

CSIR IN MEDIA



CSIR

NEWS BULLETIN

26 TO 31 DECEMBER 2021



Indian Chemical Engineering Congress (CHEMCON-2021) Comes To An End Today At CSIR-IMMT Bhubaneswar

CSIR-IMMT

31st December, 2021

The four days long Indian Chemical Engineering Congress (CHEMCON-2021) and the 74th Annual Session of the Indian Institute of Chemical Engineers (IChE) comes to an end today at CSIR- Institute of Minerals and Materials Technology, Bhubaneswar. This year IChE-Bhubaneswar Regional Centre and CSIR- IMMT Bhubaneswar organised this event in



association with the Institute of Chemical Technology-Indian Oil Odisha Campus, Bhubaneswar.

Honourable Governor of Odisha, Prof. Ganeshi Lal graced the occasion as Chief Guest. The valedictory event started with the welcome address by Prof. Suddhasatwa Basu, Director, CSIR-IMMT and also the Chairman of Local Organising Committee followed by the introduction of the guests by Prof. M. K. Jha, President, IChE.

The theme of the Conference was “Sustainable Utilisation of Resources for Chemical & Mineral Sectors” that focused on providing a forum for substantial discussion on the availability and utilization of mineral resources using the existing and emerging technologies. CHEMCON-2021 featured a host of events, which included 5 plenary lectures, 15 lectures from the CHEMCON DISTINGUISHED SPEAKERS. Two International Symposiums such as the Indo-Canada Symposium on “Clean Energy” and the Indo-South Africa Symposium on “Clean Coal Technology” were conducted where 20 speakers of international repute from India, Canada and South Africa delivered talks. Around 280 oral presentations and 105 poster presentations, concerning to various aspects of chemicals, petrochemicals, environment,

polymer, bioengineering and mineral processing took place. More than 900 delegates participated in hybrid mode. Addressing the event, Prof. Ganeshi Lal, honourable governor of Odisha said that, “To escape the challenges and the problems which the world is facing today phenomenally, the togetherness of Man and the nature is highly important. Hopefully, with the standard of living we don’t lose standard of life.” He further went on to add that, “We have dumped crores and crores of garbage and poison into the chest of the mother earth, being a child of the mother earth. That’s what we have done. That may not happen in Odisha as all care is being taken”. He also mentioned that, “I’m very happy that IMMT had organised such international level event in Odisha which is known for its rich mineral resources”.

On this occasion, Mr. Hemant Sharma, IAS, Principal Secretary of Industries department Odisha addressed the event and thanked Mr. C.P. Gurnani for his contributions to CHEMCON 2021 and Honourable Governor of Odisha, Prof. Ganeshi Lal for gracing the event with his presence. He said, “CHEMCON is an event which is not only important for the industry, for academia but it is extremely important and extremely implement for a state like Odisha. Odisha is the largest producer of iron ore and steel and we are pro-actively working on industrialisation”. He mentioned that, an event like CHEMCON was highly important for a state like Odisha.

After the governor addressed the event, Dr. C. Eswaraiah, Organising secretary, declared prizes for best presentations and posters.

This was followed by a presidential address by Prof. M. K. Jha, President, IChE. Post the valedictory session, Dr. C. Eswaraiah, Organising secretary, proposed the vote of thanks. Companies like Reliance India Limited, Indian Oil Corporation Limited, Aditya Birla Chemicals, Tech Mahindra, NALCO, Excel Industries, UPL Limited, Deepak Nitrite Limited, L&T Hydrocarbon Engineering Limited, Paradeep Phosphates Limited, IFFCO, Aarti Industries limited, The Dharamsi Morarji Chemical Co.Ltd., Transpek Silos Industry Pvt Ltd had sponsored the event.

Published in:

[Odisha News Today](#)

‘Bolster genome sequencing laboratories’

CSIR-IGIB

31st December, 2021

Pune: Public health experts have called for strengthening the existing genomic sequencing laboratories with more machines, in the wake of the state increasing genome surveillance over the Omicron variant.

At present, Maharashtra has two government genomic sequence testing laboratories, and the rest are under the Pune consortium for genome sequencing, besides a tie-up with the Council of Scientific and Industrial Research-Institute of Genomics and Integrative Biology (CSIR-IGIB). “As of now, the state has enough facilities. However, in days to come, there is a need to strengthen the existing lab network with more machines and manpower,” stated a senior official of the public health department, choosing to stay anonymous.

While testing is now largely focused on international travelers and contacts, the state has to eventually be ready for more samples from the community.

CSIR-IICT & NCL ink pact for collaborative research

CSIR-NGRI, IICT

30th December, 2021

Northern Coalfields Limited (NCL), Singrauli, and CSIR-Indian Institute of Chemical Technology (CSIR-IICT) have decided to collaborate for pursuing research and development in sustainable mining for ensuring energy security, exploring the use coal as a feedstock chemical and generation of hydrogen, and gainful utilisation of overburden material. An agreement to this was executed by CSIR-IICT/NGRI Director V.M. Tiwari in the presence of NCL CMD P.K. Sinha and others on Thursday. This initiative will be taken up as a collaborative project with initial sponsorship of ₹7.31 crore from NCL, said a press release.

NCL, Singrauli (also known as - The Energy Capital of India) based Subsidiary of Coal India Limited is mining more than 115 million tonnes of coal annually from its 10 highly mechanised opencast mines located in Singrauli and Sonbhadra district of MP and UP respectively. It is a subsidiary of Coal India Limited.

Dr. Tiwari welcomed the timely initiative of NCL to invest in promoting R&D for the use of coal as a chemical feedstock, besides addressing the needs of energy security of the nation. He also appreciated the effort of NCL toward developing technologies for utilization of overburden and other coal mine wastes. He assured the support of CSIR-IICT and its parent organization, CSIR., in realising the objectives of the pact. This collaborative initiative will help in preparing a strong roadmap for development and implementation of efficient and effective clean coal technologies, he said. The collaboration will help NCL in the direction of sustainable mining and exploring the future technologies along with the energy security of the nation, said Mr. Sinha. He also shared the other green mining initiatives of NCL in setting up plants for sand production from its overburden material, solar power plants, introduction of e-vehicles as well as use of alternatives, and aims to become a net-zero carbon company in the future.

Published in:

[The Hindu](#)

Omicron: Assam mulls setting up genome sequencing lab in Guwahati

CSIR-NEIST

30th December, 2021

Guwahati: Amid the threat posed by the 'Variant of Concern' – Omicron, the Assam government is contemplating setting up a genomic sequencing laboratory at the Guwahati Medical College and Hospital (GMCH) in a bid to boost the testing and tracking infrastructure in the state. Assam health minister Keshab Mahanta, accompanied by a team of virologists, visited



the Jorhat-based North East Institute of Science and Technology (NEIST) on Wednesday and discussed the matter with the authorities and scientists at the institute.

In mid-2020, a COVID-19 testing laboratory was established in the Jorhat campus of the North East Institute of Science and Technology (NEIST). It may be mentioned that the institute's Biotechnology Division has been playing a pivotal role in carrying out RT-PCR-based COVID-19 tests.

“Assam has been consistently fighting against COVID-19 and all preventive measures are in force to protect the citizens from the virus. Considering the emergence of the Omicron variant in the country, we have beefed up measures in our state,” Mahanta said.

The minister met CSIR-NEIST director Dr G Narahari Shastry in the presence of the National Health Mission Assam managing director and deliberated on enhancing the state's medical infrastructure, including setting up a COVID-testing laboratory in Guwahati, and other facilities for better diagnosis.

The deliberations have been prompted by the growing need and importance of SARS-CoV-2 genome sequencing in the Northeast, keeping the Omicron scare in context. The minister and virologists also visited the advanced molecular laboratory of NEIST.

Genome sequencing helps researchers identify variants that spread to new regions. Scientists have been using genome sequencing to track SARS-CoV-2 almost in real-time since the onset of the pandemic.

India has already recorded over 900 Omicron cases, with 21 states in the country reporting increasing cases of Omicron over the past few days. There is great concern in the Northeast with an Omicron case detected in Manipur recently. A 48-year-old Africa returnee to Manipur had tested positive for Omicron after his sample was sent for genome sequencing.

Three other contacts of the person have also tested positive for COVID-19, but their genome sequencing results are awaited.

Next 25 years exciting time for science in India: CSIR chief

CSIR

30th December, 2021

The country will see a number of fundamental discoveries made here in the upcoming 20 to 25 years, said Dr Shekhar Mande, director general of the Council of Scientific and Industrial Research (CSIR), on Tuesday. Mande was speaking on 'India's S&T journey in the post Independence era' organised to mark the 33rd foundation day of the Inter University Centre for Astronomy and Astrophysics (IUCAA). This was also the first of the lecture series organised by the Pune-based university to mark 75 years of India's independence.

"We are at a particular stage that in the coming 20 to 25 years, we are going to see a very exciting period for our country. There will be many fundamental discoveries and the future of science actually lies very firmly in the Indian soil," said Mande.

He said India's progress and scientific achievements, during the past 75 years, have been far ahead compared to the 50-60 contemporary countries that won independence around the 1940s and 1950s, "including our neighbours".

The Covid-19 pandemic and India's response, its strategies to tackle the outbreak and being the first to identify the disease to be an air-borne one, even prior to the declaration made by the World Health Organisation, all showcase the critical situations which Indian scientists are capable of handling today, he said. "The pandemic saw many collaborative works in the field of biology, like never before," said Mande.

With the fresh SARS Cov-2 variant, Omicron, looming and Covid-19 cases once again beginning to see a spike in many parts of the country and world over, the CSIR chief urged people to fix concealed ultra-violet set-ups installed in their ACs to control the spread of the infection indoors. He shared that the infection spread was found to be reduced by 60 to 70 per cent with this intervention, which has been made in the Parliament and the AC coaches of

trains operated by the Indian Railways. “An effective way to inactivate the virus in closed rooms supported by ACs would be by using UV-light. I urge all universities and institutions to get this setup fixed in their offices, auditoriums, etc. The only care that needs to be taken is that UV light is not exposed to humans,” suggested Mande.

On the future challenges before the scientific community, Mande said that scientists at a number of CSIR labs were working on developing some advanced technologies to address the effective use of hydrogen, finding alternatives to fossil fuels and ways to perform carbon capture-storage-use.

Sharing the latest developments from the CSIR labs, Mande said that recently, India became only the second country in the world to use indigenously developed bio-fuel to operate its defence aircraft. By August next year, the demonstration of unmanned aerial vehicles — commonly used in disaster management, remote sensing, surveillance and telecommunications — operable at a height of about 20 km above the earth’s surface will be undertaken.

SBI Foundation supports CCMB in setting up CoE for Genomics Guided Pandemic Prevention

CSIR-CCMB

29th December, 2021

Hyderabad: SBI Foundation, the CSR arm of SBI, on Tuesday said it has aided CSIR-Centre for Cellular and Molecular Biology (CCMB) in setting up a Centre of Excellence for Genomics Guided Pandemic Prevention to strengthen India's genome sequencing capabilities. Inaugurating the centre, SBI chairman Dinesh Khara said, the CoE will help the country make informed, data-driven decisions to fight the Covid-19 pandemic.

Khara also handed over a cheque of Rs 9.94 crore to Vinay Kumar Nandicoori, director, CSIR-CCMB.

AiRTH's vSure Antimicrobial Air Purifier passes CSIR-IMTECH testing; successfully kills 99.9% of black fungus

CSIR-IMTECH

28th December, 2021

Since AiRTH commenced its operations in 2020, its products and novel vision have garnered much attention worldwide. Its antimicrobial air purifiers, the first in the world, have been tested on multiple grounds to check the efficiency and effectiveness that the company promises to deliver. Recently, the renowned CSIR-IMTECH (CSIR- Institute of Microbial Technology) lab tested AiRTH's vSure Antimicrobial Air Purifier on black fungus entrapment & killing efficacy and concluded that the product killed 99.9% of black fungus causing fungi species (*Mucor hiemalis* & *Rhizopus oryzae*). This path-breaking announcement puts AiRTH's purifiers in the front league and adds another level of protection certification to the futuristic line of products.

Humanity saw the worst of nature during the second wave of the COVID-19 pandemic in India. Besides rising COVID-19 cases and deaths, several instances of black fungus emerged and created panic. This deadly fungal infection was primarily found in 'recovering' COVID-19 patients as the medications (such as steroids) given to treat COVID-19 were immunosuppressants, making patients more susceptible to black fungus. Hence, people were scared and became hesitant to visit hospitals/health care centers for regular medical check-ups and treatments.

Though black fungus cases have dialed down in India, its threat is not only restricted to COVID-19. This is a never-ending issue, which can be caused by a number of factors like diabetes (especially uncontrolled diabetes), long-term use of steroids, weak or compromised immune system, prolonged stay in the ICU, and more. Instead of living in fear of contracting this deadly infection, it's better to bring home an AiRTH purifier. Besides eliminating harmful air pollutants, its vSure antimicrobial air purifier will successfully kill 99.9% of black fungus and allow you to breathe clean and safe air.

Commenting on the notable announcement, Ravi Kaushik, Founder & CEO of AiRTH, said, “As viruses and fungus in the air have troubled us for generations, we wanted to create products that can have a complete check on them. Over the past years, we have conducted several purifier tests to examine its accuracy before selling them to the end customers. Representing IIT Bombay & IIT Kanpur and being a tech-driven and R&D-driven startup, we have meticulously developed our technology. After securing validation from the CSIR-NABL lab (prestigious national laboratory of the Government of India), our latest testing validation from the CSIR-IMTECH lab has added another feature in our cap of benchmarks that no other purifier company has achieved so far. Our multi-functional purifier can be installed in hospitals, homes, and offices to eliminate air pollutants and fungus, enabling Indians to breathe safely.”

AiRTH recently acquired funding from Whiteboard Capital, Syrma Technology, and FIRST (IIT Kanpur) and plans to disseminate it to scale its production and after-sale services, meeting PAN India demand of its customers.

CSIR hands over Vehicle-mounted Drain Cleaning System technology to MANIAR & CO.

CSIR-CMERI

28th December, 2021

CSIR-CMERI today handed over the Non-Exclusive rights for Technology Know-How of the indigenously developed 'Vehicle mounted Drain Cleaning System' to MANIAR & CO., Ahmedabad, Gujarat. The Vehicle Mounted Drain Cleaning System is a Mechanized Scavenging System consisting of 3 modules namely (i) Recycled Slurry Water Unit (ii) Closed Loop Feed Back System (iii) Post Cleaning Inspection System.



The CSIR-CMERI developed Vehicle Mounted Drain Cleaning System Prototype have been demonstrated at CSIR- National Physical Laboratory, New Delhi in the presence of Dr. Shekhar C Mande, Director General, CSIR, Prof. Harish Hirani, Director, CSIR-CMERI and other officials of CSIR, Engineers of Delhi Jal Board and Municipal Corporations of East, West and North Delhi. The efficiency and effectiveness of the Technology was highly appreciated by the present officials and subsequent to that an Expression of Interest was floated by CSIR-CMERI as a result of which the Technology is being handed over to Maniar & Co.

Dr. V.K. Chaurasia, Joint Advisor, Ministry of Housing and Urban Affairs, Government of India, congratulated CSIR-CMERI, Maniar & Co. and Tata Motors Limited on achieving such a wonderful accomplishment. He said, the deployment of the Technology in the Society through the various Civic Administration Agencies across the Nation will resolve the huge challenge associated with 'Eradication of Manual Scavenging' from India.

Dr Chaurasia said, the adoption of the Technology across the Nation will help create 'Regional Manufacturing Hubs' which consequently will help drastically improve the Employment Scenario and Economic Prospects across the Nation. Besides, the CSIR-CMERI Municipal Solid Waste Management Technology also holds the potential to be the 'Game-Changer' in the domain of Waste Management and help realise the Vision of the Prime Minister of India of a 'Zero-Landfill India'.

Prof. Harish Hirani, Director, CSIR-CMERI, during his address shared that the 'Transfer of Know-How' to MANIAR & CO. marks the 'Beginning of a New Chapter in Collaborative Business Model'. This Business Model forges the specialized expertise of Government Technology Institutions, Government of India Ministries, Original Equipment Manufacturers and Specialized Manufacturing Agencies to develop a seamless Economic Framework for time-bound and efficient delivery of Impactful Products for the Society.

Mr. Iqbal Maniar, Co-Founder, MANIAR & CO, thanked CSIR-CMERI for facilitating the adoption of the Technology. MANIAR & CO have been working in the domain of Mechanized Solutions for Sewerage Systems and observed that the most challenging thing has been the scarce availability of Water for the proper functioning of the Systems. The Pricing of the Technology is much cost-effective when compared to the existing Technologies and even more so relative to the imported variants.

Mr. Satheesh Machiraju, Sr. General Manager, Tata Motors Limited, Shri K. Sanjeeva Rao, General Manager (Govt. and Public Affairs), Delhi, Tata Motors Limited, congratulated the stakeholders for this momentous accomplishment. Tata Motors has always supported path-breaking innovations and they expressed their belief that the widespread adoption of the Technology will hugely benefit the Nation in the Long-Term.

CSIR-CIMAP, NBRI, IHBT, NEERI

28th December, 2021

IHBT demonstrates stevia crop



CSIR-NEERI director Dr Atul Vaidya at CSIR stall in Agrovision while others look on.

LOKMAT NEWS NETWORK
NAGPUR, DEC 27

Council of Scientific and Industrial Research (CSIR) participated in Agrovision 2021. Various CSIR Institutes engaged in developing agro products and farming equipment displayed their products for the benefits of farmers and guided them on increasing their productivity with the minimum cost of production.

The farmers of Vidarbha were encouraged to cultivate various varieties of lemon grass and palmarosa developed by CSIR-CIMAP to get more benefit.

CSIR-CIMAP, Lucknow has already deployed improved varieties of lemon grass and palmarosa on 600 acres of land in Vidarbha. Various herbal products including skin care, hair care, mosquito repellent, nutraceuticals, disinfectants, etc. were also showcased by CSIR-CIMAP.

CSIR-NBRI exhibited the biofertilizers and herbal products in order to increase income of farmers.

CSIR-IHBT demonstrated a potential of Stevia cultivation in Vidarbha, which is known as sweet herb of Paraguay and 300 times sweeter than sucrose.

CSIR-CCMB, CSIR-IICT collaborating on indigenous mRNA vaccine for COVID-19

CSIR-CCMB, IICT

27th December, 2021

CSIR-Centre for Cellular & Molecular Biology (CCMB) is working in collaboration with CSIR-Indian Institute of Chemical Technology (IICT) and others on developing an indigenous mRNA vaccine. “It is going to take a while with rigorous development and testing before it can be brought out in the form of an injectable vaccine”, said its director Vinay Kumar Nandicoori.



“This has been started by my predecessor Rakesh Mishra and we are continuing the process, doing analyses, testing out multiple steps in the last few months like making the RNA, and packaging into lipid particles etc,” he explained. The director pointed out that although the mRNA vaccine making is not novel because two mRNA vaccines are already in use across the world to tackle the COVID pandemic —Moderna and Pfizer — it will nevertheless requires quite lot of work as the process has not been obtained from any company.

The premier scientific institute has been in the forefront right from the time the pandemic broke out in March 2020 working in validation of diagnostic kits, developing new technologies, testing for new drugs, training personnel and in genome sequencing. “We have worked heavily on genome sequencing and approximately 12% of all the sequences across the country have come out of CCMB,” he pointed out.

With generous funding from the INSACOG - Indian SARS-CoV-2 Genomics Consortium, and others like Rockefeller and SBI Foundations, it has been able to utilize next generation sequencing platform “Novaseq” where 700-800 sequences can be done at a single shot and

through another method of 'Nanopore' 50 sequences can be done in one go. “In the recent past, we get most samples from Andhra Pradesh. These are travellers samples and genome sequencing is being done to identify Omicron cases among them”, he explained. Centre for DNA Fingerprinting and Diagnostics (CDFD) handles the Telangana and Hyderabad airport samples, said the top scientist.

Dr. Nandicoori said apart from working on improved diagnostics to test for new variants, testing new drugs and vaccinations, surveillance - genome sequencing, testing in air and sewage sampling maybe done consistently to get an idea about the spread of the infection and emergence of any new variants.

“Genome sequencing turnaround is about three - four days so by testing and genome sequencing of COVID positive samples, we can get information regarding the spread of new variants. Once we test for a certain number of samples, we will know the Omicron percentage in the general population,” explained the Director.

He advocates for the "whole world should get vaccinated" and "ensure as much vaccine coverage as possible before a more virulent variant than the Omicron comes from other parts of the world, challenging our immune system.”

CSIR participates in Agrovision 2021

CSIR-CIMAP, NBRI, CMERI, IHBT, CFTRI, NEERI

27th December, 2021



Council of Scientific & Industrial Research (CSIR) participated in Agrovision 2021 organized at Nagpur on 24-27 December, 2021. Various CSIR Institutes engaged in developing agro products and farming equipment displayed their products for the benefits of farmers and guided them on increasing their productivity with the minimum cost of production.

The farmers of Vidarbha were encouraged to cultivate various varieties of lemongrass and palmarosa developed by CSIR-CIMAP to get more benefit. CSIR-CIMAP, Lucknow has already deployed improved varieties of lemon grass and palmarosa in 600 acres of land in Vidarbha. Various herbal products including skin care, hair care, mosquito repellent, nutraceuticals, disinfectants, etc. were also showcased by CSIR-CIMAP.

CSIR-NBRI exhibited the biofertilizers and herbal products in order to increase income of the quality of crops was shared with the farmers. CSIR-CMERI, Durgapur showcased its new inventions for modern agriculture including solar-based automatic irrigation and cotton picking head. Automated irrigation with solar tree was demonstrated to the farmers as an ideal solution to load shading.

CSIR-IHBT demonstrated a potential of Stevia cultivation in Vidarbha, which is known as sweet herb of Paraguay and 300 times sweeter than sucrose. On an average, dry leaf yield of stevia is 3.0-3.5 tonnes/ha/year, which fetches market price of Rs.100 to 120/ kg, resulting in net return of Rs.2.0-2.7 lakh/ha/year. Edible and ornamental bamboos were also displayed by CSIR-IHBT.

CSIR-CFTRI apprised the farmers about bakery, beverage, cereal, fruit and vegetable along with economically viable processing, were also displayed by CSIR-CFTRI. CSIR-NEERI informed the visitors about the work done by CSIR-NEERI on green corridor development on national highway between Jam and Hinghanghat in Nagpur region.

Dr.Atul N. Vaidya, Director, CSIR-NEERI inaugurated the CSIR pavilion. He interacted with the visitors and scientists participating from various CSIR Institutes.

On all days, the CSIR pavilion was visited by thousands of farmers from Vidarbha region. Most of the visitors were curious to know about the achievements of CSIR and many were interested in taking the CSIR technologies. The CSIR scientists also interacted with farmers, entrepreneurs and students at the CSIR pavilion.

Over 200 beams erected to support damaged bridge in Vellore

CSIR-SERC

27th December, 2021

After four days of hard work, more than 200 support beams have been erected under the damaged railway bridge across the Ponnai river in Vellore district.

The repairs have come to an end, and the trial run of trains is expected to begin on Monday, railway officials said on Sunday.



Senior officials, including Chennai Divisional Railway Manager Ganesh and a team of experts from Structural Engineering Research Centre (CSIR-SERC), had camped at the site for the past two days to monitor the repairs to the British-era bridge. “Regular run of express trains will take a few more days because a safety audit has to be done,” a railway official said.

Railway officials said each steel beam is 6 feet long, 1.5 feet high and 2 feet wide and weighs 180 kg-200 kg. More than 200 beams have been erected around the damaged brick-and-mortar pillar. They have been buttressed by dozens of sandbags.

As ordered by Collector P. Kumaravel Pandian, water release into the Ponnai, a tributary of the Palar, has been stopped to prevent damage to the beams.

Published in:

[The Hindu](https://www.thehindu.com)



Please Follow/Subscribe CSIR Social Media Handles



[CSIR INDIA](https://www.youtube.com/CSIRINDIA)



[CSIR_IND](https://twitter.com/CSIR_IND)



[CSIR India](https://www.facebook.com/CSIRIndia)



[CSIR India](https://www.linkedin.com/company/CSIR-India)



[csirindia](https://www.instagram.com/csirindia)