

CSIR IN MEDIA



CSIR

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CSIR turns 80: plans pseudo-satellites while promising timely pay to the researchers

CSIR-NAL, NPL, NML, NCL, CGCRI, CIMFR

25th September, 2021

On its 80th birthday, the Council of Scientific and Industrial Research casts its gaze towards the sky as its plans to make pseudo-satellites or very high altitude UAVs that can do a variety of things at a fraction of cost than conventional satellite. Bengaluru-based National Aerospace Laboratories, one of the 37 constituent laboratories of CSIR, will manufacture the prototypes of such a high altitude UAV that has never been realised.



"Once made, such UAVs, flying at an altitude of 20,000 mt, will carry all sorts of sensors for imaging. They are not as costly as a satellite, but can do many tasks that a satellite does," Shekhar C Mande, CSIR director general, told DH.

Such high altitude platforms have been advocated for nearly a decade, but never made due to lack of clarity and many unknowns in cost and performance analyses. There are also unresolved technical and procedural challenges in the areas of certifications, reliability, and flight in controlled airspace. With a basic design in hand, NAL that played a key role in making several indigenous aircraft, has undertaken a technology demonstration project comprising detailed design and engineering development of the high altitude platforms, leading to the manufacturing of two prototypes.

The high altitude platform is one of the futuristic projects of the 80-year-old CSIR that gave India products as diverse as the country's first tractor (Swaraj) and indelible ink used during

elections to a home-grown CRISPR-based Covid-19 detection kit (FELUDA), which was also developed by two of the world's best laboratories – Massachusetts Institute of Technology and University of California, Berkeley.

The CSIR was formed on September 26, 1942 through a Department of Commerce Resolution of the British government succeeding the Board of Scientific and Industrial Research created in 1940.

While its initial budget was Rs 10 lakh, the council received a grant of Rs one crore two years later to establish its first five laboratories – National Metallurgical Laboratory at Jamshedpur, National Physical Laboratory in Delhi, National Chemical Laboratory in Pune, Central Glass and Ceramics Research Institute in Kolkata and Central Fuel Research Institute at Dhanbad. One fifth of that grant came from the Tata group.

By the end of 1954, twelve national laboratories were established and a dozen more were at the planning stage. From less than 200 employees in the 1940s, the CSIR has grown into an organisation with nearly 15,000 employees and a budget of over Rs 5,000 crore.

As the council starts working on other futuristic projects on green hydrogen, carbon capture and coal gasification, a conscious effort is being made to resolve a long-pending problem – timely distribution of the fellowships for the junior and senior research fellows in the laboratories.

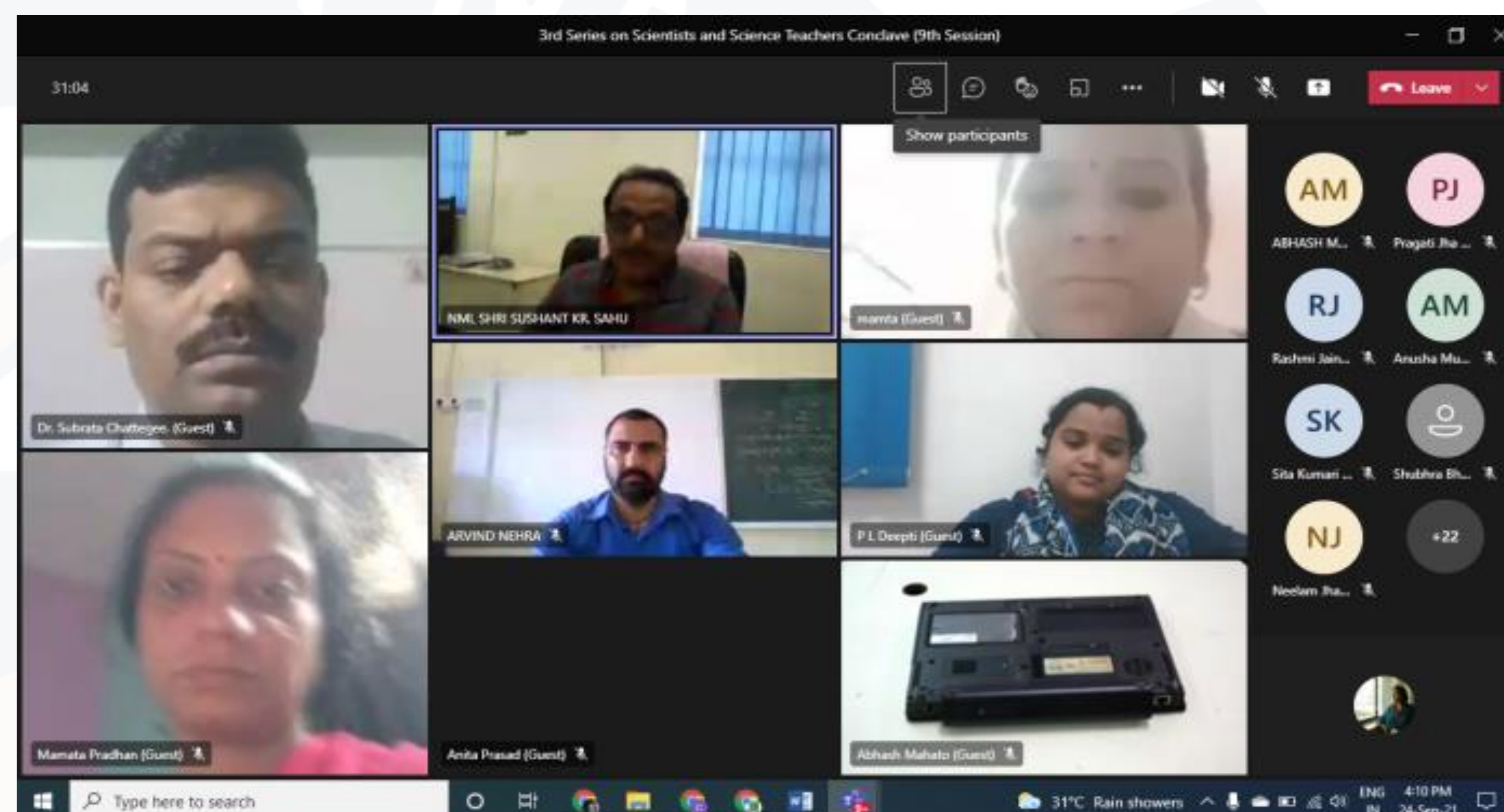
Not receiving the fellowship money in time is an issue repeatedly flagged by young scientists to the CSIR top brass. “We handle nearly 8,000 fellowships per month, of which 70-80 per cent get the payment in time. It is the problem of the remaining 20-30 per cent people that we are trying to resolve,” Mande said.

Indian unorganised sector recycles 95 % e-waste: Dr. SK Sahu

CSIR-NML

25th September, 2021

Jamshedpur, Sep 25: CSIR-National Metallurgical Laboratory (NML), Jamshedpur organised 9th Scientists & Science Teachers Conclave (SSTC) on 24th September 2021 on a virtual platform. The program was based on the theme 'E-waste' and the main objective of this online event was to create innovative content for teaching science to school students and also to encourage students to learn science with fun and creativity.



Dr. Mita Tarafder, Chief Scientist of CSIR-NML in her welcome address talked about the idea behind arranging this online event saying that it is a new concept of innovative learning. She requested the teachers to come forward and use this platform to share their experiences of innovative teaching.

The keynote address was delivered by Dr. SK Sahu, Principal Scientist, MER Division of CSIR-NML on the topic "E-waste Recycling in India". As stated by him, e-waste disposal is an issue with the developing countries like India due to lack of knowledge for proper disposal of e-waste and also due to absence of law to deal with e-waste management. He said that in India, 90-95% of the e-waste generated is recycled by unorganized sector who recover only the precious metals like gold, silver, aluminium, copper etc. and dispose of the rest in landfill which in turn gives rise to environmental pollution and various health issues. He elaborately discussed the major concerns associated with e-waste disposal and the possible ways to tackle the issues.

This was followed by a demonstration on collection of e-waste from laptop and computer by the team members of CSIR Virtual Lab Team. Demonstrations were done jointly by Dr. Aniket Dutt and Deepak Dhibar of KRIT Division, CSIR-NML.

The virtual event received good response from the participants. The program was attended by more than 40 teachers, students, scientists and professionals. Pragati Jha of KRIT Division, CSIR-NML proposed the vote of thanks and appreciated all organisers for conducting the event successfully.

Published in:

[The Avenu Email](#)

CSIR-CSMCRI

25th September, 2021

Celebration of Jigyasa outreach program under the umbrella of Azadi ka Amrit Mohatsav

ભાવનગર સેન્ટ્રલ સોલ્ટ દ્વારા કરાયેલું આયોજન જળ શુદ્ધિકરણ અને પીવાલાયક પાણીની અછત પર ઓનલાઈન સેમિનાર યોજાયો ઈન્ડસ્ટ્રીલાઈઝેશનથી પાણીની ગુણવત્તા પર થતી માઠી અસર

। ભાવનગર (સંદેશ પ્રતિનિધિ) ।

CSIR-CSMCRI, ભાવનગર દ્વારા સી એસ આઈ આર- જિજ્ઞાસા- અટલ ટીકરીંગ લેબોરેટરી ના સહયોગથી આઝાદીના અમૃત મહોત્સવ નિમિત્તે વેબિનરનું આયોજન કરાયું હતું.

સી એસ આઈ આર- સેન્ટ્રલ સોલ્ટ એન્ડ મરીન કેમિકલ્સ રિસર્ચ ઈન્સ્ટિટ્યૂટ, ભાવનગર દ્વારા ૨૪ સપ્ટેમ્બર ૨૦૨૧ ના રોજ જળ શુદ્ધિકરણ અને પીવાલાયક પાણીની અછત પર ઓનલાઈન સેમિનારનું આયોજન કરવામાં આવ્યું હતું. ભારત સરકાર દ્વારા ૭૫ માં સ્વતંત્રતા વર્ષ દરમિયાન ઉજવાયેલ સ્વતંત્રતાના અમૃત મહોત્સવ, સી એસ આઈ આર- જિજ્ઞાસા અને અટલ ટીકરીંગ લેબોરેટરી (ATL, નીતિ આયોજનું અટલ ઈનોવેશન મિશન) અંતર્ગત થયું હતું. આ કાર્યક્રમમાં પ્રધાન વિજ્ઞાનિક તથા સી એસ આઈ આર- જિજ્ઞાસા કાર્યક્રમના સંયોજક ડૉ. ડુંગર રામ ચૌધરીએ શાળાના તમામ આચાર્યો, એટીએલ-ઈનચાર્જ અને વિદ્યાર્થીઓનું સ્વાગત કર્યું હતું. ડૉ. ચૌધરીએ તેમના સંબોધનમાં નવમાથી ભારમા ધોરણના વિદ્યાર્થીઓને સંબોધ્યા તથા સી એસ આઈ આર- સેન્ટ્રલ સોલ્ટ એન્ડ મરીન કેમિકલ્સ રિસર્ચ ઈન્સ્ટિટ્યૂટ, ભાવનગર ખાતે વિવિધ ક્ષેત્રોમાં ચાલી રહેલા સંશોધન કાર્ય વિશે જણાવ્યું હતું. આ સાથે, તેમણે સી એસ આઈ આર- જિજ્ઞાસા પ્રોગ્રામના



વિવિધ પરિભાષોથી વિદ્યાર્થીઓ ને રાજકોટ, મોરબી, હળવદના માહિતગાર કર્યા હતા. વિદ્યાર્થીઓએ ભાગ લીધો હતો.

સત્ર દરમિયાન સંસ્થાના વિજ્ઞાનિક બોમિક સુતરીયાએ પીવાલાયક પાણીની કટોકટી તથા પાણીનું શુદ્ધિકરણ વિષે ચર્ચા કરી હતી. પીવાના પાણીની અછત પુરા વિશ્વ માટે કટોકટીની સ્થિતિ બનાવી રહી છે. ભારતના પણ મોટા ભાગ માં આ કટોકટી સર્જાઈ રહી છે. વાતાંલાપ દરમિયાન બતાવવામાં આવ્યું કે દેશના વિકાસ તથા ઈન્ડસ્ટ્રીલાઈઝેશનથી પાણીની ગુણવત્તા પર માઠી અસર થાય છે. આ સમસ્યાના ઉકેલ માટે પાણીની ઉપલબ્ધતા કેવી રીતે વધારવી એ બાબતે વાતાંલાપ કર્યો હતો. આ કાર્યક્રમમાં અટલ ટીકરીંગ સેન્ટર ભાવનગર, અમરેલી,

Published in:

Sandesh, Saurashtra

CSIR-NCL, RIL manufacture useful moulded plastic components from COVID-19 PPE waste

CSIR-NCL, IIP

24th September, 2021

While the COVID-19 pandemic has been raging worldwide, there has been comparatively much less chatter about the associated waste generation from the healthcare sector. To this effect, CSIR-National Chemical Laboratory (CSIR-NCL), Pune, jointly with Reliance Industries Ltd. (RIL) and several other companies from Pune have managed to manufacture useful



moulded plastic components from COVID-19 PPE waste, as per a press release from the companies.

The pilot project has the potential to be implemented throughout the country to recycle PPE waste into useful and safe products, as per the press release.

Ever since the COVID-19 outbreak, there has been a substantial increase in demand for single use plastic items such as PPE, masks, gloves, etc. Across India, more than 200 tons of COVID-19 related waste was generated every day in May 2021. Usually, this hazardous waste is incinerated at central waste management facilities. However, this is not conducive to the environment as incineration is energy-intensive and leads to the release of harmful greenhouse gases, the press release further stated.

CSIR-NCL, RIL and other companies thus tried to develop an end-to-end process for effective recycling of COVID-19 plastic waste to produce plastic products. The focus was on the conversion of suitable plastic waste for downstream processing and identification of potential stakeholders/markets for creating value for entire supply-chain.

In a proof-of-concept study, the CSIR-NCL team successfully demonstrated the lab-scale manufacture of moulded automotive products from the decontaminated PPE plastic waste (at M/s Niky Precision Engineers, Pune) by leveraging the existing recycling infrastructure available in Indian cities.

CSIR-NCL and RIL have now signed an MoU to scale up the production, laying a path to take the concept to the national level. A pilot scale of 100 Kg in the Pune city area was successfully implemented by collaborating with Pune-based companies like M/s APPL Industries Limited, M/s SKYi Composites, M/s Harsh Deep Agro Products, M/s Urmila Polymers, M/s Jai Hind Autotech Pvt. Ltd., who produced the recycled goods.

The feed material (PPE kits) was collected and decontaminated by Passco Environmental Solutions, a waste management company located in Pune. CSIR-NCL secured all regulatory approvals needed from the Maharashtra Pollution Control Board (MPCB) to complete this pilot trial.

The technical journey of CSIR-NCL, aided by Reliance and CSIR-Indian Institute of Petroleum (CSIR-IIP) Dehradun, with funding from the Council of Scientific and Industrial Research, mainly involved converting the decontaminated PPE waste (mainly comprising PPE suits/overalls) into an easily processable and upcycled agglomerated form (pellets or granules).

It was ensured that the polymer pellets show the right attributes necessary for successful conversion to produce nonfood applications, including high-performance automotive components. This pilot project can be implemented across India to build a sustainable circular “green” economy that can propel India’s growth in this relatively untapped sector and contribute towards India’s socio-environmental targets.

Published in:

[First post](#)

Now, cars can have sensors to alert possible collisions

CSIR-CRRI

24th September, 2021

The next James Bond movie is round the corner and there is every chance every four-wheeler will soon have at least one of the features of his iconic car that warns of possible collisions ahead with the help of sensors. An indigenous Artificial Intelligence (AI) based system developed jointly by multiple public and private agencies, including the International Institute of Information Technology (IIIT-Hyderabad), is currently being pilot tested and will also be seen in Mahindra's latest SUV.



iRASTE – Intelligent Solutions for Road Safety through Technology and Engineering project is a combined effort of the government, Applied AI Research Institute (INAI), Intel, IIIT-Hyderabad, CSIR-CRRI - Central Road Research Institute, Mahindra and Mahindra and the Nagpur Municipal Corporation.

“IIIT-H has been working with Intel in creating datasets for Indian driving conditions and this resulted in IDD or Indian Driving Dataset, helpful for researchers to develop their own algorithms. Setting up of INAI was like a natural progression to formalise the industry partnership and to find applications to sophisticated AI in everyday problems,” said INAI CEO Varma Konala in a post on the website.

The project was recently launched in Nagpur by Union Minister of Road Transport Nitin Gadkari. While Intel-India brought onboard systems based on Advanced Driver Assist System (ADAS) technology, CSIR-CRRI domain expertise was in road engineering and

Mahindra and Mahindra helped in conducting road safety public awareness programs and driver training. The group has been conducting small pilot studies of ADAS technology by Mobileye (an Intel company) where a camera mounted on the windshield of a vehicle will scan the entire road ahead using complex algorithms to track potential risks for safety.

If the system detects a potential risk of collision, it gives an audio and visual warning to the driver, like if a driver gets too close to the vehicle ahead, a warning will let him know so that he can slow down and maintain a safe following distance. A similar warning is sounded in case of a risk of colliding with pedestrians, cyclists or even stray animals. It also provides an alert to prevent unintentional drifting into the wrong lane. Nagpur Municipal Corporation has already adopted the collision avoidance technology in a fleet of its intra-city buses. While the primary goal is to reduce accidents and casualties through modification of driver behaviour via the use of assistive technology, the second objective lies in leveraging the predictive power of AI for fixing road infrastructure, he said.

“Currently, an accident-prone zone or black spot is identified by statistical analysis by looking into deaths and fatalities of an area but it is a lagging indicator. Accumulated data from the sensors installed in the buses can help flag potential risk in certain zones, creating a leading indicator of a potential black spot which can be corrected through road engineering,” explained Mr. Varma.

The technology has also been especially adapted to suit Indian conditions. Mobileye’s partnership with Mahindra and Mahindra has resulted in the same technology getting integrated in their latest XUV 700. While the initial roll-out of the system is in Nagpur, the eventual goal is to replicate the solution in other cities too. Talks are also on with the Telangana government to adopt the technology in a fleet of buses that ply on highways, he added. For a country that has seen 1.2 lakh deaths even in the pandemic year of 2020 a quick roll out should help reduce fatalities.

Published in:

[The Hindu](#)

Covid: If third wave comes, its intensity will be low. DG CSIR explains why

CSIR

24th September, 2021

Covid-19: The Council of Scientific and Industrial Research (CSIR) on Friday said that even if the third wave of Covid comes in the country, its intensity will be low as the large population has received at least one dose of vaccine.

Dr Shekhar C Mande, Director-General, CSIR said India has been able to get a large population vaccinated with the first dose and even with the second dose. "Our vaccines do prevent the disease to a large extent. If tested positive after being jabbed, the severity of COVID-19 is also reduced. Even if the third wave comes, then the intensity will be low and much less than compared to the second wave," Mande was quoted as saying by news agency ANI.

Experts have been saying that possibility of third wave depends on new strain and the pace of vaccination. Manindra Agrawal, who is a Professor at IIT-Kanpur, recently said that the emergence of another wave depends on the emergence of a more infectious strain. Agrawal was part of a three member team of experts who predicted almost an accurate date of arrival of the peak of the second wave in India, according to the news agency.

Dr Renu Swarup, Secretary, Department of Biotechnology, Government of India recently said that the "third wave will come if we invite the third wave to come. It is all about the human behaviour and the virus behaviour".

Dr Samiran Panda, head of epidemiology and communicable diseases, ICMR also said that the states/UTs like Delhi and Maharashtra should not see any upsurge in cases because they have already seen widespread and intense second wave.

The deadly second wave of Covid swept across India in April-May with infection cases breaching the four-lakh mark per day. At one point, active cases had gone over 35 lakh with nearly 4,000 daily casualties. This forced several states to go for lockdown as hospitals were running out of oxygen and ICU beds that were needed for Covid patients.

Genetic testing mandatory for every married couple, say CSIR-CCMB scientists

CSIR-CCMB

24th September, 2021

‘There is a chance of one in 30 to pass on the gene to the off-spring’

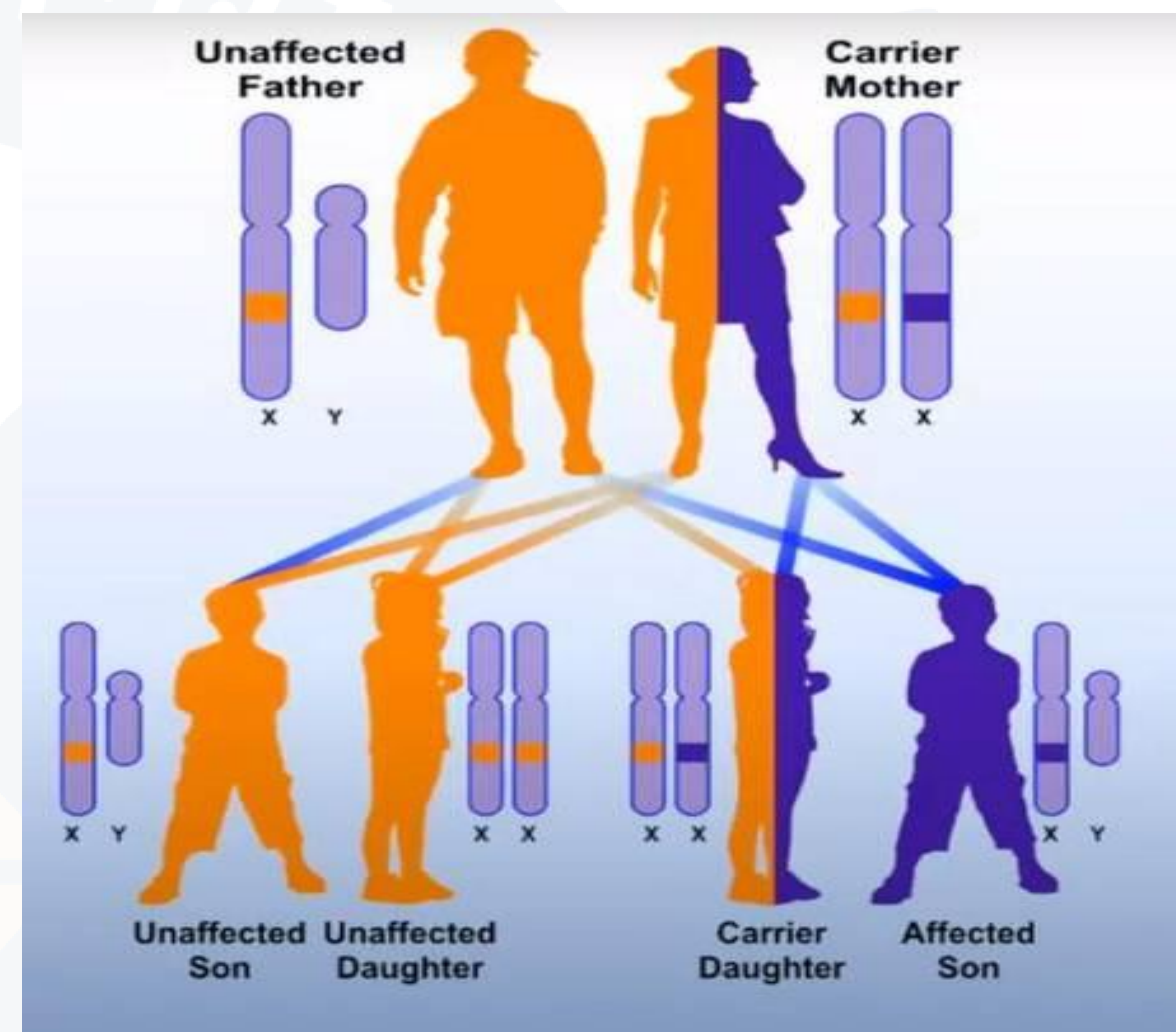
India with a huge population and known for endogamous and consanguineous marriages — within the same community or family — it is necessary for every married couple to undergo genetic testing for thalassemia since there is a chance of one in 30 to pass on the gene to the off-spring, said scientists of the CSIR-Centre for Cellular and Molecular Biology (CCMB) on Thursday. CCMB has a full-fledged Genetic Diagnostic Centre within its premises where

several options are there for families to get tested for various genetic diseases caused by mutations, which could manifest in the subsequent generations from silent carriers. These could be neurological diseases, cancers, sickle cell anaemia, spinal muscular atrophy and several others.

Early detection

“Most genetic diseases are incurable but can be managed or prevented with early detection and diagnosis. There is a chance for mutated gene to be carried into every pregnancy. Rare diseases occur in one or two persons in every 5,000, which means 70-96 million people are susceptible to carrying genetic disorders collectively putting a healthcare burden,” said scientist Surya Prabha during the ‘Open Day’ virtual presentation.

Genetic diseases could affect several generations in a family and any incidence of repeated pregnancy failures, failure to identify health issue despite numerous tests, hole in the heart,



deformities during birth and the likes should be the alerts to seek genetic counselling and testing for identifying the disorders. While there are no curative treatments, about 800 of them can be managed with injections, transfusions and gene therapy available for four disorders, she said.

Various tests can be carried out during the pregnancy testing the fluids to check for the signs of any genetic diseases in the off-spring using cytogenetic, molecular and sequencing techniques. Hypertension and diabetes do not have a cure while tuberculosis is rampant despite medication being available, so there is nothing to be unduly alarmed about genetic disorders, the scientist observed, offering hope of advanced treatments available within 10-15 years.

Earlier, director Vinay K. Nandicoori said every year close to 10,000 students visit the campus for interacting with scientists and watching them work in labs during 'Open Day' programme but the pandemic has forced an online event for the second successive year and hoped for a return to normalcy next year.

CCMB has contributed a lot during the pandemic in terms of training for diagnostics, genome sequencing with 10,000 samples done so far, finding new diagnosis methods, taking up sewage and air surveillance, screening for drugs and so on. "It is amazing a vaccine was pulled out within a year's time showing how science has transformed the human health sector," he said and hoped youngsters interested in science and as a career will be piqued during these interactions across the weekend.

CSIR-CMERI's Solar DC Cooking System, a step towards green & pollution free India

CSIR-CMERI

23rd September, 2021

Taking a small step in realising the dream of a 'Pollution-Free India', the CSIR-CMERI has developed a Solar DC Cooking System. In the distinguished presence of Swami Somatmanandaji Maharaj, Ramakrishna Mission Ashrama, Asansol, and Tapas Banerjee, Chairman, Asansol Durgapur Development Authority, Government of West Bengal, Prof. Harish Hirani, Director,



CSIR-CMERI, handed over the newly developed Solar DC Cooking System to the Asansol Braille Academy of West Bengal. The Solar DC Cooking Technology developed by the CSIR-CMERI has been transferred to two companies: Asansol Solar & LED House, and Meeco Solar & Infrastructure Associates, Durgapur.

How will it help to mitigate the Pollution?

The Solar DC Cooking System is a solar energy-based cooking system that includes a solar PV panel, charge controller, battery bank, and cooking oven. The technology offers a clean cooking environment, inverter-free direct operation, fast and uniform heating, and the ability to reduce 1 tonne of CO₂ (Carbon Dioxide) per year /household.

While speaking at the Press Conference, Prof. Harish Hirani, Director, CSIR-CMERI, expressed his gratitude for being able to hand over the indigenously designed Solar DC Cooking System to the Asansol Braille Academy, which has been doing an outstanding job in servicing Specially-Abled Children. The Solar DC Cooking System developed by the CSIR-CMERI is a small step towards realizing that ideal of a pollution-free India.

How will it be beneficial for the citizens?

In comparison to conventional solar-based cooking systems, which lose efficiency due to AC-DC conversion, the CSIR-CMERI designed Solar DC Cooking System has a 20-25 % higher efficiency and is more cost effective.

The Micro-Industries could benefit from the basic technology design because it enables ease-of-manufacturing and gives a significant economic opportunity. There is a chance that job prospects will improve as the popularity of technology grows.

Even if the use of LPG releases carbon dioxide, this system will significantly reduce carbon dioxide emissions. When the technology is out in the market, it would cost between Rs 65,000 and Rs 70,000. If government subsidies are offered, the price of the product will be significantly reduced, similar to other Solar Energy-based items. Widespread use of the CSIR-CMERI-developed Solar DC Cooking System could help India meet its aim of 200 GW of solar energy, as envisioned by the Prime Minister Narendra Modi, as well as saving 290 million tonnes of CO₂(Carbon Dioxide) emissions.

Why Solar Cooking?

Household air pollution from cooking fires in the home is a leading cause of respiratory disease, which kills many precious lives each year. Harnessing free solar energy for cooking will make drinking water safe, improve health, build resilient families, break the cycle of poverty, empower women and children and boost local economies as solar cookers do not produce any smoke.

Is Solar Power AC or DC?

Solar photovoltaic technology works on DC power. Solar panels generate direct current when the sun shines on panels, causing electrons to move and create current, thus, the current is direct as all of the electrons flow in the same direction.

Published in:

[News On Air](#)

NCL mechanism aims to convert PPE waste to recycled raw items

EXPRESS NEWS SERVICE
PUNE, SEPTEMBER 23

AT A time when efforts were being made across the world to phase out single-use plastic, the Covid-19 pandemic struck and forced back heavy use of Personal Protection Equipment (PPE) kits, gloves, masks and more such plastic-blended wearables.

The tonnes of waste generated as a result now pose serious environment hazards, unless these plastics are appropriately recycled.

In a step towards this, city-based CSIR - National Chemical Laboratory (NCL) has partnered

with Reliance Industries Limited and a number of companies in Pune to recycle waste PPEs and turn them into recycled granules and pellets. These, scientists say, can then be used to make upcycled products.

Rough estimates suggest that 200 tonnes of waste was generated in India during May this year, when the country was dealing with the deadly second wave of the Covid-19. Normally, this hazardous waste is incinerated at central waste management facilities. However, these require enormous amounts of power, and harmful greenhouse gases are often emitted as byproducts.

In a pilot project led by NCL, PPE waste weighing 100 kg generated in Pune was collected and decontaminated. NCL later processed it and has now successfully tested its technique, which experts say can be done even with higher volumes of PPE waste. NCL and RIL have entered an MoU under which this project will be scaled up.

The project aims not only to tackle large amounts of PPE waste but identify market players who could use these recycled granules and pellets into making useful products and set up a supply chain for the entire process, thus making it an end-to-end process.

Published in:

Indian Express, Times Of India

CSIR-NCL

23rd September, 2021

CSIR-NCL, RIL join hands to recycle COVID-19 PPE waste

‘पीपीई वेस्ट’ पासून प्लास्टिक उत्पादनांची निर्मिती

रिलायन्ससह विविध कंपन्यांच्या सहकार्याने
राष्ट्रीय रासायनिक प्रयोगशाळेचा पुढाकार

लोकसत्ता प्रतिनिधी

पुणे : राष्ट्रीय रासायनिक प्रयोगशाळेने रिलायन्स इंडस्ट्रीज आणि पुण्यातील अन्य कंपन्यांच्या सहकार्याने पीपीई वेस्टपासून (स्वसंरक्षण साहित्याचा कचरा) प्लास्टिक उत्पादने विकसित करण्यात यश मिळवले आहे. पीपीई वेस्टपासून प्लास्टिक उत्पादने करण्याचा प्रायोगिक प्रकल्प राबवण्यात आला असून, पीपीई वेस्टपासून उपयुक्त आणि सुरक्षित उत्पादने करणे शक्य असल्याचे स्पष्ट झाले आहे. आता देश पातळीवर हा प्रकल्प राबवण्याची क्षमता आहे.

करोना काळात स्वसंरक्षण साहित्यातील सूट, हातमोजे, मुखपट्टी आदी वस्तूंचा वापर मोठ्या प्रमाणात वाढला. भारतभरात मे महिन्यात करोना संबंधित जवळपास दोनशे टन कचरा दररोज निर्माण होत होता. आतापर्यंत केंद्रीय कचरा व्यवस्थापन सुविधेमार्फत हा कचरा जाळून विल्हेवाट लावली जात होती. मात्र कचरा जाळण्यातून हरितवायूंचे उत्सर्जन होत असल्याने ते हानिकारक आहे. या पार्श्वभूमीवर एनसीएल, रिलायन्स आणि अन्य कंपन्यांनी करोनासंबंधित प्लास्टिक कचऱ्याच्या प्रभावी पुनर्वापरासाठी प्रकल्प हाती घेतला.

एनसीएलने देशभरातील शहरांमध्ये उपलब्ध असलेल्या पुनर्वापराच्या पायाभूत सुविधांचा वापर करून निर्जंतुक पीपीई वेस्टपासून पुण्यातील निकी प्रिसिजन इंजिनिअर्स येथे प्रायोगिक तत्वावर



पुनर्वापरातून तयार झालेले आणि कृषी, स्वयंचलित वाहन उद्योगात वापरले जाणारे सुटे भाग

मोल्डेड ऑटोमोटिव्ह वस्तूंचे उत्पादन केले. पुणे शहर परिसरात एपीपीएल लिमिटेड, हर्षदीप अॅग्रो, जयहिंद ऑटोटेक यांनी पीपीई वेस्टपासून उत्पादने तयार केली.

पास्को एन्व्हायर्नमेंटल सोल्यूशन्स या कंपनीने निर्जंतुकीकरणाचे काम केले, तर या कचऱ्याचे तुकडे-गोळ्यांमध्ये रूपांतर करण्यासाठी एपीपीएल लिमिटेड तांत्रिक साहाय्य केले. तसेच तयार झालेल्या पॉलिमरच्या गोळ्यांमध्ये स्वयंचलित वाहनांसाठीचे सुटे भाग तयार करण्यासाठीचा उच्च दर्जा आणि आवश्यक गुण असल्याची खात्री एनसीएलने केली. तसेच महाराष्ट्र प्रदूषण नियंत्रण मंडळाकडून आवश्यक नियामक मान्यताही मिळवल्या.

आता एनसीएल आणि रिलायन्स यांनी सामंजस्य कराराद्वारे प्रायोगिक तत्वावर उत्पादन वाढवून या प्रकल्पाला देशपातळीवर नेण्याचे नियोजन करण्यात आले आहे.

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देश की अर्थव्यवस्था का आधार है कृषि, बरसात का पानी बचाएं, इसी से बढ़ेगी आय: डॉ संधु

सीरी का 69 वां स्थापना दिवस मनाया

पिलानी. केन्द्रीय इलेक्ट्रॉनिकी अभियांत्रिकी अनुसंधान संस्थान सीरी का 69 वां स्थापना दिवस वर्चुअल रूप से मंगलवार को मनाया गया।

श्रीकरण नरेन्द्र कृषि विश्वविद्यालय जोबनेर के कुलपति डा. जेएस संधू मुख्य अतिथि थे।

मुख्य अतिथि ने कृषि को देश की अर्थ व्यवस्था का आधार बताते हुए गिरते जल स्तर की रोक थाम के लिए जल के बचाव की आवश्यकता पर बल दिया। सीएसआईआर के महानिदेशक डा शेखर सी मांडे ने कार्यक्रम की अध्यक्षता करते हुए देश के वैज्ञानिक समुदाय द्वारा किए जा रहे वैज्ञानिक नवाचारों से जुड़ी जानकारी दी।

सीएसआईआर सीरी की

अनुसंधान परिषद अध्यक्ष तथा केपीआईटी पुणे के सीईओ रवि पंडित ने वर्तमान समय को इलेक्ट्रॉनिक्स युग करार देते हुए इंटेलिजेंट वर्ल्ड की अवधारणा पर चर्चा की। उन्होंने इलेक्ट्रॉनिक्स में शोध की संभावनाओं के बारे में सम्बोधित करते हुए युवा वैज्ञानिकों से नवीन अनुसंधान करने की अपील की। इससे पहले सीरी निदेशक डा पीसी पंचारिया ने सम्बोधित करते

हुए सीरी संस्थान से जुड़ी शोध गतिविधियों की जानकारी दी। इस मौके सीरी संस्थान के वैज्ञानिकों द्वारा विकसित किसान सखा एप का लोकार्पण भी किया गया। अतिथियों ने संस्थान में दस, बीस, पच्चीस तथा तीस वर्ष से बेहतर सेवा करने वाले कार्मिकों का सम्मान किया गया। संस्थान मुख्य वैज्ञानिक डा पीके खन्ना ने आभार जताया।

सीरी ने मनाया 69वां स्थापना दिवस • वक्ता बोले-भूजल के गिरते स्तर का प्रभावी उपचार है प्रीसीजन कृषि

सीरी : वैज्ञानिकों के बनाए 'किसान सखा' एप का लोकार्पण

भास्कर न्यूज | पितानी

केंद्रीय इलेक्ट्रॉनिकी अभियांत्रिकी अनुसंधान संस्थान (सीएसआईआर-सीरी) का 69वां स्थापना दिवस मंगलवार को मनाया गया। समारोह के मुख्य अतिथि श्रीकर्ण नरेंद्र कृषि विश्वविद्यालय, जोबनेर के कुलपति प्रोफेसर डॉ. जेएस संधू थे। अध्यक्षता सीएसआईआर के महानिदेशक एवं सचिव डीएसआईआर व पृथ्वी विज्ञान मंत्रालय डॉ. शेखर सी मांडे ने की। केपीआईटी, पुणे के सीईओ एवं संस्थान की अनुसंधान परिषद के अध्यक्ष रवि पंडित विशिष्ट अतिथि थे। संस्थान निदेशक डॉ. पीसी पंचारिया ने अतिथियों का स्वागत करते हुए संस्थान द्वारा गतवर्ष अर्जित की गई प्रमुख उपलब्धियों

सहकर्मियों को सेवा प्रमाण-पत्र देकर सम्मानित किया

समारोह के दौरान संस्थान निदेशक डॉ. पीसी पंचारिया ने संस्थान में 10, 20, 25, 30 और 35 वर्ष की अनवरत सेवा देने वाले 48 सहकर्मियों को सेवा प्रमाण-पत्र प्रदान किए। इसके साथ ही इस वर्ष से संस्थान के प्रथम निदेशक की स्मृति में आरंभ किए गए डॉ. अमरजीत सिंह स्मारक स्थापना दिवस पुरस्कार भी वितरित किए। इसमें एआई आधारित मुखाकृति पहचान उपस्थिति प्रणाली, ऑक्सीजन प्लांट और ऑक्सीजन कंसट्रेटर बनाने वाली टीमों के सदस्यों को सम्मानित किया गया। संचालन रमेश बौरा ने किया।

और शोध गतिविधियों की जानकारी दी। अतिथियों ने संस्थान के वैज्ञानिकों द्वारा देश के किसानों की सुविधा के लिए विकसित "किसान सखा" एप का लोकार्पण किया। प्रधान वैज्ञानिक डॉ. संजयसिंह ने किसान सखा एप की जानकारी दी। अतिथियों ने "सटीक कृषि प्रायोगिक स्टेशन" का आभासी दौरा

किया। डॉ. सुचंदन पाल, प्रमुख पीएमई ने स्थापना दिवस सेवा पुरस्कारों और पदाभूषण डॉ. अमरजीत सिंह स्मारक स्थापना दिवस पुरस्कारों के विजेताओं की घोषणा की। मुख्य अतिथि डॉ. जेएस संधू ने कृषि को देश की अर्थव्यवस्था का आधार बताते हुए सीरी द्वारा विकसित किए जा रहे प्रीसीजन कृषि प्रायोगिक

स्टेशन की सराहना की। उन्होंने 'किसान सखा' एप को भी किसानों के लिए उपयोगी बताया। उन्होंने सीएसआईआर और आईसीएआर के मिलकर कार्य करने के अपने स्वप्न को साकार होने पर प्रसन्नता व्यक्त की। भूजल के गिरते स्तर पर चिंता व्यक्त करते हुए जल के पुनर्चक्रण पर बल दिया और इसके लिए प्रीसीजन कृषि को जरूरी बताया। अंत में उन्होंने विजेताओं को पुरस्कार दिए। विशिष्ट अतिथि रवि पंडित ने कहा कि वर्तमान युग इलेक्ट्रॉनिक्स का युग है और इसके बिना आज जीवन की कल्पना नहीं की जा सकती। नई डिजिटल दुनिया में रह रहे हैं जो बेहद इंटेलिजेंट वर्ल्ड है। मुख्य वैज्ञानिक डॉ. पीके खन्ना ने आभार व्यक्त किया। संचालन डॉ. राजेंद्रकुमार वर्मा व सोम शुक्ला माइति ने किया।

Jitendra Singh meets Rupala; proposes integrated Aroma Dairy Entrepreneurship for J&K

CSIR-IIIM

21st September, 2021

New Delhi, Sep 21 (PTI) Union Minister Jitendra Singh on Tuesday met Animal Husbandry and Dairying Minister Parshottam Rupala and proposed an integrated Aroma Dairy Entrepreneurship for Jammu and Kashmir to boost farmers' income.

The Science and Technology Minister said Jammu and Kashmir has an abundant stock of animal husbandry as well as dairy resources and suggested that the same can be effectively integrated with Aroma Mission, which has already been launched in the Union Territory by the Council for Scientific and Industrial Research (CSIR).

This will pave the way for integrated Aroma Dairy Entrepreneurship, ensuring sustainable growth, increased income and fresh avenues of livelihood for farmers, the Ministry of Science & Technology quoted Singh as saying in a statement.

Singh said that the Aroma Mission -- also popularly referred to as "Lavender or Purple Revolution" -- has started from J&K and transformed the lives of farmers who are able to grow lavender, make a lucrative profit and improve their lives.

He said the efforts of CSIR-IIIM are laudable as they have introduced the crop native to Europe in the districts of Doda, Kishtwar and Rajouri in J&K.

Aroma Mission was launched by the CSIR in line with Prime Minister Narendra Modi's vision of improving farmers' livelihood.

Apart from providing planting material, distillation units are provided to farmers who are trained in the extraction. And many of them have become entrepreneurs as lavender oil is quite sought after, the statement said.

Besides lavender, many high value aromatic and medicinal cash crops have been introduced by the CSIR in J&K. It is now being expanded as Aroma Mission Phase II, and also floriculture mission has been recently launched. This will fetch the much-needed transformation in the lives of farmers and women, it added. PTI PR BAL

IIT Bombay, CSIR, Ather Energy top Clarivate's influential innovators list for Southeast Asia

CSIR

21st September, 2021

London-headquartered Clarivate, a leading provider of trusted information and insights to accelerate the pace of innovation has announced the winners of the annual South and Southeast Asia Innovation Awards at its Innovation Forum for the region held on September 21. The winners from India include the Indian Institute of Technology, Bombay (IIT Bombay), Council of Scientific and Industrial Research (CSIR) and smart electric scooter OEM Ather Energy.



Clarivate says that more than 400 leaders and industry insiders from academic, government and industry sectors participated in the virtual event where the innovation ecosystems in the region and the importance of sustainable development were discussed.

The company says for this year 276 organisations from academia, government and corporate sectors have been recognised in its honours list. Among them, 27 organisations received an Innovation Award. The awards are based on an analysis of patent volume, citation volume, patent success and the level of globalisation, using patent data from Derwent World Patents Index (DWPI) and Derwent Patent Citations Index (DPCI).

Gordon Samson, President, IP Group, Clarivate said, “We are pleased to once again identify and recognise the top innovators in South and Southeast Asia, an expansive and populous region with great growth potential. At Clarivate, we are on a mission to improve the way the world creates, protects and advances innovation. We are committed to helping our customer in

the region to accelerate the pace of innovation by unlocking the full value of their intellectual property.” KRS Jamwal, executive director, Tata Industries said: “The optimistic scenario materialising at the pace we want is going to require three key actors to push this forward in unison - governments, universities, and corporates. And all these three will have to focus on game changing R&D innovation, rather than incrementalism or re-purpose.”

Clarivate states that its criteria used to select the top innovators in South and Southeast Asia closely mirrors that of the annual the Top 100 Global Innovators which identifies organisations at the pinnacle of the global innovation landscape.

| Clarivate Innovation Awards 2021 – South & Southeast Asia | |
|---|--|
| Academic Institutions | |
| Country | Organisation |
| India | Indian Institute of Technology Bombay |
| Indonesia | Diponegoro University |
| Malaysia | Universiti Putra Malaysia (UPM) |
| Philippines | Cebu Technological University |
| Singapore | National University of Singapore |
| Vietnam | Hanoi University of Science and Technology |
| Government Research Organisations | |
| Country | Organisation |
| India | Council of Scientific and Industrial Research (CSIR) |
| Indonesia | Indonesian Institute of Sciences (LIPI) |
| Malaysia | Malaysian Palm Oil Board |
| Singapore | Agency for Science, Technology and Research |
| Vietnam | Vietnam Academy of Science and Technology |
| Corporations | |
| Country | Organisation |
| Indonesia | PT Pertamina |
| Malaysia | Top Glove Corporation Berhad |
| Singapore | ASM Pacific Technology |
| Sri Lanka | MAS Holdings |
| Thailand | Siam Cement Group |
| Vietnam | Viettel Group |
| Corporations in India (by industry segments) | |
| Agri-business | UPL Limited |
| Automotive | Mahindra & Mahindra |
| Chemicals & Energy | Indian Oil Corporation |
| Consumer Goods | ITC |
| Heavy Industries | Bharat Heavy Electricals |
| Other | Welspun Group |
| Pharmaceuticals | Suven Life Sciences |
| Software | Wipro |
| Emerging Corporations | |
| Country | Organisation |
| India | Ather Energy |
| Singapore | KaHa |

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National R&D labs bring livelihoods to Odisha's poorest district

CSIR-IMMT, NBRI, CIMAP, CFTRI

19th September, 2021



In 2019, a consortium of 12 national research and development laboratories joined hands in a rare effort to transform livelihoods in Odisha's Nabarangpur, one of India's poorest districts. Two years later, the interventions appear to be creating quite a stir.

With 56% tribal and 15% Dalit population, Nabarangpur has the lowest per capita income of ₹14,700 per annum in Odisha (at 2004-05 prices), and 50% of its working population does not have any work. At the bottom in almost all social indicators, it has been identified as an aspirational district by the Centre.

The collaboration involves five Council of Scientific and Industrial Research laboratories — the Institute of Minerals and Materials Technology (IMMT) in Bhubaneswar, the National Botanical Research Institute (NBRI) in Lucknow, the Central Institute of Medicinal and Aromatic Plants (CIMAP) in Lucknow, the Central Food Technological Research Institute (CFTRI) in Mysuru, and the Indian Institute of Petroleum in Dehradun; and an equal number

of Indian Council of Agricultural Research centres — the Central Institute of Freshwater Aquaculture (CIFA) in Bhubaneswar, the Indian Institute of Horticultural Research in Bengaluru, the Central Tuber Crops Research Institute in Thiruvananthapuram, the Central Avian Research Institute in Bhubaneswar, and the Indian Institute of Water Management in Bhubaneswar. The Indian Council of Medical Research's Regional Medical Research Centre in Bhubaneswar, and the Department of Biotechnology's Institute of Life Sciences in Bhubaneswar.

Nabarangpur, where little happened till a couple of years ago, now has 5,000 farmers, artisans and women self-help groups involved in livelihood generation with 12 government departments and 15 entrepreneurs.

Three-day-long training by scientists of the CFTRI propelled Albedin Bagh, 30, from being a housewife to a chocolate maker in the district headquarter town of Nabarangpur. Her handmade chocolates help her earn her ₹30,000 a month. “As I have got a fair idea about the market, I intend to switch to automation this year itself,” said Ms. Bagh. The CFTRI has formally transferred nine processes and technologies in favour of Nabarangpur's new entrepreneurs.

Nabarangpur's almost non-existent fish market, which was heavily dependent on imports from Andhra Pradesh, is likely to see local fish flooding it in a year or two. “For procuring good quality spawn and seeds, we used to travel hundreds of kilometres to Pakhanjore in Chhattisgarh, or Kolkata. After the CIFA conducted a number of refreshers' courses and live demonstrations on scientific fish farming, I have expanded my operations,” said Sujit Das, who runs a hatchery at Umarkote. Mr. Das, who has invested ₹10 lakh in the hatchery, said he might achieve break even this year itself, if things move as planned.

“We have been able to set up the entire fish value chain in Nabarangpur by establishing aquaculture clusters through hatcheries. Apart from providing government subsidies, our intention is to germinate entrepreneurial zeal among youths. We have succeeded to a far

extent,” said Nagesh Kumar Barik, scientist at CIFA. CIMAP, meanwhile, is promoting cultivation of lemon grass, Japanese mint and vetiver, and seeing the promise of a better return, farmers here are replacing eucalyptus plantations with the aromatic plants. A common facility centre to help entrepreneurs in packaging and branding may soon be set up in Nabarangpur at a cost of ₹30 lakh. Products such as aroma therapy diffusers and room sanitisers, and mint chocolates, are scheduled to be launched later this month.

CIMAP’s high-yielding curcuminoid-rich variety of turmeric named ‘CIM-Pitamber’, and the NBRI’s ‘Keshari’ variety of turmeric have also been introduced in Nabarangpur. Women SHGs have been asked to donate seeds after the annual harvest to prospective farmers, which would lessen their dependency on the market. This innovative idea has been received well.

Encouraged by the national labs’ interventions, Krushna Chandra Nayak, a young entrepreneur, has mobilised investment to the tune of ₹7-8 crore for manufacturing bio-fertilizers used in farming spices and aromatic produce.

“We had never expected such a response from farmers and entrepreneurs to our interventions. Government and other agencies must pitch into create a sustainable market for the products so that the interventions, which was meant for demonstration purposes, could spread among the masses,” said S.K. Mishra, project coordinator and former scientist with the IMMT.

Almost all line departments in the district have involved themselves in the livelihoods mission promoted by the research institutions. Backward districts such as Koraput and Nupada are also evincing interest in replicating the “Nabarangpur model”. Research and welfarism, the collaboration tries to show, are not incompatible.



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