

CSIR IN MEDIA



CSIR

NEWS BULLETIN

01 TO 05 SEPTEMBER 2022



LG, Ladakh Shri R.K.Mathur calls on Dr Jitendra Singh to discuss projects on leather centre, Leh Berry, Education Fair and CSIR supported schemes

CSIR-CLRI

03rd September, 2022

In a unique and first-of-its-kind initiative, the Department of Science & Technology (DST), Govt of India, has undertaken to set up India's first-ever "Night Sky Sanctuary" in Ladakh which will be completed within next three months. The proposed Dark Sky Reserve will be located at Hanle in Ladakh as a part of Changthang Wildlife Sanctuary. It will boost Astro tourism in India and will be one of the world's highest-located sites for optical, infra-red, and gamma-ray telescopes.



This was informed by Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh after meeting Lt. Governor Ladakh R.K. Mathur, who called on him at the national capital today.

The Union Minister informed that a tripartite MoU was signed recently among the the UT administration, Ladakh Autonomous Hill Development Council (LAHDC) Leh and the Indian Institute of Astrophysics (IIA) for launching the Dark Space Reserve. He said, the site will have activities to help in boosting local tourism and economy through interventions of Science and Technology.

Dr Jitendra Singh said that all the stakeholders will jointly work towards the preservation of the night sky from unwanted light pollution and illumination, which is a serious threat to the scientific observations and natural sky conditions. It may be noted that Hanle is best suited for the project as it is located in Ladakh's cold desert region, away from any form of human

disturbance and clear sky conditions and dry weather conditions exist throughout the year, the Minister added. Dr Jitendra Singh said, a high level delegation of scientists and officials from Central Leather Research Institute, Chennai will visit Ladakh by the end of this year to explore the possibility of setting up a regional branch of CLRI, as the UT has a very rich and wide variety of animals for leather research and industry and to promote bio-economy of animal skin-derived products. He added that Charthang in Ladakh has over 4 lakh animals mainly pashmina goats, besides Sheep and Yak. He also complimented CSIR for organising 4 training workshops, two each at Leh and Kargil for treatment of diseases of famous Pashmina Goats.

Dr Jitendra Singh also thanked the Ladakh Administration for taking a decision to start the commercial plantation of “Leh Berry”, which is gaining popularity in the entire region. The Council of Scientific and Industrial Research (CSIR) under the aegis of Union Ministry of Science & Technology is promoting "Leh Berry" which is an exclusive food product of the cold desert and also a means of wide-ranging entrepreneurship as well as self-livelihood.

The Minister said, as per the vision of Prime Minister Modi’s Ladakh visit in 2018, the local entrepreneurs will be provided gainful employment through farming, processing and marketing of about 100 odd products from sea buckthorn plant like jams, juices, herbal tea, vitamin C supplements, healthy drinks, cream, oils, and soaps in a completely organic manner. Shri Mathur informed that commercial cultivation of three medicinal plants will begin this spring season at the height of above 15,000 feet. This also includes “Sanjeevani Booty”, locally known as “Sola” which has a very high life saving and therapeutic properties. Dr Jitendra Singh conveyed to LG, Ladakh that from next year, the Department of Science and Technology will establish a distinct and huge pavilion for Ladakh Education Fair, which will be an annual feature as announced by Shri Mathur. The Minister said, DST will actively participate in correct subject choice, scholarships, career guidance, skills development and apprenticeship with prime focus of employability of youth.

Published in:

[Pib](#)

3-day National Conference on 'Recent Trends in Plant Biology' begins at SKICC

CSIR-IIIM, CIMAP

05th September, 2022

A three-day National Conference on 'Recent Trends in Plant Biology' was today inaugurated here at SKICC.

The conference is being conducted by CSIR-Indian Institute of Integrative Medicine (IIIM), Srinagar from September 5 to 7 under the patronage of Director CSIR-IIIM, Dr. D.



Srinivasa Reddy, Head RMBD, Er. Abdul Rahim and Head, CSIR-IIIM, Srinagar, Dr. Zabeer Ahmad. The main aim of the conference is to bring together plant biologists from across the country to deliver inspiring talks and share their latest research experiences.

The speakers spoke about the significance of agri based economy since the economy of Jammu and Kashmir is mostly dependent on agriculture and horticulture and Kashmir Himalaya is home to a wide variety of medicinal plants, it becomes imperative for us that we stay updated with the latest research trends and cutting-edge research techniques and technologies to make the best of our resources.

Therefore, conducting such meetings is essential said Dr. Nasheeman Ashraf, Convenor, and Dr. Nazia Abbas, Co-Convenor of the conference.

The Inaugural session was attended by Professor Sudhir Kumar Sopory, distinguished Scientist, International Center for Genetic Engineering and Biotechnology, New Delhi; Professor Farooq Ahmad Shah, Vice Chancellor, Central University of Kashmir; Dr.

Prabodh Kumar Trivedi, Director CSIR-CIMAP; Dr. Ajit Kumar Shashany, ICAR– NIPB; Dr. Muzamil Andrabi, Deputy Head CSIR-IIIM, Srinagar.

The keynote address was delivered by Padma Shri Prof. Sudhir Kumar Sopory, renowned plant physiologist. He talked about the mechanism by which plants can be made climate resilient. The key note address was followed by vote of thanks which was proposed by Dr. Muzamil.

The inaugural ceremony was followed by talks from eminent scientists who presented their work on recent research in plant sciences.

The conference will continue for three days and different topic related to plant sciences will be talked about.

Bro Moots Steel Slag Road As Pilot Project In Arunachal Pradesh

CSIR-CRRI

05th September, 2022

Itanagar, Sep 5: The Border Roads Organisation (BRO) will soon launch an environment friendly technology to construct roads in Arunachal Pradesh, keeping in view the challenges faced by the construction agency in the state due to fragile soil status and landslides, a senior official said on Monday.

The Central Road Research Institute (CRRI) established in 1952, as a constituent laboratory of India's Council of Scientific and Industrial Research (CSIR), conducted in-depth research and evolved environment friendly techniques for road construction in Arunachal Pradesh, BRO's Project Arunank chief engineer Brig Anirudh S Kanwar said. The CRRI evolved the technology at the desire of BRO Director General Lt Gen Rajeev Chaudhry, Brig Kanwar said. The technique would be taken up soon by BRO's Project Arunank as a pilot project in the state, he said. The cost effective technique, using steel slag, a byproduct of steel, would be used in constructing roads in the state which would be more durable for roads in the land-locked state, Brig Kanwar said.

CSIR-CRRI principal scientist Dr Satish Pandey, who has been part of India's first steel slag road of Surat-Hazira, would assist BRO for its trials. Dr Pandey had visited the site jointly with BRO officials for preliminary planning, Brig Kanwar said, adding that the technology being tried under the supervision of BRO additional director general (East) P K H Singh, has huge potential in providing a cost effective alternative to conventional aggregates in an environment friendly manner for long lasting roads. The topographical background prompted the BRO to go for innovative road construction, another senior engineer said, adding, that Arunachal Pradesh is characterized by high annual rainfall, forest vegetation and diversity in soils. (PTI)

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गामा-रे कवच पदार्थ के लिए एमओयू

सीएसआईआर और जेएनएआरडीडीसी नागपुर के बीच समझौता



नागपुर | सीएसआईआर-प्रगत पदार्थ तथा प्रक्रम अनुसंधान संस्थान (सीएसआईआर-एम्प्री), भोपाल और जवाहरलाल नेहरू एल्युमिनियम अनुसंधान विकास और डिजाइन केंद्र (जेएनएआरडीडीसी), नागपुर ने एल्युमिना उद्योग के अपशिष्ट (रेड-मड) का उपयोग करके गैर-विषैले लेड मुक्त गामा किरण कवच पदार्थ के विकास में सहयोग के लिए समझौता ज्ञापन पर हस्ताक्षर किए गए हैं। यह समझौता ज्ञापन खान मंत्रालय, भारत सरकार द्वारा प्रदान की गई संयुक्त परियोजना के निष्पादन के लिए है।

यह होंगे कार्य : नएआरडीडीसी रेड मड एकत्र करके उसके भौतिक-रासायनिक गुणों का विश्लेषण करेगा और सीएसआईआर-एम्प्री इस खतरनाक उप-उत्पाद को हरित तथा आर्थिक रूप से व्यवहार्य गामा-रे शिल्डिंग ईटों के रूप में विकसित करेगा। यह कार्य पी.आई (डॉ. उपेंद्र सिंह, जेएनएआरडीडीसी, नागपुर और सीएसआईआर-एपीएमआरआई, भोपाल के डॉ. शबी थंकराज सलामल) द्वारा किया जाना है। समझौते पर डॉ. अवनीश कुमार श्रीवास्तव, निदेशक, सीएसआईआर-एम्प्री और डॉ. अनुपम अग्निहोत्री, निदेशक, जेएनएआरडीडीसी, नागपुर तथा दोनों संगठनों के अधिकारियों की उपस्थिति में हस्ताक्षर किए गए। डॉ. अतुल नारायण वैद्य, निदेशक, सीएसआईआर-राष्ट्रीय पर्यावरण इंजीनियरिंग अनुसंधान संस्थान इस अवसर पर उपस्थिति थे।

Aeronautical Development Agency, BEL and CSIR-NAL get new directors

CSIR-NAL

03rd September, 2022

Dr Jitendra J Jadhav on Friday took over as Director of Aeronautical Development Agency (ADA) and Programme Director (Combat Aircraft) Bengaluru. He replaced Dr Girish S Deodhare. ADA is a department under the Defence Research Development Organisation (DRDO).



Before taking over as Director, ADA, Jadhav had served as Director of CSIR-National Aerospace Laboratories (CSIR-NAL), Bengaluru. His term at CSIR-NAL ended on June 26. He is credited to have steered the revival of the SARAS project. He was also the project director of Light Combat Aircraft-Tejas and was instrumental in steering its Initial Operational Clearance in 2011.

“He steered the weaponisation of Tejas as a lethal platform by integrating Closed Combat Missiles, Laser Guided Bombs, BVR (beyond visual range) missiles, Laser Designating Pod etc. He has developed key technologies like Mission and Display computer, digital weapon management system, Flight dynamics Simulator for LCA Tejas. He was instrumental in configuring and conceptualising LCA-MK1A as an advanced jet fighter,” a statement from ADA said.

“During his tenure, the CSIR-NAL has shown phenomenal financial growth with external cumulative earnings increased to more than Rs 500 crore through technology licensing, collaborations and national international projects,” the statement added. Meanwhile, Dr Abhay Anant Pashilkar, Chief Scientist & Programme Director, civil aircraft programs, CSIR-NAL assumed charge as Director of CSIR-National Aerospace Laboratories. Sources in the NAL

said that for a while he would also remain as the chief scientist and programme director for civil aircraft programmes.

A statement from CSIR-NAL said, “Dr Abhay Anant Pashilkar joined the Flight Mechanics & Control Division, National Aerospace Laboratories after his M.E. from the Indian Institute of Science (IISc), Bangalore, in 1993 and B.Tech (Hons) from IIT Kharagpur both in Aerospace Engineering. Since 1993, he has worked on national projects like the LCA and SARAS. He has guided 5 PhD’s and has over 30 papers in National and International Journals.”

On September 1, Dinesh Kumar Batra, Director (Finance) took additional charge as Chairman & Managing Director (CMD) of the Defence PSU Bharat Electronics Limited (BEL).

सीएसआईआर- स्पोर्ट्स प्रमोशन बोर्ड ने क्षेत्रीय फुटबॉल टूर्नामेंट की मेजबानी की

भुवनेश्वर। सीएसआईआर-स्पोर्ट्स प्रमोशन बोर्ड 1 से 3 सितंबर के दौरान सीएसआईआर लैब्स/ संस्थानों के बीच 51वें एसएसबीएमटी-तीसरे क्षेत्रीय फुटबॉल टूर्नामेंट की मेजबानी कर रहा है। सीएसआईआर लैब्स/ संस्थानों से 07 (सात) फुटबॉल टीमों, जैसे सीएसआईआर सीआईएमएफआर, धनबाद, सीएसआईआर- सीईसीआरआई, कराईकुडी, सीएसआईआर- सीएफटीआरआई, मैसूर, सीएसआईआर- एनबीआरआई, लखनऊ, सीएसआईआर- एनएएल, बंगलोर, सीएसआईआर- आईएमटेक, चंडीगढ़, सीएसआईआर- मुख्यालय, नई दिल्ली शामिल हैं। इस टूर्नामेंट का



उद्घाटन समारोह आज सीएसआईआर-आईएमएमटी कैंपस फुटबॉल ग्राउंड में भारतीय महिला राष्ट्रीय फुटबॉल टीम की पूर्व कप्तान और वर्तमान में ओडिशा पुलिस महिला फुटबॉल टीम की मुख्य कोच सुश्री श्रद्धांजलि सामंतराय की उपस्थिति में

आयोजित किया गया। इस अवसर पर प्रोफेसर एस बसु, निदेशक, सीएसआईआर-आईएमएमटी भुवनेश्वर, बामाप्रसाद बाग, वरिष्ठ प्रधान वैज्ञानिक बंकिम चंद्र त्रिपाठी, वरिष्ठ प्रधान वैज्ञानिक, बी सी साहू, प्रशासन नियंत्रक और अन्य गणमान्य व्यक्ति उपस्थित थे।

IIT Jodhpur develops fluorescent probe for the diagnosis of Alzheimer's disease

CSIR-IICB

02nd September, 2022

The research was done by IIT Jodhpur in collaboration with IIT Kharagpur and CSIR-IICB, Kolkata

A multi-institutional team led by Indian Institute of Technology Jodhpur has developed an efficient fluorescent molecular probe that can be used in the diagnosis of Alzheimer's disease. The research has been carried out in collaboration with Indian Institute of Technology Kharagpur, and Council of Scientific & Industrial Research – Indian Institute of Chemical Biology, Kolkata.

The research results have been recently published in ACS Chemical Neuroscience journal, in a paper co-authored by Dr Surajit Ghosh, Professor, Department of Bioscience & Bioengineering, IIT Jodhpur along with his research scholars Rathnam Mallesh, Juhee Khan, and Rajsekhar Roy and Prof. Nihar Ranjan Jana, Head, Department of Biosciences, IIT Kharagpur, Dr Parasuraman Jaisankar, Head, Organic & Medicinal Chemistry Division, CSIR-Indian Institute of Chemical Biology, Kolkata and Dr Krishnangsu Pradhan, Senior Research Fellow, CSIR-Indian Institute of Chemical Biology, Kolkata.

The diagnosis of Alzheimer's disease involves assessment of cognitive functions, the observation of brain size and structure through SPECT, PET and MRI scans, and the detection of amyloid plaques. Amyloid plaques are detected by extracting the brain fluid (cerebro-spinal fluid) through a spinal tap, or by PET Scans. Although both methods are reliable, they are invasive and expensive. Highlighting his research, Dr Ghosh said, "Optical imaging systems that use fluorescent or colour-based chemicals to target tissues and molecules of interest are considered better diagnostic techniques in the biomedical area," He added that fluorescence probes can enable rapid and safe analytical sensing due to the absence of radioactive chemicals or expensive equipment.

Fluorescent probe diagnosis involves injecting a fluorescent chemical that specifically attaches itself to the amyloid plaque and assessing the change in fluorescent properties using an appropriate detector. The fluorescent chemical, in addition to being able to specifically and selectively attach to A β aggregates, must also be able to cross the blood-brain barrier to reach the brain. There must also be a change in its fluorescent properties – colour and intensity – when it attaches to A β aggregates. Furthermore, the fluorescence must be in the visible light region for easy detection. The commercially available fluorescent probe ThT has poor blood-brain barrier crossing ability and exhibits only a 2.5-fold change in fluorescence intensity.

“We studied the binding modes of RM-28 with A β aggregates using molecular docking experiments and found that this probe binds to the entry site, inner clefts and surface of the A β aggregates. RM-28 can potentially replace ThT in the detection of A β aggregates in both in vitro and in vivo diagnostic techniques and could also serve as template molecular scaffold for designing novel or new fluorescent probes,” said Dr Ghosh on the future implications of their discovery.

The researchers have successfully designed and developed a series of benzothiazole based fluorescent molecules that can selectively bind to A β aggregates. All these molecules were seen to emit fluorescence in one colour when unbound, and the emission colour shifted towards red in the visible light (rainbow – violet indigo blue green yellow orange red) spectrum with a concomitant increase in fluorescence intensity. For example, a molecule they named RM28 was yellow when unbound and orange when it was bonded to the A β aggregates, and there was a 7.5-fold increase in fluorescence intensity after binding. They used AD mice brain samples to test RM28. This molecule was stable in biological fluids and could easily traverse the blood-brain barrier. It was also selective to A β aggregates in the presence of competing biomolecules. Hence, the probe found by the research team will provide a non-invasive and inexpensive reliable alternative to a spinal tap or PET Scan methods Alzheimer’s diagnosis.

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[Express Health Care](#)

CSIR's floriculture mission a boon for Maharashtra flower cultivators

CSIR-NBRI, IHBT, NEIST, CIMAP, IIIM

02nd September, 2022

The farmer clusters cultivating flowers under the nationwide “CSIR Floriculture Mission” are reaping benefits through the training provided by CSIR-National Botanical Research Institute (NBRI) of Lucknow. The farmer clusters in Vidarbha region of Maharashtra are overjoyed with the marigold flowers blossoming in their farms.



More than 192 farmers of 8 clusters in Vidarbha region alone were provided the marigold saplings in the month of June and July in 2022. Now after 2 months, the result has brought smiles on the faces of these farmers who had no work at all, especially the women farmers, informed NBRI's Maharashtra co-ordinators Dr Vijay Wagh and Dr Manish Bhojar. Not only are they seeing positive results, but they are also able to sell their produce at the nearby market with increasing demand for flowers due to Ganesh Chaturthi and the recently concluded Maharashtra Pola festival.

Reena Arvind Roy, a farmer from Gondia village in Maharashtra (about 150 kms from Nagpur), is selling marigold flowers for ₹100-120 per kgs. Along with Reena, 38 other women from her village are growing marigold. “I'm able to produce 12-13 kgs after a gap of every 2-3 days from my 500 sq. feet land that helps me earn ₹10,000 in a few weeks,” said Reena. Neeru Tai Mandurkar from Bandhya, Maharashtra is overjoyed to see the results in her 750 sq feet of farmland and she is cultivating it for the first time.

Marginal farmers of Uttar Pradesh, and in 6 more states including Madhya Pradesh, West Bengal, Odisha, Maharashtra and Bihar have also been included in the mission.

India stands on the 18th rank in the floriculture industry with only 0.61% global floriculture share. It imports flowers worth ₹38.25 cr from Thailand, Netherland and other countries, according to NBRI officials. More farmers and lands were brought under the mission to meet the huge market of flowers in India.

“The objective of the mission is to enhance the income of farmers and entrepreneurship development through high value floriculture utilizing CSIR technologies,” said Prof SK Barik, director of CSIR-NBRI, Lucknow who is also mission director of CSIR Floriculture Mission.

In Uttar Pradesh, activities of the mission are being executed in 10 districts and activities in few more districts will be initiated soon. Linking the farmer clusters from Eastern UP to Western UP via Lucknow, a UP floriculture corridor is being developed under the mission, informed Dr KJ Singh, nodal scientist of CSIR-NBRI, Lucknow.

Dr Sharad Srivastava, state coordinator UP informed that marigold saplings were distributed to farmers to cover an area of 42 hectares and training was provided. Apart from marigold, the farmers are also growing four other main crops, chrysanthemum, tuberose, gerbera, and gladiolus, he added.

With CSIR-NBRI, Lucknow, being the nodal institute of this ambitious mission, other participating institutes are CSIR-IHBT, Palampur, CSIR-NEIST, Jorhat, CSIR-CFTRI, Mysuru and CSIR-IIIM, Jammu.

CSIR zonal football tourney

STATESMAN NEWS SERVICE
BHUBANESWAR, 2 SEPTEMBER:

CSIR- Sports Promotion Board is hosting 51st SSBMT - Third Zonal Football Tournament amongst CSIR Labs./Institutions here.

Seven teams from different CSIR Labs./Institutions such as CSIR CIMFR, Dhanbad, CSIR-CECRI, Karaikudi, CSIR-CFTRI, Mysore, CSIR-NBRI, Lucknow, CSIR-NAL, Bangalore, CSIR-IMTECH, Chandigarh, CSIR-HQS, New Delhi are participating in the tournament.

Former Captain of Indian Women's National Football Team, and currently the Head Coach of Odisha Police Women's Football Team Ms. Sradhanjali Samantaray inaugurated the tournament.

Prof S Basu, Director, CSIR-IMMT Bhubaneswar, Bamaprasad Bag and others were present.

Four Day “Jigyasa for Renewable Fuel” program under Jigyasa 2.0 for the Students of Scindia Kanya Vidyalaya, Gwalior at CSIR-Indian Institute of Petroleum, Dehradun, conducted during 29 Aug-01 September, 2022

CSIR-IIP

01st September, 2022

A four-day “Jigyasa for Renewable Fuel” program under Jigyasa 2.0 program was successfully organized for the students of XIth class of Scindia Kanya Vidyalaya, Gwalior during 29 Aug-01 Sept 2022 at CSIR-Indian Institute of Petroleum, Dehradun. The 4-day program was inaugurated by Dr. Anjan Ray, Director, CSIR-IIP Dehradun. The main objective of the program is to give an exposure to different technologies developed for the utilization of non-edible vegetable oils, used cooking oil and waste plastic to different types of fuels.



Dr. Anajn Ray, motivates the students to look for different types of waste they are generating in their daily life and suggested the paths to minimize the waste generation and further utilization for energy & fuels. He also emphasized a collective effort is needed to achieve the net zero CO₂ emission target. During this program, students got an opportunity to interact with the Scientists and technical officers of CSIR-Indian Institute of Petroleum.

A series of lectures were delivered on different themes like, Renewable Fuel, Alternate Fuel, H₂ as future Fuel, Electrical Vehicle retrofitting, Artificial Intelligence & Machine Learning, Petrochemicals and Polymers by Dr. Anajn Ray, Dr. Neeraj Atray, Dr. Anand Narani, Dr. Sunil Kumar Suman, Dr. Sanat Kumar, Dr. Subham Paul, Dr. Nanoji Islavath, Dr. Robindro L., Dr. Tuhin S. Khan, Dr. D.V. Naik and Dr. Umesh Kumar to enhance the scientific temperament of students. Students also get exposure to process of RUCO to Biodiesel as well as dry ice formation from CO₂. Besides this, students also visited various laboratories such as Bio-technology & Biochemistry lab, Adsorption & Membrane Separation lab CFR Engines,

Emission Testing Lab, Thermo Catalytic Process Lab, advanced crude oil research centre, IR, and GC-MS lab. They also visited pilot plants of Waste Plastic to Fuels & Chemicals, and Biojet Fuel. During the Valedictory function participation certificates for students were given by Prof. SK Ganguly, Chief Scientist, CSIR-IIP.

In the organization of this program Dr. Ankur Bordoloi, Principal Scientist; Dr. Umesh Kumar, Senior Scientist; Dr. GD Thakrey, Senior Principal Scientist; Dr. Kamal Kumar, Sr. Technical Officer; Dr. Deependra Tripathi, Sr. Technical Officer; Dr. Jyoti Porwal, Sr. Technical Officer; Dr. Pradeep Tyagi, Sr. Technical Officer; Dr. Raghuvir Singh, Sr. Technical Officer; Mr. Mukul Sharma and Mr. Pankaj Bhaskar played an exemplary part in making the programme a success. The whole programme was coordinated by the Jigyasa coordinator, Dr. Aarti, Principal Scientist CSIR-IIP.



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