CSIR in Media





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Curtains come down on National Workshop on Hot Dip Galvanizing of Steels

23rd August 2017

Tata Steel Limited, Jamshedpur. Mostly, the engineers and researchers from various industries & institutions of national repute such as Tata Steel Limited, Tata Blue Scope, JCAPCP, RDCIS, SAIL, Bokaro Steel plant, Maruti Udhyog Ltd, IITs and NITs took part in this grand successful event.

The organizers also arranged experiments for Jamshedpur, Aug. 22 : The valedictory the delegates to demonstrate the functionality function of the national workshop on of Hot Dip Process Simulator (HDPS) facilities Hot Dip Galvanizing of Steels (HDGS), installed at CSIR-NML. 2017 jointly organised by CSIR-Today, Anindita Chakraborty of Tata Steel National Metallurgical Laboratory focused on "use of prior coating to improve zinc (NML) and Tata Steel Limited, coating on high strength steels" followed by the Jamshedpur concluded on Tuesday in delivery of Mr. R. Pais on the topic "Emerging the CSIR-NML Lecture Hall. technologies in hot dip coated steels". The two-day programme has been a Dr. LC Pathak, Senior Principal Scientist, great success. Over 40 delegates from CSIR-NML in his lecture emphasised on the various part of the country had "Challenges in characterization of galvanized participated in the workshop and and galvannealed coatings". Dr. GK Mandal, around 12 technical lectures were Senior Scientist, CSIR-NML explained the delivered by the eminent scientist of im importance of "Interface layer formation during CSIR-NML and researchers of hot dip coating" in detail.

Dr. SK Mishra, Chief Scientist, CSIR-NML focussed on "Alternative coatings on steel" and finally Dr. S. Paswan, Senior Scientist, CSIR-NML deliberated the issue on "Corrosion assessment of coated steel product". While Chairing the technical sessions, Dr. SK Tiwari, Senior Principal Scientist, CSIR-NML thanked all the speakers and anticipated that the facility like HDPS is bound to go a long way in the development of new coatings for Advanced High Strength Steels. While delivering the valedictory speech, Dr. LC Pathak, Senior Principal Scientist, CSIR-NML & Chairman, HDGS, 2017 opined that the workshop would expand the popularity of NML's Hot Dip Process Simulator (HDPS) facility for the laboratory scale simulation of in-line continuous hot dip galvanizing and galvannealing processes in India.

The HDPS system will be able to simulate the hot dip galvanising process in laboratory scale to cater the much needed demands of steel and automotive industries.

Dr. Pathak thanked all the organizing committee members specially Dr. VC Srivastava, Dr. KL Sahoo & Mr. Ashok Kumar in the end.

Stop dumping of 'ritualistic material' into Ganga to keep river clean: NEERI

24th August 2017

Put restrictions on cremation-related activity, disposal of dumps and immersion of Hindu idols, garlands and flowers in Ganga river, says study

Hindu idols, garlands and flowers in the river. The study also held that a large number of "medicinal herbs growing in sub-alpine and alpine region near Gomukh (the origin of the Ganga), Chidbasa, Gangotri and adjoining areas (of the Himalayas) must be protected" to protect the "medicinal water quality" of the river.
It called for changing pesticides-based farming along a 540-km stretch in Uttar Pradesh to organic farming. The study is a preliminary attempt to understand the anti-microbial characteristics of river Ganga. It said the

The National Environmental Engineering Research Institute (NEERI) study says a large number of medicinal herbs grow near the origin of the Ganga river and should be protected. Photo: Mint

New Delhi: People must be stopped from dumping "ritualistic material" into the Ganga, considered a holy river by millions of Indians, says a study by a central government institute. The study by reseachers at the National Environmental Engineering Research Institute (NEERI) has called for restrictions on cremationrelated activity, disposal of dumps and immersion of Mathematical States and St

The study, 'Assessment of water quality and sediment to understand the special properties of River Ganga', was conducted after the Union minister for water resources, river development and Ganga rejuvenation Uma Bharati last year said that NEERI will conduct a study to evaluate the medicinal values, if any, of the Ganga.

The NEERI study was submitted to the National Mission for Clean Ganga, the nodal authority for the Ganga's protection and conservation, a few months ago but is yet to be made public. The study also stressed the need for decentralized sewage treatment plants (STPs), individual household latrines (IHHLs) with proper excreta management in villages along the river, adoption of stringent measures like Zero Liquid Discharge by industries, and ensuring minimum environment flow (e-flow) in rivers. It also called for strict monitoring of wastewater from major multi-speciality hospitals, pharmaceutical and cosmetic industries situated in Kanpur, Bhagalpur, Allahabad and Varanasi and suggested mitigation measures as per the latest biomedical waste management rules 2016. It noted that farming is common along the river bank from Harsil (Uttarakhand) to Gangasagar (West Bengal) but that the use of "pesticides in agriculture in the surrounding areas increases rapidly as the river flow through the plains". "Converting from pesticide-based agriculture to organic farming must be initially considered in the stretch between Narora and Allahabad due to extensive farming activities and reduced flow in river," the study said. The Ganga, which originates in the Himalayas in Uttarakhand, flows for 2,525 km passing through five Indian states - Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal – before discharging into Bay of Bengal. The Ganga basin covers

26% of the country.

Cleaning up the Ganga has been a priority project for Indian governments for nearly three decades but despite spending thousands of crores of rupees the mission has failed. In a scathing judgement, the **National Green Tribunal** in July 2017 noted that "even after spending Rs7,304.64 crore up to March 2017 by the central government, state government and local authorities of the state of UP" the status of the Ganga has

"not improved in terms of quality or otherwise and it continues to be a serious environmental issue". NGT in a 543-page judgment had also banned all construction within 100 metres of the river's edge from Haridwar in Uttarakhand to Unnao in

CSIR-IHBT

24th August 2017

	ताया कि पार्व्यक स्कूल मराडा, हिम अकादमा पट्राकामकल, जाद्धक सपदा, ग्रामाण
हिमालय जैक्संपदा प्रौद्योगिकी संस्थान बुधवार को केंद्रीय विद्यालय होल्ट	, डीएवी) हमीरपुर के विद्यार्थियों ने महत्वपूर्ण विकास, चर्म उद्योग सशक्तिकरण
पालमपुर (आईएचबीटी) में सीएसआईआर पालमपुर, सरकारी स्कूल बिंद्रावन	विवेका जानकारियां हासिल की। उन्होंने बताया कि पारिस्थितिकी एवम पर्यावरण, पदार्थ
की प्लेटिनम जुबली पर आयोजित तीन फाउडेशन मनसिंबल, ग्रीन फील्ड	नगरोटा सुबह नौ बजे से शाम पांच बजे तक संस्थान खनिज, खनन, ऊर्जा, मानव संपदा पोशण
दिकसीय कार्यक्रम का समापन बुधवार को बगवां, आधारशिला दैहण, रेनबो झे	रनेशनल में युवाओं को उपयोगी जानकारी प्रदान की इंजीनियरिंग एवं आधारभूत ढांचा व जल
हुआ। कार्यक्रम में प्रदेश के विभिन्न शैक्षणिक नगरोटा बगवां, सैंट पाल स्कूल	ालमपुर, गई। विद्यार्थियों को अंतरिक्ष एवम स्टेउटेजिक विषयों पर इस तीन दिवसीय कार्यक्रम में
संस्थानों के विद्यार्थियों को विज्ञान के बारे में न्यूग्ल पब्लिक स्कूल	बंद्रावन, सेक्टर, खाद्य एवं पोषण, कृषि व फूलों की प्रमुखता से जानकारी दी गई।

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Himachal Dastak, Page 1

Also published in:

Punjab Kesri, Page 1 Divya Himachal, Page 1

CSIR-IHBT

Curtains down on CSIR exhibition

at Palampur

OUR CORRESPONDENT

PALAMPUR AUGUST 23

The CSIR Platinum Jubilee Mega Exhibition organised at the CSIR-IHBT, Palampur, witnessed a huge flow of students, teachers and general public on the concluding day of the exhibition.

CSIR was on display in aerospace to oceanography, tractor to aero plane, road to affordable housing. leather to energy, value added agriculture to functional foods, mines and minerals to environment, potable drinking water to generics and medicines, instrumentation to chemical and petrochemicals, rural technologies to human resource management and intellectual property management. School and college students, scholars, teachers, professors and retired professors thronged the ven-

Industrial Research (CSIR), the largest public funded R&D organization of the country is celebrating its 75th foundation year from September 26, 2016 to September 26, 2017. As part of its platinum jubilee celebrations, the CSIR is showcasing Achievements of the scientific and technological innovation made by its 38 constituent laboratories across the country in different fields of science and technology. The exhibition has been categorised into fourteen themes viz. aerospace & strategic sector, agriculture & floriculture, chemical & petrochemical, societal technologies, ecology & environment, energy, engineering & infrastructure, food & nutrition, generics & healthcare, intellectual property, enabling leather, materials/minerals/mining, nurturing human resource and water. The exhibition will provide great opportunity

vided to school students, particularly government schools and to others who requested for it. Council of Scientific and

ue in large numbers.

Transport facility was pro-

to students, youth and all sections of society to get a glimpse scientific of achievements of the CSIR under one roof.

The Tribune Thu, 24 August 2017 (Himachal Edition) epaper.tribuneindia.com//c/2

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दिवसीय राष्ट्रीय कार्यशाला का समापन मंगलवार को हुआ, जिसकी अध्यक्षता ड़ा. टी मुख़र्जी ने की। इस दो दिवसीय कार्यशाला का मूल उद्देश्य स्टील की गुणवत्ता में सुधार करना है। कार्यशाला में Tata Blue Scope, JCAPCP, RDCIS, SAIL, बोकारो Steel plant, Maruti Udhyog Ltd, IITs व NIT के प्रतिभागियों ने हिस्सा लिया। संचालन टीएसएल की अनिन्दीत ने किया।

Published in:

AMG Patrika

CSIR-NML

Hindustan, Dainik Jagran, Dainik Bhaskar

Workers slog sans protective gear

CSIR - NEERI

24th August 2017

•Sewage worker Krishna says they don't have any such gears and no one gave them the gloves at least

•Workers complain of itching sensation probably because of

Sanitation workers removing garbage and aquatic plants with **the polluted water** bare hands from Vinayaka Sagar in Tirupati

Tirupati: Sewage worker Krishna's work begins at sharp 7 am. He along with his colleagues assemble at Vinayaka Sagar, a water body synonymous with the immersion of Ganesh idols, on the outskirts of Tirupati. After a light breakfast, they enter the murky waters, which is a mix of storm and drain, unmindful of the stench. They do not wear any kind of protective gear to enter the neck deep water for annual cleaning of tank ahead of 'Ganesh nimajjan' and have zero concern for their life. They go on removing the garbage and aquatic plants from tank with their bare hands till evening. This is the plight of sanitation workers, hailing from Anantapur and Kavali in Nellore district, currently engaged by the civic authorities to get the tank ready for immersion of Ganesh idols, which usually takes place on the third-day of Vinayaka Chavithi in Tirupati. When asked about their safety as they do not wear the protective gear, Krishna replied that they don't have any such gears and no one gave them the gloves at least. Without having the knowledge of what is there beneath the water, they walk through the cleaning area with bare foot.

here may be glass pieces, sharp stones and other harmful material inside the waters. There may be even insects and some may be poisonous ones. But, one cannot see any fear in their eyes. However, Krishna said when they come out they feel itching sensation probably because of the polluted water. After standing amidst the unbearable stench, they even find it difficult to take food as they get vomiting sensation. The tank has been fully covered with the duckweed plant, which has become very difficult to remove. The group of workers are finding it tough in removing the refuse from the sewage water and usually move it closer to the shore for a JCB to collect it. In the absence of proper machinery, the authorities have been relying on human intervention.

A senior official from the Corporation said, though the water is murky, it has all good characteristics which proved through the tests in laboratory. Even the Pollution Control Board has tested the water, he maintained. Located on the outskirts of Tirupati, Vinayaka Sagar's name is heard much during Vinayaka Chavithi time every year than any other time. The tank spread over 29 acres has two major inlets. Recently National Environmental Engineering Research Institute (NEERI) scientists came and inspected the tank. They were planning to take up Phytorid technology, a form of eco-friendly sewage treatment soon. Though the officers were planning to

develop the area on the lines of Tank Bund in Hyderabad, there is still a long way to go towards that goal.

विचार आया है। केंद्रीय विद्यालय 🗖 जयदीप रिहान, पालमपुर पालमपुर की जमा दो की छात्रा अरे वाह! विज्ञान में तो बहुत रिया ने बताया कि सीएसआईआर संभावनाएं हैं। यह उन बच्चों का में आयोजित की जा रही प्रदर्शनी में कहना है जो पालमपुर स्थित कुछ ऐसे रोचक विषय भी उनके सीएसआईआर संस्थान में सामने आए हैं, जिनके बारे में अब संस्थान में आयोजित किए जा रहे टेक्नोफेस्ट में साइंस के विभिन्न राजपुर, केवी होल्टा, विवेका रसायन एवं पेट्रोकेमिकल, बौद्धिक संजय कुमार ने बताया कि

प्लेटिनम जुबली टेक्नोफेस्ट में पहलुओं पर काफी लाभदायक फाउंडेशन भवारना, ग्रीन फील्ड संपदा, ग्रामीण विकास, चर्म उद्योग सीएसआईआर की विभिन्न पहुंच रहे अनेक विद्यार्थियों ने जानकारी उनको मिली है। तुशार, नगरोटा, बतरा कालेज, जीएवी सशक्तिकरण, पारिस्थितिकी एवं प्रयोगशालाओं द्वारा विकसित विज्ञान के क्षेत्र में ही अपना भविष्य उद्भव और वरुण ने बताया कि सल्याणा, गर्ल्ज स्कूल पालमपुर, पर्यावरण, पदार्थ, खनिज, खनन, वैज्ञानिक तकनीकी, प्रौद्योगिकी एवं बनाने की बात कही है। यहीं से अंतरिक्ष एवं स्ट्रेटेजिक सेक्टर की जीजीडीएसडी कालेज राजपुर ऊर्जा, मानव संपदा पोषण, उत्पाद के बारे में आम नागरिक उनमें आगे जाकर साइंस में ही जानकारी उनको भविष्य में बहुत सहित करीब 12 शिक्षण संस्थानों इंजीनियरिंग एवं आधारभूत ढांचा, विशेषकर छात्रों तक जानकारी भविष्य की संभावनाएं तलाशने का काम आएगी। तीन दिवसीय के आठ सौ से अधिक बच्चों ने जल आदि विषयों पर महत्त्वपूर्ण पहुंचाई जा रही है।

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Dainik Jagran, Page 3 Punjab Kesari, Page 4

CSIR ORGANISES THREE-DAY CAPSULE EXHIBITION AT

ANPRI

CSIR - AMPRI

24th August 2017

Council of Scientific and Industrial Research is a leading R&D organisation of the country with 38 premium institutes spread across the country. CSIR is organising Capsule Exhibition across the country as a part of the CSIR Platinum Jubilee Celebrations to make the masses acquainted with the contributions of CSIR in various fields. The venue for the three-day exposition, started on August 22, is CSIR — Advanced Materials and Processes Research Institute, Bhopal. A large number of Students, Dignitaries and entrepreneurs witnessed the display on the achievements of CSIR at one place. The early warning system for landslides is important today when we are regularly facing the natural calamity in the hilly areas. The system is developed by CSIR - Central Building Research Institute, Roorkee, and is successfully implemented in North - Western Himalayas. CBRI Roorkee has also done important work in the area of substitution of wood by industrial wastes. This, on one side, reduces the cutting of trees and on the other curbs the pollution caused by the hazardous industrial wastes. Central Mechanical Engineering Research Institute (CMERI), Durgapur has developed Swaraj, Sonalika and Krishishakti, which are very popular tractors of India. Similar to the above Amul Milk developed by Central Food Technology Research

Institute, Mysore using Buffalo milk if extremely popular. The exhibition contains the exhibits on the achievements of CSIR in the areas of CSIR - 800(Social Intervention), Nurturing Human Resources, Intellectual Property and Entrepreneurship, Chemical and Petrochemical, Water, Ecology and Environment, Leather, Materials and Minerals, Energy, Healthcare, Aerospace, Engineering and Infrastructure,

Agriculture and Floriculture, and Food and Nutrition. The exhibition will conclude on Thursday.

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आइएचबीटी के प्रेस प्रवक्ता डॉ. राकेश सूद ने बताया कि प्रदर्शनी के दूसरे दिन राजपुर, पालमपुर के चार, भवारना, नगरोटा बगवां, ठाकुरद्वारा के दो, सलियाणा व बनूरी के स्कूलों विद्यार्थी पहुंचे। उन्होंने कहा कि विद्यार्थियों में प्रदर्शनी के लिए खासा उत्साह देखा गया। बुधवार को प्रदर्शनी का अंतिम दिन होगा। उन्होंने बताया कि सीएसआइआर की 75वीं वर्षगांठ पर इस प्रदर्शनी का आयोजन किया गया है।

सीएसआइआर पालमपुर में प्रदर्शनी के दौरान विद्यार्थी व शिक्षक 💩 जागरण

केंद्रीय विद्यालय में आयोजित विज्ञान प्रदर्शनी में

 मावधावा पारावाय के जालटज

 केंद्रीय विद्यालय अल्हीलाल

 पालमपुर : केंद्रीय विद्यालय अल्हीलाल

 में मंगलवार को विज्ञान प्रदर्शनी का

 आयोजन किया गया। इसका शुभारंभ

 स्कूल की प्रधानाचार्य डॉ. सुधा शर्मा

 ने किया। प्रदर्शनी में सभी विद्यार्थियों

 ने बढ़-चढ़कर भाग लिया और अपने

NANOTECHNOLOGY, CLIMATE CHANGE AND POLLUTION

CSIR - IICT

24th August 2017

Nano-material is the future technology for countries around the world that is equipped to tackle the toughest of environmental challenges that the mankind face today, but it needs to be harnessed quickly and made mainstream

The world today faces environmental problems and challenges of staggering proportions. With every passing year, threats to ecological biodiversity of the planet are multiplying. As countries scramble to find effective solutions, it is quickly emerging

that traditional practices for conserving the <u>environment</u> and the time-tested methods of preventing pollution may not prove to be successful in getting the desired results. Nanotechnology and nanomaterial-driven pollution control strategies are rapidly emerging as a small, but ultra powerful source of solutions for today's vexing environmental problems. First explored for applications in microscopy and computing, nanomaterial made up of units that are each thousands of times smaller than the thickness of a human hair, are emerging as useful tools for tackling threats to our planet's well-being. Nano-material is increasingly forming the foundation of eco-friendly technology that

can capture carbon dioxide from air and toxic pollutants from water and degrade solid waste into useful products. Scientists, researchers and innovators are relying on this technology to slowly but steadily mitigate climate change process. Thanks to the amount of research and development in this sector, nano-material are now not only dependable and recyclable but also efficient catalysts. These features have spurred a bevy of technical innovations in which nano-material plays an integral and pivotal part.

For instance, in order to slow down the concerning increases in carbon dioxide levels in the atmosphere and also mitigate climate change, researchers have developed Nano CO₂ harvesters that can absorb atmospheric carbon dioxide and deploy it for industrial purposes. For instance, alcohol is a useful by product of CO₂ extraction from the

atmosphere using Nano CO₂ harvesters. Nano-material is simple chemical catalysts which is photochemical in nature that works in the presence of sunlight. But this technology still has a long way to go before it becomes a widely accepted mainstream solution. Nano-particles offer a promising approach to this because they have a large surface-area-to-volume ratio for interacting with CO₂ and properties that allow them to facilitate the conversion of CO₂ into other useful substances. The challenge is to make them economically viable, and in pursuit of the same, researchers have tried everything from metallic to carbon-based nano-particles to reduce the cost, but so far they haven't become efficient enough for industrial-scale

volume application. But research in this area is slowly but surely yielding results. One of the recent progresses made in this area is by research conducted by scientists of the Council of Scientific and Industrial Research-Indian Institute of Petroleum and The Lille University of Science & Technology, France. In this project, researchers developed a Nano CO2 harvester that used water and sunlight to convert atmospheric CO2 into methanol, which can be employed as an engine fuel, a solvent, an anti-freeze agent and a diluent of ethanol. Made by wrapping a layer of modified graphene oxide around spheres of copper zinc oxide and magnetite, the material looks like a miniature golf ball and is capable of capturing CO2 more efficiently than conventional catalysts and can be readily reused. Similarly, nano-particles can also be used to cleanse water from pollution created due to toxic dyes used in textile and leather industries. The dyes from tanneries tend to leach into natural sources of water like deep tube wells or groundwater and, if wastewater from these industries is left untreated, it creates a problem that is rather difficult to solve.

An international group of researchers at the University of Warsaw in Poland have established that nano-material can be widely used for removing heavy metals and dyes from wastewater. The absorption processes, using materials containing magnetic nanoparticles, are effective and can be easily performed because such nano-particles have a

large number of sites on their surface that can capture pollutants and don't readily degrade in water. Using the same concept, appropriately designed magnetic nano-material can be used to separate pollutants such as arsenic, lead, chromium and mercury from water. In addition to removing dyes and metals, nano-material can also be used to clean up oil spills. Researchers at the Rice University in Houston, Texas, have developed a reusable nanosponge that can remove oil from contaminated seawater. Apart from this, nanomaterial can also be effectively used to manage organic waste, which can pollute land and water if not handled properly. Farms and food industry generate humongous amounts of biodegradable waste. One of the oldest methods to treat biodegradable waste is to dump it into tanks called digesters. These are full of anaerobic microbes that consume the material, converting it into biogas fuel and solids that can be used as fertilisers. But anaerobic digestion is slow. Nanoparticles can accelerate the anaerobic digestion of the sludge, thus making it more efficient in terms of duration and enhanced production of the biogas. Nano-material is the future technology that is equipped to tackle the toughest of environmental challenges that the mankind face today, but it needs to be harnessed

