

CSIR IN MEDIA



CSIR

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CSIR – IMMT celebrated its 59th Foundation Day

CSIR-IMMT

14th April, 2022

Bhubaneswar: The CSIR-IMMT (Institute of Minerals and Materials Technology), Bhubaneswar today celebrated its 59th foundation day in the presence of Chief Guest Sridhar Patra, Chairman cum Managing Director, NALCO, Guest of Honor Mahendra Kumar Gupta, IRPS, Joint Secretary, CSIR, Prof. Rahul Mitra, Professor, IIT Kharagpur, Prof. S Basu, Director, CSIR-IMMT, Dr. A.K. Sahu, Chairman, Foundation Day Celebration Committee & several other scientists, officials, and staff members.



Speaking on this occasion Chief Guest Sridhar Patra, Chairman cum Managing Director, NALCO, said, now we are at a point where we need to think of a sustainable society. We need to emphasize both on industrialization as well as protection of our environment. Our action and thought process should be integrated. CSIR-IMMT is doing a fabulous job in the research and development work for the betterment of the Industrial sector.

Welcoming the guests and dignitaries Prof. S. Basu Director, CSIR-IMMT presented the Annual Report of the Institution. Prof. Basu Said, IMMT was able to work on various projects both funded by government and private agencies. In past pandemic situation IMMT developed many assistive device products related to Covid-19. Department successfully working at the state of the art “slurry pilot plant test loop facility” for hydraulic transportation of iron ore and set up an incubation center of IMMT for the young entrepreneurs or startups. He also thanked to all scientist, technical, administrative staff members and students of IMMT who’s sincere efforts made this pandemic difficult year to a

successful time. Director, Prof. S. Basu also said that JIGYASA is an important program of CSIR-IMMT and such student visit programs will have great impact on students mind. He thanked all scientists and research scholars involved in demonstrating many important experiments and facilities to school and college students. Hindi Magazine Abhivyakti was released on this occasion.

Delivering the Foundation Day Lecture on “Light weight and high-temperature materials for structural applications: challenges and innovations”, Prof. Rahul Mitra, IIT Kharagpur said, this is my first visit to IMMT Bhubaneswar Campus and I am very happy to see such high standard experimental labs which is now very essential and important to deal with the requirements from Govt or Industry sector developments. Guest of Honour Sri Mahendra Kumar Gupta, IRPS, Joint Secretary, CSIR mentioned that IMMT plays major role in developments of Industrial sector using Metal and Minerals experiment technology.

On this occasion under “Project Jigyasa” a science experiment demonstration program was organized. Students from 5 different school and colleges of Khordha district like Govt. RRL project school, Saraswati Sishu Vidya Mandir Jaydev Vihar and Saraswati Sishu Vidya Mandir Niladri Vihar, Meridian residential college, KMBB Science Higher secondary school participated in this demonstration program.

Jigyasa program Head Dr. Debi prasad Das, said, “This science demonstration is familiarization of science through real experiments so that students can feel it & understand it in a better way. Around 350 students of School and college students accompanied by their teachers visited different labs of CSIR-IMMT & witnessed live demonstration of experiments. An entrepreneur’s meet was organized at The Common Research & Technology Development Hub of CSIR-IMMT. The celebration ended with award giving ceremony and different cultural activities by the students, staff members of CSIR-IMMT. Dr. A.K. Sahu, Chairman, Foundation Day Celebration Committee thanked all the guests, dignitaries, and delegates for their participation in the foundation day celebration.

Published in:

Orissadiary

CSIR-IMMT

14th April, 2022

सीएसआईआर-आईएमएमटी ने मनाया स्थापना दिवस

कार्यक्रम

- औद्योगीकरण के साथ-साथ अपने पर्यावरण की सुरक्षा पर जोर
- अनुसंधान और विकास कार्यों में शानदार उपलब्धि : श्रीधर पात्र



विज्ञान को छात्र समझ सकें इसका प्रयास जरूरी

विज्ञान कार्यक्रम के प्रमुख डॉ देवी प्रसाद दास ने कहा, यह विज्ञान प्रदर्शन वास्तविक प्रयोगों के माध्यम से विज्ञान का परिचय है ताकि छात्र उसे महसूस कर सकें और इसे बेहतर तरीके से समझ सकें. स्कूल और कॉलेज के लगभग 350 छात्रों ने अपने शिक्षकों के साथ सीएसआईआर-आईएमएमटी की विभिन्न प्रयोगशालाओं का दौरा किया और प्रयोगों का लाइव प्रदर्शन देखा. शाम को छात्रों और कर्मचारियों

के द्वारा एक सांस्कृतिक कार्यक्रम का भी आयोजन किया गया था. समारोह का समापन सीएसआईआर-आईएमएमटी के छात्रों, स्टाफ सदस्यों द्वारा सांस्कृतिक कार्यक्रम और पुरस्कार वितरण के साथ हुआ. कार्यक्रम के अंत में स्थापना दिवस समारोह समिति के अध्यक्ष साहू ने स्थापना दिवस समारोह में भाग लेने के लिए सभी मेहमानों, गणमान्य व्यक्तियों और प्रतिनिधियों को धन्यवाद दिया.

भुवनेश्वर. सीएसआईआर-आईएमएमटी (खनिज और सामग्री प्रौद्योगिकी संस्थान), भुवनेश्वर ने बुधवार को अपना 59वां स्थापना दिवस मनाया है. इस अवसर पर मुख्य अतिथि के रूप में नालको के अध्यक्ष और प्रबंधन निदेशक श्रीधर पात्र, सम्मानित अतिथि के रूप में सीएसआईआर के संयुक्त सचिव महेंद्र कुमार गुप्ता (आईआरपीएस), आईआईटी खड़गपुर के प्रो राहुल मन्त्रि, सीएसआईआर-आईआईएमटी के निदेशक प्रो एस बासु, स्थापना दिवस आयोजक समिति अध्यक्ष एके साहू, संस्था के अन्य वैज्ञानिक, अधिकारी और कर्मचारी उपस्थित थे.

मुख्य अतिथि श्रीधर पात्र ने इस अवसर पर कहा कि, अब हम एक ऐसे बिंदु पर हैं जहां हमें एक स्थायी समाज के बारे में सोचने की जरूरत है. हमें औद्योगीकरण के साथ-साथ अपने पर्यावरण की सुरक्षा दोनों पर जोर देने की जरूरत है. हमारी क्रिया और विचार प्रक्रिया को एकीकृत किया जाना चाहिए. सीएसआईआर-आईएमएमटी

औद्योगिक क्षेत्र की बेहतरी के लिए अनुसंधान और विकास कार्यों में शानदार काम कर रहा है. अतिथियों और गणमान्य व्यक्तियों का स्वागत करते हुए सीएसआईआर - आईएमएमटी के निदेशक प्रो एस बासु ने संस्था की वार्षिक रिपोर्ट प्रस्तुत की. इस अवसर पर उन्होंने कहा कि, आईएमएमटी सरकारी और निजी दोनों एजेंसियों द्वारा वित्त पोषित विभिन्न परियोजनाओं पर काम करने में सक्षम था. पिछली महामारी की स्थिति में आईएमएमटी ने कोविड -19 से संबंधित कई सहायक उपकरण उत्पाद विकसित किए हैं. विभाग लौह अयस्क के हाइड्रोलिक परिवहन के लिए अत्याधुनिक स्लरी पायलट प्लांट

टेस्ट लूप सुविधा पर सफलतापूर्वक काम शुरू हुआ था और हम युवा उद्यमियों या स्टार्टअप के लिए आईएमएमटी में एक इनक्यूबेशन केंद्र स्थापित किया है. उन्होंने आईएमएमटी के सभी वैज्ञानिक, तकनीकी, प्रशासनिक स्टाफ सदस्यों और छात्रों को भी धन्यवाद दिया है, जिनके ईमानदार प्रयासों ने इस महामारी को एक सफल समय बनाने के लिए कोशिश किया था. इस अवसर पर हिन्दी पत्रिका अभिव्यक्ति का विमोचन किया गया. अतिथि महेंद्र कुमार गुप्ता ने कहा कि, औद्योगिक क्षेत्र के विकास में धातु और खनिज प्रयोग प्रौद्योगिकी का उपयोग के लिए आईएमएमटी ने एक प्रमुख भूमिका निभाया है.

CSIR-NBRI

14th April, 2022

बोगनवेलिया उत्सव में हरभजन सिंह और चित्रा किस्म की मांग



बोगनवेलिया उत्सव के समापन पर पुरस्कृत किए गए विभिन्न प्रतियोगिताओं के विजेता • सौजन्य : स्वयं

जासं, लखनऊ : एनबीआरआई (राष्ट्रीय वनस्पति अनुसंधान संस्थान) के केएन कौल परिसर में चल रहे दो दिवसीय बोगनवेलिया उत्सव के अंतिम दिन भी पर्यावरण प्रेमी उमड़े। लोग बोगनवेलिया की विभिन्न किस्मों को खरीदने के लिए बिज्जी काउंटर पर कतार में दिखे। बोगनवेलिया की हरभजन सिंह, चित्रा व शुभा किस्मों की मांग अधिक रही।

विकासनगर से आई माया को बोगनवेलिया के विभिन्न रंगों के 20 पौधे चाहिए थे, लेकिन पौधों की संख्या कम होने की वजह से वह 10 पौधे ही खरीद सकीं। अलीगंज से आए केसी गुप्ता और बीना ने हरभजन सिंह और शुभा किस्म के पौधे खरीदे। सदर से आए क्षितिज और उनकी मां अर्चना को मैरी पामर और पिक्सी के फूल बहुत पसंद आए। विकास नगर से आई विद्या ने चित्रा, हरभजन सिंह, शुभा और महारा किस्मों के पौधे खरीदे।

प्लास्टिक के इस्तेमाल से बढ़ रहा प्रदूषण : बोगनवेलिया उत्सव और समर प्लांट साइंस फेस्ट में मुख्य अतिथि अब्दुल कलाम आजाद तकनीकी विश्वविद्यालय के कुलपति प्रो. प्रदीप कुमार मिश्रा ने कहा कि प्लास्टिक के प्रयोग से प्रदूषण बढ़ रहा है। विशिष्ट अतिथि कलाकार पंकज गुप्ता ने कहा कि विज्ञान और कला के समायोजन से हम वैज्ञानिक उपलब्धियों को जनमानस तक आसानी से पहुंचा सकते हैं। संस्थान के निदेशक प्रो. एसके बारिक ने कहा कि फ्लोरीकल्चर मिशन के अंतर्गत बोगनवेलिया के पौधे की नई किस्में, उन पर शोध और विकास कार्य को आगे बढ़ाया जाएगा। समापन के अवसर पर समर प्लांट साइंस फेस्टिवल में आयोजित विभिन्न प्रतियोगिताओं के विजेताओं को पुरस्कृत किया गया।

CSIR-NBRI

14th April, 2022

'प्रदूषण की समस्या पर देना होगा ध्यान'

■ एनबीटी, लखनऊ : हमें आगे आने वाले समय में खाद्य सुरक्षा और प्रदूषण के समाधानों पर सबसे ज्यादा ध्यान देना होगा। हमें प्रकृति को अपने जीवन में सबसे बड़ी जगह देनी होगी। यह बात एकेटीयू के कुलपति प्रो. प्रदीप कुमार मिश्र ने सीएसआईआर-एनवीआरआई में चल रहे दो दिवसीय बोगनवेलिया फेस्टिवल व समर प्लांट साइंस फेस्ट के समापन पर कही। इस मौके पर संस्थान के निदेशक प्रो. एसके बारिक, विशिष्ट अतिथि पंकज गुप्ता और डॉ. विधु साने फेस्ट में शामिल 300 शोधार्थियों का हौसला बढ़ाया।

Bougainvillea and Summer Plant Science Fest ends in Lucknow

CSIR-NBRI

13th April, 2022

The two-day Bougainvillea Festival and Summer Plant Science Festival concluded at the CSIR-NBRI with a valedictory ceremony on Wednesday. Prof Pradeep Kumar Mishra, vice-chancellor, AKTU, Lucknow, was the chief guest at the valedictory ceremony and Pankaj Gupta, artist, was present as guest of honour. Dr SK Tiwari, chief scientist and coordinator of the festival, said that several scientists and eminent experts of bougainvillea participated in the meet.



The guidelines for organising a complete bougainvillea show were also drafted by the experts and strategies for research and development programmes on bougainvillea were also discussed.

Vidhu A Sane, senior principal scientist and coordinator of Summer Plant Science Fest presented the programme report of the fest. She said that different scientific competitions were organised including digital photography competition, oral presentations and poster presentations. A total number of 300 research scholars participated in the fest.

Prof Mishra congratulated the institute for organising the festival. Expressing concern over the increasing plastic pollution, he said, “We have to give Nature, Earth the highest place in our life so that we can create a safer and cleaner environment for the coming generations.” He called upon all the research scholars to carry forward the research and development works on plant-based solutions for a remedy to plastic pollution. Prof Mishra also distributed prizes to the winners of various competitions organised as part of the Fest.

Pankaj Gupta, the famous artist of the city appreciated the scientific photography displayed by the researchers in the fest and expressed his views in connection with science and art. He said that in combination with art, we can easily disseminate our scientific achievements to the general public.

Earlier while welcoming the guests, Prof SK Barik, director, CSIR-NBRI said that under the CSIR-Floriculture Mission, the development of new varieties of Bougainvillea plant will be taken forward. Prof Barik said that from next year, the Bougainvillea Festival will be organised at the national and international level, in which private nurseries, institutions, etc. will be able to participate in various formats.

Cryo-transmission electron microscope launched at CCMB

CSIR-CCMB

13th April, 2022

Hyderabad: The state-of-the-art cryo-transmission electron microscope at the Centre for Cellular and Molecular Biology (CCMB) was inaugurated by Dr Shekhar Mande, Director-General, Council of Scientific and Industrial Research (CSIR). According to a release, Thermo Fisher Scientific cutting-edge cryo-transmission electron microscope supports advanced research and will help scientists to accelerate potential cures, drug discoveries and diagnostic research. The facility will be accessible to researchers in CCMB, other CSIR labs as well as those from other institutes, universities, pharma and biotech companies across the country. Thermo Fisher solutions deployed at the new facility also feature a suite of automation and sample-handling technology, increasing ease of use and ensuring the maximum amount of high-quality data that can be collected for each sample.



"Cryo-EM has revolutionised structural investigations of macromolecules in recent times. The installation of cryo-electron microscope will help CCMB to explore macromolecular structures, create research knowledge base and skills for cryo-EM research in the country. It will facilitate ground-breaking research and establish leadership in structural biology, enzymology, and drug discovery", said Amit Chopra, managing director, India and South Asia, Thermo Fisher Scientific. He said the new facility's technology will enable researchers to work with samples at cryogenic temperatures, at around -173°C, and image individual molecules. In addition to the confocal microscopy, NMR spectroscopy and X-ray diffraction facilities at CCMB, the addition of cryo-electron microscopy makes it a remarkable facility for researchers to investigate details of living cells like never before.

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[The Hans India](https://www.hansindia.com)

Indian scientists develop hybrid material to absorb greenhouse gas methane

CSIR-IICT

13th April, 2022

A group of scientists have computationally designed a hybrid material which can absorb greenhouse gas methane, converting it to clean Hydrogen and also simulated a process of capturing carbon dioxide in-situ and converting it to high purity hydrogen from non-fuel grade bioethanol. They have also designed a facility that can test such materials and help further carbon capture research at the institute. Given the global warming potential of greenhouse gases, scientists are trying to explore innovative methods of absorbing these gases and converting them to useful substances. New materials that can play dual role of absorption as well as conversion is the new challenge area for scientist in carbon capture innovation.



Responding to the challenge, in a series of researches on carbon capture and utilization scientists from Indian Institute of Chemical Technology (IICT), Hyderabad have not only computationally designed a hybrid material that can capture methane and also act as catalyst to convert it to high purity hydrogen, but also simulated and designed a process for in situ capture of carbon dioxide and its conversion to high purity hydrogen from non-fuel grade bioethanol through a mechanism called the optimized intensified chemical looping reforming. The later research has been published in the Elsevier journal Chemical Engineering and Processing.

They researchers have also fabricated a facility that can further carbon capture and conversion research at the institute. The facility, a dual operational fixed cum fluidized bed reactor system (FBR) can carry out sorption enhanced steam methane reforming (SESMR) for high purity

H₂ production based on the modelling and preliminary experimental studies. The FBR facility has been successfully commissioned recently in Jan 2022 at CSIR-IICT, Hyderabad, under a Mission Innovation Project supported by Department of Science and Technology to IICT Hyderabad. It is unique and available for the first time in the country to test the performance of dual functional materials for SESMR in fluidized bed reactor system. SESMR offers specific advantages of in-situ CO₂ removal through sorbents and thereby overcomes the equilibrium limitations of steam reforming and leads to high purity H₂ production.

Potential dual functional materials identified from theoretical predictions are now being synthesized and simultaneously FBR operating conditions are being optimized for existing sorbent/catalyst materials for meeting increasing challenges of carbon capture and utilization and associated research.

Farmpreneur icon of North East India –Success story out of initiative of NERCRMS, a registered society under the aegis of UNDER THE Ministry of DoNER

CSIR-IHBT

13th April, 2022

New Delhi : In Ukhrul district of Manipur, the agro-climatic conditions are favorable for the cultivation of Apple. In the year 2019, the low chilling varieties of Apple were introduced in the Ukhrul district by North Eastern Region Community Resource Management Society (NERCRMS), NEC, GoI in association with the Institute of Himalayan Bio-resource Technology (CSIR-



IHBT), Palampur, Himachal Pradesh. The initiative received an overwhelming response from the farming community and as well as from the various government and non-government agencies.

Under the initiative, Smt. Augustina Awungshi Shimray, a resident of Poi Village, Ukhrul, Manipur, was chosen as the beneficiary for the apple cultivation. She was one of the farmers who received the training at the Institute of Himalayan Bio-resource Technology (CSIR-IHBT), Palampur, Himachal Pradesh. Following the capacity-building support, Smt. Shimray successfully grew apples in her orchard. Her first yield, she grew nearly 160 kg of Apples which she sold at a lucrative price of Rs. 200/- perkg.

Inspired by her success, few more farmers took up apple plantation. For her exemplary efforts, the Hon'ble Chief Minister of Manipur Shri. N. Biren Singh felicitated her. Later, she also received financial support from the state government to train Apple Cultivation and its post-harvest management.

Smt. Shimray has expressed her sincere gratitude to NERCRMS, NEC, GoI for transforming her life and enabling her to become economically self-sustainable. Today, she has realised a new meaning of Atma Nirbharta and her story is an inspiration to the entire farming community of North East India.

Pune Science Weekly: There is no age bar for new learnings, says Dr Arvind Natu

CSIR-NCL

13th April, 2022

For 50 years, Dr Arvind Natu has been taking the road between Pune University and CSIR-National Chemical Laboratory (NCL). These two institutions have seen Natu grow from an ordinary boy from Belgaum to a scientist of organic chemistry, making significant contributions to pharmaceuticals and organic synthesis.



At 75, Natu still travels far and wide to interact with underprivileged students with a single motto turned life mission – to motivate young potential students to study science. “I may have toured and given over 750 lectures to school and college students from underprivileged backgrounds in the remotest area of Maharashtra and India. This, I believe, is to give back to the society,” says Natu, who is presently the chairman of the Board of Governors of IISERs – Kolkata and Thiruvananthapuram.

Hailing from a humble background, Natu’s father was determined to give his children a good education and knew that Pune was the hub. In the early 1960s, Natu migrated to Pune but his early student days were not easy, he says. English medium, especially for oral communication, hindered Natu’s progress while starting off graduation at SP College and later post-graduation at the University of Pune. “Initially, I could barely speak in English. I soon realised the need for mastering the language in order to progress and took up a special course,” he shares. Since then he has had a flair for learning new languages. Back in those days, even for submission of a PhD thesis, the student had to have basic knowledge of one foreign language. “That is how I casually opted for German as a hobby,” he recalls.

CSIR-NCL opened this young Pune University graduate opportunities to real laboratories and industry projects. “I joined NCL in 1970 and enjoyed a great amount of academic freedom. I bagged a number of opportunities to work on industry projects, mainly in process development for drug development and pharmaceuticals, developing antifungals and others,” he shares.

To date, Natu credits his mentors Prof MS Wadia at Pune University, Dr CR Narayanan, and Dr VN Gogte at CSIR-NCL to have laid a strong career foundation and kindled his interests in organic chemistry. Very early, Natu also became a family man with two daughters.

It was his post-doctoral research student days in Germany during 1976-1979 that changed Natu’s outlook on academics, life and the overall world.

After taking a four-month German language course at Goethe Institute in Luneburg near Hamburg, Natu was geared up to join the Institute of Organic Chemistry Technical University in Berlin. At the German university, his group was involved in working on natural products. He was tasked with isolating chemical compounds having a medicinal value from plants that were imported from South Africa.

“During my coursework, I must have isolated over 400 compounds. I vividly recall spending my first Christmas in Germany working at the lab along with my guide—the only two people at the university working on a Christmas day. I had to prove myself,” he recalls.

Being a husband and a father to two daughters, the post-doctoral studentship was in some ways odd for Natu, who says, “It was not the age but the way my fellow classmates thought and hung around made me feel an odd one. Yet, I enjoyed being a bachelor and would often go on short weekend trips to neighbouring countries.”

Germany has a special place in Natu’s heart, he says. “Studying alongside students from multiple nationalities gave me a true flavour of internationalisation. My post-doctoral training

in Germany instilled the desired attitude and approach towards science and sharpened my intellect. The facilities there allowed one to pursue great research,” he narrates.

Upon his return to India and resuming work at NCL, Natu also stepped up research works for the industry. He also took up the role as an adjunct professor at the Department of Biotechnology at Pune University, and the teaching continued for 23 years. “I took a keen interest in learning Biology nearly 15 years after dropping the subject in Class 12. But that has only strengthened my profile as a scientist. There is no age bar for new learnings,” he shares.

A few years ago, he delivered a 28-part lecture series titled ‘Biology and Chemistry of DNA and RNA’ as an invited scientist at the Bielefeld University, Germany. In 2018, Natu became one of the 12 Indian recipients of Germany’s Cross of Merit—the highest tribute to a foreign national. This was in recognition of his contributions to promoting science and education between India and Germany.

Half a century has passed since Natu was a PhD scholar and a lot has changed, for the good, in India’s research landscape. “Unlike today, our interactions with research guides were limited back in the 1970s. Also, there would be no ready-to-use chemical reagents available at labs, so we would make our own. I remember using about 5 kgs of clove extracts to prepare isolation of the starting material for my actual research. Of course, now students cannot function as we did,” he notes.

“My father was a tailor. As young students, we did not have much information about courses or colleges. In comparison to the level of awareness that I see in today’s students, we were unaware of the opportunities,” he narrates.

CUJ organizes curtain raiser programme for National Calendar event

CSIR-NISCAIR, NISTADS

13th April, 2022

JAMMU, Apr 12: A curtain raiser program for the forthcoming 2-day national conference and exhibition on 'National Calendar of India' to be held in Ujjain on 22nd and 23rd April 2022, was conducted in Central University of Jammu in collaboration with Vijnana Bharati and Ministry of Culture, Govt of India and Rashtriya Dindarshika Prasar Manch.



The main focus of the event was to disseminate the ethos of the National Calendar of India that was passed by the Parliament of India in 1957. Copies of the calendars were also released by the visiting dignitaries.

The chief guest of the programme was Rajiv Rai Bhatnagar, Advisor to Lieutenant Governor of UT of J&K. In his address, he focused on adopting various other programs which may help in the successful implementation of various initiatives taken by Govt of J&K and Government of India.

The guests of honour were Dr Ranjana Aggarwal, Director CSIR-NISCAIR/NISTADS, Abhay Marathe from Rashtriya Dindarshika Prasar Manch and Dr Gautam Mengi, Prant Sanghchalak, RSS J&K.

Dr Ranjana, in her keynote address, explained the five key points, putforth by the Prime Minister of India on the eve of Azadi Ka Amrut Mahotsav and also deliberated on the science behind the Swadeshi Calendar.

In his welcome address, Vice Chancellor, Central University of Jammu, Prof Sanjeev Jain briefed about the importance of such events and various other initiatives taken by the Central University of Jammu regarding NEP 2020 and technological advancement for enhancing the teaching and research standards.

This was followed by the introductory speech delivered by Prof Rajni Kant, President, Vigyan Parishad (State Chapter of Vijnana Bharati) and the Vision & Mission of Vigyan Parishad. On behalf of Abhey Marathe, Sanjay Parlikar briefed about the concept behind the National Calendar. The deliberations of the event were conducted by Dr Neelika Arora from Central University of Jammu.

CSIR-NBRI

13th April, 2022

2-day Bougainvillea festival begins at NBRI

LUCKNOW : A two-day Bougainvillea and Summer Plant Science Festival was inaugurated on Tuesday at CSIR-National Botanical Research Institute (CSIR-NBRI). Deputy chief minister Brajesh Pathak was the chief guest while Asim Arun, minister of state (independent charge), and Prof RK Dhiman, director, SGPGIMS, Lucknow, were present as the guest of honour.

Dr SK Tiwari, the chief scientist and coordinator of the Bougainvillea Festival, said that two flower exhibitions (Chrysanthemum and Coleus; Rose and Gladiolus) were organised earlier by the institute, but there was no exhibition for Bougainvillea, a major summer plant.

“This is the first effort of the institute in this direction to explore the possibilities of opening this exhibition for the participation of the general public in future,” he said.

Vidhu A Sane, senior principal scientist and coordinator of



Deputy CM Brajesh Pathak with others at the festival. HT

Summer Plant Science Fest, said that this festival is being organised entirely by the research scholars so that they will get an experience to face future challenges.

Deputy CM Pathak highlighted the importance of plant-based medicines in our daily life while Asim Arun remembered his long association with the institute and extended his best wishes for the exhibition.

The festival will be open to the general public on April 13 from 10 am to 5 pm. HTC

India makes strides in carbon capture technology to reach its mitigation goal to fight climate change

CSIR-IICT

12th April, 2022

NEW DELHI: As countries are making efforts to go for 'net zero' emissions by 2050, Indian institutions have started coming out with different solutions to deal with the problem of climate change through mitigation. Scientists from the Indian Institute of Chemical Technology (IICT), Hyderabad have computationally designed a hybrid material which can absorb methane



and convert it to clean Hydrogen in what could be a significant step to deal with climate-damaging greenhouse gas (GHG) whereas Indian Institute of Technology (IIT) Guwahati has partnered with NTPC Limited to design and develop a highly energy-efficient system for CO₂ capture from power plants.

The technology, developed by the IIT Guwahati, which works on flue gas using a newly activated amine solvent, consumes up to 11% less energy compared to commercial activated MDEA (Monoethanolamine) solvent and up to 31% less energy compared to benchmark MEA (Monoethanolamine) solvent.

On the other hand, the scientists at IICT Hyderabad, whose research is published in the Elsevier journal Chemical Engineering and Processing, have simulated a process of capturing carbon dioxide in-situ and converting it to high purity hydrogen from non-fuel grade bio-ethanol. Releasing their findings, the ministry of science & technology on Monday said that the scientists have designed a facility that can test such materials and help further carbon capture research at the institute.

"Given the global warming potential of GHG, scientists are trying to explore innovative methods of absorbing these gases and converting them to useful substances. New materials that can play a dual role of absorption as well as conversion is the new challenge area for scientists in carbon capture innovation," said the ministry in a statement, released a week after the UN's Intergovernmental Panel on Climate Change (IPCC) spoke about possibility of deploying various technological solutions to deal with the ever growing emissions.

Responding to the challenge, the IICT's scientists have fabricated a facility, a dual operational fixed-cum-fluidized bed reactor system (FBR), that can further carbon capture and conversion research. The FBR facility was successfully commissioned at CSIR-IICT, Hyderabad under a 'Mission Innovation' (MI) project in January.

The MI was launched by 20 countries, including India, on the sidelines of the UN climate conference (COP21) in Paris in 2015 to double government funding on clean energy research and development over five years, and enhance international engagement in programmes on clean energy R&D.

India has taken the lead in developing a framework for the Mission which is promoting clean energy technologies with active participation of scientists, researchers, universities, industries, utilities as well as private organisations across the world through the MI platform.

It is expected that the indigenous technology, developed by a research team led by Prof Bishnupada Mandal of Department of Chemical Engineering, IIT Guwahati, may help in proliferation of the energy-efficient system for CO₂ capture to different parts of the country.

CSIR-NBRI

12th April, 2022

आज से जानें रंग-बिरंगे बोगनवेलिया की खूबियां

जगरण संगठदाता, लखनऊ : बोगनवेलिया ऐसा पौधा है जो हमारे आसपास के परिवेश को सजाने-संवारे और निखारने के साथ ही हमें प्रकृति से जोड़ने में भी मददगार है। आमजन को बोगनवेलिया की खूबियों से परिचित कराने के लिए मंगलवार से दो दिवसीय बोगनवेलिया उत्सव का आयोजन किया जा रहा है। वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआइआर) की प्रयोगशाला राष्ट्रीय वनस्पति अनुसंधान संस्थान (एनबीआरआई) द्वारा आयोजित इस उत्सव में लोग निःशुल्क हिस्सा ले सकेंगे।

संस्थान के निदेशक प्रो. एसके बारिक के अनुसार, 13 अप्रैल को 1953 को नेशनल बोटैनिकल गार्डन (एनबीजी) को सीएसआइआर की प्रयोगशालाओं में शामिल किया गया था। इसके बाद 25 अक्टूबर 1978

● एनबीआरआई परिसर में दो दिन चलेगा उत्सव



बोगनवेलिया ● सौ. इंटरनेट मीडिया

को एनबीजी का नाम बदलकर राष्ट्रीय वनस्पति अनुसंधान संस्थान (एनबीआरआई) कर दिया गया। इस उपलक्ष्य में बोगनवेलिया उत्सव शुरू किया जा रहा है।

बोगनवेलिया उत्सव का आयोजन संस्थान के कैलाश नाथ कौल ब्लॉक

में किया जाएगा। सुबह 10 बजे से आरंभ होने वाला यह कार्यक्रम शाम पांच बजे तक चलेगा। इसमें एनबीआरआई द्वारा विकसित बोगनवेलिया की 25 किस्मों के साथ अन्य सौ से अधिक प्रजातियों की प्रदर्शनी लगाई जाएगी। साथ ही,

खासियत से भरा बोगनवेलिया

एनबीआरआई के मुख्य विज्ञानी डा. एसके तिवारी ने बताया कि बोगनवेलिया विषम परिस्थितियों में खिलने का एक प्रतीक है, जो गर्मी के थपेड़ों को सहते हुए, प्रदूषण की मार झेलते हुए भी विकसित होकर आपके घर के कोनों से लेकर सड़क पर डिवाइडर तक की शोभा बढ़ाता है। बोगनवेलिया बगीचों में लगाने के लिए सबसे ज्यादा पसंद की जाने वाली उष्णकटिबंधीय चढ़ाई करने वाली झाड़ियों की प्रजाति मानी जाती है। सबसे बड़ी खासियत यह है कि ज्यादा गर्म जगहों में इसके फूलों का रंग और भी ज्यादा निखरता है।

यहां 25 से अधिक किस्म के पौधे बिक्री के लिए भी उपलब्ध रहेंगे। इस दौरान बोगनवेलिया पर शोध कर रहे शोधार्थी, विज्ञानी, नर्सरी विशेषज्ञ और बागवानी में रुचि रखने वाले अपने विचार साझा करेंगे।

समर प्लांट साइंस फेस्टिवल भी होगा

साथ : बोगनवेलिया उत्सव के दौरान ही संस्थान के शोधार्थियों द्वारा स्टूडेंट समर प्लांट वर्कशॉप का आयोजन भी किया जा रहा है।

संस्थान की वरिष्ठ प्रधान विज्ञानी डा. विधु साने ने बताया कि इसका पूरा संचालन और आयोजन 'छात्रों का, छात्रों के लिए और छात्रों द्वारा' की तर्ज पर सीएसआइआर के पीएचडी स्कालर करेंगे। आयोजनों में अक्सर वरिष्ठ विज्ञानी ही अपनी बात रखते हैं। इसी वजह से संस्थान ने निर्णय लिया है कि समर प्लांट साइंस उत्सव में पीएचडी के शोधार्थी पोस्टर प्रेजेंटेशन और व्याख्यान के माध्यम से अपने शोध के बारे में प्रस्तुति देंगे। इसके अलावा उत्सव में वनस्पति विज्ञान आधारित फोटोग्राफी, क्विज प्रतियोगिता और सांस्कृतिक कार्यक्रम का भी आयोजन किया जाएगा।

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CSIR-CSMCRI

12th April, 2022

Open day exhibition for school children

સેન્ટ્રલ સોલ્ટ એન્ડ મરીન કેમિકલ રિસર્ચ ઇન્સ્ટિટ્યૂટના સ્થાપના દિવસે વિદ્યાર્થીઓનો વૈજ્ઞાનિક-શૈક્ષણિક પ્રવાસ

(ભાવનગર, તા.૧૧)

સીએસઆઈઆર-સેન્ટ્રલ સોલ્ટ એન્ડ મરીન કેમિકલ રિસર્ચ ઇન્સ્ટિટ્યૂટ, ભાવનગરના સ્થાપના દિવસ (૧૦ એપ્રિલ ૨૦૨૨) તથા ૭૫મા સ્વતંત્રતા વર્ષ દરમિયાન ભારત સરકાર દ્વારા ઉજવવામાં આવેલ આઝાદીના અમૃત મહોત્સવ નિમિત્તે સીએસઆઈઆર-જિજ્ઞાસા હેઠળ ભાવનગરની વિવિધ શાળાઓના વિદ્યાર્થીઓ અને શિક્ષકો માટે વૈજ્ઞાનિક-શૈક્ષણિક પ્રવાસો અને વૈજ્ઞાનિક પ્રવચનોનું આયોજન કર્યું. કાર્યક્રમની શરૂઆત ડૉ. ડુંગર રામ ચૌધરી, પ્રધાન વૈજ્ઞાનિક અને સીએસઆઈઆર-જિજ્ઞાસા પ્રોજેક્ટ ઇન્વેસ્ટિગેટર, સીએસઆઈઆર-સીએસએમસીઆરઆઈ દ્વારા શિક્ષકો અને વિદ્યાર્થીઓના સ્વાગત સાથે કરવામાં આવી હતી. ડૉ.પ્રતાપ બાપટે, પ્રધાન વૈજ્ઞાનિક સંસ્થાની વિવિધ સંશોધન પ્રવૃત્તિઓને અનુસરી હતી. ડૉ.મંગલસિંહ રાઠોડ, પ્રધાન વૈજ્ઞાનિક ટીશ્યુ કલ્ચરના સિદ્ધાંત અને ઉપયોગો વિશે વિસ્તૃત માહિતી આપી હતી.



તેમણે સમજાવ્યું કે કૃત્રિમ વાતાવરણમાં છોડની નવી પેશી ઉગાડીને મોટી સંખ્યામાં છોડ તૈયાર કરવાની તકનીક છે જેમાં છોડની કોઈપણ પેશી જેમ કે મૂળ, ડાળ, ફૂલ વગેરેને પોષક માધ્યમ પર જંતુરહિત સ્થિતિમાં ઉગાડવામાં આવે છે. ટીશ્યુ કલ્ચરને નવા છોડના વિકાસ

માટે થોડી જગ્યાની જરૂર પડે છે અને નવી જાતોના ઉત્પાદનને ઝડપી બનાવવામાં મદદ કરે છે. વૈજ્ઞાનિક શ્રી બિપિન વ્યાસે xમીઠાનું વિજ્ઞાન અને તેની ઉપયોગિતાx વિષય પર વિગતવાર પ્રકાશ પાડ્યો, બિપિન વ્યાસે મીઠાના વિવિધ પાસાઓ વિશે રસપ્રદ માહિતી આપી અને આપણા રોજિંદા જીવનમાં મીઠાનું શું મહત્વ છે? મીઠાનો પ્રાચીન ઇતિહાસ, મીઠાનો. વિવિધ ઘરેલું અને ઔદ્યોગિક ઉપયોગો વિશે સમજાવ્યું. મીઠું બનાવવા માટે વપરાતા યાંત્રિક સાધનો અને તેની રચના વિશે ઊંડાણપૂર્વક માહિતી આપવામાં આવી. તેમણે આયોજન અને આયર્નની ઉણપને કારણે ગોઈટર અને એનિમિયા અને આ માટે xડબલ ફોર્ટિફાઈડ સોલ્ટx ની ઉપયોગિતા વિશે જણાવ્યું. બાદમાં, શિક્ષકો અને વિદ્યાર્થીઓએ સંસ્થાની વિવિધ સંશોધન પ્રવૃત્તિઓનું અવલોકન કર્યું. રિવર્સ ઓસ્મોસીસ (રિવર્સ ઓસ્મોસીસ, આરઓ) બસ, સીવીડની ખેતી અને તેનો ઉપયોગ, વર્કશોપ અને મીઠું પ્રોડક્શન ટેકનોલોજીનું ઉત્સાહપૂર્વક નિરીક્ષણ કરવામાં આવ્યું હતું.

Central team led by Jitendra Singh takes stock of arrangements at Palli

CSIR

11th April, 2022

A high level central team comprising of senior officers, led by Union Minister Dr Jitendra Singh on Monday visited the Palli panchayat in the Samba district of Jammu that is venue of Prime Minister Narendra Modi's rally on 24 April. The "Panchayati Raj Diwas" this year is being organised at Palli by the Union Ministry of Panchayati Raj in collaboration with the Union Ministry of Science & Technology, the Department of Biotechnology and the Council of Scientific and Industrial Research(CSIR).



Prominent among those who accompanied the Union Minister to Palli Panchayat included Chetan Prakash Jain, CMD, Central Electronics Limited and Industrial Research, Union Ministry of Science and Technology, which is in the process of setting up a solar plant in the Palli Panchayat in a record time of 20 days.

The 500 KV solar plant is being installed on a total area of 6,408 square metres and will electrify 340 houses in the Panchayat, thus making it the first carbon neutral panchayat under the Government of India's "Gram Urja Swaraj Programme".

The other senior Central Government functionaries who accompanied Dr Jitendra Singh included Sunil Kumar, Surveyor General of India, Dr Purnima Rupal, Senior Scientist from CSIR, Dr Dev Priya Dutta senior Scientist from Ministry of Science & Technology, Dr Sreenivas Reddy, Director IIIM-CSIR Jammu, Dr Vaishali Punjabi and Dr Richi senior scientists from Department of Biotechnology, Dr Vipin Kumar, Director, National Innovation

Foundation, Gandhinagar Gujarat, Dr Bharat Bhushan, Dr Gaurav Jain and Dr B K Tyagi, from Vigyan Prasar, Union Ministry of Science & Technology, among others.

A team of senior J&K officers led by Additional Chief Secretary Atal Dulloo also interacted with the central team at the site of the programme at Palli Panchayat.

Speaking to media after the visit, Dr Jitendra Singh said, the choice of Palli Panchayat as the venue of the national level Panchayati Raj Diwas indicates the high priority given by Prime Minister Narendra Modi to Jammu & Kashmir and the Modi government's focus to strengthen Panchayati Raj Institutions (PRIs) in the Union Territory. He said, Prime Minister Modi will be undertaking this visit for the first time after the first-ever election to the District Development Councils held in Jammu & Kashmir 70 years after independence.

Prime Minister Modi, said Dr Jitendra Singh, has been over the last 8 years reiterating his government's commitment to establish grassroot democracy in Jammu & Kashmir, with focus on development and equitable distribution of resources among all sections of society and all regions.

Living up to the spirit of Prime Minister Narendra Modi's concern for rural upliftment, Dr Jitendra Singh said, the Union Ministry of Science & Technology headed by him will endeavour to showcase during the Panchayati Raj Diwas, some of the latest scientific innovations, which are applicable for rural development and upgraded agricultural farming but are somehow not being adequately used in this part of the country.

He said, there will be an attempt to exhibit Drone Technology in Agricultural farming, Aroma Mission & Purple Revolution Floriculture mission, modern uses of Bamboo, wastewater management, etc.



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