of Farmacy, Anadolu University, Yunusemre Kampusu Eskisehir-Turkey). (Indian J. Exp. Biol.; 51, 10; 2013, Oct.; 789-96).

Studied the investigation, of the effects of fibronectin and type IV collagen extracellular matrix proteins and the role, of caspase-3 and -9 on cis-platin induced U2-OS apoptis. First investigated the cytotoxic effects of cis-platin on cell system by colorimetric method and then used the morphological and enzyme linked immunosorbent assay(ELISA) analysis for determination cell apoptosis when induced with cis-platin. In addition, after adhering the cells to fibronectin or type IV collagen proteins, the apoptotic rate and the effects of caspase-3 and -9 were also investigated by ELISA in presence of specific inhibitors. US-OS cis-platin for 48 hours. Morphological and the numerical data showed that cis-platin was able to induced apoptosis on cells as a close-dependent manner. Caspase-3 and -9 inhibitors inhibited cis-platin-induced apoptosis in U2-OS cells, respectively. The binding cells to 10 g/mL of fibronectin but not type IV collagen enhanced the apoptosis about 2.5 fold that effects inhibited with caspatase-3 inhibitor. The caspase-3 and -9 are involved in the apoptotic signals induced by cis-platin in U2-OS. The binding to fibronectin, but not type IV collagen enhanced the apoptotic response of U2-OS and fibronectin-dependent apoptosis was activated by caspase-3. These finding might be useful for patients to fight against osteosarcoma. (40 Ref.; 12 Fig.).

49.14496

Free fatty acid & fat content. BAJPAI (D), (M/s. Bureau Vertias Consumer Products Services Indian Limited, No. : C-19, Sector-7, Uttar Pradesh State, India). (Leather Age; 35, 12; 2013, Nov.; 36-40).

Further indirect evidence of the biological nature of the phenomenon can be the seasonal occurrence of the defect which appears often when the environmental conditions promote mould or bacteria growth, sometimes after many days or months from the actual leather production date. Moreover, the scientific bibliography reports that fatty acids can undergo a hydrogenation process, thanks to some microorganisms, in the same way as hydrogenation in industrial processes in the presence of proper catalysts. It is possible to say that fatty spue cannot be avoided by only controlling the acidity of the fatliquoring reagents used in the process. The main risk for this defect is the high degree of hydrolysis of the triglycerides. The hypothesis of a biological mechanism for the fatty spue is based on the fact that in the leather that had been studied, it was found that the palmitic and the stearic acids were in the ratio of about 1, which is contrary to the ratio normally found in the lipid extract of the leathers where the stearic acid is very much higher than the palmitic. This higher amount can only be explained by an hydrogenation of the double bond in unsaturated fatty acids like oleic through an enzymatic mechanism. Further studies are being carried out to analyse the change in fatty matter in the pelts throughout the leather making processes. (2 Fig.).

LEATHER CHEMICALS AND AUXILIARIES

49.14497

Integrated bare narrow capillary-hydrodynamic chromatographic system for free-solution DNA separation at the single-molecule level. ZHU (Z), CHEN (H), WANG (W), MORGAN (A), GU (C), HE (C), LU (JJ), LIU (S), (College of Chemistry and Chemical Engineering, Wuhan Textile University, No.: 693 Xiongchu Avenue, Wuhan, Hubei 430013, People's Republic of China). (Angew. Chem.; 52, 21; 2013, May, 17; 5612-6).

Discusses the coupling of a high-pressure electroosmatic pump(EOP) and a microfabricated chip-injector with a bare narrow capillary-hydrodynamic chromatographic system(BaNC-HDC), that enables the samples to be injected at low-picoliter volumes and analysts to be eluted at picoliters per minute and a wide range of deoxyribonucleoroacid(DNA) fragments to be resolved rapidly in free solution at the single-molecule level. (28 Ref.; 12 Fig.).

49.14498

Dynamic molecular recognition in solid state for separating mixtures of isomeric dicarboxylic acids. UŽAREVIÆ (K), HALASZ (I), DILOVIC (I), BREGOVIÆ (N), RUBÈIÆ (M), MATKOVIÆ-CALOGOVIÆ (D), TOMOŠIÆ (V), (Ruder Boškovic Institute, Bijeniæka 54, 10002 Zagreb, Croatia). (Angew. Chem.; 52, 21; 2013, May, 17; 5504-8).

Describes a polyamine host that recognizes dicarboxylic acids in solution and in the solid state, with the highest selectivity towards maleic acid, binding it from mixtures with up to five other carboxylic acids, including fumaric acid. Recognition using mechanochemistry is a dynamic process involving intermediate phases, resulting in the same selectivity as achieved by crystallization from solution. (40 Ref.; 1 Tab.; 8 Fig.; 1 Scheme).

49.14499

Acid-catalyzed in situ generation of less accessible or unprecedented N-Boc imines from N-Boc aminals. KANO (T), YURINO (T), ASAKAWA (D), MARUOKA (K), (Department of Chemistry, Graduate School of Science, Kyoto University, Sakyo, Kyoto 606-8502, Japan). (Angew. Chem.; 52, 2I; 2013, May, 17; 5532-4).

Discusses the in situ generation of hitherto unattainable alkynyl-substituted N-Boc-protected imines that was realized by the acid-catalyzed elimination of tert-butyl carbamate from N-Boc aminals. A wide variety of N-Boc imines can be generated, which can then be utilized for subsequent carbon-carbon bond-forming reactions, such as Mannich-type reactions. (42 Ref.; 2 Tab.; 2 Fig.; 5 Schemes).

49.14500

Collagen-like cell-penetrating peptides. YAMAZAKI (CM), NAKASE (I), ENDO (H), KISHIMOTO (S), MASHIYAMA (Y), MASUDA (R), FUTAKI (S), KOIDE (T), (Department of Chemistry and Biochemistry, School of Advanced Science and Engineering, Waseda University, No.: 1-104 Totsukamachi, Shinjuku-ku, Tokyo 169-8555, Japan). (Angew. Chem.; 52, 21; 2013, May, 17; 5497-500).

Discusses arginine-rich heterotrimeric collagen-like peptides that were prepared and evaluates their uptake efficiency. The spatial rearrangement of the Arg residues on the triple-helix surface significantly affected the cellular uptake. The collagen-like triple-helical conformation provides these cell-penetrating peptides with a high resistance to proteases. (23 Ref.; 1 Tab.; 8 Fig.).

49.14501

Catalytic hydrodefluorination of fluoromethanes at room temperature by silylium-ion-like surface species. AHRENS (M), SCHOLZ (G), BRAUN (T), KEMNITZ (E), (Department of Chemistry, Humboldt-Universitat zu Berlin, Brook-Taylor-Str. 2, 12489 Berlin, Germany). (Angew. Chem.; 52, 20; 2013, May, 10; 5328-32).

Describes the aluminium chlorofluoride(ACF) that catalyzes the hydrofluorination, as well as Friedel-Crafts reactions of Fluorinated methanes in the presence of Et_3SiH(triethylsilane). A surface-bound silylium-ion-like species is considered to be a crucial intermediate in achieving the C-F bond cleavage. (54 Ref.; 1 Tab.; 3 Fig.; 3 Schemes).

49.14502

Vibrational analysis of an industrial Fe-based Fischer-Tropsch catalyst employing inelastic neutron scattering. HAMILTON (NG), SILVERWOOD (IP), KAPIÂN (J), HECHT (L), WEBB (PB), TOOZE (RP), PARKER (SF), LENNON (D), (Sosol Technology UK Limited, Purdie Building, University of Saint Andrews, College Gate K16 9ST, Fife, Scotland). (Angew. Chem.; 52, 21; 2013, May, 17; 5608-11).

Discusses that the inelastic neutron scattering(INS) that has been used to obtain the vibrational spectrum of a large-scale unit operation.Whereas previous reports on iron Fischer-Tropsch catalysts highlight the presence of retained carbonaceous species, the INS spectra reveal the additional presence of partially hydrogenated aromatic molecules. (32 Ref.; 1 Tab.; 4 Fig.).

49.14503

Amine-promoted asymmetric(A+2) annulations for the enantioselective synthesis of tetrahydropyridines : A traceless and recoverable auxiliary strategy. HU (P), HU (J), JIAO (J), TONG (X), (Key Laboratory for Advanced Materials and Institute of Fine Chemicals, East China University of Science and Technology, Meilong Road No. : 130, Shanghai 200237, China). (Angew. Chem.; 52, 20; 2013, May, 10; 5319-22).

Describes the in situ reaction of 2-(acetoxymethyl)buta-2,3-dienoate and a secondary amine which produces a 2-methylene-3-oxobutanoate that can be used in asymmetric [4+2] annulations with N-tosylimines to provide tetrahydropyridines in good to excellent yields and enantioselectivities.The amine is easily recovered and acts as a traceless auxiliary. (64 Ref.; 1 Tab.; 5 Schemes).

49.14504

High-pressure scanning tunneling microscopy of a silver surface during catalytic formation of ethylene oxide. BÖCKLEIN (S), GUNTHER (S), WINTTERLIN (J), (Department Chemie, Ludwig-Maximilians-Universität Munchen, Butennadstr. 5-13, 81377 Munich, Germany). (Angew. Chem.; 52, 21; 2013, May, 17; 5518-21).

Describes a high-pressure scanning tunneling microscope(STM) which was used to bridge the pressure gap for the Ag-catalyzed ethylene epoxidation. An active oxygen species on an Ag(111) single crystal was characterized under ultra-high vacuum conditions. Identified the same species with STM in an ethylene/oxygen mixture. Indicated the detection of the formation of ethylene oxide in the STM cell. (30 Ref.; 12 Fig.).

49.14505

Molecular architecture of cobalt porphyrin multilayers on reduced grapheme oxide sheets for high-performance oxygen reduction reaction. TANG (H), YIN (H), WANG (J), YANG (N), WANG (D), TANG (Z), (State Key Laboratory of Multiphase Complex Systems, Institute of Process Engineering, Chinese Academy of Science, No. : 1, North 2nd Street, Zongguancun Haidian District, Beijing 100190, People's Republic of China). (Angew. Chem.; 52, 21; 2013, May, 17; 5585-9).

Discusses the multilayes of Co^{2+}(cobalt) and porphyrin, fabricated on the surface of reduced graphene oxide sheets by a layer-by-layer assembly technique and are potentially cost-effective and high-efficient oxygen reduction reaction(ORR) catalysts. The multilayers have comparable electrocatalytic activity to commercial C/Pt(Carbon-Platinum) catalysts, but much better methanol tolerance and long-term stability toward ORR. (57 Ref.; 11 Fig.; 1 Scheme).

49. 14506

Efficient access to trifluoromethyl diarylpyrrolines and their N-oxides through enantioselective conjugate addition of nitromethane to â,â–disubstituted erones. KAWAI (H),YUAN (Z), KITAYAMA (T), TOKUNAGA (E), SHIBATA (N), (Department of Frontier Materials, Graduate School of Engineering, Nagoya Institute of Technology, Gokiso, Shawa-ku, Nageya Aichi 466-8555, Japan). (Angew. Chem.; 52, 21; 2013, May, 17; 5575-9).

Discusses the cupreidinium salt 1 that catalyzes, the highly enantioselective conjugate addition of nitromethane aryl-â-trifluoromethyl aryl enones. The biologically important chiral pyrrolines 4 and N-oxide 5, having trifluoromethylated all-carbon quaternary chiral center, were easily synthesized from the key intermediate(R)-3 in high to excellent yields. (62 Ref.; 2 Tab.; 3 Fig.; 2 Schemes).

49.14507

Exceptional dendrimer-based mimics of diiron hydrogenase for the photochemical production of hydrogen. YU (T), ZENG (Y), CHEN (J), LI (Y), YANG (G), (Key Laboratory of Photochemical Conversion and Optoelectronic Materials, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, No. : 2 Beiyitiao Street, Zhonggerancun, Haidian District, Beijing 100190, People's Republic of China). (Angew. Chem.; 52, 21; 2013, May, 17; 5631-5).

Describes a three-component homogeneous catalyst system that has been prepared with an Ir^{III} complex as the photosensitizer, artificial hydrogenases bearing a diiron core and dendritic frameworks as the proton reduction catalyst and triethylamine as the sacrificial electron donor. An initial turnover frequency of over 7240 h^{-1} and a quantum yield of up to 28% were determined for the photocatalytic evolution of hydrogen. (50 Ref.; 5 Fig.).

49.14508

Oxidation and reduction of the 5-(2'-Deoxyuridinyl)methyl radical. LIN (G), LI (L), (Department of Chemistry and Chemical Biology, Indian Chemistry-Purdue University, Indianapolis(IUPI), No. : 402 North Blackford Street, Indianapolis 46202, USA). (Angew. Chem.; 52, 21; 2013, May, 17; 5594-8).

Discusses the 5-(2'-Deoxyuridinyl)methyl radical 1 as a key intermediate in the thymine oxidative reaction mediated by reactive oxygen species. Presents an evidence that 1 is prone to both oxidation and reduction reactions at the absence of O_2(Oxygen). These results question the current paradigm and suggest that the redox chemistry 1, which has been largely overlooked in the past, may play a major role in determining the fate of 1. (39 Ref.; 2 Tab.; 4 Fig.; 1 Scheme).

49.14509

Stabilization of a two-coordinate$[GeCl]^+$ cation by simultaneous ó and À donation from a monodentate carbodiphosphorane. SHABANA KHAN, GOPAKUMAR (G), THIEL (W), ALCARAZO (M), (Max-Planck-Institut für Kohlenforschung, Kaiser-Wilhelm-Platz 1, 45470 Mülhein an der Ruhr, Germany). (Angew. Chem.; 52, 21; 2013, May, 17; 5644-7).

Presents the synthesis, structure and reactivity of Germanium tetrachloride[GeCl]$^+$ and Stannous chloride[SnCl]$^+$ cations bearing a carbodiphosphorane as ancilliary ligand. Simultaneous and donation from the carbodiphosphorane to Ge(Germanium) is observed in the Ge compound and HOMO-1(Highest Occupied Molecular Orbital-1), whereas only the ó dative component is presented in the Sn analogue. (37 Ref.; 2 Fig.; 4 Schemes).

49.14510

Suppression of gene expression by G-quadruplexes in open reading frames depends on G-quadruplex stability. ENDOH (T), KAWASAKI (Y), SUGIMOTO (N), (Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 7-1-20, Minatojima - minamimachi, Kobe 650-0047, Japan). (Angew. Chem.; 52, 21; 20l3, May, 17; 5522-6).

Describes the sequences with the potential to form G-quadruplexes that had been identified in the open reading frames of Escherichia coli genes. These sequences were found to form parallel G-quadruplexes and to suppress translation of the messenger ribonucleoroacids (mRNAs) into proteins in vitro in cells. (41 Ref.; 7 Fig.).

49. 14511

Three-dimensional structural analysis of MgO-supported osmium clusters by electron microscopy with single-atom sensitivity. AYDIN (C), KULKARNI (A), CHI (M), BROWNING (ND), GATES (BC), (Department of Chemical Engineering and Materials Science, University of California, One Shields Avenue, Davis, California 95616, USA). (Angew. Chem.; 52, 20; 2013, May, 10; 5262-6).

Describes the aberration-corrected scanning transmission electron microscopy(ACTEM), that had been used to determine the 3 dimension(3 D) structure of MgO(magnesium oxide)-supported Os_3, Os_4, Os_5 and Os_{10} clusters which have structures nearly matching those of osmium carbonyl compounds with known crystal structures. The samples are the best-defined supported catalysts. (30 Ref.; 7 Fig.).

49.14512

Preparation and application of denatured starch-gelatine complex. DAI (R), DU (X), SHAN (Z), (Key Laboratory of Leather Chemistry and Engineering of Ministry of Education, Sichuan University, Wangjiang Campus, Section No. : 24 of Southern Yichuan, Chengdu 610005, Sichuan Province, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 6; 2013, Nov.-Dec.; 256-61).

Describes the denatured starch-gelatine complex(GS) and denatured starch(OS) that were produced by oxidizing acid hydrolyzing starch with sodium hydrochlorite. The results clearly showed that acid degradation and oxidative degradation significantly reduced both the molecular and particle size of native starch. The Maillard reaction occurred during the preparation of GS. The two kinds of denatured starch and several typical fillers applied to chrome-tanned crust leather. The contrasting results of filling showed that GS had some obvious characteristics different from those of other

fillers. The leather sample filled with denatured starch-gelatine complex GS showed obvious thickening, excellent tensile strength and tear strength, as well as moderate softness. The leather sample filled with GS exhibited moderate tensile strength and tear strength, as well as excellent elongation. GS and OS effectively separated fibre bundles and thus had favorable prospects for improving the sensory characteristics of chrome leather. (10 Ref.; 6 Tab.; 9 Fig.).

49.14513

Diastereodivergent carbometalation/oxidation/selective ring opening : Formation of all-carbon quaternary stereogenic centers in acyclic systems. DELAYE (P), DIDIER (D), MAREK (I), (The Mallat Family Laboratory of Organic Chemistry, Schulich Faculty of Chemistry and Lise Meither-Minerva Center for Computational Quantum Chemistry, Technion-Israel Institute of Technology, Technion City, Haifa 32000, Israel). (Angew. Chem.; 52, 20; 2013, May, 10; 5333-7).

Describes the title reaction sequence for cyclopropanes that allows the preparation of aldehydes bearing á-quaternary stereocenters in an one post-reaction from readily available starting materials. Both enantiomers of the corresponding aldehyde were obtained from the same cyclopropane derivative through a diastereodivergent carbometalation reaction. (85 Ref.; 2 Tab.; 3 Schemes).

49.14514

Effective synthesis of chiral N-fluoroalkyl aziridines through enantioselective aziridination of alkenes with fluoroaryl azides. JIN (L), XU (X), LU (H), CUI (X), WOJTAS (L), ZHANG (XP), (Department of Chemistry, University of South Florida, No. : 4202 East Fowler Avenue, Tampa, Florida 33620-5250, USA). (Angew. Chem.; 52, 20; 20l3, May, 10; 5309-13).

Describes the Co^{II}(Cobalt II) of a D2-symmetric chiral porphyrin ([Co(D2-Por*)] as a highly effective catalyst for the enantioselective aziridination of alkenes with fluoroalkyl azides. The reaction can be performed at RT(Reaction Time) with low catalyst leading and the olefin is the limiting reagent. Furthermore, the reaction is tolerant toward different combinations of aromatic olefins and fluoroaryl azides. (62 Ref.; 3 Tab.; 1 Fig.; 2 Schemes).

49.14515

Total synthesis of (+)-linoxepin by utilizing the Catelli reaction. WEINSTABL (H), SUHARTONO (M), QURESHI (Z), LAUTENS (M), (Davenport Laboratories, Department of Chemistry, University of Tokyo, No. : 80 Saint George, Toronto, Ontario M55 3H6, Canada). (Angew. Chem.; 52, 20; 2013, May, 10; 5305-8).

Discusses the synthesis of the structure by novel lignin(+)-linoxepin in an eight-step sequence. The enantioselective synthesis features the palladium-catalyzed Catellani reaction as the key step. Two new carbon-carbon bonds are formed, one of which results from a C-H(Carbon-Hydrogen) bond functionalization in this highly convergent multicomponent reaction. (32 Ref.; 8 Schemes).

49.14516

Copper-catalyzed 5ØþÞ–selective and stereospecific direct allylic alkylation of terminal alkynes : Synthesis of skipped enynes. MAKIDA (Y), TAKAYAMA (Y), OHMIYA (H), SAWAMURA (M), (Department of Chemistry, Faculty of Science, Hakkaido University, No. : 5 Chome Kita 8 Jonishi, Kita Ward, Sapporo, 060-0810, Japan). (Angew. Chem.; 52, 20; 2013, May, 10; 5350-4).

Describes the title reaction using internal secondary allylic phosphates proceeded with excellently regioselectivity and section E : stereoselectivity to give skipped enynes. Enantioenriched secondary allylic phosphates proceeded with 1,3-anti stereochemistry to afford the corresponding chiral 1,4-enynes, which were used for various derivatizations and the formal total synthesis of a GnRH(Gonadotropin-releasing hormone) antagonist. (42 Ref.; 4 Tab.; 2 Schemes).

49.14517

Synthesis of epoxyisoprostanes : Effects in reducing secretion of Pro-inflammatory cytokines IL-6 and IL-12. EGGER (J), BRETSCHER (P), FREIGANG (S), KOPF (M), CARREIRA (EM), (Laboratory of Organic Chemistry, ETH Zurich, HCI H335, Wolfgang-Pauli-Strasse 10, 8093 Zurich, Switzerland). (Angew. Chem.; 52, 20; 2013, May, 10; 5382-5).

Discusses the efficient and general synthetic route to the elusive epoxyisoprostanoid phospholipids PEIPC (1-palmitoyl-2-(5,6-epoxy-isoprotane E_2)-sn-glycero-3-phosphatidylcholine and PEOPC(1-palmitoyl-2-(5,6-epoxyisoprostane A2)-sn-glycero-3-phosphatidylcholine) along with the isoprostanoids EC and EI relies on a number of stereo- and chemoselective steps, including a C-H(Carbon-Hydrogen) insertion for the rapid construction of the cyclopentanone ring. The synthesized compound display unprecendented biological activity in reducing the secretion of pro-inflammatory cytokines. (47 Ref.; 1 Fig.; 6 Schemes).

49.14518

Copper-catalyzed trifluoromethylation of N,N-dialkylhydrazones. PAIRE (E), MONTEIRO (N), BOUYASSI (D), BAUDDIN (O), (Université Claude Bernard Lyon 1, Central National de la Recherche Scientifique-United Medical Resources 5246, Institut de Chemie et Biochemie Moléculaires et Supramoleculaires, CPE Lyon, 43 Boulevard, 69622 Villeurbanne, France). (Angew. Chem.; 52, 20; 2013, May, 10; 5346-9).

Describes the trifluoromethylation, of (hetero) aromatic aldehyde N,N-dialkylhydrazones, which was achieved at room temperature by using Togni's trifluoromethylation reagent under CuCl(Copper (I) chloride) catalysis. This simple reaction is believed to occur by a CF_3(trifluoromethyl)-radical transfer mechanism and yields useful trifluoromethylated building blocks. (42 Ref.; 2 Tab.; 4 Schemes).

49.14519

Rhodium-catalyzed asymmetric arylative cyclization of meso-1,6-dienynes leading to enantioenriched cis-hydrobenzofurans. HE (Z), TIAN (B), FUKUI (Y), TONG (X), TIAN (P), LIN (G), (Key Laboratory

of Synthetic Chemistry of Natural Substances, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, No. : 345 Linghing Road, Shanghai 200032, China). (Angew. Chem.; 52, 20; 2013, May, 10; 5314-8).

Discusses the title reaction of cyclohexadienone-containing meso-1,6-dienynes, with arylboronic acids through a tandem arylrhodation/conjugate addition sequence that has been realized and the provision of a novel approach to the enantioenriched cis-hydrobenzofurans with both excellent yields and enantioselectivities. (59 Ref.; 3 Tab.; 4 Schemes).

49.14520

A catalytic asymmetric synthesis of polysubstituted piperidines using a Rhodium(I)-catalyzed[2+2+2] cycloaddition employing a cleavage tether. MARTIN (TJ), ROVIS (T), (Department of Chemistry, Colorado State University, Fort Collins, Colorado 80523, USA). (Angew. Chem.; 52, 20; 2013, May, 10; 5368-71).

Discusses the title reaction that proceeds with a variety of alkyne substrates in good yield and high enantioselectivity. N-methylpiperidine products with functional groups handles can be accessed upon reduction of the vinylogous amide in high diastereoselectivity(>19:1) and cleavage of the tether. (53 Ref.; 5 Tab.; 1 Fig.; 1 Scheme).

49.14521

A magnesium-mediated cascade assembly for the atom-economical synthesis of bis(imidazolidine-2,4-dione)s. HILL (MS), LIPTROT (DJ), MAHON (MF), (Department of Chemistry, University of Bath, South Building, Claverton Down, Bath BA2 7AY, North East Somerset, England). (Angew. Chem.; 52, 20; 2013, May, 10; 5364-7).

Describes the structurally complex bis(imidazolidine-2,4-dione) molecules that may be synthesized with complete atom-efficiency from simple building blocks by a kinetically controlled magnesium-mediated cascade of intermolecular isocyanate insertion and intramolecular alkyne hydroamination reaction steps. (28 Ref.; 1 Tab.; 1 Fig.; 4 Schemes).

49.14522

Synthesis and application of â–substituted Pauson-Khand adducts : Trifluoromethyl as a removable steering group. AIGUABELLA (N), POZO (Cd), VERDAGUER (X), FUSTERO (S), RIERA (A), (Institute for Research in Biomedicine(IRB Barcelona), Baldiri I Re ixac, 10, 08028 Barcelona, Spain). (Angew. Chem.; 52, 20; 2013, May, 10; 5355-9).

Reports the synthesis of the previously unknown â–substituted regioisomers of the intermolecular Pauson-Khand reaction of terminal alkynes. This regiochemistry was achieved by using the trifluoromethyl group as a removable directing group on the alkynes. (47 Ref.; 2 Tab.; 7 Schemes).

FINISHING MATERIALS

49.14523

Determination of free fatty acids in leather. LUO (X), YANG (F), FENG (J), MA (H), (College of Resource and Environment, Shaanxi University of Science and Technology, No. : 6 Xuefu Zhonglu, Weiyang District, Xi'an 710021, Shaanxi Province, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 6; 2013, Nov.-Dec.; 251-5).

Investigated the content of free fatty acids by qualitative and quantitative methods. The cable-extraction method was used to test six different types of leather sample in which the dichloromethane was an extraction agent. After the extract was methyl esterified it was again extracted by petroleum ether. Then the colour and titration method was used to quantitatively analyse the extract. Meanwhile studied the effect of different decolourisation ways on the quantitative analysis. The properties of extraction products were characterized by gas chromatography-mass spectroscopy(GC-MS). The results show that the main components of free fatty acids in leather are oleic acid, palmitic acid, stearic acid and some linoleic acid. The effect is, overall, better when the level of ethanol in the decolouring solution is 80% to 85%. (13 Ref.; 1 Tab.; 7 Fig.).

49.14524

Mathematical modeling of a vegetable tanning process. SANNINO (S), VAIANO (V), CIAMBELLI (P), MANNA (AM), CARACCIOLO (D), NAVIGLIO (B), CALVANESE (G), (Dipartimento di Ingegneria Industriale, Universita di Salerno, Via Ponte Dm Melillo, 84084 Fisciano(SA), Italy). (J. Soc. Leather Technol. Chem.; 97, 4; 2013, Jul.-Aug.; 139-44).

Describes the development and validation of a mathematical model of the vegetable tanning process under different operating conditions. This mathematical model describes the tanning process as a series process involving tannin diffusion into the leather and subsequent reaction with collagen. The external diffusion has been assumed to be very fast because of the high rotation rate of the drum. The change of hide thickness was also considered by analyzing the experimental data. The mathematical model well describes tanning processes for most of the examined operating conditions. (6 Ref.; 7 Fig.).

49.14525

Viscosity and retanning properties of isophthalic dihydrazide based amino resins under different reactant conditions. RASHID (S), AHMAD (A), MUHAMMAD (R), FAHIM (AQ), (Department of Chemistry, GC University, Katchery Road, Lahore 54000, Pakistan). (J. Soc. Leather Technol. Chem.; 97, 5; 2013, Sep.-Oct.; 211-9).

Describes the sulfonated amino resins like urea and melamine formaldehyde resins which are in wider uses in retanning of leather. Both urea and melamine formaldehyde resins show free formaldehyde contents in the retanned leather greater than permissible limits(d"10ppm).

Discusses the sulfonated isophthalic dihydrazide with formaldehyde and sodium metabisulfite under different reactant conditions to optimize the free formaldehyde content in retanned leather within permissible limits. Investigated the retanning behaviors of these resin. Studied the tear strength, tensile strength, elongation at break and morphology of grain and cross section of fibre strength through scanning electron microscopy(SEC) of the retanned leather. Total gravimetric analysis(TGA) was performed to evaluate the thermal stability of the resin. Structural elucidation of the optimized resin was characterized by fourier transform infrared(FTIR). (21 Ref.; 3 Tab.; 12 Fig.).

49.14526

Rapid determination of six aldehydes in leathers by ultra performance liquid chromatography. YU (L), ZHAO (C), WU (M), DONG (W), LIU (S), GOU (Y), JIN (J), WEN (Y), LIN (W), (College of Polymer Science and Engineering, Sichuan University, Wangjiang Campus, No. : 24 of South Section 1, Yichuan Road, Chengdu 610065, Sichuan Province, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 4; 2013, Jul.-Aug.; 149-53).

Describes the development of a simple pre-column derivatization method using (2,4-Dintrophenylhydrazine, DNPH) as pre-column labeling reagent followed by ultra performance liquid chromatography(UPLC) with a Photo-Diode Array detector(PDA) for the determination of six aldehydes namely glyoxal, formaldehyde, acetaldehyde, propionaldehyde, butyraldehyde, glutaraldehyde in leather samples. Acetonitrile and 0.1% sodium dodecyl benzene sulfonate aqueous solution(1:1,V/V) was used for the ultrasonic extraction at 40°Centigrade. Investigated a derivatizing parameter-temperature in detail. The quantification limits were obtained for the desired compounds ranging from 25 to 45 ìg 1^{-1} under optimal conditions. The recoveries were higher than 90.6%. Successfully applied the proposed method to the determination of the target compounds in leather samples with a high sensitivity than traditional high performance liquid chromatography(HPLC) and ultraviolet-visible(UV-Vis) scenary spectrophotometry methods. (15 Ref.; 4 Tab.; 2 Photos).

49.14527

Effect of inversion layer and oxide layer thickness on the performance of PX-Si TFT devices. JOSHI (DP), SHARMA (K), GILL (FS), (Department of Physics, DBS(Dayanand Brijendra Swaroop)(Postgraduate) College, Karanpur Road, Chironwadi, Dehradun-248 001, Uttarkhand State, India). (Indian J. Pure Appl. Phys.; 51, 9; 2013, Sep.; 638-41).

Investigated theoretically about the dependence of transfer characteristics of polycrystalline silicon thin film transistor(PX-SiTFT) devices on gate oxide thickness(t_{ox}) and inversion layer thickness(t_{si}) by considering a new Gaussian energy distribution of grain boundary(GB) trapping states. Studied the dependence of drain current(I_D) and GB space charge potential barrier height(qVg) of PX-Si TFT on gate voltage(V_{GS}) at different inversion layer thickness qVg and oxide layer thickness. Observed the drain current, that increases on decreasing the thickness of oxide layer and inversion layer. (12 Ref.; 10 Fig.).

49.14528

Ammonia gas sensing property of nanocrysalline Cu_2S thin films. SHINDE (MS), PATIL (DR), PATIL (RS), (Department of Physics, PSGVPM(Poojya Sane Guruji Vidya Prasarak Mandal)'s Arts, Science & Commerce College, Maharashtra State Highway 1 Shahada, Nandurbar District, Maharashtra State, India). (Indian J. Pure Appl. Phys.; 51, 10; 2013, Oct.; 713-6).

The nanocrystalline semiconducting thin films of copper sulphide(Cu_2S) were deposited by novel chemical route using aqueous solution of 0.1 M copper chloride, 0.05 M thiourea, complexing agent 10% aqueous ammonia(NH_3) and hydrazine hydrate. Investigated the characterization and gas sensitivity of as deposited Cu_2S thin film sensor. Observed the as deposited Cu_2S thin films to be very sensitive for NH_3 gas at room temperature. Upon exposure of NH_3 gas the Cu_2S sensors led to decrease in resistance which is attributed due to inter-conversion of Cu(I) and Cu(II) charge states. The response to ammonia gas by Cu_2S thin films is detected at 200 to 500 ppm concentration in air. The maximum sensitivity(19.78%) for ammonia gas by Cu_2S sensor was found at 500 ppm gas concentration. The quick response(~60 s) and fast(~90 s) are the main features of these sensors. Studied and discussed the effects of gas concentration on the gas sensing performance of the Cu_2S sensor. (20 Ref.; 5 Fig.).

49.14529

Epoxidized natural rubber based nanocomposites : exploring replacement of carbon black with nanoclay in tribology. CHATTOPADHYAY (PK), (Government College of Engineering and Leather Technology, Block-LB-II, Sector-3, Salt Lake, Kolkata-700 098, India). (Leather Age; 35, 10; 2013, Sep.; 17-9).

Various particulate composites based on epoxidised natural rubber(ENR), carbon black(CB) and nanoclay(NC) were prepared by keeping the total filler content constant at 35 phr(parts per 100g rubber). Analyzed the friction and wear characteristics of the composites. Morphology of these composites were also characterized by small angle X-ray scattering(SAXS), transmission electron microscopy(TEM), scanning electron microscopy(SEM) to establish the structure-property correlations. SAXS results reveals enhancement in overall interfacial roughness(ds) with the increased substitution of CB by NC. Increased CB-NC interfacial roughness(ds) with the increased substitution of CB by NC. Increased CB-NC causes enhancement in ds, leading to reduction in wear resistance of ternary composites. Reduction of wear resistance for NC populated samples is attributed to lower dispersion parameter(DO,1) values of NC in the matrix, realized through image analysis of TEM photo-micrographs. It has been realized that complete replacement of CB by NC up to 15 phr improves the frictional coefficient but reduces the wear resistance. (12 Ref.; 2 Tab.; 2 Fig.).

49.14530

Genotyping by icaA gene based PCR of Staphylococcus strains isolated from bovine mastitis cases. KULER (RN), ISLOOR (S), SURYANARAYANA (VSS), VEERAGOWDA (BM), SHRIDHAR (NB), CHANDRASEKHAR (N), SHARADA (R), (Department of Veterinary Microbiology, Veterinary College, Karnataka Veterinary, Animal and Fisheries Science University(KVAFSU), Bellary Road,

Vinayakanagar, Sanjaynagar, Hebbel, Bengaluru–560 024, Karnataka State, India). (Indian J. Biotechnol.; 12, 4; 2013, Oct.; 541-3).

The polysaccharide intracellular adhesion, synthesized by the products of ica gene cluster, is essential, for biofilm formation. The potential of Staphylococcus aureus isolates(25), Saccharomyces epidermidis isolate(2) and other Staphylococcal species to form biofilm was detected through amplification of icaA gene by polymerase chain reaction(PCR). Results revealed that, of the 25 isolates of Staphylococcus(S.) aureus, 23 showed amplicon of 1.2 kb; whereas no amplicons were observed in other 2 isolates. Further, the 2 isolates of Staphylococcus epidermidis showed icaA gene amplification. On the other hand, other Staphylococcal species, such as S.equorum, S.xylosus, S.sciuri subsp. Rodentium, S.intermedius, S.saprophyticus, S.haemolyticus, S.capitis subsp. ureolyticus, S.arlettae S. hyicus, S.scuri, S.sciuri subsp. Coranaticus, S.chromogens and S.caseolyticus, did not show any gene amplification. The study showed high prevalence of ica locus in most the S.aureus isolates confirms its role as a virulence factor in the pathogenesis of mastitis. (17 Ref.; 1 Tab.; 2 Fig.).

49.14531

The changing face of catalysis. VISHWANATHAN (B), (National Center for Catalysis Research, Department of Chemistry, Indian Institute of Technology(IIT) of Chennai, Chennai-600 036, India). (Chem. Ind. Dig.; 26, 10; 2013, Oct.; 100-4).

Catalysis is essentially a surface phenomenon. Understanding the surface is essentially more difficult than studying bulk materials, since sustaining the surfaces in the same condition for long duration for examination is difficult especially in normal atmospheric environments. Discussed the role of catalysis in sustainable development and the challenges it faces. Describes briefly about the photocatalysis and electrocatalysis, which are the future drivers of catalytic reactions. (8 Ref.; 3 Tab.; 5 Fig.).

LEATHER PROPERTIES. QUALITY CONTROL

49.14532

Detection of thiabendazole applied to organic fruit by near IR surface enhanced Raman spectroscopy. MULLER (C), DAVID (L), PINZARU (SC), (Babes-Bolyai University, Biomedical Physics, Theoretical and Molecular Spectroscopy Department, Kogalniceanu 1, RO-400084, Cluj-Napoca, Romania). (Spectrosc. Europe/Asia; 25, 4; 2013; 6-10).

Describes 2-(4-thiazolyl)benzimidazole, which is, in the organic fruit and which is in use as a low toxicity fungicide in wax coatings of fruits. It has been used as a fungicide in leather also. Detailed the measurement and detection with typical results. (6 Ref.; 3 Fig.; d1 Photo).

49.14533

Resistance of bullfrog leather and skin composition during beamhouse operations. HILBIG (CC), FOCKINK (DH), PIANA (PA), BOSCOLO (WR), FEIDEN (A), MALUF (MLF), (Universidade Estadual do Ooste do Paraná-UNIOESTE, Rua da Faculdade, 645, Toledo, 85903-000, Brazil). (J. Soc. Leather Technol. Chem.; 97, 5; 2013, Sep.-Oct.; 189-94).

Evaluates the resistance of bullfrog skin, Lathobates catesbeianus, tanned with chromium salts and vegetable tannin. Checked also the influence of chemicals on the skin during the beamhouse operations. Adopted a completely randomized design for the resistance test, in a 22 factorial arrangement such as two tanning agents namely vegetable tannins and chromium and two cutting directions such as longitudinal and transverse. Collected six samples during the beamhouse operations namely soaking, liming, dehairing, bating and degreasing and analyzed for moisture, crude protein, other extract and mineral matter. The results of the tensile strength and elongation test revealed that there was an interaction between factors namely tanning agent and direction for strength and tensile strength indicating that both are important for test results of resistance. On the other hand, only the tanning agent was significant and the chromium salts being the most efficient for progressive tearing tests. The composition analysis showed that there was little variation in the amount of lipids during processing and there is no need for degreasing, because of the skin of frogs has a low fat content which is removed in previous stages of processing. (29 Ref.; 4 Tab.; 2 Fig.).

49.14534

Quantitative estimation of hair follicle patterns for leather surface using K-function(L-function) method-Part 1 : Influence of individual and location differences for goatskins on estimation of L-function. DOHSHI (S), (Leather Testing Center, Technology Research Institute of Osaka Prefecture, 1-18-13, Kishibe-naka, Suita, Osaka 564-0002, Japan). (J. Soc. Leather Technol. Chem.; 97, 4; 2013, Jul.-Aug.; 145-8).

Investigates the influence of individual and location differences on the quantitative estimation of hair follicle patterns for goatskins using the K-function(L-function) method for which five pieces of chrome-tanned goatskins were put into use. Observed the hair follicle patterns of butt, shoulder and belly locations for goatskins by a digital microscope and quantitatively estimated by using K-function(L-function) method. As a result, observed a characteristic L-function) for goatskin. No individual differences in hair follicle patterns of goatskins were observed for both observation images and quantitative estimation. On the other hand, since the mean distance between two hair follicles for belly location was longer than those for butt and shoulder locations, small location differences were observed for goatskins. However, for all samples and locations, the L-function seemed low by comparison with random distribution within the region of the existence of three guard hair follicles. In conclusion, it was found that a characteristic L-function for the hair follicle patterns of goatskins was observed and the K-function(L-function) method becomes an useful tool to quantitatively estimate hair follicle patterns of goatskins. (5 Ref.; 12 Fig.).

49.14535

Quantitative estimation of hair follicle patterns for leather surface using K-function(L-function) method-Part 2 : Influence of individual and location differences for sheepskins on estimation of L-function. DOHSHI (S), (Leather Testing Center, Technology Research Institute of Osaka Prefecture, 1-18-13, Kishibe-naka, Suita, Osaka 564-0002, Japan). (J. Soc. Leather Technol. Chem.; 97, 5; 2013, Sep.-Oct.; 185-8).

Estimates the sheephair follicle patterns quantitatively using the K-function(L-function method). Investigated, especially, the influence of individual and location differences on the estimation of L-

function. Five pieces of chrome-tanned sheepskins were used in this study. Observed the hair follicle patterns of butt, shoulder and belly locations for sheepskins by a digital microscope and quantitatively estimated them by using K-function(L-function) method. As a result, it was found that the hair follicle patterns of sheepskins are defined as random distributions for all distances from the chosen sampling point, although they seemed to be regular distributions when observing them using a microscope. Observed also no individual and location differences in hair follicle patterns of sheepskins for both observation images and quantitative estimation(L-function). It is concluded quantitative estimations of hair follicle patterns by K-function(L-function) method is indispensable for the identification of leather materials, because judgments using both observation by a microscope and a statistical K-function(L- function) method give different results for the distribution of hair follicles of sheepskins. In the future, quantitative estimations of hair follicle patterns for a variety of leathers used in leather goods also need to be discussed. (4 Ref.; 12 Fig.).

49.14536

Effect of recycling of soak-liquor on chemical properties of lining leather. TARAPHDAR (A), BHUMIK (H), (Government College of Engineering and Leather Technology, Block LB, Sector-III, Salt Lake City, Kolkata-700 098, India). (J. Indian Leather Technol. Assoc.; 63, 11; 2013, Nov.; 1220-38).

A study has been done for the reduction of water consumption in the soaking operation as well as total dissolved solids(TDS) load in the effluent due to common salt from wet-salted raw goat-skins. In this process, 1-kg wet salted raw-skin would be able to soak with the 1-kg fresh water within more or less same time of conventional soaking. In spite of gradual increment of salt content in soaked skins due to reuse of soak-liquor, they are limed together as a lot and followed the same recipe for the preparation of shoe lining leather as followed to prepare a separate lot of lining leather from conventional soaking. Different chemical properties of both conventional and experimental samples have been measured after finishing (standard IS :5914-1970) and compared. The properties have been found for the experimental samples are very much encouraging and all these have been shown and discussed. (10 Ref.; 7 Tab.).

49.14537

Polyurethane/polyacrylate/silica nanocomposite prepared by seeded emulsion polymerization and the properties of finished leather. BAO (Y), MA (J), LIU (J), LU (J), (College of Resources and Environment, Shaanxi University of Science and Technology, Key Laboratory for Light Chemical Additives and Technology of Ministry of Education, No. : 6 Xuefu Zhonglu, Weiyang District, Xi'an 710021, Shaanxi Province, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 6; 2013, Nov.-Dec.; 238-43).

Describes a polyurethane/polyacrylate/silica nanocomposite, that was prepared by seeded emulsion polymerization using polyurethanes as a seed emulsion and potassium persulphate(KPS) as a free radical initiator, in which silica was synthesized via the sol-gel method of tetraethoxysilane(TEOS) and was modified by vinyl triethoxy silane(A-151). Investigated in detail about the influence of synthesis conditions such as the polyurethane and SiO_2(Silicon dioxide) content on the physical-mechanical properties and water resistance of polyurethane/polyacrylate/silica nanocomposite.

The tensile strength and elongation at break of nanocomposite films, at first, increase and then decrease with the increasing content of polyurethane. The incorporation of silica leads to improved tensile strength, but the elongation at break decreased. Water uptake measurements confirmed that the water resistance of polyurethane/polyacrylate/silica nanocomposites was improved by the introduction of polyurethane and silica. The improved properties of the leather finished by polyurethane/polyacrylate/silica nanocomposite are shown, in contrast to polyacrylate finish. The water vapour permeability was increased by 7.14% and the water resistance by 30.34%. (9 Ref.; 1 Tab.; 5 Fig.; 2 Schemes).

49.14538

Sheepskin ulcer prevention : a pressure relieving assessment. ZOU (J), TANG (Q), XU (B), CHEN (W), (National Engineering Laboratory for Clean Technology of Leather Manufacture, Sichuan University and Key Laboratory of Ministry of Education of Leather Chemistry and Engineering, Sichuan University, Wangjiang Campus, Section No. : 24 of Southern Yichuan, Chengdu 610065, Sichun Province, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 4; 2013, Jul.-Aug.; 172-5).

Reported the non assessment of the effect on the pressure relieving of the sheepskin although it has been used in clinical care for ulcer prevention. Thereby this study is aimed at quantitatively evaluating the effectiveness of sheepskin in pressure relief. The pressure distributions of 18 students lying in supine posture on the standard hospital mattress(SHM) with and without the sheepskin mattress(SSM) were measured by the mFLEX(Mangino Force Level Execution) system. Provided variables of peak pressure(mmHg)(PP), average pressure(AP) and contact area(cm^2)(CA) at total, back, sacrum and heel region for comparisons. A paired-T test with a significance level of 0.05 shows that, when the overlay of SSM was used on a SHM, total CA was significantly increased by 19.3% and PP and AP were reduced by 8.8% and 10.8% respectively. Obtained also a similar reduction rate at the sacrum position. All outcomes were proven to be reliable except for the heel area. Overall, sheepskin is an effective ulcer prevent product giving pressure relief. (13 Ref.; 1 Tab.; 2 Fig.).

BY-PRODUCTS

49.14539

Rheological behavior of alkali solubilized collagen from limed bovine split wastes. CHEN (Y), LI (G), JIA (Y), (College of Chemistry and Chemical Engineering, Division of International Relations of Chengqing University of Science and Technology(CQUST), Chengqing 401331, Huxi University Town, Shapingba District, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 5; 2013, Sep.-Oct.; 195-9).

Describes the model of the rheological behavior of alkali solubilized collagen solutions(ASCS) from calf limed splits to investigate the effects of temperatures such as 25°, 27.5°, 30° and 32.5° Centigrade) and concentration(8, 10 and 15 mg/ml) on its fluid type using viscometrical rheometry. ASCS were reconstructed by using a power-law model and exhibited the typical pseudoplastic behavior with flow behavior index values, n>1 increased with increasing concentration but decreased with increasing temperature. The dynamic viscoelastic properties of ASCS were

determined by means of an oscillatory rheometry at different pH, concentrations and temperatures in the ranges 2.5 to 8, 5-15 mg/ml and 25-35°Centigrade, respectively. The values of storage modulus(G°), loss modulus(G") and complex viscosity(ç*) decreased with increasing pH from 2.5 to 7 and then increased as pH increased further. Meanwhile G, G", ç* and relaxation times increased with the increase of collagen, concentration, but decreased with increasing temperature and behaved without regularity at 35°Centigrade. (18 Ref.; 1 Tab.; 9 Fig.).

49.14540

Novel approach for the removal of organic contaminants in wastewaters : Adsolubilization of 2-Naphthol onto collagen fibres. MALDONADO (F), MANICH (AM), MARSAL (A), (IQAC-CSIC Institute of Advanced Chemistry of Catalonia, Spanish National Research Council, Jordi Groba, 18-26, 08034 Barcelona, Spain). (J. Soc. Leather Technol. Chem.; 97, 3; 2013, May-Jun.; 105-10).

Research on adsolubilization to fibrous proteins, such as collagen, has received little attention despite its academic relevance and potential industrial applications. Aims to study the influence of different parameters on adsolubilization onto collagen fibre using 2-naphthol as a model substance in order to verify the feasibility of this process in removing organic contaminants from wastewaters. The collagen fibres were previously or simultaneously treated with an anionic surfactant under mild acidic aqueous conditions to form the admicelles. The parameters such as shaking time, surfactant type namely sodium dodecyl sulphate(SDS) and sodium dodecyl benzene sulphonate(SDBS); influence of pH; presence of electrolytes and polarity of the medium were considered. Adsolubilization isotherms were obtained at 10, 20, 28, 30 and 35°Centigrade and the kinetic study of adsolubilization was also measured. Thermodynamic parameters such as enthalpy change, entropy change and free energy change were calculated by applying the van't Hoff equation for adsolubilization of 2-naphthol. The higher adsolubiization capacity of 2-naphthol was reached at acidic pH and equilibrium was achieved after two hours of treatment. The presence of ethanol in the batch considerably lowered the adsolubilization capacity of fibrous collagen. Thermodynamic parameters indicated that the adsolubilization process is exothermic and spontaneous. The kinetic study revealed that adsolubilization of 2-naphthol onto collagen fibres is best described by a pseudo-second order model. The results have opened the door to the use of collagen fibres in the separation of organic contaminants from wastewaters through adsolubilization. (25 Ref.; 4 Tab.; 7 Fig.).

49.14541

Adsorption, biosorption and bioaccumulation used to remove chromium(III) from tannery wastewaters : A critical review. HINTERMEYER (BH), TAYANI (EL), (Centro de Tecnologia de Recursors Minerals y Ceramica(CETMIC), Comisión de Investigaciones Centificas de la Provincia de Buenos Aires, CONICET, Camino Centenario y 506, C-C.49, (B1897ZCA) M.B. Gonnet, Argentina). (J. Soc. Leather Technol. Chem.; 97, 6; 2013, Nov.-Dec.; 231-7).

Analyzed the processes of adsorption, biosorption and bioaccumulation considering their ability to remove chromium(III). Already published studies that represent the actual state of knowledge were taken into account for this purpose. Included a detailed description of principal physicochemical

properties of adsorbents, biosorbents and micro-organisms, pointing those features that explain the mechanism by which the separation occurs. Noted an inadequate evaluation of the bearing species of the tanning agent with respect to the treated solutions and that, not always the most adequate species was selected. Examined the way in which the electrical charge and the size of studied complex ions affect the attraction force in adsorption/biosorption in order to elucidate both aspects. The consideration of such parameters proved that the electrical charge varies enormously from the one substance to another and besides it prevails on the size. Accordingly, it was decided to focus attention only on treatments that were performed with tanning wastewater or with basic chromium(III) sulphate. Finally, compared the amounts of chromium(III) sequestered per gram of each adsorbent/biomaterial. The largest uptake was 189.1mg/g, obtained with a Cr-resistant autochthonous fungus. (41 Ref.; 1 Tab.; 2 Fig.).

49.14542

Minimal bactericidal concentration for a quaternary ammonium compound used in soak liquors. VEYSELOVA (C), BIRBIR (M), BERBER (D), (Marmara University, Faculty of Arts and Science, Department of Biology, 34722 Goztepe-Yerleskesi, Kadiköy, Istanbul, Turkiye). (J. Soc. Leather Technol. Chem.; 97, 4; 2013, Jul.-Aug.; 166-71).

The soaking process is an ideal environment for bacterial growth and bacterial activity and during this process causes severe damage of hides. The use of an effective bactericidal agent during soaking is very important to prevent the detrimental effect of bacteria on hides. Examined a quaternary ammonium compound(QAC) containing 12.5% dodecyl dimethyl ammonium chloride(DDAC) and 12.5% benzyl methyl ammonium chloride(BMAC) which is used in soaking liquors in Turkiye for its effect on Bacillus licheniformis, Bacillus pumilus, Staphylococcus intermedius, Pseudomonas luteola, Enterobacter cloacae, Vibrous fluvialis and Enterococcus fucium. Staphylococcus intermedius, Pseudomonas luteola, Enterobacter cloacae and Enterococcus faecium were isolated from soak liquor containing 0.8g/L of the test agent. Bacillus licheniformis, Bacillus pumilus and Vibrio fleuvidas were isolated from salt-pack-cured hides. These bacteria were commonly found in isolates from salted hides. Examined the test agent at different concentrations on the bacteria by the Kirby-Bauer disk diffusion method on Mueller Hinton Agar both at 25°Centigrade and at 37°Centigrade. In addition, the Minimal Bacterial Concentration of the agent for the bacteria and the mixed population of these bacteria was also determined in Mueller Hinton Broth at 37°Centigrade. All concentrations of the agent produced an inhibition zone for all of the test bacteria. Inhibition zone diameter changed according to concentration of agent and the species of bacteria. The agent was found to be more effective at 25°Centigrade than at 37°Centigrade. 2.97g/L of the agent in Mueller Hinton Broth was found to kill both the bacteria and mixed culture at exposure times of both 8 and 24 hours at 37°Centigrade. It was concluded that the agent should be used in higher concentrations in soak liquors to inactivate the bacteria that might cause major damages on hides. (31 Ref.; 3 Tab.).

49.14543

Management of hazardous waste from fertilizer complexes. SUKUMARAN NAIR (MP), (Center for Green Technology & Management(CGTM), Monical Apartments, Chalakkarapadam Road, Kakkanad, Kochi-682 028, Kerala State, India). (Chem. Ind. Dig.; 26, 12; 2013, Dec.; 59-62).

There has been widespread consciousness among industry operations and environmentalists across the world regarding the management, handling and disposal of indigenously generated as well as imported hazardous waste by following the Basel Convention(1989). Intended an outline, of the technology and management approaches available for disposal of toxic and hazardous wastes generated from fertilizer plant operations. (1 Photo).

TANNERY. ENVIRONMENTAL ASPECTS

49.14544

Why smaller companies struggle with process safety. HERBER (JW), (M/s. Process Hazard Management Services, LLB, No. : 11, Moonlight Bay, Stillwater, Minnesota 55082, USA). (Chem. Ind. Dig.; 26, 12; 2013, Dec.; 52-8).

The majority of events investigated by the United States Chemical Safety and Hazards Investigation Board(CSB) occurred at smaller companies. Some of these companies may not fully recognize the hazards of the processes they operate or may not be aware of regulatory requirements. While these events may lack the visibility of an event at a major location or company, they are devastating to the company, its employees, the community and its customers. Reviewed the CSB investigation reports of serious process safety incidents and some of the system futures that caused them. Proposed new systems, that could be implemented by large companies, regulators and industry groups to inform and support smaller companies in their struggle with Process Safety Management(PSM) implementation. (7 Ref.; 1 Tab.).

49.14545

Sources of information on Green Chemistry. AJAY KUMAR, (Galgotias University, Plot No. : 2, Sector-17 A, Yamuna Expressway, Greater Noida-201 306, Gautam Budh Nagar District, Uttar Pradesh State, India). (Chem. Wkly.; 59, 15; 2013, Nov., 15; 216-8).

Described the important sources of information on "Green Chemistry" in order to promote research in field of green/sustainable chemistry. Provided a list, of these important sources of information. (12 Ref.; 1 Fig.; 5 Photos).

49.14546

Criminal waste. SETTER (S), (Leather Intl.; 215, 4837; 2014, Jan./Feb.; 18 & 20). Questioned whether the industry in Italy is really conscious of its responsibility concerning effluent treatment and waste disposal as the controversy is raised over a treatment scandal in that country. (1 Photo).

49.14547

Green solution for ecology and economy in tanning-phosphonium and polyamide combination process. JOHN SUNDAR (V), MURALIDHARAN (C), MANDAL (AB), (Leather Processing Technology

Division, Council of Scientific and Industrial Research-Central Leather Research Institute(CSIR-CLRI), Adyar, Chennai-600 020, India). (Leather Age; 35, 12; 2013, Nov.; 17&19-20).

Chrome tanning through a preferred method of tannage is threatened by serious perceived concerns about chromium. A transition towards process innovations involving part or complete elimination of minerals or atleast chromium is gaining momentum. Many research groups have studied in detail about the combination tannages involving phosphonium salts, oxazolidines and vegetable tannins. Studied about the combinations of phosphonium and polyamide based auxiliaries and found to yield encouraging results. Optimized the quantity of phosphonium and polyamide through detailed application trials. The hydrothermal stability tanned leathers(Ts) 90±20°Centigrade as inferred by dynamic scanning calorimetry(DSC) studies. The experimental leathers had compact fibre structure when compared to full chrome tanned leathers as inferred through scanning electron microscopic studies. The resultant leathers were found to be fuller with smooth texture and better strength characteristics. In addition, obtained better adsorption and exhaustion of post tanning auxiliaries. The study has resulted in ensuring retention of natural character to leather while ensuring needed functional and aesthetic properties in finished leathers. (15 Ref.; 2 Tab.; 3 Fig.).

49.14548

Biogas generation, purification and botling : development in India. BAMBORIYA (ML), (MNRE(Ministry of New and Renewable Energy)), Block-14, CGO Complex Lodhi Road, Delhi-110 003, India). (Renew. Energy; 7, 2&3; 2013, Dec.; 28-32).

Biogas bottling plants are one of the most potent tools for mitigating climate change by preventing black carbon emission from biomass chulhas, since biogas is used as a coking fuel. Additionally, methane emissions from untreated cattle dung and biomass waste are also avoided. The purified biogas is bottled in compressed natural gas(CNG) cylinders and wherever CNG is currently used, bottled biogas can be used as an alternative. (1 Tab.; 1 Photo).

49.14549

Wind turbines in extreme weather conditions. (Renew. Energy; 7, 2&3; 2013, Dec.; 46).

Current design standards for wind turbines take into account short term extreme wind events but prolonged wind conditions experienced in tropical storms are not covered. Therefore, described the developments, of the guidelines for wind turbines in extreme conditions. (1 Photo).

49.14550

On-line determination of formaldehyde in tannery effluent by reverse reference flow injection analysis with phenol reagent. LI (N), ZHANG (X), CHEN (S), MA (Y), JIN (H), LI (H), (National Engineering Laboratory for Clean Technology of Leather Manufacture, Sichuan University and State Key Laboratory of Hydraulics and Mountain River Engineering, Sichuan University, Wangjiang Campus, Section No. : 24 of Southern Yichuan, Chengdu 610065, Sichuan Province, People's Republic of China). (J. Soc. Leather Technol. Chem.; 97, 5; 2013, Sep.-Oct.; 207-10).

Describes a novel reverse reference flow injection analysis(rrFIA) method coupled with spectrophotometric detection for the determination of formaldehyde in tannery effluent. Measured the absorbance of the complex at 630 nm. Discusses the chemical factors and rrFIA variables affecting the system. The linear range of this method is 0.005-1.0mg.L^{-1}, the detection limit is 4.01 ìg.L^{-1} and the precision is 0.583% under the optimal conditions. The error is within ±5% which meets the requirements when comparing this method with the National Standard Method of China. The proposed method is simple and convenient for the determination of formaldehyde in tannery effluent. (7 Ref.; 1 Tab.; 3 Fig.).

LEATHER PRODUCTS

LEATHER GOODS

49.14551

Upholstery leather standards. BAJPAI (D), (M/s. Bureau Veritas Consumer Products Services Limited, No. : C-19, Sector-7, Noida-201 301, Uttar Pradesh State, India). (Leather Age; 36, 2; 2014, Jan.; 37-40).

The international standard bearing serial no. : ISO 16131 which based on EN 13336 : 2004, Leather-Upholstery leather characteristics. Guide for selection of leather for furniture has been prepared by Technical Committee ISO/TC 120, Leather, Subcommittee SC 2, Tanned leather. This standard species sampling and test methods and gives recommended values for upholstery leather for furniture.

SUBJECT INDEX

AUTHOR INDEX

JARIPATKE (A)	49.14483	MALUF (MLF)	49.14533
JIA (Y)	49.14539	MANDAL (AB)	49.14492
JIAO (J)	49.14503		49.14547
JIN (H)	49.14550	MANICH (AM)	49.14540
JIN (J)	49.14526	MANNA (AM)	49.14524
JIN (L)	49.14514	MAREK (I)	49.14513
JOHN SUNDAR (V)	49.14547	MARSAL (A)	49.14540
JOSHI (DP)	49.14527	MARTIN (TJ)	49.14520
KAMMEYER-MUELLER (J)	49.14490	MARUOKA (K)	49.14499
KANAGARAJ (J)	49.14492	MASHIYAMA (Y)	49.14500
KANO (T)	49.14499	MASUDA (R)	49.14500
KAPITÂN (J)	49.14502	MATKOVIÆ-ÈALOGOVIÆ (D)	49.14498
KAWAI (H)	49.14506	MALUF (MLF)	49.14533
KAWASAKI (Y)	49.14510	MONDAL (C)	49.14486
KEMNITZ (E)	49.14501		49.14487
KISHIMOTO (S)	49.14500	MONTEIRO (N)	49.14518
KITAYAMA (T)	49.14506	MORGAN (A)	49.14497
KLEBAN (M)	49.14489	MUHAMMAD (R)	49.14525
KOIDE (T)	49.14500	MUKHERJEE (G)	49.14486
KOPF (M)	49.14517		49.14487
KRITHIGA (G)	49.14493	MULLER (C)	49.14532
KULER (RN)	49.14530	MURALIDHARAN (C)	49.14547
KULKARNI (A)	49.14511	NAKASE (I)	49.14500
KWAN (HK)	49.14478	NAVIGLIO (B)	49.14524
LAUTENS (M)	49.14515	OHMIYA (H)	49.14516
LENNON (D)	49.14502	PACHE (A)	49.14488
LI (G)	49.14539	PAIR (E)	49.14518
LI (H)	49.14550	PARK (S)	49.14481
LI (L)	49.14508	PARKER (SF)	49.14502
LI (N)	49.14550	PATIL (DR)	49.14528
LI (Y)	49.14507	PATIL (RS)	49.14528
LIN (G)	49.14508	PENG (AC)	49.14479
	49.14519	PIANA (PA)	49.14533
LIN (W)	49.14526	PINZARU (SC)	49.14532
LIPTROT (DJ)	49.14521	POZO (Cd)	49.14522
LIU (J)	49.14537	PUVANAKRISHNAN (R)	49.14493
LIU (S)	49.14497	QURESHI (Z)	49.14515
	49.14526	RANGANATHAN (TV)	49.14491
LU (H)	49.14514	RASHID (S)	49.14525
LU (J)	49.14537	RAY (L)	49.14494
LU (JJ)	49.14497	RIERA (A)	49.14522
LUO (X)	49.14523	ROVIS (T)	49.14520
MA (H)	49.14523	RUBÈIÆ (M)	49.14498
MA (J)	49.14537	RUBENSTEIN (A)	49.14490
MA (Y)	49.14550	SABNAVIS (M)	49.14483
MAHON (MF)	49.14521	SANKARANARAYANAN (P)	49.14493
MAKIDA (Y)	49.14516	SANNINO (S)	49.14524
MALDONADO (F)	49.14540	SAWAMURA (M)	49.14516

SCHAUBROECK (JM)	49.14479	VEERAGOWDA (BM)	49.14530
SCHOLZ (G)	49.14501	VERDAGUER (X)	49.14522
SENTHILVELAN (T)	49.14492	VEYSELOVA (C)	49.14542
SETTER (S)	49.14546	VINODH KUMAR (M)	49.14492
SHABANA KHAN	49.14509	VISWANATHAN (B)	49.14531
SHAH (V)	49.14482	WANBERG (C)	49.14490
SHAN (Z)	49.14512	WANG (D)	49.14505
SHARADA (R)	49.14530	WANG (J)	49.14505
SHARMA (K)	49.14527	WANG (W)	49.14497
SHIBATA (N)	49.14506	WARRINGHAM (R)	49.14502
SHINDE (MS)	49.14528	WEBB (PB)	49.14502
SHRIDHAR (NB)	49.14530	WEINSTABL (H)	49.14515
SILVERWOOD (IP)	49.14502	WEN (Y)	49.14526
SIVAS (H)	49.14495	WINTIERLIN (J)	49.14504
SONG (Z)	49.14490	WISEMAN (RB)	49.14480
SUGIMOTO (N)	49.14510	WOJTAS (L)	49.14514
SUHARTONO (M)	49.14515	WU (M)	49.14526
SUKUMARAN NAIR (MP)	49.14543	XU (B)	49.14538
SURNARAYANA (VSS)	49.14530	XU (X)	49.14514
TAKAYAMA (Y)	49.14516	YAMAZAKI (CM)	49.14500
TANG (H)	49.14505	YAN (M)	49.14478
TANG (Q)	49.14538	YANG (F)	49.14523
TANG (Z)	49.14505	YANG (G)	49.14507
TARAPHDAR (A)	49.14536	YANG (N)	49.14505
TAVANI (EL)	49.14541	YIN (H)	49.14505
TEGTMEYER (D)	49.14489	YU (L)	49.14526
THIEL (W)	49.14509	YU (T)	49.14507
TIAN (B)	49.14519	YUAN (Z)	49.14506
TIAN (P)	49.14519	YURINO (T)	49.14499
TOKUNAGA (E)	49.14506	ZENG (Y)	49.14507
TOMIŒIÆ (V)	49.14498	ZHANG (X)	49.14550
TONG (X)	49.14503	ZHANG (XP)	49.14514
	49.14519	ZHAO (C)	49.14526
TOOZE (RP)	49.14502	ZHOU (M)	49.14478
UMAMAHESWARI (T)	49.14493	ZHU (Z)	49.14497
UŽAREVIÆ (K)	49.14498	ZOU (J)	49.14538
VAIANO (V)	49.14524		

-: J I L T A :-

Owner: Indian Leather Technologists' Association, ***Printer***: Mr. S. D. Set, ***Publisher***: Mr. S. D. Set, ***Published From***: 'Sanjoy Bhavan', (3rd floor), 44, Shanti Pally, Kasba, Kolkata - 700107, West Bengal, India *AND* ***Printed From***: M/s TAS Associate, 11, Priya Nath Dey Lane, Kolkata- 700036, West Bengal, India, ***Editor****:* Dr. Goutam Mukherjee.