

CSIR IN MEDIA



CSIR

NEWS BULLETIN 26 TO 30 NOVEMBER 2020



Vehicle, factory emissions contribute most to foul Kolkata's winter air: study

CSIR-NEERI

30th November, 2020



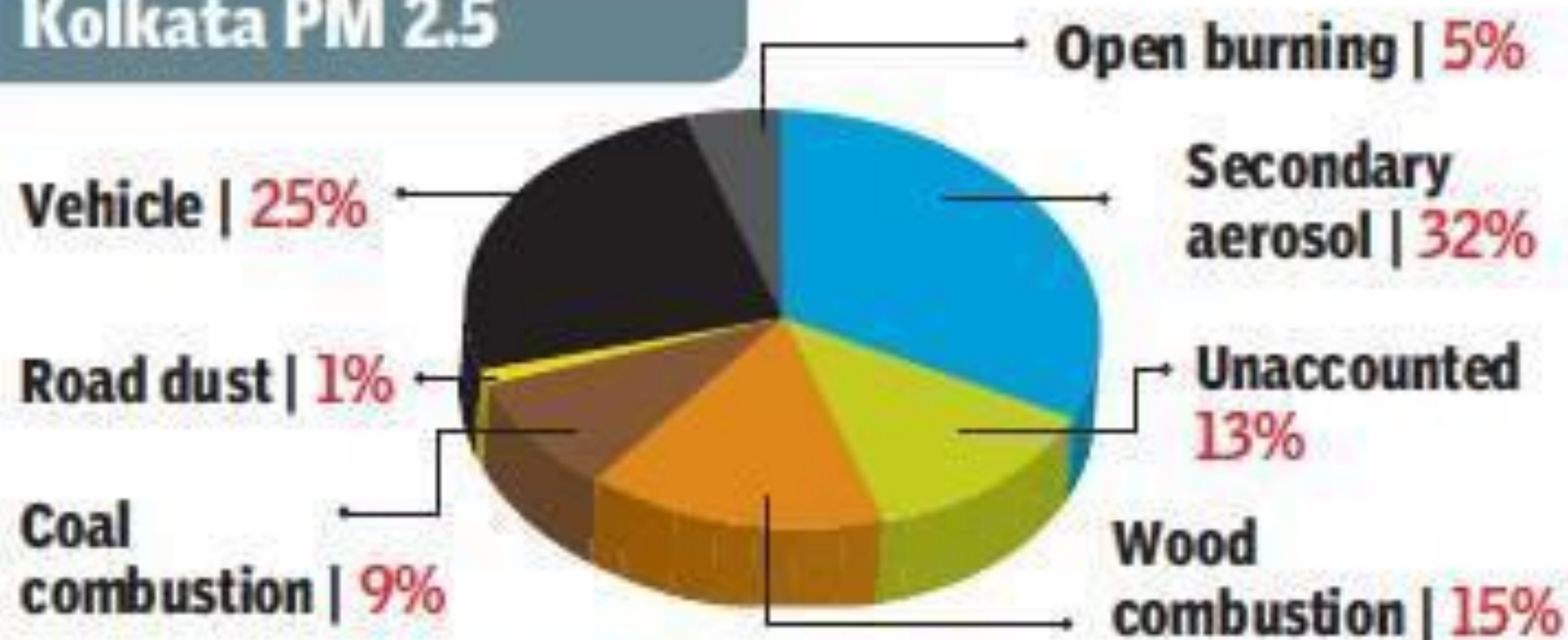
A quarter of the pollutants in Kolkata's winter air is contributed by vehicular emission, the result of a two-year study on sources and quantum of pollutants has revealed. The largest contributor to the foul winter air is secondary aerosol formed by the reaction between salts in the atmosphere and chemicals released in the exhaust of vehicles, factories and thermal stations, as well as burning of waste. According to the source apportionment study commissioned by West Bengal Pollution Control Board (WBPCB) and conducted by National Environmental Engineering & Research Institute (NEERI), secondary aerosol comprise nearly a third

of the PM_{2.5} pollutants during winter. What this essentially means is that if strategies can be formulated to reduce these two pollutant sources, nearly 60% of the city's air pollution can be addressed. The study also revealed that biomass combustion has increased during winter in Kolkata. Burning of wood and coal by civic agencies during road repair and roadside pice hotel operators, among others, contribute to another quarter of pollutants. TimesView These inputs need to be factored in our efforts to reduce air pollution. The pandemic has only reinforced how important air quality is to our life. he study, which started in the summer of 2017, is crucial for strategizing where to invest in pollution combat measures. "The measures we had adopted were based on the preliminary report in 2019. The results have been encouraging. The final report will help us fine-tune the strategies further," said WBPCB chairman Kalyan Rudra. "Secondary aerosols get self-neutralized in summer. But during winter, they become a major contributor of particulate matter. It isn't clear whether these secondary

Pic: Subhojyoti Kanjila; graphic: Dipankar Chanda

12 SPOTS MONITORED FOR 4 SEASONS

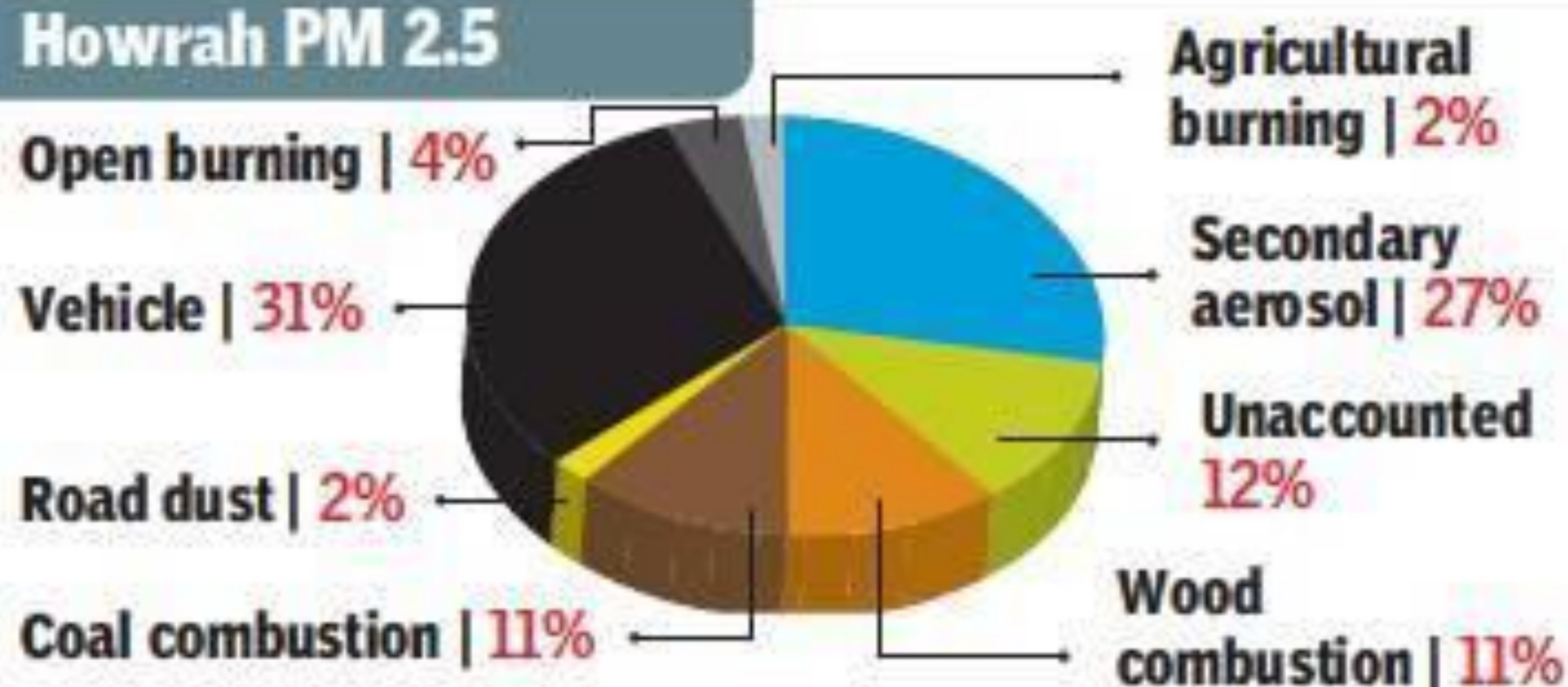
Kolkata PM 2.5



STUDY STATS

- Study covered 4 seasons – 2 winters, 2 summers – in 2017 and 2018
- 12 spots selected – Minto Park, Baishnabghata, Moulali, Shyambazar, Dunlop, Chetla, a control location in Haringhata in Kol & Bandhaghat, Dasnagar, Howrah Maidan, Buxarah, a control location in Singur in Howrah

Howrah PM 2.5



INADEQUACIES IN THE STUDY

- High percentage of unaccounted for sources (13% for Kolkata and 12% for Howrah) in winter
- Transboundary pollution ignored or could not be assessed; being at the tail end of the Indo-Gangetic plains, a proper demarcation

of areas with potential pollution-causing activities should be the prerequisite

- In winter, when instances of wood and coal combustion and open burning are high, PM2.5 modelling has recorded reduced contribution from domestic and commercial combustion

- Contribution from open burning is shown as 'nil' during winter, as compared to 6% during summer – this is unnatural since trees shed leaves in winter, which are subsequently burnt
- Construction-rich nodes of the city were ignored for the study

aerosols are formed locally or get carried in from outside,” said Deepanjan Maumdar, principal scientist and head of CSIR-NEERI, Kolkata zonal centre. “The results of the study is in line with the source apportionment studies in a majority of cities in southeast Asia,” said Amitava Bandyopadhyay, an expert on chemical components of pollutants. However, Kankana Das, an environment analyst with Legal Initiative for Forest and Environment (LIFE), an environmental research and advocacy organization, found the 12-location study inadequate for a city the size of Kolkata.

“Almost all the locations were a mix of traffic junction, residential area, residential and traffic mixture and traffic and commercial mixture. The construction-intensive locations were largely kept out, which eventually led to lower percentage contribution from the construction sector,” she said.

Published in:

[The Times of India](#)

CSIR team called on LG Mathur; discussed CSIR S&T initiatives for Ladakh

CSIR –. IIIM, IHBT, NBRI, NGRI, CMERI, CLRI

30th November, 2020

A team of Scientists of CSIR led by Director, Dr. D. Srinivasa Reddy, called on Lt. Governor, Sh. R.K.Mathur here today, they apprised him about the science & technological initiatives, the Council of Scientific and Industrial Research (CSIR) envisages, to bring the Ladakh UT on a global platform. This includes framing Science, Technology and Innovation Policy for UT, setting up of CSIR-Centre of Excellence for High Altitude Natural Sciences, establishment of experimental and demonstration farms of different medicinal, aromatic and nutraceutical plants/ crops and endemic microbial & plant biodiversity of Ladakh etc.

Through a detailed PowerPoint presentation, the LG was informed that CSIR, a premier R&D organisation under the dynamic leadership of its Director General, Dr. Shekhar C. Mande, based upon the expertise, core competencies & domain of different constituent organisations of CSIR, has, in first phase involved its six Institutes viz. CSIR-IIIM, CSIR-IHBT, CSIR-NBRI, CSIR-NGRI, CSIR-CMERI and CSIR-CLRI to provide extensive knowledge and technological support to Ladakh UT Govt. in the areas of industrial agriculture with a focus on commercialization of endemic & other high value medicinal, aromatic and nutraceutical plants, crops, bioprospection of endemic microbial and plants diversity, geophysical mapping, eco-friendly leather processing and microbiological & biotechnological intervention to bring benefits to people.

CSIR-IIIM, Jammu has been designated as a nodal institution for this endeavour of CSIR. It was also informed during the deliberations that CSIR-IIIM and M/S Sun Pharma shall jointly augment the COVID-19 testing in Ladakh by providing the technical trained manpower, equipments like RT-PCR machines and bio-safety cabinets. For this the modalities have already been worked out during their meeting with Commissioner Secretary Health, Director and other senior officials of Ladakh UT Health Department.

The team of Scientist from CSIR, Er. Abdul Rahim, Dr. Zabeer and Dr Shahid Rasool, headed by Dr. D.Srinivasa Reddy was on a three-day visit to Ladakh to explore the possibilities for implementation of various S&T, societal and economic development programmes to be launched by CSIR in Ladakh. During past three days, the team visited the Centre of Excellence for Sea Buckthorn, Nimoo, Agriculture farm, Palam-Leh, Trans-Himalayan medicinal plants farm of NISR, Leh. They also held deliberations with the officials of Agriculture Deptt., NISR and Director, DRDO-DIHAR.

The team of CSIR Scientists also held two rounds of meetings with Sh. Rigzin Samphel, Commissioner Secretary, Agriculture, Health & Horticulture, UT Ladakh, who supervised their field visits and scientific deliberations conducted during past three days.

Published in:

[The Kashmir Images](#)

CSIR team calls on LG Ladakh, discusses initiatives for UT

CSIR –IIIM

29th November, 2020

A team of scientists from the Council of Scientific and Industrial Research (CSIR) on Sunday called on Lt Governor R K Mathur here and apprised him about the science and technological initiatives to bring Ladakh on a global platform, an official spokesman said. The CSIR team led by Director D Srinivasa Reddy is on a visit to Ladakh to explore the possibilities for the implementation of various science and technological and societal and economic development programmes in the Union Territory, the spokesman said. At the meeting with the Lt Governor, the team briefed him about the initiatives which include framing science, technology and innovation policy for UT, setting up of CSIR-Centre of Excellence for high altitude natural sciences, establishment of experimental and demonstration farms of different medicinal, aromatic and nutraceutical plants or crops and endemic microbial and plant biodiversity of Ladakh, a spokesman said.

He said the LG was also informed that CSIR is providing extensive knowledge and technological support to Ladakh UT government in various fields including industry and agriculture with a focus on commercialisation of endemic and other high value medicinal, aromatic and nutraceutical plants and crops, bioprospection of endemic microbial and plants diversity, geophysical mapping, eco-friendly leather processing and microbiological and biotechnological intervention to bring benefits to people. CSIR-IIIM, Jammu has been designated as a nodal institution for this endeavour of CSIR, the spokesman said, adding it was also informed during the deliberations that CSIR-IIIM and Messrs Sun Pharma would jointly augment the COVID-19 testing in Ladakh by providing the technical trained manpower, equipment like RT-PCR machines and bio-safety cabinets. PTI TAS AQS AQS

Published in:

[Out Look](#)

CSIR –CSIO

29th November, 2020



Officials show an MoU signed for design and development of technologies in Chandigarh on Saturday. TRIBUNE PHOTO

BEL, CSIO join hands

DESIGN & DEVELOPMENT

CHANDIGARH, NOVEMBER 28

The Panchkula division of Bharat Electronics Limited (BEL) and Central Scientific Instruments Organisation (CSIO), Chandigarh, will work as joint partners for design and development of futuristic technologies in the area of aviation and perimeter security.

A memorandum of understanding (MoU) in this regard was signed between the two organisations here today. Jiten-der Kumar, Additional Director General in the Defence Ministry's Directorate General of Aeronautical Quality Assurance was the chief guest on the

occasion. He appreciated efforts of the CSIO for developing aviation technologies.

The CSIO Director, Prof SA Ramakrishna, said, "The partnership between the two organisations is cemented by this agreement. It has enabled CSIO to be BEL's natural research source. Meanwhile, BEL becomes the industry partner that takes up and translates to reality niche technologies developed by the CSIO."

Prabha Goyal, General Manager, BEL, said, "BEL will jointly explore and develop futuristic avionics technologies and systems for perimeter monitoring in order to contribute towards self reliance." — TNS

Published in:
The Tribune

विमानन और परिधि सुरक्षा की तकनीक पर मिलकर काम करेंगे सीएसआईओ व बीईएल



सीएसआईओ व बीईएल के बीच हुए समझौते के अभिलेख दिखाते अधिकारी। अमर उजाला

चंडीगढ़। भारत इलेक्ट्रॉनिक्स लिमिटेड (बीईएल) और सीएसआईओ के मध्य शनिवार को समझौता हुआ। दोनों संस्थान विमानन और परिधि सुरक्षा की तकनीक पर मिलकर काम करेंगे। भविष्य की तकनीकों के

डिजाइन और उनके विकास पर काम किया जाएगा। उन्होंने कहा कि भविष्य में अधिक विमानन प्रौद्योगिकी विकसित करने की जरूरत है। सीएसआईओ के निदेशक प्रो. एसए रामाकृष्णा ने कहा कि इस समझौते के तहत दोनों संस्थान बेहतर कार्य करेंगे। बीईएल की जीएम प्रभा गोयल ने बताया कि दोनों संस्थान भविष्य की एवियोनिक्स तकनीक का पता लगाएंगे और परिधि की निगरानी के लिए सिस्टम को अत्याधुनिक तकनीकों के जरिए लेस किया जाएगा।

Curtain raiser event of 6th IISF held at IIIM

CSIR –IIIM, NISTADS

28th November, 2020

To mark the celebrations of 6th edition of India International Science Festival (IISF) 2020, being held this year online during December 22nd – 25th, the CSIR-Indian Institute of Integrative Medicine Jammu today organized day-long online curtain raiser programme. The programme was attended by scientists, educationists, technocrats, scholars, students, teachers and members of civil society. The chief guest of the event, Dr Ranjana Aggarwal, Director, CSIR-NISTADS, Delhi, gave a lecture titled “Celebrating IISF-2020 in New Avatar.” She eloquently elaborated about the theme of IISF-2020 and its importance in the current scenario and invited everyone to participate whole-heartedly in the main event. IISF-2020 is an annual event organised jointly by Science & Technology related Ministries and Departments of the Government of India, Council of Scientific and Industrial Research (CSIR) and Vijnana Bharati (Vibha). In his virtual message, Dr DS Reddy, Director, CSIR-IIIM, said that young minds should think critically and challenge conventional set of thinking. He also pressed for the need to develop scientific temper among students for transformation of the youth and country. Er Rajneesh Anand, Chief Scientist, informed that more than 40 schools with about more than 600 students across UT of Jammu & Kashmir and UT of Ladakh participated in this event. He elaborated proceedings of the event and introduced about IISF-2020. He encouraged the students to participate in IISF-2020 in large numbers and become a part of self-reliant India. Prof Mineesh Gulati, Principal, Happy Model Foundation, Udhampur and well-known Science communicator, delivered popular science talk to the students. He encouraged the students to think critically and enjoy science. Online Extempore and Essay competitions were conducted in which more than 150 students from 40 schools across UT of Jammu & Kashmir and UT of Ladakh participated. Presentation on Aroma Mission was given by Dr Parvaiz Qazi and results were declared by Dr Asha Chaubey. Dr Deepika Singh conducted the proceedings of the event. Vote of thanks was proposed by Dr Dhiraj Vyas. Programme concluded with the National Anthem.

Published in:
[Daily Excelsior](#)

S Chandrasekar takes charge as director of CSIR NCL Pune

CSIR-IICT, NCL

28th November, 2020



After scientist Ashwini Kumar Nangia completed his tenure as the director of CSIR National Chemical Laboratory, Pune on November 27, Srivari Chandrasekar, Director CSIR-Indian Institute of Chemical Technology, Hyderabad, and a distinguished synthetic organic chemist, has taken over additional charge as the Director of CSIR- NCL. Nangia will be returning to University of Hyderabad as a senior professor of chemistry. Chandrasekar completed BSc and MSc degrees from Osmania University, Hyderabad in 1982 and 1985, respectively and obtained PhD in Chemistry from CSIR-IICT, Hyderabad in 1991 under the

supervision of A V Rama Rao. He joined CSIR-IICT as a scientist in 1994 and grew up to the position of director in 2015. Chandrasekar has published more than 285 research papers in international peer-reviewed journals and has supervised 80 PhD thesis and 20 postdoctoral associates have worked in his group. He also has 19 patents to his credit, said the official note from NCL. Chandrasekar has received several accolades including Eminent Scientist Award for contributions in the field of Chemistry from Telangana State Government in 2017, CNR Rao National Prize for Chemical Research 2012, CSIR Technology award 2014 and Infosys prize in Chemical sciences 2014 for his contributions in synthetic organic chemistry. He is a fellow of all the three Indian Science academies, i.e., National Academy of Sciences, Indian Academy of Sciences and Indian National Science academy. He is also an Alexander von Humboldt fellow, added the official release.

Published in:
[The Times of India](https://www.thehindu.com/news/national/s-chandrasekar-takes-charge-as-director-of-csir-ncl-pune/article25444444.html)

Coronavirus | Oxford COVID-19 vaccine more suitable for India: CCMB Director

CSIR-CCMB

28th November, 2020



‘Involvement of Indian firm in manufacture ensures availability’

CSIR-Centre for Cellular and Molecular Biology (CCMB) Director Rakesh Mishra has called the successful mass testing of the University of Oxford (United Kingdom) and pharmaceutical firm - AstraZeneca vaccine for COVID-19 a "historic and dream come true" as it has been able to bring it out in a "short time" "This is another good vaccine option done in a more traditional manner and less demanding in terms of transportation and the need for an extensive cold chain network. It is more likely to be suitable for the country as it can be stored at standard fridge temperatures

and it might be cheaper to manufacture than the other two successful vaccines reported so far," said Dr. Mishra in an exclusive interaction. The fact that an Indian firm, Serum Institute of India (SII), is involved in the manufacture of the Oxford-AstraZeneca vaccine means the availability is assured unlike the two RNA-based vaccines of United States firms - Moderna and Pfizer, which had cleared phase 3 trials and shown to be 90% safe. But, either of them does not have a production base here so far and, therefore, they need to be imported in large numbers. "Oxford-AstraZeneca vaccine efficacy is sound and protection of 70% overall is not a big problem as it keeps changing. Although it is puzzling why the regimen of 'half a dose first followed by one full dose, is showing more than 90% protection as against 'one full dose each twice' in a gap of four weeks showing just 62%. Whether by mistake or otherwise, if the data holds on when larger numbers are analysed, it could turn out to be a boon. Any vaccine offering protection of 50% or more is acceptable in current circumstances," observed

the director. The heartening aspect is that all the three vaccines announced to date are "stable" and "provide good protection against coronavirus". "It is a marvellous achievement for science that safety and efficiency have been established within months but we cannot accelerate time so how long will the claimed protection lasts will be known in a few years," he said. Two doses of a vaccine is a time-tested formula to strengthen the body's immune system. And, it could take up to six months after the vaccination starts for a semblance of return to normal life. The vaccine protection is normally expected to kick in for the individual concerned 10 days after the second booster injection, said Dr. Mishra.

In an ideal situation, trials on a smaller scale are done in the country before their usage for vaccines made and approved outside, but emergency approvals are more likely if vaccine is performing excellent many different contexts, he added.

Published in:
[The Hindu](#)

Villagers dig out diamond-like stones in Nagaland

BHADRA GOGOI

DIMAPUR, Nov 26: An area at Wanching village in Mon district of Nagaland bordering Myanmar may have deposits of diamond, throwing up “glittering” prospects.

A video showing hundreds of villagers digging a small hill in the village to unearth “diamond” went viral today. The villagers reportedly dug out diamond-like stones from the hill.

According to sources in Mon, the villagers are camping in the area and trying to dig out the precious metal. However, the quantity and quality of the stones found in the area could not be confirmed immediately.

“Reports apparently of #Diamond found in #Wanching village #Mon district #Nagaland,” Director General (Prisons and Jails) of Nagaland Police Rupin Sharma, who was also the State DGP, tweeted today.

Meanwhile, Mon Deputy Commissioner Thavaseelan K told this correspondent over phone that some stones have been found in the village area. He said it was still not known whether these stones are diamond or any other metal.

He added that the Nagaland Geology and Mining Department is sending a team to study the stones. “It can be con-



nal, *Current Science*, the “ophiolite” rocks of Nagaland – that is a part of the Indo-Myanmar ranges – may potentially hold “microdiamonds” – diamonds of small size, less than one millimetre.

Indications of occurrence of “microdiamonds” have come from the presence of a manganese-bearing mineral called “manganilmenite” in the ophiolite rocks in the Pokphur area of Nagaland, authors of the



Villagers digging a hill in search of diamond-like stones at Wanching in Mon district of Nagaland. – Correspondent

firmed whether these stones are diamond or any other crystal metal only after the team finds out what exactly they are,” the DC said. According to an Indo-German study published in the jour-

study – Bibhuranjan Nayak of the CSIR-Institute of Minerals and Materials Technology in Bhubaneswar, and Franz Michael Meyer of the Aachen University in Germany – said.

Published in:

Assam Tribune

रणनीति

विज्ञान को बढ़ावा देने के लिए प्रयास की दी गई जानकारी

जन-जन तक पहुंचाएं नई विज्ञानिक तकनीक

संवाद सहयोगी, पालमपुर : वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद (सीएसआइआर) एवं हिमालय जैवसंपदा प्रौद्योगिकी संस्थान (आईएचबीटी) पालमपुर के निदेशक डाक्टर संजय कुमार ने कहा कि नई वैज्ञानिक तकनीक को जन-जन तक पहुंचाया जाए। उन्होंने विज्ञान को बढ़ावा देने के लिए संस्थान की ओर से जिज्ञासा, विज्ञान मेले एवं प्रदर्शनियां, विज्ञानिक-छात्र-अध्यापक संपर्क कार्यक्रमों, विज्ञानिकों की ओर से स्कूलों में लोकप्रिय वैज्ञानिक संभाषणों के माध्यम से विज्ञान के प्रति जिज्ञासा उत्पन्न करने, किसानों एवं उद्यमियों को वैज्ञानिक तकनीकों का प्रशिक्षण जैसे प्रयासों की जानकारी दी। यह बात उन्होंने हिमालय जैवसंपदा प्रौद्योगिकी संस्थान पालमपुर में

आईएचबीटी पालमपुर में भारतीय अंतरराष्ट्रीय विज्ञान महोत्सव का आयोजन, दैनिक जीवन में विज्ञानिक दृष्टिकोण अपनाने पर दिया बल

वीरवार को छोटे भारतीय अंतरराष्ट्रीय विज्ञान महोत्सव का एक पूर्व भूमिका समारोह एमएस टीम के माध्यम से आयोजित कार्यक्रम में कही।

वैज्ञानिक और औद्योगिक अनुसंधान विभाग सचिव एवं वैज्ञानिक और औद्योगिक अनुसंधान परिषद नई दिल्ली के महानिदेशक डाक्टर शेखर सी. मांडे ने कहा कि विज्ञान को लोकप्रिय बनाने व जन-जन तक पहुंचाने में भारतीय अंतरराष्ट्रीय विज्ञान पर्व का बहुत अधिक महत्व है। उन्होंने दैनिक जीवन में विज्ञानिक दृष्टिकोण

अपनाने की आवश्यकता पर बल दिया।

समारोह के मुख्यअतिथि हिमालयन पर्यावरण अध्ययन और संरक्षण संगठन देहरादून के संस्थापक डाक्टर अनिल प्रकाश जोशी ने ग्रामीण भारत की दशकों तक उपेक्षा पर चिंता व्यक्त करते हुए बताया कि भारत आत्मनिर्भर तभी हो सकता है, जब हम अपने ग्रामीण भारत को इसमें शामिल करेंगे। प्राचीन विज्ञान का उचित उपयोग न करने के चलते विज्ञानिक उन्नति में आपेक्षित सफलता नहीं प्राप्त हो पाई।

ग्लोबल पब्लिक हेल्थ एंड डिस्कवरी रिसर्च जॉनसन एंड जॉनसन के प्रमुख डाक्टर अनिल कौल ने स्वास्थ्य क्षेत्र में विज्ञान और प्रौद्योगिकी की भूमिका विषय पर

प्रस्तुति में विषाणु रोगों के निवारण में दवा निर्माण के क्षेत्र में किए गए नवोन्मेष अनुसंधान का विवरण प्रस्तुत किया।

इस अवसर पर विज्ञान भारती हिमाचल प्रदेश अध्याय के अध्यक्ष और राष्ट्रीय प्रौद्योगिकी संस्थान हमीरपुर के एसोसिएट प्रोफेसर डाक्टर अश्विनी राणा, कृषि विश्वविद्यालय पालमपुर, आयुर्वेदिक कॉलेज पपरोला, नवोदय विद्यालय, केंद्रीय विद्यालय, सेंटपॉल स्कूल के अध्यापकों व विद्यार्थियों, विज्ञानियों, शोधार्थियों, कर्मियों, चाय उत्पादकों, उद्यमियों, लाहौल-स्पीति के कृषकों ने भाग लिया।

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सीएसआईआर-सीरी, पिलानी में संविधान दिवस का आयोजन

पिलानी (सीमा सन्देश संवाददाता)। सीएसआईआर-सीरी पिलानी में संविधान दिवस का आयोजन किया गया। संस्था के जनसंपर्क अधिकारी रमेश बौरा ने बताया कि इस अवसर पर डॉ पी.सी. पंचारिया एवं अन्य सहकर्मियों ने राष्ट्रपति रामनाथ कोविंद के साथ भारत के संविधान की उद्देशिका का वाचन किया। इसका सीधा प्रसारण दूरदर्शन के माध्यम से देशभर में किया गया। उनके साथ ही केंद्र तथा राज्य सरकारों व अन्य संगठनों के अधिकारियों व कर्मचारियों एवं अन्य नागरिकों ने भी संविधान की प्रस्तावना पढ़ी। उल्लेखनीय है कि देश के नीति-नियंताओं ने हमारे लोकतांत्रिक गणराज्य भारतवर्ष के नागरिकों



के लिए आज के दिन वर्ष 1949 में देश की प्रमुख नियम पुस्तक अर्थात 'भारत का संविधान' प्रदान किया था।

इसी महत्वपूर्ण दिन की याद में देश भर में आज के दिन को संविधान दिवस के रूप में मनाया

गया। यह कार्यक्रम गुजरात के केवडिया (सरदार सरोवर बांध) में स्थित स्टैच्यू ऑफ यूनिटी और सीएसआईआर मुख्यालय सहित देश भर में अनेक कार्यालयों और अन्य स्थानों पर भी आयोजित किया गया।

CSIR –NML

27th November, 2020

NEED NEW TECHNOLOGIES FOR CARBON DIOXIDE CAPTURE: NARENDRA

ML NEWS SERVICE

JAMSHEDPUR: T V Narendran, CEO & Managing Director, Tata Steel on Thursday said that the biggest challenge in India's target to reach 300 million tonnes of steel production by 2030, is the government regulations related to the environment.

He discussed the Chinese approach of having dedicated universities and institutions for research and handling issues in production of Steel, Mg, Ti and other materials. He emphasised the need for new technologies for carbon dioxide capture and utilization and production of green electricity and green hydrogen. The managing director was delivering the



Foundation Day lecture on 'Creating an Ecosystem for Innovation in Materials and Manufacturing' on the 71st Foundation Day of CSIR-National Metallurgical Laboratory (NML), Jamshedpur. The foundation

day programme was presided over by Dr. S. C. Mande, Secretary DSIR & DG CSIR. The chief guest of the function was Narendran. Prof. Indranil Manna, VC BIT Meshra was present as the Guest of Honour. Dr. Indranil

Chatteraj, director, CSIR-NML, in his welcome, briefly mentioned about the contribution of CSIR-NML in the development of our nation over the past 70 years through various technological developments and pioneering works. Prof. I Manna, the guest of honour, delivered a lecture on "Perspectives and Prospects of Additive Manufacturing" in which he highlighted how additive manufacturing is becoming relevant to many industries by making production processes cost effective with minimum waste. He mentioned that this industry is growing rapidly and is likely to rise to \$120 billion by 2025. As highlighted in his presentation, this manufacturing process has several

advantages and is ideal for production of high value low volume engineering components and devices, which find applications in Automotive, Defence and Aerospace industries. This year, the annual awards were declared and presented in the auspicious presence of honourable dignitaries.

These awards are conferred in the names of previous directors of CSIR-NML. The chief guest, Narendran, felicitated the award winners. Before delivering the presidential address, Dr S C Mande, released two issues of the Journal of Materials Science and Metallurgy (JMMS). These special issues are on "Advanced materials" and "Specialized and smart coatings".

Published in:
Morning India

CSIR –NML

27th November, 2020

NML 71st Foundation Day, Narendran expresses need for green electricity

Mail News Service

Jamshedpur, Nov 26 : T V Narendran, CEO & managing director, Tata Steel on Thursday said that the biggest challenge in India's target to reach 300million tonnes of steel production by 2030, is the government regulations related to the environment. He discussed the Chinese approach of having dedicated universities and institutions for research and handling issues in production of Steel, Mg, Ti and other materials. He emphasised the need for new technologies for carbon dioxide capture and utilization and production of green electricity and green hydrogen.

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energy.

In his presidential address titled "CSIR: Past, Present & Future", Dr Mande mentioned a few pioneering works of CSIR in the past and elaborated on the present ongoing works and achievements of CSIR to combat the current situation of COVID-19. CSIR has worked on several diagnostic technologies (FELUDA, Dry Swab Direct RT-PCR) and developed a ventilator (by CSIR-NAL).

He expressed willingness for working on collaborative future projects to develop CO2 utilization technologies, green hydrogen technologies and High Altitude Platform (HAP) systems (for applications in Telecommunication, Remote Sensing, Surveillance and Disaster Recovery). (W-PB)

Published in:

The Avenue Mail

**एनएमएल का 71वां
स्थापना दिवस समारोह**

सीएसआईआर ने देश के विकास के लिए लगातार प्रयास किया, कोरोना काल में डायग्नोस्टिक टेक्नोलॉजी से लेकर वेंटीलेटर तक बनाया : डायरेक्टर जनरल

2030 तक 300 मिलियन टन स्टील उत्पादन लक्ष्य में पर्यावरणीय नियम बाधक : नरेन्द्रन

सिटी रिपोर्टर | जमशेदपुर

राष्ट्रीय धातुकर्म प्रयोगशाला (एनएमएल) का 71वां स्थापना दिवस समारोह गुरुवार को ऑनलाइन आयोजित हुआ। समारोह में मुख्य अतिथि टाटा स्टील के प्रबंध निदेशक सह सीईओ टीवी नरेन्द्रन थे। कहा - भारत में 2030 तक 300 मिलियन टन स्टील उत्पादक बनने के लक्ष्य के बीच में केन्द्र सरकार का पर्यावरण संबंधी नियम बाधक है। वहीं उन्होंने चीन के स्टील उत्पादन बढ़ाने के लिए विश्वविद्यालय व रिसर्च सेंटर खोलने व नई तकनीक इजाद करने के उदाहरण दिए। उन्होंने कार्बन डाइऑक्साइड



समारोह में शामिल अतिथि।

उत्सर्जन के लिए नई तकनीक, ग्रीन इलेक्ट्रिसिटी के उत्पादन-उपभोग पर बल दिया। समारोह की अध्यक्षता कर रहे सीएसआईआर के डायरेक्टर जनरल डॉ. एससी मांडे ने कहा - सीएसआईआर ने देश के विकास के लिए लगातार प्रयास किया है।

औद्योगिक ईकाइयों से लेकर रक्षा ईकाइयों तक को नई तकनीक दी है। कोरोना काल में डायग्नोस्टिक टेक्नोलॉजी से लेकर वेंटीलेटर तक बनाया है। आने वाले दिनों में सीएसआईआर द्वारा ग्रीन हाइड्रोजन टेक्नोलॉजी-कार्बन डाइऑक्साइड

उपयोग संबंधी तकनीकों पर काम करने की बात कही। विशिष्ट अतिथि बीआईटी मेसरा के कुलपति प्रोफेसर आई मन्ना ने कहा - उत्पादन के लिए नई तकनीक विकसित करना, लागत कम करना व वेस्ट मैनेजमेंट की तकनीक विकसित करना बड़ा उद्योग बन चुका है। 2025 तक यह 120 मिलियन का उद्योग बनेगा। इस दौरान एनएमएल के डायरेक्टर डॉ. इन्द्रनील चट्टोपाय ने एनएमएल के द्वारा देश के विकास के लिए ईजाद की तकनीक की जानकारी दी, वहीं धन्यवाद ज्ञापन डॉ. सौमित्र तरफदार ने दिया। ऑनलाइन समारोह में लगभग 250 से अधिक प्रतिभागियों ने भाग लिया।

Published in:

Dainik Bhaskar

Border Roads Organization inks agreement with CSIR, CIMFR on controlled blast design for excavation of rock

CSIR-CIMFR

27th November, 2020



Border Roads Organisation (BRO) inked an agreement with the Council of Scientific and Industrial Research's constituent lab, Central Institute of Mining and Fuel Research (CIMFR) based in Dhanbad.

The agreement was signed on 25.11.2020 at HQ, DGBR for "Advice on Controlled Blast Design for Excavation of Rock at BRO Road Construction Sites". CSIR-CIMFR has been working with BRO and scientific inputs provided by CSIR-CIMFR enhanced the progress in construction by 30-40% at different strategic roads. BRO has acknowledged the effectiveness of CSIR-CIMFRs control blasting technique

and other measures for safe and efficient rock excavation. As per BRO, CSIR-CIMFR technique ensures proper fragmentation of muck and drilling efforts are substantially reduced and blasting is more controlled and stable slopes are achieved. The progress enhancement due to CSIR-CIMFR technique has been appreciated by BRO officials at critical border roads in Arunachal, Uttarakhand, Ladakh and other states, leading to the signing of the current agreement for a period of five years which can be extended further upon mutual understanding. The agreement, was signed in presence of Dr. P.K. Singh, Director, CSIR-CIMFR Dhanbad and Dr. Aditya Rana, Scientist will co-ordinate the activities. DG CSIR Dr. Shekhar Mande complimented the assistance provided by CIMFR scientists to BRO so far and expressed hope that the MoU will enable enhanced cooperation between the two and strengthen strategic preparedness in the country.

Published in:
[Doordarshan](#)

Coronavirus | Dry swab RT-PCR COVID-19 test gets ICMR nod

CSIR-CCMB, NEERI

27th November, 2020



CSIR-CCMB's simpler and cost effective method can ramp up testing.

CSIR-Centre for Cellular and Molecular Biology (CCMB) finally got the permission of the Indian Council of Medical Research (ICMR) to commercially use the 'game changing technology' of dry swab RNA-extraction free testing method for the COVID-19 virus on Friday. Developed by the in house research team, it will help public health authorities to scale up the testing at a fraction of the current cost of conventional RT-PCR tests and also give results in a double quick time. The ICMR has issued an advisory permitting "the use of CSIR-CCMB dry swab method,

considering its lesser cost and quick turn-around time after evaluating and finding an overall concordance of 96.9%". The CCMB has sought the ICMR nod after finding the trial runs successful here in association with the TS health authorities in July and first reported in these columns.

CCMB finds cheaper, more effective RT-PCR method to test COVID-19 samples

In the conventional testing method, nasopharygeal — nose or oropharyngeal — throat swab samples are collected by sample collection centres from the suspected coronavirus patients. These are transported to testing centres, sometimes even hundreds of kilometres away. The swab samples are generally placed in a liquid called Viral Transport Medium (VTM) and to avoid leakage, the samples are packed heavily that adds on to sample processing times at both the sample collection and testing centres. Yet, there could be leakages from samples, which render those batches untestable and unsafe in handling, explained CCMB Director Rakesh Mishra.

CCMB researchers have found that the 'VTM' can be totally avoided and dry swab technique also does not require RNA extraction process, and can be directly used for RT-PCR testing with sensitivity and specificity similar to the current gold standard. This can be used in settings where automated RNA extraction is not available. "RNA extraction, even with automation, takes four hours for roughly 500 samples. VTM and RNA extraction both add a significant burden on money and time required for mass testing for coronavirus. We believe the technique's merit holds for all kinds of settings and has the potential of bringing the costs and time of testing by 40-50%. COVID-19 screening can also be enhanced several fold with immediate effect while, at the same time, making the whole process safer," said the Director.

CSIR Director-General Shekhar C. Mande said the dry-swab direct RT-PCR method is easy to implement with no requirement of new kits and existing manpower can perform this with no additional training and hence could make a significant contribution to ramping up the testing capacity in the country quickly. The dry swab test methodology has also been independently corroborated by multiple premier institutes and hospitals such as Centre for DNA Fingerprinting and Diagnostics (CDFD), IISER-Berhampur, CSIR-NEERI, GMCH-Nagpur, Genepath based in Pune, IGGMSH and MAFSU, Nagpur and also Apollo Hospitals, Hyderabad. It has been published in peer reviewed journal by CSIR-CCMB and by other scientific groups in several prestigious scientific journals across the world, a release stated.

Published in:
[The Hindu](#)

Tata Steel MD Narendran expresses need for green electricity

CSIR –NML, NAL

26th November, 2020

T V Narendran, CEO & managing director, Tata Steel on Thursday said that the biggest challenge in India's target to reach 300 million tonnes of steel production by 2030, is the government regulations related to the environment. He discussed the Chinese approach of having dedicated universities and institutions for research and handling issues in production of Steel, Mg, Ti and other materials. He emphasised the need for new technologies for carbon dioxide capture and utilization and production of green electricity and green hydrogen. The managing director was delivering the Foundation Day lecture on 'Creating an Ecosystem for Innovation in Materials and Manufacturing' on the 71st Foundation Day of CSIR-National Metallurgical Laboratory (NML), Jamshedpur. The foundation day programme was presided over by Dr. S. C. Mande, Secretary DSIR & DG CSIR. The chief guest of the function was Narendran. Prof. Indranil Manna, VC BIT Meshra was present as the Guest of Honour. Dr. Indranil Chatteraj, director, CSIR-NML, in his welcome, briefly mentioned about the contribution of CSIR-NML in the development of our nation over the past 70 years through various technological developments and pioneering works.

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