CSIR IN MEDIA

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Compiled by Science Communication and Dissemination Directorate (SCDD), CSIR, Anusandhan Bhawan, New Delhi

CSIR-CFTRI

10th November, 2021

International Conference on

"Gut-Brain-Health: Connections" held

Mysuru, Nov. 10 - The two-day International Conference on "Gut-Brain-Health: Connections" jointly organised by KSOU and CSIR-CFTRI recently, aimed to explore how gut micro-biota influences our mind, health and vice-versa.

This conference was organised as part of the silver jubilee celebrations of KSOU.

Prof. S. Vidyashankar, Vice-Chancellor, KSOU; Prof.Sridevi Annapurna Singh, Director, CFTRI; Dr. Prakash Halami, Chief Scientist & Professor-AcSIR Microbiology and Fermentation Technology Department, CSIR-CFTRI; Dr. S. Niranjan Raj, Director-CIQA, KSOU; Dr. Panduranga Narasimha Rao, Science Coordinator, KSOU, were present during the inauguration in the Assembly Hall of CFTRI.

Dr. Arun Sharma, Founder-Director, International Institute of Mahayoga & Natural Hygiene (IMANAH), USA and Prof. Srinivas Arka, Founder, Centre for Conscious Awareness (CCA), United Kingdom Arka Dhama Ayurved, delivered the keynote addresses. Several eminent speakers representing the academia, research and industry delivered talks during this conference. They are: Dr. Rama Chaudhry, MD, Professor & Head, Department of Microbiology, All India Institute of Medical Sciences, New Delhi; Prof. Diego Mora, Department of Food Environmental and Nutritional Sciences, (DeFENS), University of Milan, Italy; Dr. M.V.S. Aparna, Senior Business Intelligence Developer, Health Plan of San Joaquin, California; Dr.Yogesh Souche, Scientist G, National Centre for Cell Science (NCCS), Pune; Dr. Debanjan Banerjee, Consultant Old Age Psychiatrist, DM Geriatric Psychiatry NIMHANS, Bengaluru; Dr. V.S.T. Krishna, Professor, Department of Psychiatry, JSS Medical College; Dr. Saravana Babu Chidambaram, Professor, Department of Pharmacology & Coordinator, Centre for Experimental Pharmacology & Toxicology, JSS University; and experts from CFTRI and KSOU.

More than 200 participants from India and abroad had registered for this conference which was live streamed.

Published in:

Star Of Mysore

NML Jamshedpur hosts symposium on 'Fatigue, Fracture and Integrity Assessment'

CSIR-NML

09th November, 2021

Jamshedpur, Nov 9: National symposium on "Fatigue, Fracture and Integrity Assessment", began today at the CSIR-NML, Jamshedpur. The event being held virtually is jointly organised by the Indian Structural Integrity Society (InSIS), Indian Institute Metals – Jamshedpur Chapter and the CSIR-National Metallurgical Laboratory (NML), Jamshedpur.

This three-day event, November 9-11, 2021 is the 8th in a series of symposiums which was initiated in the year 2000 by CSIR-NML, Jamshedpur. The virtual program was attended by more than 50 professionals from various research organisations, academia and industries.

Dr. Indranil Chattoraj, Director, CSIR-NML thanked Dr. Debashish Bhattacharjee, Vice President, Tata Steel and the Chief Guest of the inaugural program for giving his valuable time to grace the occasion.

In his address he appreciated Dr. Bhattacharjee for his keen interest in the subject of fatigue and fracture and his contribution in the past to make this symposium a huge success. He emphasized on the importance of fatigue and fracture data of materials to assess the life of important engineering structures and components and talked about the contribution of CSIR-NML and the pioneering work of Dr. Soumitra Tarafder who has been actively involved in the research and study of fatigue, fracture and creep failure of engineering materials in the past as the Chief Scientist and Advisor, Management of CSIR-NML.

The welcome address was followed by a speech delivered by Dr. S. Sivaprasad, Chief Scientist and Head HRG at CSIR-NML. He talked about the symposium and the support provided by various groups including Tata Steel who are engaged in working in the area of fatigue and fracture.

Dr. Debashish Bhattacharjee, Vice President – New Materials Business at Tata Steel was invited as the Chief Guest of the function.

The objective was to create a community of technologists, researchers and students who are continuously engaged in the research and study of fatigue and fracture of engineering materials and components. Leading specialists from across the country and abroad are invited to deliver talks on various aspects of fatigue and fracture behaviour of materials.

The aim of the symposium is to provide a common forum for interaction and exchange of knowledge among professionals representing various industrial sectors like power, defence, aerospace, automotive, oil & natural gas and process industry as well. It is expected that the deliberations of this three-day event will provide an opportunity for further interactions between academia, research laboratories and industries who are engaged in development of engineering materials and components.

Published in:
Avenue Mail

CSIR-CFTRI to hold virtual event on sustainable rural food processing

CSIR-CFTRI

09th November, 2021

CSIR-Central Food Technological Research Institute (CFTRI) is organising online training under the CSIR Integrated Skill Initiative for the benefit of SHGs and rural entrepreneurs who are interested in food processing.

National Rural Livelihoods Mission (NRLM) was launched by the Ministry of Rural Development (MoRD), Government of India, and it envisages to alleviate rural poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities, resulting in appreciable improvement in their livelihoods on a sustainable basis, through building strong grassroots institutions of the poor.

Under this programme, poor women have been mobilised to form their own institutions like Self Help Groups and higher order community institutions at village, panchayat, cluster, block as well as district levels to carry out various social activities and delivery of services. Activities of these community institutions include strengthening financial and livelihoods support services and imparting skills to the rural population.

Furthermore, Start-up Village Entrepreneurship Programme (SVEP), the sub-scheme under the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) focusses on supporting small entrepreneurs, individual and group through various business support services as well as credit support. A large percentage of the enterprises supported through the various programmes of the MoRD support enterprise in the food processing sector.

This programme is targeted for Self-Help Groups (SHGs) registered under State/National Rural Livelihoods Mission (SRLM / NRLM). Though the priority and the targeted group is SHGs, rural entrepreneurs can also apply for this programme (individual registrations). One SHG can nominate a maximum of five members to attend this programme.

The virtual training programme course consists of processing of locally grown agri-commodities with 1-2 case studies; Jam, jelly and ketchup processing; Ingredients and formulations for variety papad and chips making; Processing and preparation of variety pickles: Packing, labelling, branding and marketing requirements; Hygiene, nutrition standards & FSSAI requirements; Requisite skills for creating linkages with livelihoods opportunities; Interfacing with DICs for state government support.

The total intake for this training programme is 200 seats (first come first served basis). The Registration Fee: Rs. 1,180 (including GST) and last date for payment & registration is November 12, 2021, or reaching 200 applications whichever is earlier. The Date & Time of the Webinar is November 18, 2021 - 09:30am to 1:00pm & 2:00pm to 4:30pm. E-Certificates will be issued to those who successfully complete the programme.

Published in:

Fnb News

CSIR-IITR

08th November, 2021

Diwali crackers choke city, pollution reaches 3-yr high

TIMES NEWS NETWORK

Lucknow: Air pollution levels in the city this Diwali night were the highest in three years.

In fact, Gomtinagar and Charbagh areas turned into gas chambers with pollution levels increasing by 250% on Diwali night as compared to normal days.

This was revealed in the air quality assessment study done by the CSIR-Indian Institute of Toxicology Research (IITR), released on Sunday.

Nine locations in the city were monitored by IITR – Gomtinagar, Charbagh, Aminabad, Alambagh, Indiranagar, Vikasnagar, Aliganj, Amausi and Chowk – in the study.

The average PM2.5 concentration of all the localities this Diwali (November 4) was 556 micrograms per cubic metre of air.

In comparison, the levels in 2019 and 2020 were 402mg and 346mg, respectively, on Diwali nights.

Similarly, the average PM10 concentration on this year's Diwali was 883mg, higher than the values of 2019 and 2020, which stood at 604mg and 536mg, respectively.

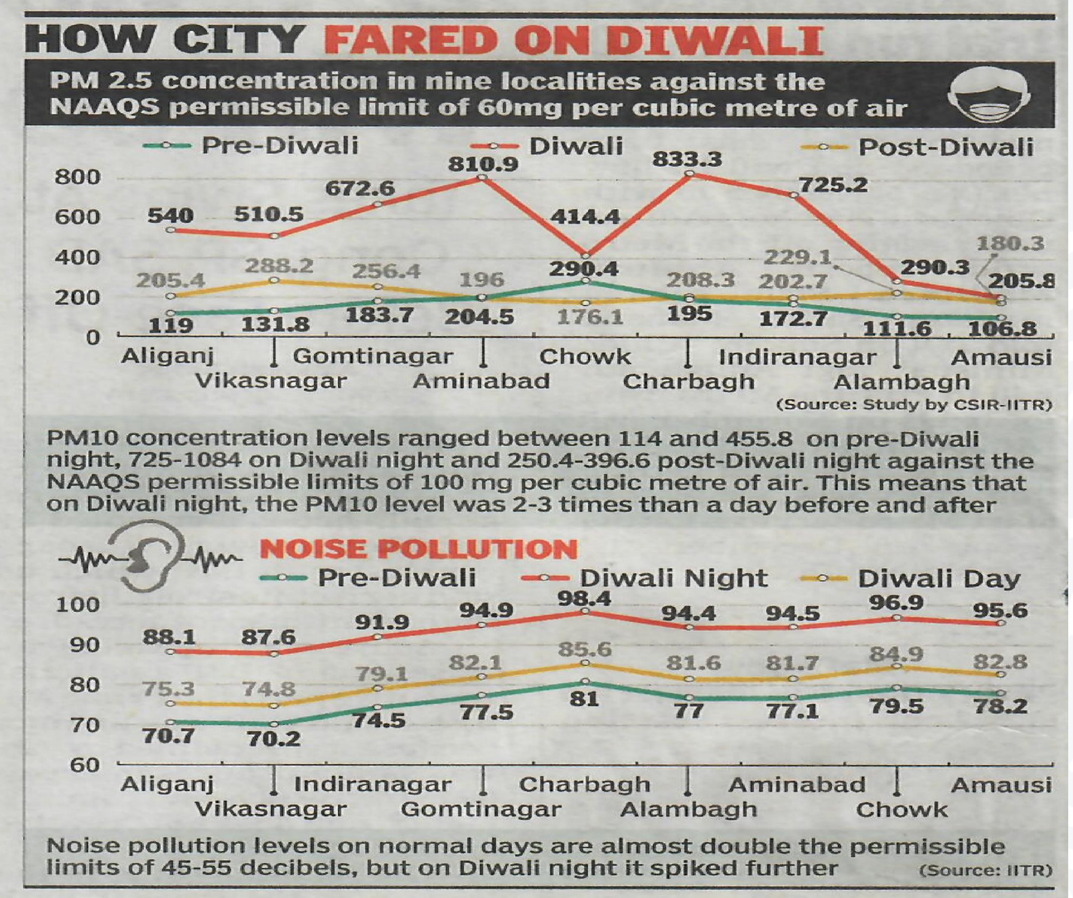
The only solace was that this year's values were less than that of 2017 and 2018. This year, monitoring was done from November 2-5 (Pre-Diwali, Diwali day and post-Diwali).

An alarming rise in air pollution was witnessed in all the localities on Diwali night with the average concentration of the ultrafine PM2.5 particles about 4-14 higher than the permissible limits of 60mg per cubic metre of air, set by the National Ambient Air Quality Standards (NAQS).

Similarly, average concentration of PM10 particles in the air was 8-11 times higher than the permissible limits of 100mg per cubic metre of air.

"The spike was due to fireworks and vehicular pollution in the city during Diwali festivity," said chief scientist, IITR, GC Kisku, who led the study.

"PM2.5 is a hazardous pollutant that does not disperse easily and can remain in the air for around a week which is hazardous for public health, hence, people should take precautions," he added.



PM10 concentration levels ranged between 114 and 455.8 on pre-Diwali night, 725-1084 on Diwali night and 250.4-396.6 post-Diwali night against the NAAQS permissible limits of 100 mg per cubic metre of air. This means that on Diwali night, the PM10 level was 2-3 times than a day before and after

Noise pollution levels on normal days are almost double the permissible limits of 45-55 decibels, but on Diwali night it spiked further (Source: IITR)

Charbagh noisiest of them all

Lucknow: Charbagh experienced deafening noise levels soaring to 100 decibels during Diwali. It was the highest value among the nine localities monitored by IITR for its study.

The levels were recorded thrice – November 3 (pre-Diwali) and day and night on November 4 (Diwali). "On Diwali night, the maximum noise levels at Charbagh reached 98.4 decibel. The average noise level at this location was 89.4 decibels. Both the values were highest among all localities," said chief IITR scientist GC Kisku, who led the study.

"Our study showed that the noise levels were higher than the prescribed standards of 55 decibels (for day) and 45 decibels (for night) in all the localities even at normal times. On Diwali, they increased further," he added. "In fact, at most locations, noise levels crossed 80 decibels which is very harmful for human beings," he said. TNN

Published in:

The Times Of India

20 Indian scientists feature in Stanford University created global database

CSIR-CDRI, NBRI 07th November, 2021

Around 20 scientists from Lucknow figure among the top scientists from India in the world database created by the US-based Stanford University. The report was prepared by Prof John P. Loannidis of Stanford University and his team and published by Elsevier.

Scientists working in areas such as chemistry, nanoscience, mechanical engineering, material science, bioinformatics, automation, energy, geology and environmental engineering figure on the list. Of 1,86,177 scientists featured in the list, 2,042 are from India. As many as eight scientists from CSIR Central Drug Research Institute and two serving scientists from the National Botanical Research Institute figure in the database.

The CDRI scientists include Shrikant R. Mulay, Atul Kumar, Koneni V. Sashidhara, Prabhat Ranjan Mishra, Manish K. Chourasia, Rakesh Maurya, A.K. Saxena and Prem M.S. Chauhan and from NBRI, B.N. Singh and Debasish Chakraborty have made it to the top. Meanwhile, three professors cum scientists from Lucknow University (LU) and six doctors from King George's Medical University (KGMU) have also found the place in the global database. From LU, renowned zoologist Prof Omkar, Prof C.R. Gautam from the physics department and a faculty in the chemistry department Abhinav Kumar made it to the database.

From KGMU, head neurology Prof R.K. Garg, head paediatrics department Prof Shaily Awasthi, associate professor at psychiatry department, Sujit Kumar Kar, head microbiology department Prof Amita Jain, associate professor Santosh Kumar of respiratory medicine department, and former Head of Department microbiology department Prof U.C. Chaturvedi have found a place in the list.

Published in:

The Economic Times

CSIR-CCMB's dry swab RT-PCR test method gets more validation

CSIR-CCMB 07th November, 2021

Another study highlights 'immense' value of the method in virus detection

CSIR-CCMB's novel 'Dry Swab', extraction-free direct RT-PCR testing method, which has reduced the time taken for the COVID test result to be declared, got further validation with another study highlighting the 'immense' value of the method in the detection of any kind of variant, better sensitivity and illuminating more 'scientific dimensions'.

Published by the Indian Academy of Sciences, Journal of Biosciences, in the latest issue, the "Temporal Stability and Detection Sensitivity of Dry Swab Diagnosis" of SARS-CoV-2 by scientists C.G. Gokulan, Uday Kiran, Santosh Kumar K and Rakesh Mishra of CSIR-CCMB, Academy of Scientific and Innovative Research (AcSIR), Ghaziabad and Buchmann Institute for Molecular Life Sciences, Goethe University, Frankfurt (Germany), discussed more advantages and scope for commercialisation as it can increase lab throughput by three-folds.

Challenges like reagent shortage, limited human resources and high transmission rate can be handled in a better manner to contain the infection and better allocation of medical resources, as it can quickly diagnose and control the spread. The study on temporal stability of two strains of SARS-CoV-2 at two different temperatures indicates that for shorter distance transportation, cold chain can be avoided and the dry swab samples with low viral load also is stable at RT for 24 hours.

In case of high sample surge, the swabs can be stored at 4°C for up to 3 days without compromising the detection sensitivity. The method is expected to hold similar advantages in case of other emerging variants of SARS-CoV-2 as indicated by multiple sewage surveillance and sequencing studies, it said.

This suggests that while the virus variants could be different with respect to the rate of infection and eliciting immune response, they are generally stable for longer time in different conditions. Throughput of dry swab-based sample processing could be further increased by collection of samples directly into tubes containing the 'TE-P buffer' and since no transportation is required, it would increase the turnover time drastically when thousands of samples are being tested.

"There is no loss of detection seen upon storage at RT for up to 3 or 4 days of time and results indicated that a minimum final concentration of 0.5 mg/ml of proteinase K is enough to produce results comparable to that of 2 mg/ml," they said. This suggests tests can be increased four times and corresponding costs reduced.

Data indicates that dry swab method correlates well with the conventional method. Lesser CT values of dry swab samples in comparison to that of the VTM-RNA samples suggest better sensitivity of the method within 48 hours of time. Dry swab samples are also found to be stable at RT for 24 hours and the detection of SARS-CoV-2 RNA by RT-PCR do not show variance from VTM-RNA.

This extraction free, direct RT-PCR method holds phenomenal standing in the present life-threatening circumstances due to COVID. Thus, we propose dry swab method as a viable and economical alternative for the existing gold standard https://rdcu.be/cAJ7Q, they added.

Published in:
The Hindu

Earlier Govts deliberately discouraged Start-Ups in J&K: Dr Jitendra

CSIR-IIIM

06th November, 2021

Srinagar, Nov 5: Union Minister of State Dr Jitendra Singh accused the earlier governments of the erstwhile Jammu and Kashmir State, of deliberately discouraging Start-Ups in Jammu & Kashmir, including in the Kashmir valley, so that, in his words "the youth could remain perpetually dependent on salaried government jobs and continue hanging around the political masters of the day."

As a result, the region's immense potential for entrepreneurship and self-livelihood remained unexplored, he said.

The official spokesperson said that while addressing an interactive meet of Agricultural Start-Ups and farmers, organised jointly by Council Of Scientific and Industrial Research (CSIR) and Sher-e-Kashmir University of Agricultural Sciences & Technology (SKUAST), on Friday the Minister said, this is for the first time in the last few years that under the leadership of Prime Minister Narendra Modi, concerted and technology based effort has been made to promote the agriculture sector for young StartUps in the region. Whereas, in the past, he said, the farmers and the agriculturists would largely depend upon the mood of climate and vagaries of nature for cultivation, in the last few years, new areas like, for example, Lavender cultivation have been explored at a large scale both in the Kashmir valley in the areas around Gulmarg etc. as well as in the Jammu region in districts Doda and Reasi.

The Minister said that no government in any country of the world can ensure 100% salaried government jobs to every youth, but a responsible government always plans to promote means

of livelihood and this is precisely what the Modi government is trying to seek. He said, a sustained awareness campaign needs to be launched among the youth and their parents to educate them that there are much more lucrative emoluments available through these self-livelihood and new StartUps options and, therefore, they should not be led to waste their time and energy in protesting for government salaried jobs.

Reiterating that the farming of today is no longer the farming of yesterday, Dr Jitendra Singh said, the farmer today is actually an agricultural technocrat or an agricultural Startup who has the option of making handsome profits using the new technology and provisions introduced in the agricultural sector by Prime Minister Narendra Modi.

He said, the Government of India through CSIR is providing all the relevant financial and technical support for new modes of cultivation, multiple integrated farming and also hybrid farming which have the capacity to double farmers' income by 2022, as envisaged by the Prime Minister.

Dr Jitendra Singh also distributed Farming Kits to agriculturists drawn from all the ten districts of Kashmir valley. An MoU of collaboration was also signed between CSIR and SKUAST.

Director General CSIR Dr Shekhar Mande, Vice Chancellor SKUAST Professor J P Sharma and Director IIIM Dr Reddy also joined the Minister during the interactive session with the farmers.

Published in:
Rising Kashmir

Focus on green fireworks production from April-May: Eco lobby

CSIR-NEERI

06th November, 2021

Prevention of the bursting of banned firecrackers is difficult to implement, said officials of the state pollution control board and environmentalists. The only solution is prevention of the manufacture of banned firecrackers in April and May, when the production usually begins, they point out. Manufacturing units, officials and environmentalists said, should be trained in making fireworks that adhere to the standards set by the authorities.

The manufacturers should also be helped to obtain certification from regulatory bodies so that people know they are buying certified products. An officer of the Kolkata police had said on Thursday that it would have been easier to enforce the cracker ban had it covered all fireworks.

"Now, whenever we are trying to seize crackers, the onus is on us to prove that they are not green fireworks," the officer had said. Manufacture and sale of all traditional firecrackers are banned in Bengal, following orders from the Supreme Court and the state pollution control board (PCB).

Only green fireworks – the standards for which are set by the Council for Scientific and Industrial Research-National Environmental Engineering Research Institute (CSIR-NEERI) – are allowed.

"Once firecrackers enter the market, it is almost impossible to prevent people from buying and bursting them. We should not be under any illusion that the crackers whose sound we are

hearing are green ones. No green fireworks have been manufactured. There is hardly any commercial production of green fireworks in our state," said Naba Dutta of Sabuj Mancha, a platform of citizens that has been tracking bursting of banned crackers in the city on Diwali and Kali Puja for years.

"If the government really wants to stop bursting of banned firecrackers, it should intervene at the point of manufacturing and distribution. Once distributed, it is tough to implement a ban," he said.

An official of the PCB who asked not to be named echoed Dutta. The official said manufacturers should be trained in making green fireworks. The manufacturers should be trained by NEERI, a Union government-run organisation that issues the certification of green crackers, the official said.

"The PCB or other departments of the state government can help NEERI meet the manufacturers." A document posted by the PCB on its website mentions that only green fireworks, bearing the green fireworks logo and a QR code, are authentic items. The code can be scanned by a mobile app named "Green QR", made by CSIR-NEERI.

On scanning the QR code, a buyer will get to see the certification details and the chemical ingredients contained in that particular green firework.

About half fireworks sold in Bengal are manufactured in the state and the rest come from Tamil Nadu's Sivakasi, said Biswajit Das, a manufacturer.

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Telegraph India

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