

CSIR in Media



A Daily News Bulletin
31st August to 1st September 2017



CSIR ranked 9th public research institution of the world

CSIR

1st September 2017

India's largest autonomous public research and development organisation Council of Scientific and Industrial Research (CSIR) has been ranked ninth in the world. The ranking is based on a composite indicator that combines research performance, innovation outputs and societal impact measured by their web visibility, so as to reflect scientific, economic and social characteristics of institutions.

The institute has been ranked ninth amongst a total of 1,207 government institutions, according to the Scimago Institutions ranking World Report 2017.

With this ranking, CSIR comes in the company of globally renowned organisations namely Chinese Academy of Sciences; Centre National de la Recherche Scientifique, France; Helmholtz Gemeinschaft and Max Planck Gesellschaft in Germany; Consejo Superior de Investigaciones Cientificas, Spain; Russian Academy of Sciences; Japan Science and Technology Agency; Consiglio Nazionale delle Ricerche, Italy and Leibniz Gemeinschaft, Germany. "In overall global ranking, CSIR stands at 75th position amongst 5250 institutions world-wide. It is the only Indian organisation which has found place amongst the Top 100 Global Institutions," CSIR said in a statement here on Thursday.

Scimago Institutions Ranking (SIR) is a science evaluation resource developed by Scimago Labs based on data from Scopus -- one of the world's largest database of peer-reviewed research literature, to assess Worldwide Institutions. Known for its cutting edge research and development (R&D) in science and technology areas, the CSIR has a dynamic network of 38 national laboratories and 38 outreach centres. CSIR covers a wide spectrum of science and technology -- from radio and space physics, oceanography, geophysics, chemicals,

drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology.

It provides significant technological intervention in many areas with regard to societal efforts which include environment, health, drinking water, food, housing, energy, leather, farm and non-farm sectors.

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Businessstandard.com

Also published in:

The Pioneer, Asam Tribune

Low-cost water filter that may save millions

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Bhopal: After 10 years research, a senior principal scientist of CSIR AMPRI, Bhopal, has developed a domestic water filter model that not only runs without electricity but also costs next to nothing.

This innovation would come as a boon in villages of Shivpuri district in Madhya Pradesh, where people don't get marriage proposals because of high level fluoride. Over 70 million people in India suffer from problems caused by fluorosis.

According to the inventor,



The domestic water filter model developed by Dr I B Singh (inset)

Dr I B Singh, it will cost only 10-20 paise per litre, putting it within reach of BPL families. Fluoride is beneficial in pre-

vention of cavities and strengthens the skeletal system, but long-term consumption of water containing excessive fluoride causes fluorosis that affects teeth, bones, joints and ultimately leads to crippling of the body, he said.

"Many districts in the state have this problem. My innovation will solve it to a large extent," he told **TOI**. The 'nanoadsorbent' based filter can process 1 litre to 3 litre per hour. The methodology, based on nanocoating the sediment-removal filter is a new concept and can be used at the domestic

household level, the scientist told **TOI**, adding that he has succeeded in synthesising the low-cost nanoadsorbent at Rs 600 a kg. "Because of the regeneration quality of the nanoadsorbent, two filters, each containing 250gm nanoadsorbent, can treat 1,200-2,000 litre water that have 2 to 3.5 ppm fluoride with around 400 ppm dissolved solid. This volume of treated water is sufficient for the drinking and cooking needs of a 4-5-member family for 2-3 months," Dr Singh said.

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Gadget could benefit millions

►From P 1

After thrice regeneration, treatment cost of water is estimated to be around 20 paise per litre, he added. Dr Singh has also made a comprehensive environmental management plan to make the technology eco-friendly.

The exhausted nanoadsorbent can be used in paint and ceramic tiles and desorbed fluoride can be converted to pure calcium fluoride by community treatment which can be used in aluminium-metallurgy and making industries, he says.

This gadget would prove beneficial to millions in the country. A survey in 2001 found that more than 70 million people in 19 states — including Madhya Pradesh, Andhra Pradesh and Rajasthan — were suffering from fluorosis. Now, the number may have crossed 100 million. **TNN**

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The Times of India, Page no. 1

Meet on Nanoscience

CSIR-CSIO

31st August, 2017

Meet on nanoscience

Chandigarh: The third annual meeting of the Chandigarh Region Innovation and Knowledge Cluster (CRIKC) nanoscience group was organised jointly by the Central Scientific Instruments Organisation (CSIO), Chandigarh, and the Institute of Nanoscience and Technology (INST), Mohali, here on Tuesday. Delivering the plenary CRIKC nanoscience lecture, Prof V Ramgopal Rao, Director, Indian Institute of Technology, New Delhi, shared his knowledge and experience of the fabrication of nanoelectronic devices, which are ideally suited for low cost disposable sensor applications. He also highlighted their commercial implications as well as various government schemes for scientists and researchers in this field. CSIO Director RK Sinha delved upon the growing impact of nanoscience and technology in modern era and its potential for finding customised solutions to several problems. Invited talks by various scientists covered the thematic topics of nanoscience with a special focus on their fusion with various fields of applications such as health care and electronics. TNS

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The tribune

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The Times of India, Hindustan Times

City scientists find volcanic margins in East Antarctica

U. SUDHAKAR
REDDY | DC
HYDERABAD, AUG. 29

Scientists at city-based National Geographical Research Institute (NGRI) have found volcanic passive continental margins beneath the Maitri Station in the East Antarctica. They have inferred that these margins are affected by the thermal events which were responsible for the Gondwana supercontinent break-up, including the Indian subcontinent.

Maitri is India's second research station in the Antarctica. Studies are conducted there on intra crustal layers beneath this region.

NGRI scientists, led by Sandeep Gupta and Nagaraju Kanna and A. Akilan, conducted seismic studies and published a paper in the *Polar Research* journal.

Mr Sandeep Gupta said, "The earth is made of plates which constantly move and get together and get apart. This is called plate tectonics. The Gondwana supercontinent existed till 542 million years and broke into two 180 million years ago. The Western Half included America, Africa and the Eastern Half included the Indian sub-continent, Madagascar, Australia and

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Antarctica. Around 140 million years ago, Africa and America separated from the Western Half and in the Eastern Half, India and Madagascar separated from Australia and the Antarctica. Around 90 million years ago, Madagascar separated from the India subcontinent and 65 million years ago India got separated for Seychelles."

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Mr Sandeep Gupta said, "Earth is made of plates that constantly move and get together and get apart this is called plate tectonics. Gondwana supercontinent existed till 542 million years. Gondwana supercontinent broke into two 180 million years ago into Western Half consisting of America, Africa and

Eastern Half consisting of Indian sub continent, Madagascar, Australia and Antarctica. Around 140 million years ago Africa and America separated in Western half and in Eastern Half India and Madagascar separated from Antarctica and Australia. Around 90 million years ago Madagascar got separated from India sub continent and 65 million years ago India got separated for Seychelles."

"In our study, we tried to understand how this separation of Gondwana took place. The magma came up and plates got thinned up. Whatever is happening inside the earth is expressed on the surface. To know what is happening beneath the Maitri station we used seismic imaging. We have observed signatures at this crucial part that explained how the Antarctica got separated from Africa. We have used data collected over years. It is called passive as there is no activity," Sandeep Gupta said.

"We investigated the crustal shear wave velocity model beneath the Maitri station, situated in the central Dronning Maud Land of the East Antarctica, through the receiver function modelling," said the researchers.

Published in:

Deccan Chronicle, Page no. 3

Rapid urbanization, environmental degradation causing biodiversity loss: Expert

CSIR-NEERI



Nagpur: "Rapid urbanization, lack of public awareness and the environmental degradation are responsible for biodiversity loss today," said Shalini Dhyani, scientist, environmental impact and sustainability division, National Environmental Engineering Research Institute (**NEERI**). She was speaking on 'Urban disasters and ecosystem-based approaches' on the concluding day of three-day mega exhibition on science and technology by Council of Scientific and Industrial Research (CSIR). The exhibition, which was organized as a part of diamond

31st August, 2017 jubilee celebrations of CSIR, witnessed participation of over 3,500 students of various schools and colleges. Elaborating on the topic, Dhyani said that people don't know how to reside in a clean surrounding. Also the unplanned development plays a major role in welcoming the disasters. "Look at the way trees are being cut in the name of infrastructural development. Deforestation has direct negative impact on our ecosystem. In the mad rush to build houses or colonies, people are not leaving any green space likes parks, gardens etc in their locality. People just think about building houses (or infrastructure) but no one gives a serious thought to sewage disposal." "Day by day our rivers and oceans are getting more and more polluted. As a result accessing clean water is becoming very difficult," she said. Dhyani added that the urban green spaces were becoming a thing of the past, with marshlands shrinking rapidly. "Water bodies are being completely polluted without giving any serious thought to loss of ecosystem. Thus it is very important to make smart use

of available land and integrate urban green spaces with urban infrastructure," she said. Giving the example of the benefit of greenery around us, Dhyani said, "The best example can be found in Neeri itself. The campus is lush green, hence the internal temperature is usually 3 to 4 degrees Celsius less than the outside temperature," she said. Rima Biswas Mondal, scientist, waste water technology division, NEERI, delivered a lecture on how the smallest creatures on Earth help in solving the biggest environmental challenges. "Never underestimate the power of microbes. Though only 3% of the total microbial population are harmful to the humans, we are indiscriminately using bacteriostatic chemicals like Triclosan in soaps, detergents, liquid soaps and handwashes which claim to kill 99.99% of bacterial population," she said. Biswas also explained the life of microbes in extreme conditions.

"Micro-organisms are omnipresent and they are known to be present in this planet for 3.5 billion years. They were the first life to have evolved on Earth. In those times, our planet didn't have any protective ozone layer and conditions were very harsh and devoid of any oxygen."

"Those microbes belong to a special group of bacteria, called the Archea. Archea exist even now and are still known as inhabitants of extreme conditions," she said.

Published in:

[Timesofindia.indiatimes.com](https://timesofindia.indiatimes.com)

CSIR-CFTRI

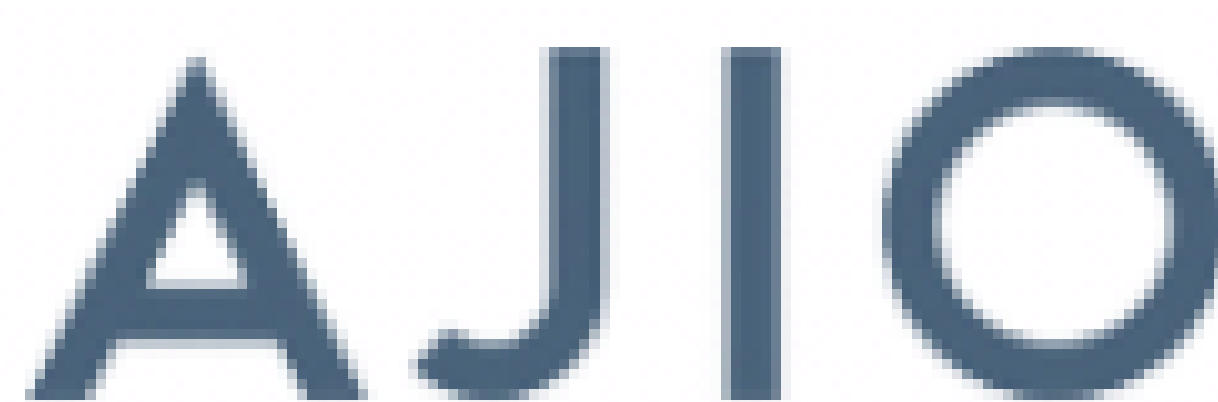

31st August, 2017



CFTRI: Yesterday, Today, Tomorrow

When asked about one's situation in day-to-day life, particularly in Mysuru, the most commonly heard response is "managing somehow." Most managers, vested with the onerous responsibility of foreseeing problems in their set-up and solving them without passing the buck to their employers would respond the same way to the friendly question. However, that kind of a wishy-washy reply and mindset dictating that standoffish ethos on the part of the individuals in charge may prove detrimental to the health of their establishment and its public image in case of publicly funded institutions. A case in point presents itself this week in the city. One is obliged to dwell on Central Food Technological Research Institute (CFTRI), Mysuru, which has made front-page news in this daily yesterday for all wrong reasons. In fact, it may be more appropriate to remark that the national institute, which formally took birth in the city in October 1949, has been making news, on and off, for some time past, the centre-figure in the despatches being its Director himself.

Many in the city can testify that CFTRI, one of the 39 research institutes under the umbrella of Council of Scientific and Industrial Research (CSIR), Department of Science and Technology (DST), Government of India, has witnessed glorious days in the past until recently, thanks to the pioneering research of scientists resulting in many now-well-known technologies in the field of Food Science and Technology that have been gainfully utilised by entrepreneurs both in India and other countries.

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Public image of institutes such as CFTRI, particularly with decades of history, is bound to experience high and low views. The Heads of CFTRI and staff of its various Departments, until recently, did manage to earn adulation in circles of their profession, namely research and development as well as food processing industry, locally, regionally, nationally and also globally. Their successful research efforts have made the country self-reliant in the field of innovation, having developed

processes for instant mixes for the land's traditional dishes, value addition to plantation produce such as spices, baby food based on buffalo milk, to name a few, apart from training youth to be competent food scientists and technologists.

READ ALSO Meeting on Kannada implementation

Over the past five years, the ambience within the CFTRI witnessed a disturbing makeover, quite contrasting to that of the past six-plus decades. A pro-Kannada outfit took umbrage at the clutch of staff-unfriendly acts attributed to the just-transferred Head of the Institute, while the city's cognoscenti with their avinaabhaava (I-can't-be-without-you) connect with the Institute chose to be passive witness to the goings. The CSIR has moved its Head to its Head Quarters, reportedly in public interest. His successor is required to lead the staff of CFTRI from the front to be future-ready in their research projects.

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NIO, Environment Dept to assess damage caused by Lucky 7

CSIR-NIO

29th August 2017

GSPCB seeks bank guarantee of Rs 1 crore from company before the vessel is towed; Money will be used to restore the environment



meeting of NIO, Captain of Ports (CoP) and the Environment Department will be held shortly to decide on the environment impact assessment study to be undertaken of the beach. “After the vessel got grounded at Miramar, the vessel was supposed to be towed immediately. However, the owner failed to do so thereby affecting the beach,” sources said. Due to the Ganesh Chaturthi vacation, the department was not able to undertake the environment impact study, sources said, adding that a joint study along with NIO will be initiated soon. The department has sought from CoP all the reports about the vessel and these are being studied. As reported by Herald, retired NIO scientist Antonio Mascarenhas has confirmed that the Miramar shoreline has started showing signs of damage with augmented soil erosion and wave-cut vertical scrap along the frontal pioneer dune due to the vessel.

PANJIM: National Institute of Oceanography (NIO) and the State Environment Department will jointly assess the environmental damage caused by casino vessel Lucky 7, which has partially sunk at Miramar beach. The vessel has been grounded on the beach since July 16. Simultaneously, Golden Globe Hotels Pvt Ltd, which owns the vessel, has been asked to submit a bank guarantee of Rs 1 crore towards the environmental damage it has caused to the beach, before towing away the vessel. Sources confirmed that a joint

GSPCB Member Secretary Levinson Martins said the Board has granted Lucky 7 owner, Gopal Kanda, permission to tow the vessel on condition that a bank guarantee of Rs 1 crore is submitted so as to mend the damage caused to the environment. “Once the vessel is towed away, the Board will conduct its own study to examine the damage caused to the environment. The money will be spent to restore the environment,” he said.

The vessel, which had left MPT dockyard on July 13, had first stranded off Cabo-Raj-Bhavan and then drifted towards Miramar beach. There were a few attempts made to sail the vessel but it had now developed a hole at the bottom, which is growing larger.

Dubai-based salvor surveying Lucky 7

Captain of Ports (CoP) Department is awaiting a report from Golden Globe Hotels Pvt Ltd (GGHPL) detailing its plan of action in removing the stranded vessel Lucky 7 from Miramar beach.

“We have sought to know whether it has appointed any salvor, assessment of the vessel and plan of action. We won’t tolerate its presence on the beach for a long time,” an official said.

The department had sent a written communiqué to GGHPL last Thursday demanding a reply this week, with a copy of the reply to be sent to North Goa Collectorate. “We have asked the company to re-float and take the vessel out at the earliest,” he said.

Meanwhile, experts from a Dubai-based salvor are on board surveying the ship, based on which a report is expected to be submitted to CoP. “Its experts including divers are on board. They are also conducting underwater survey to check the state of the vessel beneath. They will submit the report accordingly,” a source said.

It is learnt that around 3-4 crew members are still on board waiting for instructions of operations while the condition of the ship remains the same.

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A Hub for Women Entrepreneurs on the Anvil in Guwahati

CSIR-CFTRI

30th August 2017

GUWAHATI: “A Women Entrepreneurs Hub will be set up in Guwahati which will exclusively cater the products made by women”, declared Assam’s Industries and Commerce Minister Chandra Mohan Patowary while inaugurating the three-day exhibition on ‘Traditional Jewellery Designing and Making, Block Printing and Lifestyle Products’ at Indian Institute of Entrepreneurship (IIE), Guwahati. The programme was sponsored by the Women Cell of the Commissionerate of Industries and Commerce, Assam.

Lauding the efforts in crafting exquisite products and designs, the Minister asked the women entrepreneurs to focus on innovation and quality to compete in the national and international markets, while retaining the traditional motifs. He therefore asked the department officials to rope in professional experts to impart training on fine quality commodities.

The minister also added that the upcoming Incubation Centre at Ambari, Guwahati would dedicate two floors of the building for products, goods and artefacts designed and made by women. Stating that only micro industries can provide large employment opportunities at comparatively lower capital investments than large industries, Minister Patowary said that an Industrial Park will be set up at Jagiroad on a plot of 19 *bighas* land with 40 sheds of Micro, Small and Medium Enterprises (MSME) where women entrepreneurs will be given preferences.

Minister Patowary distributed certificates to the trainees who successfully underwent the jewellery designing and block printing course at Indian Institute of Gems and Jewellery,

Jaipur and IIE, Guwahati and fashion designing at National Institute of Fashion Technology (NIFT), Kolkata. Additional Chief Secretary, Ravi Capoor said that the Department had so far trained around 500 women in candle-making, natural dye, jute and water hyacinth weaving, and would extend all help to set up their own enterprises. Additional Director, Industries and Commerce, Manjula Saikia Bhuyan in her presentation mentioned that department plans to provide a platform to the women entrepreneurs in upcoming events like IITF, New Delhi and BIMSTEC Expo, Kolkata.

Meanwhile, National Small Industries Corporation (NSIC), under the sponsorship of Women Cell, Commissionerate of Industries and Commerce, has sent 50 women for advance training programme for two weeks to Central Food Technological Research Institute (CFTRI), Mysore for food processing and Sardar Vallabhbhai Patel International School of Textiles and Management (SVPSTM), Coimbatore for fashion designing.

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ISRO says IRNSS-1H launch unsuccessful, heat shields failed to separate

CSIR-NPL

1st September 2017



The launch was expected to set the Indian Regional Navigation Satellite System (IRNSS)-1H into a Sub-Geosynchronous Transfer Orbit. The space agency had maintained a 29-hour countdown for the project, which began at 2 pm yesterday afternoon.

The Indian Space Research Organisation today received a setback, when the launch of the much-anticipated IRNSS-1H failed. According to ISRO Chief AS Kiran Kumar, the mission was unsuccessful as the heat shields did not separate and therefore the satellite could not launch. “There was no problem in any of the stages. The heat shield did not separate, due to which it was unable to get into orbit,” Kumar said in a press conference. “The satellite got separated internally, but it is enclosed within the heat shield,” he added. The launch was scheduled at 7 PM from the Satish Dhawan Space Centre at Sriharikota, and the navigation satellite was launched on the Polar Satellite Launch Vehicle C-39.

What is ISRO IRNSS-1H navigation satellite?

Today’s launch by India’s space agency was meant to send the eighth rocket of India’s navigation system, weighing 1425 kg and fitted with replacement atomic clocks, into orbit. This launch was important, as three Rubidium Atomic Frequency Standards (RAFS) clocks on the IRNSS-1A had malfunctioned. This launch was considered critical, as India’s navigation still operates on the US-based Global Positioning System (GPS). The IRNSS-1H would have introduced Navigation with Indian Constellation, or NavIC, that would have provide accurate information services within Indian territory,

and upto a distance of 1500 kms around India's borders. The NavIC satellite system was supposed to consist of 7 satellites, with two being set later as replacements. The IRNSS-1H launch was crucial, as atomic clocks help maintain Indian Standard Time, which is set by the National Physical Laboratory. Atomic clocks are known to have an error of one second in a million years. The failure of this launch suggests that the NPL will have to continue to rely on GPS for the maintenance of its available atomic clocks.

The NavIC system was set up after ISRO's Telemetry and Command Network (ISTRAC) cell and National Physical Laboratory had signed a Memorandum of Understanding earlier. The NavIC was expected to have standard positional service, for civilian purposes, and restricted service, which was to cater to the defence and ISRO.

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[thesIndianexpress.com](https://www.thehindianexpress.com)