CSIR in Media



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Grey water treatment workshop concludes





A daylong workshop on opportunities and challenges in grey water treatment technology concluded at the UPES. The Uttarakhand State council for Science and Technology (UCOST) director general Rajendra Dobhal presided over the workshop sponsored by the Department of Science and Technology. Addressing the gathering, Dobhal spoke on the current water availability scenario and its management.

"In view of the current water resource scarcity, its effective management has become even more important. The need of the hour is to regularly undertake requisite steps for its

proper management to avoid association of additional challenges with this already scarce resource.

Though 70 per cent of the earth's surface is covered by water, less than one per cent is available for human consumption, therefore it becomes even more essential that everyone should contribute for its conservation. Researchers and scientists need to develop technology for water solutions and collate its valuable data for the next generations," he added.

Senior scientist from CSIR-NEERI, Delhi, Raman Sharma spoke about revival of water bodies and lakes carried out by NEERI with Delhi Jal Board's support. Brij Mohan Sharma from Society of Pollution and Environmental Conservation Scientists (SPECS) also shared his field experiences and case studies on water treatment units in Dehradun while addressing the audience. Associate professor and assistant dean (Research), School of Engineering, UPES, SM Tauseef spoke of his research experiences.





Water scarcity and its management pose a big challenge that should have been acted upon by yesterday instead of today or tomorrow. Despite the delay, it is still better to be late than never, he added.

Mahendra Rana from Government Inter College, Shilodi (Pauri) spoke on the loss of water in mountains due to lack of proper water management while Sakshi Gupta from Graphic Era University spoke on rainwater harvesting and entrepreneurial opportunities.







प्रौद्योगिकीः सामाजिक उत्थान के लिए' अवसर पर अतिथियों द्वारा आयोजन की के अध्यक्ष डॉ एस अली अकबर, मुख्य तेजी से बढ़ रही है। उन्होंने इसके लिए विषय पर अपने प्रस्तुतीकरण दिए गए। स्मारिका का विमोचन भी किया गया। अपने प्रस्तुतीकरणों में संस्थान के तीनों साथ ही संस्थान की विज्ञान पत्रिका एल रहेजा, जयपुर केंद्र के प्रभारी डॉ पी व्यक्त की कि शीघ्र ही हिंदी न केवल शोध क्षेत्रों के चयनित वैज्ञानिकों द्वारा इलेक्ट्रॉनिक दर्पण 2019 में प्रकाशित की खिलों को चतुर्वेदी, प्रशासनिक अधिकारी श्री विनोद यह संयुक्त राष्ट्र संघ की आधिकारिक कार्यो पर प्रस्तुतीकरण दिए गए। स्थानपन्न निदेशक डॉ पी के खन्ना द्वारा कुमार, कार्यक्रम के संयोजक श्री रमेश भाषाओं में अपना स्थान बनाएगी।

Published in:

Seema Sandesh





NCL researchers become first Indians to win Merck Young Scientist Award







mostly belong to precious metals platinum, palladium, iridium etc. These are very expensive and their abundance in the earth is very less. They can't be used for longer period as there are chances that these may finish soon. "My group is trying to do the same chemical transformation with Earth's abundance metals like silicon and calcium. Indian researchers have received first Merck Silicon is second most Earth's abundance Young Scientist Award 2019 in Chemical metal and calcium is fifth most so can we do Sciences recently at Bangalore instituted by the same transformation with these elements Merck, a science and technology company instead of those precious metals" said Dr Sen. operating worldwide. Merck Young Scientist The other recipient of the award are Dr Award is given to researchers with less than Debojyoti Chakraborty, Institute of Genomics ten years of experience with expertise in and Integrative Biology, Delhi (IGIB); Dr solving some of the toughest problems in Dipyaman Ganguly, CSIR-Indian Institute of chemical sciences. Dr Sakya Singha Sen, a Chemical Biology, Kolkata (CSIR-IICB); Dr senior scientist from National Chemical Siddhesh S Kamat, Indian Institute of Science Laboratory (CSIR-NCL), Pune has been Education and Research (IISER), Pune; Dr awarded for doing remarkable research in Mahendran K .R, Rajiv Gandhi Centre for chemical science. Sen and his research team Biotechnology, Thiruvananthapuram (RGCB) specializes in main group chemistry and and; Dr Basker Sundararaju, Indian Institute involves in the synthesis of compounds with of Technology, (IIT) Kanpur. The winners main group element and their catalytic received cash award of Rs 2,00,000 and application. All the catalysts currently used Travel Award of Rs 1,50,000 each.





The Jury included eminent scientists from top Indian Academic institutes with Dr Shahid Jameel, Chief Executive Officer, The Welcome Trust / DBT India Alliance, as the Chair and, Dr Anurag Agrawal, Director Institute of Genomics & Integrative Biology, Prof Apurva Sarin, Director, Institute for Stem Cell Biology and Regenerative Medicine, Dr Davinder Gill, Chief Executive Officer Hilleman Laboratories and Dr Radha Rangarajan, CEO, Co-Founder, Vitas Pharma, as Co-Chairs.

Merck is a global company working on breakthrough solutions and technologies in more than sixty countries. It has been functional for more than 350 years, found by Friedrich Jacob Merck in Darmstadt, Germany in 1668. It invested a total of \notin 2.2 billion in research and development.







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हस्तांतरित की जा रही है, जो जल्द ही व्यावसायिक उत्पादन शुरू करेगी। इलेक्ट्रोस्टेटिक डस्ट मिटीगेशन डिवाइस नामक यह मशीन विद्युत तरंगों पर आधारित है, जिसमें पानी का न्यू नतम इस्तेमाल होगा। इसका जिम्मा यमुनानगर की कंपनी को सौंपा गया है। प्रदूषित वातावरण में स्मॉग से निपटने के लिए अभी तक सिर्फ पानी के छिड़काव को ही कारगर विकल्प माना जाता है, लेकिन सीएसआइओ

हारा तैयार की गई इलेक्ट्रोस्टेटिक डस्ट किया जा सकेगा, जबकि जरूरत के बेहद कम होगी। प्रति मशीन तैयार मिटिगेशन डिवाइस में पानी को विद्युत मुताबिक इससे अधिक क्षमता वाली करने पर 50 से 60 हजार रुपये लागत तरंगों के वाहक के रूप में इस्तेमाल मशीन भी विकसित की जा सकेगी। आएगी। मशीन तैयार करने वाली टीम किया जाएगा। इसमें जहां पानी का बेहद मशीन को ट्रैक्टर ट्रॉली या छोटे ट्रक में संस्थान के वैज्ञानिक अनिल जांगझ, कम इस्तेमाल होगा, वहीं अन्य विकल्पों में खबकर धीरे-धीरे आगे बढ़ते हुए अनूप कुमार, अनिल कुमार, अंकित की अपेक्षा स्मॉग का सफाया कहीं स्मॉग को नियंत्रित किया जा सकता कांची, योगिता सिंह, सुकृति आचार्य, अधिक आसान होगा।इस मशीन से 50 है। चंडीगढ़ स्थित देश के प्रतिष्ठित प्रदीप कुमार और अनु सैनी का भी मीटर तक के दायरे में स्मॉग का सफाया 🛛 रिसर्च एंड डेवलपमेंट इंस्टीट्यूट विशेष योगदान रहा है।

में काफी फायदेमंद साबित होगी। इस

किया जाएगा, जो इसका ब्यावसायिक

उत्पादन करेगी।

सीएसआइओ ने करीब एक साल की तैयार यह डिवाइस इससे निपटने कड़ी मेहनत के बाद इस तकनीक को विकसित किया है। प्रोजेक्ट से जुड़े टेक्नोलॉजी को हरियाणा की एक निजी सीनियर साइंटिस्ट डॉ. मनोज कुमार फर्म को ट्रांसफर करने के लिए एम ओयू पटेल के अनुसार, इस खास डिवाइस से वातावरण में मौजूद प्रदूषक कणों को विद्युत तरंगों से ढेर किया जा सकेगा। डॉ. सुरेंद्र सिंह सैनी, प्रमुख, विजनेस विद्युत तरंगों से टकराकर यह कण नीचे इनोवेटिव एंड प्रोजेक्ट प्लानिंग, आ गिरेंगे। इस युक्ति में पानी की बेहद सीएसआइओ, चंडीगढ़। महीन बौछार होगी, जो विद्युत तरंगों की संवाहक होगी। लिहाजा, पानी की खपत

Published in: Dainik Jagran

Scientists created organic and herbal lipsticks for lipstick lovers

Lipstick is the most used cosmetics all over Kumar, Director, CSIR-IHBT, "The developed the world. It enjoyed its global share of technology provides a process for the preparation \$5760 million in 2016 and expected to reach of herbal lipstick and has great market potential \$8670 million in 2021. To provide a safe, with additional health-promoting effects." non-toxic and eco-friendly substitute to synthetic colors, the Scientists of Council of Different classes of people worldwide use Scientific and Industrial Research- Institute cosmetics for beautification since ancient of Himalayan Bioresource Technology times. However, during the last few decades, (CSIR-IHBT) have extracted natural colors there has been a tremendous increase in the and dyes from the natural occurring use of cosmetics. The daily use of cosmetics vegetables and plants sources. The main may lead to localized skin problems, and the concern in natural colors is stability. To harmful effects are caused by skin or oral overcome this issue, natural colors were absorption of some chemical substances. The stabilized by natural methods and used for toxic elements are related to mineral the preparation of beauty-enhancing and pigments, which are used as coloring agents. health-protecting cosmetic composition i.e., Numerous cosmetics used daily are applied in Herbal Lipstick. It is prepared in different susceptible areas like lips where the

shades like cherry red, pink, purple, and orange by the use of natural colors derived from vegetable and plant sources and blended with various essential oils in cosmetically suitable base materials. These herbal lipsticks have the potential to beautify the texture and shade of lips and to provide health-promoting and protective effects. According to Dr. Sanjay

absorption of toxic material is very high. Lipstick is the common cosmetic item worn by women in their day-to-day life. It is a product holding primary ingredients like waxes, pigments, and oils that impart shading, texture, and softness to the lips. Fragrances and preservatives are additionally included to prevent lipstick from becoming rancid.

Synthetic colors and dyes used in lipstick might be responsible for various allergies, skin irritation, skin discoloration, dermatitis, neurotoxicity, and cancers. However, due to increased awareness in the consumers, the concern towards the quality of products has been amplified.

"Nowadays, natural colors and dyes become important commodities in today's global forethought because of the hazardous effects of synthetic dyes on humans, animals, as well as to the environment.

These lipsticks may provide a solution to all these problems," said Dr. Kumar.

Chemical engineers need to contribute for better food processing techniques

engineering in terms of its preservation or new product. Here is the big opportunity to collaborate with the food scientists and food chemists and engineers to develop new products and processes especially in the field of food processing"said Prof. Pandit. A research paper published in the journal of rural development says that the food Chemical engineering has contributed to processing sector is growing, but it is yet to human lives to great extent in various compete in the world market. India's share in sectors like development of medicines, world export is meagre with 1.17 per cent. biomaterials, implants, 3D printing, water, There is a huge gap between productivity and wastewater treatment. It has specifically processing of items. The factors which have played a vital role in food processing. But been used to study food processing industry there is a lot more that chemical engineers are S&T capability of sector, its employment can do in terms of providing better food generation capacity and skills needed in the processing techniques said Prof. AB Pandit, sector. Vice-Chancellor, Institute of Chemical Technology (ICT), Mumbai while speaking Prof Pandit also told about the possible at the 70th foundation day of Council of opportunities for the youngsters in the field. Scientific and Industrial Research-National He talked about the rural applications that Chemical Laboratory (CSIR-NCL). "Now is included solid fuel burning stoves, cooking the time for the chemical engineers to devices and solar dryers, cavitating handbecause all food processing contribute pump for safe drinking water. "As an engineer, operations involve chemistry and chemical at every stage you must calculate to find out

that the choices which you are making are indeed going to be affordable" he said. He emphasized on the agro-waste utilization that included the alkaline hydrolysis of wool based keratins, cardanol production from cashewnut shell, coconut husk biochar. He explained about the use of growth promoters for spinach plant, selective one-step extraction of intracellular biomolecules, portable microscope in education and diagnosis applications, life cycle analysis. Prof. Ashwini Kumar Nangia, Director, CSIR-NCL in his welcome remarks spoke on technologies developed and also projects implemented over last four years. NCL Research Foundation Annual Awards were also delivered to the deserving scientists and staff.

Water quality is good in 18 of 45 Bengaluru lakes: Study

Contrary to the perception that lakes across needs proper treatment. The interim report the city are cesspools, a study by CSIRputs the WQI of 22 lakes at poor and two at National Environmental Engineering very poor. Three lakes had no water from Research Institute (Neeri) has certified that August to December last year. The three, water quality in 18 (40%) of the 45 lakes it incidentally, are yet to be developed, while the examined is "good", implying it can be used remaining 42 have been revived. Also, water for domestic and irrigation purposes. in none of the lakes was found to be excellent However, it's not fit for drinking. and fit for drinking. "On HC directions, we BBMP had commissioned Neeri to assess engaged Neeri to conduct a comprehensive water quality index (WQI) of all its 206 study of Bengaluru lakes. It has submitted the lakes on directions of the high court, which interim report. We will examine it and is hearing a batch of petitions on the augment efforts in improving WQI in all condition of various Bengaluru water bodies. lakes, both which have been developed or have In its interim report released recently, the to be developed by BBMP," said Ravikumar institute said it assessed 45 lakes and Surpur, special commissioner, major projects their under quantified WOI and health. Incidentally, the Palike has fully tive classifications: excellent, good, poor developed only 75 of the 206 lakes it its

very poor and unsuitable for drinking. According to the study, excellent category means the water is fit for drinking, irrigation and industrial purposes, while good water is fit for domestic, irrigation and industrial uses. Water of poor quality can be used only for irrigation, very poor for 'restricted' irrigation and that which is unsuitable for drinking

custody. Sources said shortage of funds is the primary reason for poor maintenance. Asked why water quality of many lakes is certified as poor, a senior BBMP official said: "Lakes in outer areas have not seen development for the past few years. With sewage not being diverted, they continue to receive filth." Citing the example of Parappana Agrahara lake whose water has been classified as very poor by Neeri, the senior official said it's because the STP which treats water released from the nearby Central Jail has stopped functioning. "We have issued a notice to jail authorities asking them to fix it. The quality of water will improve within a few months once the STP starts working. Thirumenahalli Lake, which also has very poor water quality as per the study, doesn't have a proper outlet to release accumulated sewage. We are working on it." Asked about the green colour of water in most lakes, the official said, "That is not a reflection of the water quality. Soil and sediments of a lake play a vital role in determining the colour." He added: "Frequent rejuvenation, good

rain and STPs can contribute to clearer water," he added.

W	ater quality	Usage	Water bodies surveyed following Karnataka high court directive
	Good	Domestic, irrigation and industrial	Jakkur, Kempambudhi, Devasandra, Handrahalli Kere, Agrahara, Sankey Tank, Ulsoor, Haraluru Kere, Vijinapura Kere, Amblipura Melina Kere, Kasavanahalli, Munnekolalu Kere, Basapura lake, Chokkanahalli, Devarabeesanahalli, Kowdenhalli, Ambalipura Kelagina Kere, Deepanjali
	Poor	Irrigation	Dasarahalli (Chokkasandra), Kattigenahalli Kere, Narsipura, Kodigenahalli, Kattigenahalli Kere, Narsupura, Dorekere, Yediyur, Rachenahalli, Mangammanapalya Kere, Yelahanka Kere, Kogilu, Chinnappanahalli, Herohalli, Garudacharpalya, JP Park, Shilavanthana Kere, Kaigondanahalli, Sigehalli, Uttarahalli, Allasandra, Puttenahalli
	Very poor	Restricted use for irrigation	Thirumenahalli, Parappana Agrahara Source: CSIR-Neeri stud

Making it clear that water termed good is not potable, BBMP commissioner BH Anil

Kumar said, "It is used only for domestic, irrigation and industrial purposes." Lake expert Ramprasad said the perception of city lakes will change now. A senior Neeri official said they've surveyed all 206 lakes under BBMP and the final report will be submitted soon.

Published in:

The Times of India

'Future India' lecture series in Mysuru

The first lecture will be held on January 10 The Central Food Technological Research Institute (CFTRI), Mysuru, has organised a series of lectures by scientists and technologists for students of Mysuru. The series titled 'Future India' aims to educate next-generation technologists and innovators about the achievements of Indian science and technology on various fronts. The first talk will be on January 10. Information technology analyst and scientist Shivananda Kanavi will speak on 'How Indians won the Silicon Valley'. Students will get a chance to interact with speakers, the institute said. "We believe that our students get

limited chances to listen to experts and hence have launched this initiative," said CFTRI director KSMS Rao.

The institute has also announced that it is ready to join hands with other academic institutions here to organise such lectures in future. "This would scale up the effort and reach more students," he added. Entry to the lecture is free but by invite. Those interested can call 0821-2515910 to register.

CSIR- CFTRI has been conducting such student-scientist sessions since 2017 for students

and teachers of Kendriya Vidyalayas, Jawahar Navodaya Vidyalayas and other government schools from Mysuru and neighbouring districts. CFTRI has launched 'JIGYASA', one of the major initiatives taken up by CSIR at the national level to further widen and deepen its Scientific Social Responsibility (SSR) in collaboration with Kendriya Vidyalaya Sangathans (KVS). The programme focuses on connecting students and scientists to inculcate the culture of scientific thinking in children while still at school. <u>Published in:</u>

The Hindu

कम ही लोग जानते हैं। यही वजह है कि अधिकतर लोग अपने सपनों को सच करने से चुक जाते हैं और आलोक धवन उनकी मन की इच्छा निदेशक, आईआईटीआर आधी-अधुरी रह जाती है। सफलता कैसे हासिल की जाती है बता रहे हैं आईआईटीआर के निदेशक आलोक धवन। वो कहते हैं कि समस्याएं वॉशिंग मशीन की तरह होती हैं, वे हमें कपड़े की तरह घुमाती हैं, खंगालती हैं और फिर बाद में सुखा देती है, लेकिन जब हम बाहर आते हैं तो साफ-संदर और हर प्रकार की गंदगी से साफ होकर निकलते हैं। यह बात हम जीवन में उतार लें तो संघर्ष के समय में हमारे चेहरे पर मुस्कुराहट कायम रहेगी और हम आनेवाली समस्याओं का मुकाबला डट कर करने को तैयार रहेंगे।

कोई जन्म से बड़ा नहीं होता कोई भी आदमी जन्म से बड़ा नहीं होता है। उसके पीछे होता है उसका कठिन परिश्रम, लंबा संघर्ष, लष्प के प्रति इंमानदारी और दृढ़ संकल्प। आपको सपने देखने ही पड़ेंगे तब ही आप उन सपनों के लिए कर्म करोगे। इसके लिए आपको अपने अवसरों को पहचानना होगा। अगर आप उन लोगों में से हो जो सोचते हैं कि अवसर खुद तुम्हारे पास आएगा तो आप पूरी तरह से गलत हो। कोई भी कार्य अपने आप नहीं होता। लाखों मील दूर चले आए हैं। हमें खुद के आसपास नजर दौड़ानी चाहिए और ऐसे लोगों से सीख लेनी चाहिए। इताशा को दूर रखें।

लक्ष्य की ऊंचाई ज्यादा रखें

पूर्व राष्ट्रपति डॉक्टर अब्दुल कलाम ने कहा था कि हर व्यक्ति को बड़े सपने देखने चाहिए। सपने वो नहीं होते है, जो नींद में आए। सपने वे होते हैं जो सोने न दें। हमारा मानना है कि लक्ष्य को जितना ज्यादा ऊंचा रखेंगे, उतना ही ज्यादा सफल होने की गुंजाइश होगी। एक बात और, जितनी ज्यादा लक्ष्य की ऊंचाई होगी, उतना ही ज्यादा हमें धैर्य रखना होगा। एक साधारण से परिवार में जन्म लेने वाले डॉ. कलाम के इतने बड़े वैज्ञानिक और देश के प्रथम व्यक्ति यानी राष्ट्रपति बनने का कारण था उनके सपनों का बड़ा होना।

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