

CSIR in Media



75 Years of

CSIR Touching Lives

A Daily News Bulletin

16th May 2017

CFTRI to promote startups in food processing sector

CSIR-CFTRI

14th May 2017

With a view to promoting startups in the food processing sector, CSIR-Central Food Technological Research Institute (CFTRI), Mysuru, will be launching entrepreneurship training programmes in association with the Kautilya Entrepreneurship and Management Institute, Bengaluru.

organised at Jain University campus in Bengaluru.

Breakfast foods, ready-to-eat foods, natural beverages, superfoods, healthy snacks, minimally processed vegetables, food processing machineries, FSSAI regulations, among others will be the key focus areas during the programme titled “Entrepreneurial Opportunities in Food and Allied Sectors”, scheduled to be held from June 5 to 16.

The programme has been designed to address both the technologies and entrepreneurship areas for enabling successful ventures in the area of food processing. The entrepreneurship part of the programme will dwell on developing opportunities, customer value proposition, marketing, financing, and branding.

While the first week of the programme will be held on the CFTRI premises in Mysuru, the latter part of the programme will be

CFTRI, a premier food research laboratory under the Ministry of Science and Technology, Government of India, has already been offering five-day-long short-term training programmes throughout the year. The short-term training programmes, which are generally spread across five days, focus on various aspects of food processing and technologies.

The upcoming programme titled “Entrepreneurial Opportunities in Food and Allied Sectors” is in line with the Startup India and Skill India missions of the Government of India and can cater to the needs of various stakeholders such as entrepreneurs, exporters, food parks, MSME, among others, said Director of CFTRI Ram Rajasekharan in a statement here.

This collaboration of the technology leader with management experts will be able to strengthen the entrepreneurial ecosystem in the sunrise sector contributing 14% of the manufacturing GDP of the country, the statement said, adding that the programme was open for aspiring entrepreneurs and early stage entrepreneurs, focusing on opportunities in the food sector.

Published in:

[The Hindu](#)

Symposium lays stress on emission reduction

CSIR-IIP

14th May 2017

A two-day symposium on “Shaping the Energy Future: Challenges & Opportunities (SEFCO-2017)”, to mark National Technology Day, concluded at the Indian Institute of Petroleum (IIP) here on Friday. The symposium was inaugurated by Dr Pushpito K Ghosh, Professor, ICT, Mumbai, on Thursday.

It focused on growing energy consumption, stringent environment regulations, need for increased production and reduction in carbon emissions. It consisted of four sessions — Alternate Energy and Fuels, Catalysis for Energy and Environment, Process Intensification and Engineering and Technologies for Future Energy.

Published in:

[Tribune](#)

How much extra fuel do bad roads guzzle? Study in Delhi-NCR to find out

CSIR-CRRI

15th May 2017

Even though India is building around 22 km of roadways every day, there is no data to claim which roads are fuel friendly. Around 47,350 km of roads were laid during 2016-17 under the Pradhan Mantri Gramin Sadak Yojana.



Ask any car owner about their vehicle giving poor mileage and they would give you umpteen reasons from poorly maintained engines, faulty driving styles to bad fuel quality. But how much extra fuel do you need because of pothole-filled roads? Do concrete roads increase your car's mileage or does your car consume more fuel on asphalt roads?

Even though India is building around 22 km of roadways every day, there is no data to claim which roads are fuel

friendly. Around 47,350 km of roads were laid during 2016-17 under the Pradhan Mantri Gramin Sadak Yojana (PMGSY).

For the first time a study has been initiated in India to reveal how much extra do we spend while travelling on bad roads and which type of roads are the most fuel friendly and cost-efficient. The study, which kicked off from Thursday, would be conducted mostly on roads, expressways and highways in and around Delhi-NCR.

“The study would tell us how much extra fuel we consume while negotiating with potholes, curves, flyovers. It would also reveal whether asphalt roads or concrete roads give more mileage among others. This is the first of its kind study in India,” said Dr Ravindra Kumar, principal scientist of Central Road Research Institute’s (CRRI) transport and planning division in Delhi.

The one-year-long study is being carried out by the CSIR-CRRI, under the Council of Scientific and Industrial Research (CSIR) and is being funded by the Petroleum Conservation Research Association.

“A vehicle fitted with laser-emitting equipment, rut scanners, GPS and cameras will first travel for nearly 1,000 km along some of the best roads in the vicinity of Delhi-NCR, such as the Yamuna Expressway and NH24, to collect the baseline data on the fuel-efficient roads,” said Kumar.

Rut scanners and hundreds of laser beams emitted almost every other second will take readings of potholes, road gradient and roughness, among others, after every 2.5mm of distance travelled. The video camera will record the roads and GPS will give the exact locations.

Researchers will then drive at least three types of vehicles on various types of roads in Delhi — roads filled with potholes, flyovers, concrete roads and roads made of bitumen among others — to find out how much extra fuel does it require to drive along these roads. A vehicle fitted with hi-tech gadgets will also travel along with them to collect data about the bad roads.

“These vehicles will be fitted with fuel metres and will be driven along various roads at various speeds ranging from 20kmph to 80kmph. We have chosen mini segment cars, a SUV and a truck. We would test the truck both in loaded and unloaded

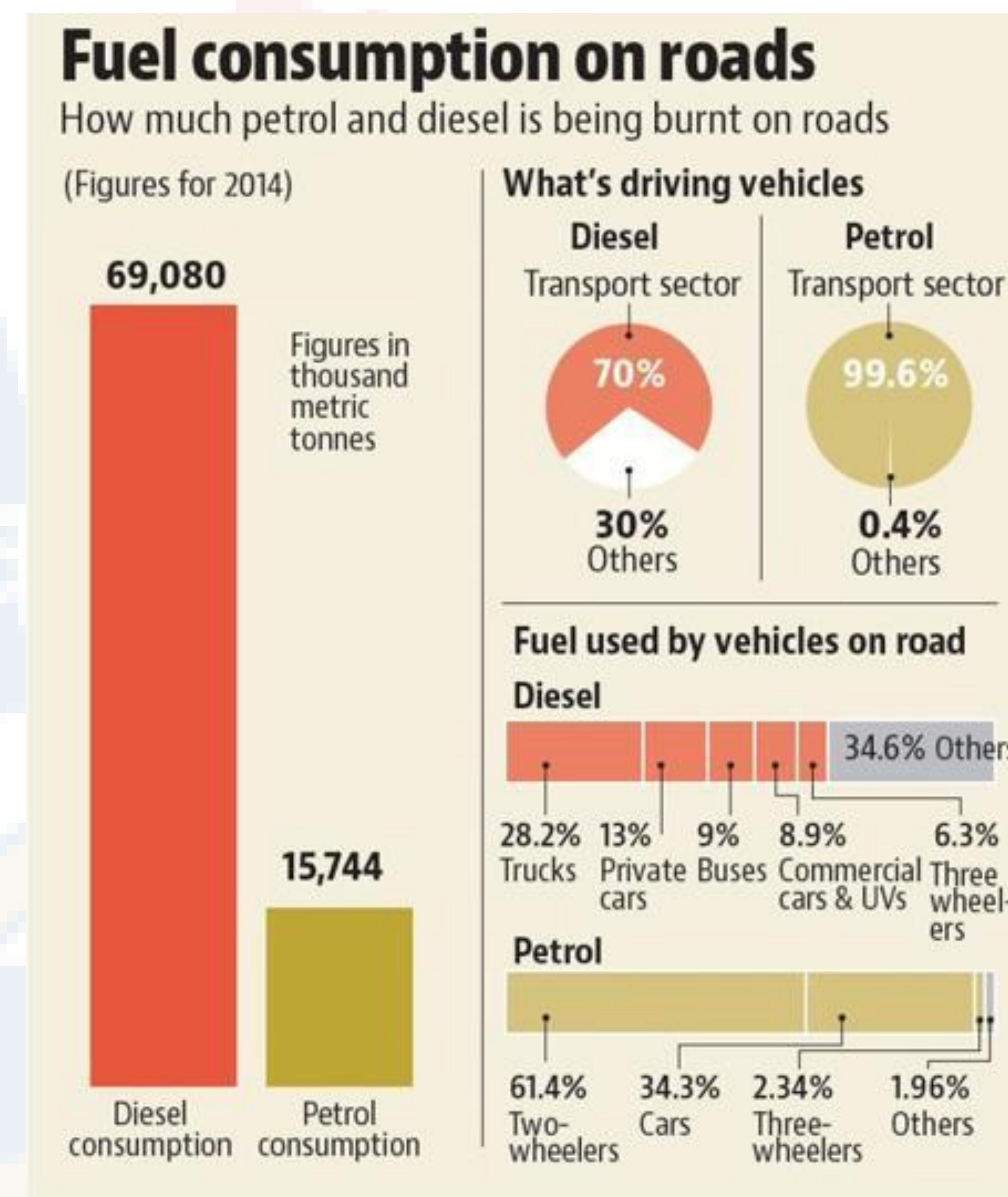
Some of the roads that the researchers have chosen are the concrete roads between Najafgarh and Dhansa, Barapullah flyover and potholed roads of Dilshad Garden, Narela and Madanpur.

The difference with the baseline data would tell researchers how much we are losing – both fuel and money — while travelling on bad roads.

A few developed countries such as USA, UK and Canada among others have already done such studies. No such data however exists in India.

“While studies in Canada have shown that a loaded truck while travelling on a concrete road could save at least 4% fuel, a similar study done in Texas, USA have revealed that vehicles travelling on concrete roads can save at least 3-8% fuel,” he added.

Experts feel that the findings would help planners and policy makers to decide the type of roads that India should build in future to save a portion of its GDB which goes down the drain because of bad roads.



Published in:

[Hindustan Times](https://www.hindustan-times.com)

Geopolymer Concrete Road using NTPC-DADRI Fly Ash by NETRA and CSIR

CSIR-CBRI

15th May 2017

NTPC-NETRA and CSIR-Central Building Research Institute, Roorkee have developed high strength fly ash based geopolymer concrete for construction of road as per IRC specifications. A Geopolymer concrete road stretch of 50 m length and 3 m width with 40 MPa concrete strength has been laid successfully at CSIR-CBRI, Roorkee using NTPC Dadri fly ash, first of its kind in India. This Geopolymer road will not require water curing as required by cement concrete road and also paves the way for bulk fly ash utilization.

NTPC is fully aligned to the needs of adapting to emerging technologies and upgrading the technologies through research and development as a leading player in the World Energy Sector. The company is particularly sensitive to Research & Development and the paradigm shift which it can make. NETRA (NTPC Energy Technology Research Alliance) set up in 2009 is the outcome of this vision.

Climate change, waste management, carbon capture and Utilization, new & renewable energy, efficiency improvement and cost reduction are core areas of research. NETRA is also providing scientific support to NTPC and external utilities for improving availability, reliability and efficiency.

Published in:

[Energy Infra Post](#)

CSIR-CEERI

15th May 2017

An electronic tongue for tasting tea, testing milk



**FROM THE
LAB**

AN UPDATE FROM INDIA'S FINEST
RESEARCH INSTITUTES

PC PANCHARIYA & TEAM

CENTRAL ELECTRONICS ENGINEERING
RESEARCH INSTITUTE, PILANI

A FEW years ago, we were working on a project that studied the withering process in the tea processing industry. We were analysing the impact of withering, a process aimed at reducing moisture content in tea leaves, on flavour. We used to send our samples to professional tasters for feedback. It was then that we realised the limitations of this exercise.

Results from tasters are usually subjective and often not repeatable or reproducible, and also depend on the mood and health of the taster on a given day.

That got us thinking about the need for an electronic taster, an instrument that would give objective results, would not be affected by an external environment and, what is more, would be consistent every time. The desire persisted even after our tea project was over. A

result of efforts to deal with the problem of milk adulteration that is quite common in our cities. A public sector undertaking, Rajasthan Electronics and Instruments Ltd, which produces a variety of dairy instruments, had showed some interest in developing a device for detecting the level and composition of adulteration in milk.

Globally no such devices are available for this specific task. There are some instruments that can be put to use for this but these are very expensive, in the range Rs 60 lakh-Rs 1 crore because they are meant to serve some other purpose.

We decided to put our electronic tongue to test on this particular job. We had to carry out some modifications but our initial attempts to measure the presence of urea, a common contaminant, in some milk samples gave encouraging results. After a few months' effort we were able to make our electronic tongue sensitive to various kinds of adulterations in milk. It took six minutes

THE RESEARCH

From a device that could test tea, water and wine for biochemicals and return a signature indicating their taste, to a new device that tests milk for adulterants

to test one sample, and the entire device was estimated to cost Rs 2 lakh.

Our industrial partners, however, wanted a more efficient and cheaper device. Successive improvements resulted in the device testing one sample within 40-45 seconds and we were also able to drive down the estimated cost to a few thousand rupees. This particular electronic tongue is now in commercial production. About 150 of them are al-

few months later, we embarked on a full-fledged project to develop this taster. We called it an electronic tongue.

The instrument we came up with could sample tea, water, wine and some juices. An array of sensors detect the presence of various biochemicals in these liquids and return a signature unique to that particular drink. The idea was to integrate an electronic nose and a camera to make the device a complete taster that could detect not just the chemical composition of a liquid but also smell its flavour and see its colour.

This device, though unique and interesting, had limited uses. But it was a good starting point to develop a new equipment with utilities not just in the industry but also in households. This new equipment was a

ready deployed in various industrial dairy units. It can detect salt, detergent, caustic soda, baking powder, ammonium sulphate, liquid soap, hydrogen peroxide, boric acid and a few other chemicals in milk, and ascertain whether the milk is fit for drinking.

We are currently in the process of developing an advanced version, one that can measure fat, solid nonfat, protein, lactose as well as added water, with real-time monitoring of the entire supply chain. We are also simultaneously developing a home version that can be sold for around Rs 5,000 – with the same capabilities as the industrial one.

For your research to be considered for this column, please write to Senior Editor Amitabh Sinha at amitabh.sinha@expressindia.com

Published in:

Indian Express, Delhi, Page 14

Ayurvedic drug in 'top 20'

CSIR-NBRI

15th May 2017

The government's move to revive traditional medicines has started yielding results. In a major shot in the arms of Ayush Ministry, an ayurvedic drug developed by the Council of Scientific & Industrial Research (CSIR) has been adjudged as top 20 best medicines in the country. Notably, the Ayush Ministry was carved out from Health Ministry as a separate ministry to promote traditional medicines by PM Narendra Modi. "It's for the time that an ayurvedic drug formulation has been included in the list of top 20 medicines which is mainly dominated by modern medicines. The development establishes that patients are switching towards traditional healthcare system when it comes to

treating diabetes," an Ayush Ministry official said, adding that the BGR-34 medicine, which was developed by the CSIR, has been proving a better alternative to cure the non-communicable disease.

The ayurvedic drug BGR-34 is at 14th position in the list which is dominated by the allopathic medicine of multinational companies such as Sanofi, Zydus, Lupin, etc. The ayurvedic formulation, which has been developed by CSIR –National Botanical Research Institute (NBRI) Lucknow is ranked at 33rd position in terms of MAT (moving annual total) value of the drug. The MAT value of a drug is declared after study its efficacy.

Published in:

[Millenium Post](#) Rashtriya Sahara, Page 16

CSIR-IITR

13th May 2017

आइडिया है तो उस पर काम जरूर करें

जागरण संवाददाता, लखनऊ : यदि आपके मस्तिष्क में कोई इनोवेटिव आइडिया है तो आलोचकों के चक्कर में उसे खत्म न करें। यदि पूर्णरूप से संतुष्ट हैं तो उसे अवश्य पूरा करें। तमाम सफल स्टार्टअप ऐसी ही कोशिशों से मुकाम पर पहुंचे हैं।

सीएसआइआर-भारतीय

विषयविज्ञान अनुसंधान संस्थान (आइआइटीआर) में शुक्रवार को आयोजित राष्ट्रीय प्रौद्योगिकी दिवस के अवसर पर आयोजित कार्यक्रम में यह बात पुणे के एनसीएल इनोवेशंस के प्रमुख डॉ. वी. प्रेमनाथ ने कही। प्रयोगशाला से बाजार तक पर दिए गए व्याख्यान में उन्होंने कहा कि कैसे एक समस्या आधारित समाधान को बाजार में लाने के लिए वैज्ञानिक अनुसंधान का सहारा लेते हैं। उन्होंने हिप रिप्लेसमेंट के लिए उपयोग किए जाने वाले पॉलिमर का उदाहरण देते हुए कहा कि यह अनुसंधान का ही फल है। परामर्शदाता सुधी राज वर्मा द्वारा 'यूजिंग टेक्नोलॉजी इन इनोवेशंस' पर व्याख्यान दिया।

इस मौके पर विद्यालयों और कॉलेज के छात्रों को वैज्ञानिक, नवीन आविष्कारक व उद्यमी बनने के लिए प्रेरित करने के लिए विशेष रूप से डिजाइन किए गए दो



सीएसआइआर में आयोजित कार्यक्रम में बोलते डॉ. वी. प्रेमनाथ

कार्यक्रम भी प्रारंभ किए गए। 'एक दिन के लिए वैज्ञानिक बनो' पर एक दिवसीय कार्यशाला 18 मई को शुरू की जाएगी और दो सप्ताह के लिए 29 मई से छात्रों को इनोवेशन और सृजन के प्रति सशक्त बनाने के लिए ईपीआइसी नामक कार्यक्रम शुरू किया जाएगा। दोनों कार्यक्रम को देश के तीन प्रमुख विज्ञान अकादमियों से समर्थन मिलेगा। आइआइटीआर के निदेशक प्रो. आलोक धावन ने कहा कि इन कार्यक्रमों से बच्चे वैज्ञानिकों से सीधे रूबरू हो सकेंगे।

Published in:

Dainik Jagran, Page 13

CSIR-CSMCRI

15th May 2017

सीएसआईआर केंद्रीय नमक एवं समुद्री रसायन अनुसंधान संस्थान भावनगर में राष्ट्रीय प्रौद्योगिकी दिवस का आयोजन

भावनगर। सीएसआईआर केंद्रीय नमक एवं समुद्री रसायन अनुसंधान संस्थान भावनगर में राष्ट्रीय प्रौद्योगिकी दिवस 2017 मनाया गया। यह समारोह अपराह्न 3.00 बजे मुख्य अतिथि प्रद्युम्न व्यास, निदेशक नेशनल इंस्टीट्यूट ऑफ डिजाइन अहमदाबाद और विशिष्ट अतिथि डॉक्टर सीबी त्रिपाठी, डीन, सरकारी मेडिकल कॉलेज, भावनगर के स्वागत से शुरू हुआ। समारोह के संयोजक तथा संस्थान के मुख्य वैज्ञानिक एवं अध्यक्ष विश्लेषणात्मक विज्ञान, डॉक्टर परिमल पाल ने सभी का स्वागत करते हुए सी एस एम सी आर आई द्वारा विकसित अनेकों स्वदेशी प्रौद्योगिकियों का परिचय दिया। इस अवसर पर संस्थान में रिवर्स ऑस्मोसिस, नमक में समुद्री रसायन, समुद्री जैव प्रौद्योगिकी, प्रक्रिया डिजाइन और इंजीनियरिंग, इलेक्ट्रो मेंब्रेन, प्राकृतिक उत्पाद व हरित रसायन, पादप कॉमिक्स और अकार्बनिक पदार्थ और उत्प्रेरक के क्षेत्र में अपने नवीनतम पेटेंट और लाइसेंसीकृत प्रौद्योगिकियों का प्रदर्शन किया गया। विशिष्ट अतिथि डॉक्टर सीबी त्रिपाठी

नहीं अपने संबोधन में स्वदेशी तकनीकों के विकास पर ध्यान केंद्रित किया जो आम आदमी, समाज और उद्योगों से संबंधित समस्याओं को हल करने में मदद कर सकता है। उन्होंने इस पर भी जोर दिया कि स्वास्थ्य सेवा से संबंधित प्रौद्योगिकी एक महत्वपूर्ण भूमिका निभाती है अतः वैज्ञानिकों को स्वास्थ्य संबंधी अनुसंधान की ओर प्रेरित होना चाहिए जो उनके तथा समाज के जीवन को स्वस्थ रख सके। उन्होंने वृक्षारोपण, छत पर बागवानी और 1 सप्ताह में एक दिन कार्यालय में जाने के लिए साइकिल का इस्तेमाल कर पर्यावरण को हरित करने पर भी जोर दिया। मुख्य अतिथि प्रद्युम्न व्यास में आर्थिक और सामाजिक विकास के लिए डिजाइन के महत्व पर व्याख्यान दिया। अपने संबोधन में उन्होंने एक पीढ़ी से दूसरी पीढ़ी तक हमारी तकनीकों के परिवर्तन पर चर्चा की। उन्होंने जोर दिया कि हमें अपनी प्राचीन डिजाइन अवधारणा और उत्पादों को नहीं भूलना चाहिए परंतु वर्तमान पीढ़ी की आवश्यकता अनुसार हमें ऐसे उत्पाद और

डिजाइन विकसित करने चाहिए जो समाज की जरूरतों को पूरा कर सकें। उन्होंने एनआईडी अहमदाबाद द्वारा किए गए विभिन्न शोध गतिविधियों पर भी चर्चा की और बताया कि कैसे एनआईडी समाज और राष्ट्र के उत्थान में योगदान दे रहा है। समारोह में संस्थान के निदेशक डॉक्टर अमिताभ दास ने सीएसएमसीआरआई परिवार के हर एक सदस्य ने अपने संबंधित क्षेत्रों में अपना श्रेष्ठतम लेकर समाज की अपेक्षाओं को पूरा करने का आह्वान किया। समारोह का समापन आलोक कुमार, प्रशासनिक अधिकारी, सीएसएमसीआरआई के धन्यवाद ज्ञापन से हुआ। कार्यक्रम का संचालन डॉक्टर विना त्यागी ने किया। देश हर साल 11 मई को राष्ट्रीय प्रौद्योगिकी दिवस मनाता है ताकि भारत के तकनीकी नवचारों और उत्कृष्टता के इतिहास को याद किया जा सके। यह दिन इसलिए भी महत्वपूर्ण है क्योंकि भारत ने 11 मई 1998 को पोखरण में परमाणु बम का सफलतापूर्वक परीक्षण किया था।

Published in:

Gujarat Vaibhav, Page 10