

CSIR in Media



75 Years of

CSIR Touching Lives

News Bulletin

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e-platform for auction of Kangra tea

CSIR –IHBT



Deputy chairman of the Tea Board India, Kolkata, Arun Kumar Ray, visited the CSIR-IHBT today. He interacted with scientists for strengthening the Kangra tea industry. Ray said an e-platform would be created for auctioning Kangra tea so that it could be sold from Dharamsala without being transported to Kolkata to avoid transportation cost. For the assessment of tea quality, artificial intelligence would be used throughout the country so that the complaints of growers and the factory management on accurate leaf grade could be addressed. He also asked the institute to assess the cold-flavour quality of the first flush tea, which was gaining popularity in Darjeeling.

15th October, 2019

The board had planned to promote Himachal tea brands through its GI, which had been awarded due to the scientific data of CSIR-IHBT.

Setting up of tea nurseries of quality tea clones was also discussed and it was suggested that entrepreneurship would be promoted for raising tea nurseries of high-yielding varieties. Ray appreciated the efforts of the institute for supporting the tea industry and invited them to participate in the proposed tea exhibition to be held in Kolkata. “A comprehensive integrated programme on tea mechanisation is the only solution to cope with labour shortage, boost profitability of tea growers and strengthen the industry,” Dr Sanjay Kumar, director, CSIR-IHBT.

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[The Tribune](#)

CSIR-IHBT

15th October, 2019

अब कांगड़ा चाय की होगी नीलामी

जागरण संवाददाता, पालमपुर : टी बोर्ड ऑफ इंडिया कोलकाता के उपाध्यक्ष अरुण कुमार रे ने सोमवार को आइएचबीटी पालमपुर का दौरा कर कार्यों का जायजा लिया। उन्होंने कहा कांगड़ा चाय की नीलामी के लिए ई-प्लेटफार्म बनाया जाएगा। ऐसा होने से परिवहन लागत बचेगी और इसे धर्मशाला में ही बेचा जा सकेगा। उन्होंने वैज्ञानिकों से कांगड़ा चाय पर किए जा रहे शोध के बारे में जाना और उन्हें कोलकाता में होने वाले चाय एक्सपो के लिए आमंत्रित किया। उन्होंने कहा कटी हुई चाय की गुणवत्ता के आकलन के लिए देशभर में कृत्रिम बुद्धिमत्ता का इस्तेमाल किया जाएगा। उन्होंने संस्थान को चाय का आकलन करने के लिए कहा, जो दार्जिलिंग में लोकप्रियता हासिल कर रही है। टी बोर्ड ने टीआइ के माध्यम से हिमाचल चाय ब्रांडों को बढ़ावा देने की योजना बनाई

● टी बोर्ड ऑफ इंडिया के उपाध्यक्ष ने किया आइएचबीटी का दौरा

● संस्थान के वैज्ञानिकों को दिया कोलकाता चाय एक्सपो का न्योता



हिमालय जैवसंपदा प्रौद्योगिकी संस्थान पालमपुर का दौरा करने के दौरान वैज्ञानिकों के साथ टी बोर्ड ऑफ इंडिया के उपाध्यक्ष अरुण कुमार रे ● जागरण

है। आइएचबीटी के निदेशक डॉ. संजय कुमार ने बताया कांगड़ा चाय का उत्पादन करीब 8.9 लाख किलो है। सीएसआइआर ने इसे बढ़ाकर 25 लाख किलो करने के

लिए रोडमैप तैयार किया है। संस्थान के वैज्ञानिकों ने टी बोर्ड ऑफ इंडिया के उपाध्यक्ष को कांगड़ा चाय तैयार करने के बारे में विस्तार से जानकारी दी।

Published in:
Dainik Jagran

NITI Aayog for action plan to promote seaweed cultivation

CSIR –CSMCRI



Jitendra Kumar, advisor to member, NITI Aayog, inspected seaweed cultivation in the coastal areas of Mandapam and Rameswaram island on Sunday and held discussions with stakeholders to formulate a ‘plan of action’ for promotion of seaweed cultivation in the Palk Bay region. A day after holding discussions with K. Gopal, Principal Secretary, Fisheries Department in Chennai, Mr Kumar inspected seaweed cultivation at Olaikuda and Munaikadu in the island and interacted with the stakeholders. He was accompanied by Collector K Veera Raghava Rao,

14th October, 2019

CMFRI Director A Gopalakrishnan, CSMCRI Director Amitava Das and Fisheries Director G.S. Sameeran among others. Mr. Kumar inspected the seaweed cultivation, the value addition process and seaweed seedling production facility mainly to work out an action plan to promote seaweed cultivation in the region with facilities to produce value added products and providing marketing linkages. Describing seaweed cultivation as the best economic activity, Mr Kumar said NITI Aayog intended to work with the State government to promote seaweed cultivation for the benefit of people in the region while addressing the ecological concerns. “We will see how best we can utilise the potential to the maximum in a sustainable manner,” he said. Pointing that ecology had long time benefits for the people he said the officials would take a holistic view while promoting seaweed cultivation. “We will see both economic benefits and ecological concerns and take a balanced view,” he added. Later, Mr Kumar visited the CSIR-CSMCRI Marine Algal Research Station (MARS) and inspected

the making of seaweed by-products. Supported by the National Fisheries Development Board (NFDB) and Tamil Nadu Fisheries Department has already launched training programme for seaweed cultivation using raft methodology and started distributing bamboo rafts to fisherwomen and groups.

The Department had also set up Sap extraction units in tie up with Marine Algal Research Station for making value added products, officials said. Additional Director of Fisheries Johny Tom Varghese, Scientist in-charge, CMFRI, Mandapam R Jayakumar, Senior Principal Scientist, CSMCRI, MARS, Mandapam K Easwaran and Deputy Director of Fisheries E Kathavarayan were among others present.

Published in:

[The Hindu](#)

Integrate natural and social sciences: CSIR chief

CSIR –NGRI



Natural and social sciences should be integrated to address challenges being faced by humanity, according to Shekhar C Mande, Secretary, DSIR and Director-General, Council For Scientific and Industrial Research (CSIR).

He was speaking at the inaugural session of the second Triennial Congress on Geosciences for Sustainable Development Goals at CSIR- National Geophysical Research Institute here on Sunday. An integrated approach for pooling data from different sources will help, he added.

14th October, 2019

“We have compartmentalised ourselves. There is a need to integrate different approaches,” Mande said. Kathryn Whaler, President, International Union of Geodesy and Geophysics (IUGG) said fundamental science will continue to underpin everything being done for sustainable development.

In his welcome address, VM Tiwari, Director, NGRI said there was a need for close collaboration between academicians, researchers and industry.

Published in:
[Business Line](#)

R&D units must ensure timely delivery of products: DRDO Chairman

CSIR –CECRI



He says Centre is keen on research outcomes

G. Satheesh Reddy, Secretary, Department of Defence Research and Development (R&D), and Chairman, Defence Research and Development Organisation (DRDO), has said the Centre is keen on research outcomes of various R&D organisations and timely delivery of products. Addressing the 78th Foundation Day of Council of Scientific and Industrial Research (CSIR) at CSIR-Central Electrochemical Research Institute (CSIR-CECRI) here on Saturday, he said the existing eco-system between the basic

14th October, 2019

Stressing the importance of the connection between the CSIR-CECRI with DRDO laboratories pertaining to R&D projects and technology transfer, he commended CECRI's B.Tech Programme, which helped students to gain both academic knowledge and research experiences simultaneously. The recent growth in start-up companies in areas other than information and communication technology was a welcome sign as it helped to make innovative products in the country, he said. "Self-reliance alone is not sufficient; the country looks for first of its kind products, innovation in technologies and state-of-the-art products," he said. Mr. Reddy said R&D organisations would emerge successful in meeting the societal needs only if they drew roadmap for timely deliverables. There should be a need for creating knowledge and implementation of artificial intelligence and cyber security in the country, he added. He inaugurated the low-temperature scanning probe microscopy facility, solar-powered hydrogen generator and CECRI Club library on the occasion.

He also released CSIR-CECRI annual report and honoured staff members who had completed 25 years of service. He distributed prizes to the winners of various competitions conducted by CECRI Club in connection with the Foundation Day.

In her presidential address, N. Kalaiselvi, Director, CSIR-CECRI, highlighted the importance of technologies and e-management in the present era. She said CSIR laboratories played important roles in meeting the technological demands and urged the scientists to realign themselves to make “New CSIR for New India.”

CECRI Chief Scientists D. Velayutham, S. Sathiyarayanan and Administrative Officer C. Shyam Sundar were among others present.

Published in:
[The Hindu](#)

5th edition of IISF-2019 at Kolkata from Nov 5

Fest to host around 28 different events: Minister Dr Harsh Vardhan

MYSURU, DHNS

To encourage young minds towards the field of science and to promote networking of stakeholders working towards the propagation of science, S&T Ministry and Vijnana Bharati (Vibha) is hosting India International Science Festival (IISF) 2019, from November 5 to 8 at Kolkata.

In a press conference at Central Food Technological Research Institute (CFTRI), here, Union Minister of Science and Technology and Earth Sciences Dr Harsh Vardhan said that the fifth edition of IISF is a festival to celebrate the achievements of India's scientific and technological advancements with students, innovators, craftsmen, farmers, scientists and technocrats from India and abroad. The event will be organised with the theme 'Research, Innovation, and Science Empowering the Nation' (RISEN) India.



Union Minister of Science and Technology and Earth Sciences Dr Harsh Vardhan releases a poster of India International Science Festival (IISF) 2019 at Central Food Technological Research Institute (CFTRI) in Mysuru on Saturday. Vijnana Bharati (Vibha) Secretary Praveen Ramdas and CFTRI Director K S M S Raghava Rao are seen. DH PHOTO

IISF is also a platform to bring together students, researchers, innovators, artists, and the general public to celebrate India's achievements in science and technology. IISF is also an attempt to encourage young minds towards the field of science and to promote networking of stakeholders working towards the propagation of science, he said.

The minister said, "IISF-2019 expects to host a gathering of approximately 12,000 participants from India and

abroad. Satyajit Ray Film and Television Institute, Bose Institute and Indian Institute of Chemical Biology would be sites for a few other events during the festival. IISF 2019 will host more than 28 different events during this period."

Students Science Village

For school students, a Students Science Village has been planned at IISF 2019, where more than 2,500 school students from all over the nation have been invited. Under the Pradhan Mantri Sansad

Adarsh Gram Yojana, every Member of Parliament has been asked to nominate five students each along with their teacher from their constituency for the village.

A vast exhibition of India's Scientific and Technological prowess would be in display through several expos—most prominent being the Science Expo at Science City. New-age Technology show and an expo for the Divyangjan would be yet another one.

CFTRI Director K S M S Raghava Rao was present.



Union Minister of Health and Family Welfare Dr Harsh Vardhan looks at the food products of Central Food Technological Research Institute (CFTRI), Mysuru.

'1.5L health, wellness centres by 2022'

MYSURU, DHNS: Union Minister of Health and Family Welfare Dr Harsh Vardhan on Saturday said that the country will have 1,50,000 health and wellness centres under the Ayushman Bharat Scheme by 2022.

Vardhan was addressing presspersons in a press conference, at Central Food Technological Research Institute (CFTRI), here.

The Union government's aim is to build a healthy nation and 22,000 health and wellness centers have been established in parts of the country. The government will establish 40% of the centers by March 2020.

The minister said, "The centers will have facilities to treat problems such as hypertension, diabetes, and cancer among the others. Apart from treatment, health awareness programs will be taken up through the centers."

According to the minister, there is a need for a revolution

in the field of health and science to raise health concerns and promote scientific mindset among the people. The Union government has been focusing on the health sector and earmarked sufficient funds for the health sector. The state governments must concentrate more on these sectors, he opined.

When asked about the Family planning policy, the minister said, "The idea of Prime Minister Narendra Modi is to create awareness on population control. There should be a healthy family and implementing family plan policy is not our objective."

No politics in I-T raids

Harsh Vardhan denied opposition party allegations that Union government is misusing I-T, ED, and CBI to tackle them. The officials are doing their work and Union government has no connection with the I-T raids. The allegations of opposition party leaders are baseless, he said

Vijayavani 13.10.19 P.5

ಕುಟುಂಬ ಯೋಜನೆ ಕಡ್ಡಾಯವಿಲ್ಲ

ಸರ್ಕಾರದ ಮುಂದಿಲ್ಲ ಆಲೋಚನೆ | ಕೇಂದ್ರ ಸಚಿವ ಹರ್ಷವರ್ಧನ್ ಸ್ಪಷ್ಟನೆ

■ ವಿಜಯವಾಣಿ ಸುದ್ದಿಜಾಲ ಮೈಸೂರು
ಕುಟುಂಬ ಕಲ್ಯಾಣ ಯೋಜನೆಯನ್ನು ಕಡ್ಡಾಯಗೊಳಿಸುವ ಆಲೋಚನೆ ಕೇಂದ್ರ ಸರ್ಕಾರದ ಮುಂದಿಲ್ಲ ಎಂದು ಕೇಂದ್ರ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ಆರೋಗ್ಯ ಮತ್ತು ಕುಟುಂಬ ಕಲ್ಯಾಣ ಸಚಿವ ಡಾ.ಹರ್ಷವರ್ಧನ್ ಸ್ಪಷ್ಟಪಡಿಸಿದರು.

ಕುಟುಂಬದ ಗಾತ್ರ ಹೆಚ್ಚಾದರೆ ಸಾಕಷ್ಟು ಸಮಸ್ಯೆಗಳು ಎದುರಾಗುತ್ತವೆ. ಹೀಗಾಗಿ ಕುಟುಂಬ ಸಣ್ಣದಿದ್ದಷ್ಟು ಉತ್ತಮ. ಇದೇ ಅಭಿಪ್ರಾಯವನ್ನು ಪ್ರಧಾನಿ ನರೇಂದ್ರ ಮೊದಲಿ ವ್ಯಕ್ತಪಡಿಸಿದ್ದಾರೆ. ಆದರೆ, ಅವರು ಕುಟುಂಬ ಕಲ್ಯಾಣ ಯೋಜನೆಯನ್ನು ಕಡ್ಡಾಯಗೊಳಿಸುವ ಕುರಿತು ಎಲ್ಲೂ ಮಾತನಾಡಿಲ್ಲ ಎಂದು ಶನಿವಾರ ಸುದ್ದಿಗೋಷ್ಠಿಯಲ್ಲಿ ತಿಳಿಸಿದರು.

ಕುಟುಂಬದ ಸದಸ್ಯರ ಸಂಖ್ಯೆ ವೃದ್ಧಿಸದಂತೆ ತಡೆಯುವುದು ಒಂದು ಸಾಮಾಜಿಕ ಹೊಣೆಗಾರಿಕೆಯಾಗಿದೆ. ಸಮಾಜದ ಪ್ರತಿಯೊಬ್ಬರು ಸಹಕರಿಸಿದರೆ ಮಾತ್ರ ಇದು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಸರ್ಕಾರ ನಿರಂತರ ಜಾಗೃತಿ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ನಡೆಸುವ ಮೂಲಕ ಜನರಲ್ಲಿ ಅರಿವು ಮೂಡಿಸುವ ಪ್ರಯತ್ನ ಮಾಡುತ್ತಿದೆ ಎಂದು ತಿಳಿಸಿದರು.

ವಿಜ್ಞಾನ ಒಂದು ಚಳವಳಿ, ಉತ್ತಮ ಆಗಬೇಕಾಗಿದೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಕೇಂದ್ರ ಸರ್ಕಾರ ಪ್ರತೀವರ್ಷ ಭಾರತೀಯ ಅಂತಾರಾಷ್ಟ್ರೀಯ ವಿಜ್ಞಾನ ಮೇಳ ಹಮ್ಮಿಕೊಳ್ಳುತ್ತಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಮನೋಭಾವ ಬೆಳೆಸಬೇಕಾಗಿದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಕೇಂದ್ರ ಮತ್ತು ರಾಜ್ಯ ಸರ್ಕಾರ ವಿಜ್ಞಾನಕ್ಕೆ ಹೆಚ್ಚಿನ ಒತ್ತು ನೀಡುವ ಅವಶ್ಯಕತೆ ಇದೆ. ಕೇಂದ್ರ ಸರ್ಕಾರ ಇತ್ತೀಚೆಗೆ ವಿಜ್ಞಾನಕ್ಕೆ ಹೆಚ್ಚಿನ ಒತ್ತು ನೀಡುತ್ತಿದೆ. ಇದಕ್ಕೆ ಪೂರಕವಾಗಿ ಆಯಾ ರಾಜ್ಯ ಸರ್ಕಾರಗಳು ಐಟಿನ್‌ನಲ್ಲಿ ಶೇ.8ರಷ್ಟು ಅನುದಾನವನ್ನಾದರೂ ವಿಜ್ಞಾನ ಕ್ಷೇತ್ರಕ್ಕೆ ಮೀಸಲು ಇಡಬೇಕು. ಕೇವಲ ಹಣವೊಂದರಿಂದಲೇ ವಿಜ್ಞಾನದ ಬೆಳವಣಿಗೆ ಸಾಧ್ಯವಿಲ್ಲ. ಇರುವ ವ್ಯವಸ್ಥೆ ಹಾಗೂ ಅನುದಾನದ ಪರಿಣಾಮಕಾರಿ ಬಳಕೆ ಆಗಬೇಕಾಗಿದೆ ಎಂದರು. ಸುದ್ದಿಗೋಷ್ಠಿಯಲ್ಲಿ ಸಿಎಫ್‌ಟಿಆರ್‌ಐ ನಿರ್ದೇಶಕ ಡಾ.ಕೆಎನ್‌ಎಂಎಸ್ ರಾಘವರಾವ್, ವಿಜ್ಞಾನ ಭಾರತಿ ರಾಷ್ಟ್ರೀಯ ಕಾರ್ಯದರ್ಶಿ ಪ್ರವೀಣ್ ಇದ್ದರು.

1.50 ಲಕ್ಷ ವೆಲ್‌ನೆಸ್ ಸೆಂಟರ್
ದೇಶದಲ್ಲಿ ಆರೋಗ್ಯ ಸೇವೆಯನ್ನು ಉತ್ತಮಪಡಿಸಲು ಪ್ರಸ್ತುತ 22 ಸಾವಿರ ಹೆಲ್ತ್ ಆ್ಯಂಡ್ ವೆಲ್‌ನೆಸ್ ಸೆಂಟರ್ ಪ್ರಾರಂಭಿಸಲಾಗಿದೆ. 2022ರ ಹೊತ್ತಿಗೆ 1.50 ಲಕ್ಷ ಸೆಂಟರ್‌ಗಳನ್ನು ತೆರೆಯುವ ಗುರಿ ಹೊಂದಲಾಗಿದೆ. ಪ್ರಾಥಮಿಕ ಆರೋಗ್ಯ ಕೇಂದ್ರಗಳ ಸೇವೆಯನ್ನು ಮತ್ತಷ್ಟು ಪರಿಣಾಮಕಾರಿ ಯಾಗಿಸುವುದು ಇದರ ಉದ್ದೇಶವಾಗಿದೆ. ಈ ಕೇಂದ್ರದಲ್ಲಿ ತಾಯಿ, ಮಗುವಿನ ಆರೈಕೆ ಹಾಗೂ ಎಲ್ಲ ಪ್ರಾಥಮಿಕ ಆರೋಗ್ಯ ಸೇವೆಗಳು ದೊರೆಯಲಿವೆ ಎಂದು ಡಾ.ಹರ್ಷವರ್ಧನ್ ತಿಳಿಸಿದರು.

ಐಟಿ ದಾಳಿ ರಾಜಕೀಯ ಪ್ರೇರಿತವಲ್ಲ
ದೇಶದ ವಿವಿಧ ರಾಜಕಾರಣಿಗಳ ಮೇಲೆ ನಡೆದಿರುವ ಐಟಿ, ಇಡಿ ದಾಳಿಯ ಹಿಂದೆ ಕೇಂದ್ರ ಸರ್ಕಾರದ ಯಾವುದೇ ಪಾತ್ರ ಇಲ್ಲ ಎಂದು ಕೇಂದ್ರ ಸಚಿವ ಡಾ.ಹರ್ಷವರ್ಧನ್ ತಿಳಿಸಿದರು. ಐಟಿ, ಇಡಿ ಸಂಸ್ಥೆಗಳು ಸ್ವತಂತ್ರವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತಿವೆ. ಕೇಂದ್ರ ಸರ್ಕಾರ ಈ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಹಸ್ತಕ್ಷೇಪ ಮಾಡುತ್ತಿಲ್ಲ. ರಾಜಕೀಯ ಕಾರಣಗಳಿಗೋಸ್ಕರ ಕೇಂದ್ರ ಸರ್ಕಾರದ ವಿರುದ್ಧ ಅನಗತ್ಯ ಟೀಕೆಗಳನ್ನು ಮಾಡಲಾಗುತ್ತಿದೆ. ಇಂಥ ಟೀಕೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು ವ್ಯರ್ಥ ಎಂದರು.

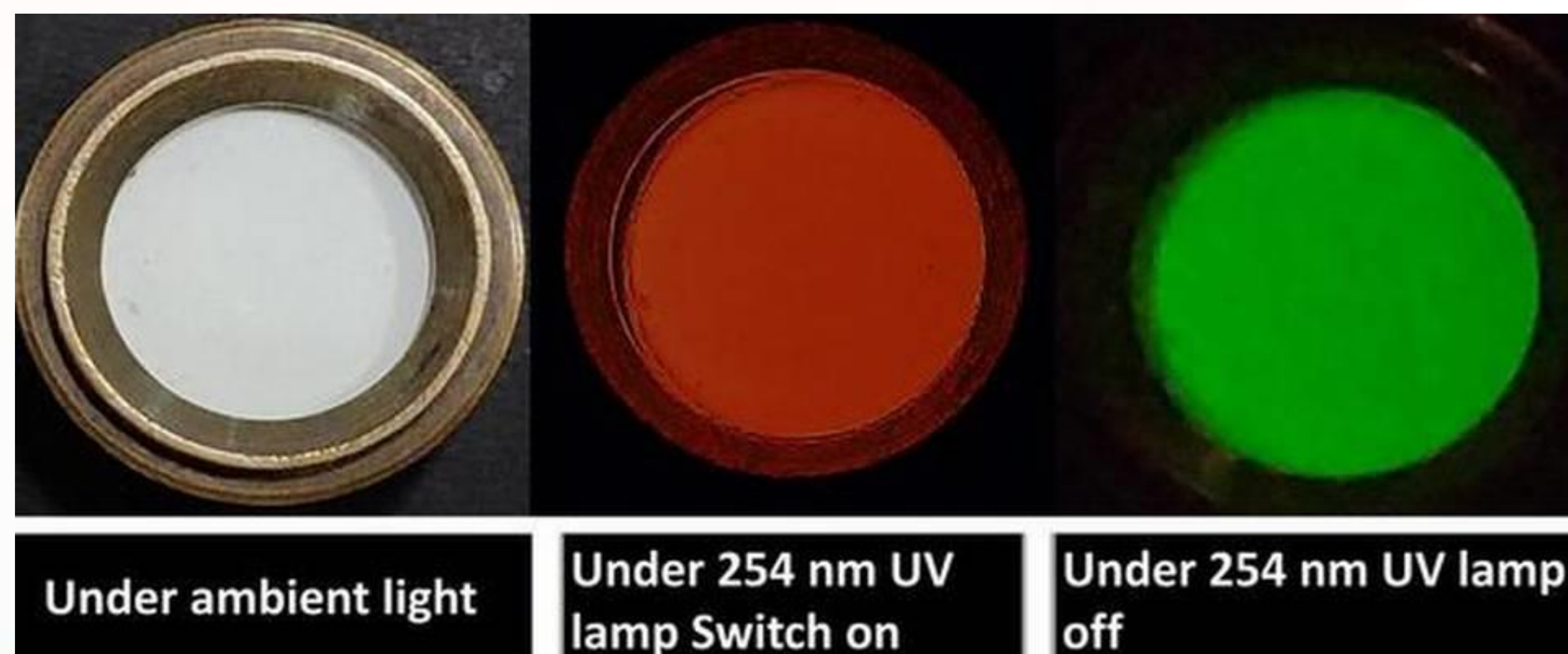
ನ.5ರಿಂದ ಅಂತಾರಾಷ್ಟ್ರೀಯ ವಿಜ್ಞಾನ ಮೇಳ
ಕೋಲ್ಕತಾದಲ್ಲಿ ನ.5 ರಿಂದ 8ರವರೆಗೆ ಭಾರತೀಯ ಅಂತಾರಾಷ್ಟ್ರೀಯ ವಿಜ್ಞಾನ ಮೇಳ ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಕೇಂದ್ರ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಸಚಿವ ಡಾ.ಹರ್ಷವರ್ಧನ್ ತಿಳಿಸಿದರು. ಮೇಳದಲ್ಲಿ 12 ಸಾವಿರ ಭಾರತೀಯ ಹಾಗೂ ವಿದೇಶಿ ಪ್ರತಿನಿಧಿಗಳು ಭಾಗವಹಿಸುವ ನಿರೀಕ್ಷೆ ಇದೆ. 'ವಿದ್ಯಾರ್ಥಿಗಳ ವಿಜ್ಞಾನ ಗ್ರಾಮ' ನಿರ್ಮಾಣ ಮಾಡಿ ದೇಶದ ವಿವಿಧೆಡೆಯಿಂದ 2500 ಕಾಲಾ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಆಹ್ವಾನಿಸಲಾಗುವುದು. ಜತೆಗೆ ಸಂಸದರ ಅಧಿಕಾರ ಗ್ರಾಮದಿಂದ ಐದು ವಿದ್ಯಾರ್ಥಿಗಳು ಹಾಗೂ ಒಬ್ಬರು ಶಿಕ್ಷಕರನ್ನು ಆಯ್ಕೆ ಮಾಡಲಾಗುವುದು ಎಂದು ಶನಿವಾರ ಸುದ್ದಿಗೋಷ್ಠಿಯಲ್ಲಿ ಮಾಹಿತಿ ನೀಡಿದರು. ವಿದ್ಯಾರ್ಥಿಗಳು, ಸಬ ಸಂಶೋಧಕರು, ಕಲಾ ವಿದರು, ಸಂಶೋಧಕರು ಹಾಗೂ ಜನಸಾಮಾನ್ಯರು ಒಂದೆಡೆ ಸೇರಿ ನಮ್ಮ ದೇಶದ ವೈಜ್ಞಾನಿಕ ಹಾಗೂ ತಾಂತ್ರಿಕ ಸಾಧನೆಗಳನ್ನು ಸಂಭ್ರಮಿಸಲು ಇರುವ ಬೃಹತ್ ವೇದಿಕೆ ಇದಾಗಿದೆ. ಕೋಲ್ಕತಾದ ಬೃಹ ಬಾಂಗ್ಲಾ ತನ್ವಂಜನ್ ಹಾಗೂ ಸೈನ್ಸ್ ಸೆಂಟರ್‌ಗಳು ಮೇಳದ ಪ್ರಮುಖ ವೇದಿಕೆಗಳಾಗಿವೆ ಎಂದರು. ಮೇಳದಲ್ಲಿ ಸೈನ್ಸ್ ಎಕ್ಸ್‌ಪೋ ಹಮ್ಮಿಕೊಳ್ಳಲಾಗುವುದು. ಇದರಲ್ಲಿ ದೇಶದ ವೈಜ್ಞಾನಿಕ ಮತ್ತು ತಾಂತ್ರಿಕ ಸಾಮರ್ಥ್ಯವನ್ನು ಪ್ರದರ್ಶಿಸಕ್ಕೆ ಇಡಲಾಗುವುದು. ಹೊಸ ಯುಗದ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ದಿವ್ಯಾಂಗಿಗೆ ವಸ್ತುಪ್ರದರ್ಶನ ಹಮ್ಮಿಕೊಳ್ಳಲಾಗುವುದು. ಇದರೊಂದಿಗೆ ಪುಸ್ತಕ ಮೇಳವನ್ನೂ ಆಯೋಜಿಸಲಾಗುವುದು. ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನದ ಮುನ್ನಡೆಯಲ್ಲಿ ಮಹಿಳಾ ವಿಜ್ಞಾನಿಗಳ ವಿಶೇಷ ಪಾತ್ರದ ಕುರಿತು ಒತ್ತು ನೀಡುವ ಪ್ರದರ್ಶನಗಳು ಮೇಳದ ಮತ್ತೊಂದು ಆಕರ್ಷಣೆಯಾಗಿದೆ. ಇದರಲ್ಲಿ ಸುಮಾರು 700 ಮಹಿಳಾ ವಿಜ್ಞಾನಿಗಳು ಹಾಗೂ ಸಂವೇದ್ಯಮಿಗಳು ಭಾಗವಹಿಸಲಿದ್ದಾರೆ ಎಂದು ತಿಳಿಸಿದರು.

2015ರಲ್ಲಿ ಪ್ರಾರಂಭ
ಪ್ರತಿವರ್ಷ ದೇಶದ ವಿವಿಧೆಡೆ ಮೇಳವನ್ನು ಹಮ್ಮಿಕೊಳ್ಳಲಾಗುತ್ತಿದೆ. ಭಾರತೀಯ ಅಂತಾರಾಷ್ಟ್ರೀಯ ವಿಜ್ಞಾನ ಮೇಳವನ್ನು ಪ್ರಥಮ ಬಾರಿಗೆ 2015ರಲ್ಲಿ ನವದೆಹಲಿಯಲ್ಲಿ ಪ್ರಾರಂಭಿಸಲಾಯಿತು. ಮೇಳ ವರ್ಷದಿಂದ ವರ್ಷಕ್ಕೆ ಹೆಚ್ಚಿನ ಸಂಖ್ಯೆಯಲ್ಲಿ ಜನರನ್ನು ಆಕರ್ಷಿಸುತ್ತಿದೆ. ಕಳೆದ ಬಾರಿ ಲಕ್ನೋದಲ್ಲಿ ನಡೆದ ಮೇಳದಲ್ಲಿ ಒಟ್ಟು 10 ಲಕ್ಷ ಸಾರ್ವಜನಿಕರು ಭೇಟಿ ನೀಡಿದ್ದರು ಎಂದು ಸಚಿವ ಡಾ.ಹರ್ಷವರ್ಧನ್ ತಿಳಿಸಿದರು.

NPL synthesises novel security ink

CSIR –NPL

13th October, 2019



The two-pigment dispersion glows red under UV light, emits green colour soon after the light is turned off

A novel security ink that emits intense red colour when exposed to 254 nm wavelength UV and emits green colour soon after the UV source is turned off has been synthesised by a team of researchers from the Delhi-based National Physical Laboratory (CSIR-NPL). The emission of red is due to fluorescence while green is due to phosphorescence phenomenon. Both red and green can be clearly seen with the naked eye under ambient conditions. The red colour is emitted at 611 nm wavelength while the green is emitted at 532 nm. The ink has the potential to be used as a security feature on currency notes and passports.

Two pigments

“To the best of our knowledge, this is the first report of an ink that contains two pigments that emit different colours at very different wavelengths when exposed to UV light of a particular wavelength,” says Dr. Bipin Kumar Gupta from NPL who led the team of researchers. The results were published in the *Journal of Materials Chemistry C*. Unlike in other materials, the ink shows phosphorescence as the emission of the red pigment is not quenched by the green pigment while the UV lamp is on as the two have very different emission wavelengths — 611 nm for red and 532 nm for green. Also, when exposed to 254 nm UV light, the excitation spectrum of one does not cover the other.

Hydrothermal processing

The team first synthesised the pigments that emit red and green colours. For synthesising the red pigment, sodium yttrium fluoride doped with europium through hydrothermal method.

For the green pigment, the researchers mixed strontium aluminium oxide and doped it with europium and dysprosium. “We have to use two dopants for the green pigment as continuous generation of photons is needed for phosphorescence. In this case, the europium provides the electrons while dysprosium provides the holes. The electrons and holes recombine to create photons,” explains Dr. Gupta. The red and green pigments synthesised separately are mixed in 3:1 weight ratio and heated to 400 degree C for three hours. “Annealing [heating] at 400 degree C ensures that the rods [of sodium yttrium fluoride red pigment] adhere to the spheres [of the strontium aluminium oxide green pigment],” says Dr. Gupta. “If the two pigments are mixed without annealing then the two pigments would separate out during ink formation and the desired property of the ink to produce dual emission with single excitation will not be possible.” The ink is prepared by dispersing the two pigments that have been mixed at a high temperature in a commercially available polyvinyl chloride (PVC) medium and vigorously stirred for an hour. “The advantage of having the rods sticking to the spheres is that the rods don’t cover the spheres completely and so both the pigments are exposed to UV irradiation,” says Amit Kumar Gangwar from CSIR-NPL and first author of the paper. “In the core-shell structure that we tried, the shell tends to block UV excitation and so the emission from the core is reduced.”

Lasting phosphorescence

While the green phosphorescence is seen even if the ink is briefly exposed to UV radiation, exposing the ink to UV for 15 minutes ensures that the phosphorescence lasts for about four hours. The researchers found the images printed on ordinary paper using the ink exhibits excellent physical durability and chemical stability. There was no noticeable change in emission from the images even at the end of six months when exposed to high (42 degree C) and low (10 degree C) temperatures and high humidity. The emission showed no changes when the images were exposed to various bleaching solutions. “We carried out accelerated testing and found that the images to be stable for more than 20 years,” says Dr. Gupta.

Published in:

[The Hindu](#)

CSIR studying how traffic impacts schoolkids' health

CSIR-CRRI

13th October, 2019

With the increasing number of vehicles and high levels of emission in cities becoming an issue of serious concern, the Council of Scientific and Industrial Research (CSIR) is undertaking a study on the impact of traffic on the health of schoolchildren. While regular exposure to traffic-related air pollution is known to have both short-term and long-term effect on human health and impacts respiratory, cardiovascular and neuro-psychological functions, there is also growing evidence worldwide that it adversely impacts academic performance.

The project is being undertaken by the CSIR's Central Road Research Institute and will involve data collection and statistical surveys over a period of time with regard to traffic density, roads infrastructure and pollution level at multiple spots on the ground. With ever increasing number of vehicles on roads and greater distance to be travelled between homes and schools, children are exposed to higher level of air pollution for longer durations, having adverse health effects, said scientists. Respiratory disorders like asthma and some eye-related allergies are common.

“In addition, anthropological as well as geographical and meteorological factors that hamper the dispersion of particulate matter present in the air also have to be considered,” a scientist said. “Vehicle emissions, dripping oil, road dust and tyre fragmentation result in an increase in carbon monoxide, sulphur dioxide, nitrates and suspended particulates in the air,” he added.

A scientist referred to a paper published earlier this year by the US National Bureau of Economic Research, which indicated that when students switch to schools with higher levels of traffic pollution, they tend to experience decline in test scores, more behavioral

incidents and more absents. Air pollution harms cognitive performance and poses a major threat to health worldwide, the paper noted.

Likely effects

- Respiratory, cardiovascular, neuro-psychological issues
- Asthma, some eye-related allergies
- Poor academic performance

Published in:

[The Tribune](#)

The hunt for green firecrackers in Delhi

CSIR-NEERI

12th October, 2019

The green crackers that the Supreme Court has allowed to be burst during Diwali in Delhi are barely there in the market a fortnight before the festival. The supposedly environment friendly crackers developed by government agencies were hard to find in the Sadar Bazar wholesale market in Old Delhi on Thursday. Many shopkeepers in the nearby Jama Masjid area have desisted from putting up a shop for crackers. Those who have, expressed dissatisfaction at the low sales.

The problem several shopkeepers cited was that the types of green crackers with them were too few when compared to the variety of conventional firecrackers, which customers wanted. “We are selling only green fireworks but the stock is too less. We have received only *anaar* and *fuljhari* so far. We hope to get more items soon. As of now, entire firecracker market is in a slump. No one is purchasing. Rates are high comparatively.

There’s a spike of almost 50 per cent in the rates. Nine out of 10 who come to my shop leave without buying anything, because of the rates. The customers' behavior is totally justified. They come with expectations of choosing from a range of crackers, and I can show them only two things. Why would they buy these? This is the case in the entire city,” a shopkeeper at Prem Fireworks in Jama Masjid, told this website. Another Sadar Bazar shopkeeper said they decided on not selling crackers or applying for a licence as they did saw no benefit in selling fewer varieties, which too are hard to come by. “No we are not selling crackers this year since our license was not renewed.... Even with green crackers, there are only 7-8 variation, and that too these are much more expensive than the routine crackers. That’s another reason why we are not selling them,” said a salesman in Royal Fireworks.

The environment ministry launched the green crackers only last week. The crackers, which the government claimed will release 30 per cent less particulate matter (PM) 2.5 and PM 10 into the atmosphere, have been designed by a gamut of government agencies under a project helmed by the CSIR-NEERI. According to the definition set by CSIR-NEERI, the green crackers are those that are “made with reduction in size of shell, elimination of ash usage etc., reduced usage of raw materials in the compositions, of uniform acceptable quality, and/or use of additives as dust suppressants to reduce emissions with specific reference to particulate matter (PM) (SO₂ and NO₂).” The government has issued certificates to more than 300 manufactures to produce green crackers. But the formulation for the crackers and required approvals came so late in the day that it seems to have stressed out the industry’s production machinery, which is finding it hard to manufacture enough crackers of enough types to meet the demand.

A Jama Masjid shopkeeper surmised that it will not be till next year that green crackers will be available in the market in enough quantities. He too rued the low sales. “Customers want a variety of fireworks and they are not up for buying these two. We have been told by manufacturers that they are unable to produce enough green crackers this year. The situation may improve next year,” said the proprietor at Ajit Fireworks. A traders’ association leader at Sadar Bazar said the market loss because of the unavailability of green crackers and a ban on traditional crackers is hard to quantify, since traders were already anticipating a rough time this year also. The Supreme Court banned the sale of conventional firecrackers last year just before Diwali. “There are no green crackers in the market. No one is selling crackers anymore. They are selling other things, like decoration stuff, candles, lamps. We haven’t estimated the loss yet. We were prepared already for a rough deal since something or the other happens every year, so we focused on selling the other items. People will burst crackers anyway, either from last years’ spare stock or by buying them from UP or Haryana,” said Neeraj Kumar of the Fireworks and General Traders' Association.

Published in:
[The Telegraph](#)

CCMB study explains auto-inflammation

CSIR-CCMB

12th October, 2019

It is published in Proceedings of National Academy of Sciences

The human body's immune system has receptors to detect proteins of pathogenic micro-organisms gaining entry into it. Our cells respond to them by secreting cytokines that causes inflammation and fever. However, there are cases of auto-inflammation where individuals suffer from inflammation without an infection! Familial Cold Autoinflammatory Syndrome (FCAS) is one example where patients show symptoms of inflammation only upon exposure to sub-normal temperatures.

Certain mutations in the immune receptor proteins are known to cause FCAS, but the actual mechanism of how it works is not known. A study led by Ghanshyam Swarup and Vegesna Radha at the CSIR-Centre for Cellular and Molecular Biology (CCMB) here has provided an insight into how the FCAS is caused. Published in the *Proceedings of National Academy of Sciences*, U.S.A., the study identifies a protein, HSC70, as a negative regulator and explains the complex procedure of how the mutation occurs.

This is the first study which describes a mechanism of cold-induced inflammation caused by a mutation in an immune receptor. The mechanism described in the study is likely to raise the possibility of devising strategies/drugs for modulating the activity of HSC70 or other related proteins for controlling inflammation.

Published in:

[The Hindu](#)

Putting plastic waste to use

CSIR –IIP



India generates at least 25,940 tonnes of plastic waste daily, equivalent to the weight of around 4,300 elephants. Of this, about 60% gets recycled, according to the Union environment ministry. The rest gets dumped in landfills, clogs drains, goes into the ocean as micro-plastics, or is burnt, leading to air pollution. In the absence of a proper waste management system, the plastics that get recycled are often dirty, which makes the recycling process water-intensive and expensive. “It is the process of cleaning the plastics before recycling that makes it resource intensive. A lot of water is required to wash the collected plastics, especially if it is oily or greasy as it has to be cleaned with a

11th October, 2019

solvent,” said Dr Suneel Pandey, director of environment and waste management, The Energy and Resources Institute (TERI). Experts say proper waste collection and management is at the core of ensuring more plastics get recycled instead of ending up in landfills and oceans.

“Improper waste management also makes plastics collected for recycling less safe as they pick up environmental toxins, bio-medical waste or very unpleasant bacteria, viruses and fungi at a landfills,” said Dr Anjan Ray, director of Indian Institute of Petroleum (IIP), a laboratory of the Council of Scientific and Industrial Research (CSIR-IIP).

After reaching the recycling facility, food packaging material also presents a unique challenge. They are made of multiple layers of different kinds of plastics that are impossible to separate and hence recycle. Also, all plastics can be recycled only seven to eight times at best.

Wealth out of waste

Researchers from various institutes have come up with innovative ways to utilise the plastic waste that cannot be recycled further or are unrecyclable.

At IIT Delhi, a group of chemical engineers are working on chemically breaking down plastics to its smaller hydrocarbon molecules and then synthesising diesel out of it. The process uses packaging material, Polyethylene terephthalate (PET) bottles, polystyrene, and multi-layer packaging.

“The process is meant for plastics that are at the end of their life. The plastics are basically cleaned out and melted, when the vapours form, they are further cracked or broken down to smaller molecules using a catalyst, a fraction of which is then condensed and collected to be used as fuel,” said Uma Dwivedi, a PhD student working on the project.

The fuel produced can currently be used as a blend in stationary diesel machines like generators and needs further testing and standardisation to be used as commercial diesel in vehicles.

A similar

processing method is used by the CSIR - IIP in Dehradun to create commercial grade diesel. “Recycling is definitely important but to my mind, the ultimate solution would be to take the plastic agglomerates and turn them back into its constituents. Plastics are mainly made of carbon and hydrogen and so are fossil fuels. So, at CSIR-IIP we have set up a plant to convert waste plastic to diesel. For every 1,000 kg of plastic, we can make 800 litres of diesel. The balance is mostly LPG, which we use to heat the reactor that makes the diesel,” said Ray.

A German chemical producer called BASF is also working with similar chemical recycling method to create a raw material usually derived from fossil fuels for its products. The challenge with these technologies is the pricing. The marketability of the diesel also depends on the crude price of petroleum and the resulting products in the market. “Scientists are now looking for ways to close the loop and create a circular economy for plastic, meaning all the plastic produced should be reused and recycled.

The few methods that are out there, like what is being done by the German company, the cost of the processing is too high,” said Pandey. One cost-effective solution was developed by Dr Rajagopalan Vasudevan, professor at Thiagarajar College of Engineering in Madurai. The National Highways Authority of India is currently scaling up his technology to use plastic waste in making roads. He came up with the idea of mixing plastic waste with Bitumen used for constructing roads in 2001. “That year the Tamil Nadu government had planned to ban plastic and my concern began with the more than 1 lakh people employed by the industry. Since plastic is derived from petroleum just like Bitumen, I thought of using it for road construction. The result, not only plastic waste was getting utilised, the roads were cheaper and steadier,” he said. The plastic waste does not have to be segregated and even multi-layered plastics can be used in the mix. “All we need to do is collect the waste, dry it out and use it,” he said. The construction of every kilometre of road required nine tonnes of Bitumen and one tonne of plastic waste. This means for every kilometre of road, one-tonne Bitumen is saved, which costs about ₹30,000.

These processes are necessary to combat the challenge of existing plastic waste, but researchers say that there is a need to focus on effective alternatives that can help in reducing the use of plastic products. “To make plastic eco-friendly we must make it more biodegradable. A lot of work is going on in bio-degradable plastics, but petroleum-derived plastics like polyethylene, polypropylene, and polystyrene are cheap and abundant. It is therefore necessary for investment in research to develop better plastics that are more efficiently biodegradable,” said Dr Pandey. Research on ways to degrade plastic that is already in the soil or landfills using microbial solutions is also needed, he said.

Published in:

[Hindustan Times](#)

આયોડિન અને આયર્ન બંનેનો સમાવેશ થાય છે તેવું ભાવનગરની CSMCRI દ્વારા વિકસાવાયેલ 'ડબલ ફોર્ટીફાઇડ મીઠું' શરીર માટે ગુણકારી

ભૂજ ખાતે ત્રણ કેન્દ્રીય વિદ્યાલયમાં જિજ્ઞાસા કાર્યક્રમમાં ૩૨૫ બાળકો જોડાયા

। ભાવનગર (સંદેશ પ્રતિનિધિ) ।
ભાવનગરની સેન્ટ્રલ સાલ્ટ એન્ડ મરીન કેમિકલ રિસર્ચ ઇન્સ્ટિટ્યૂટ દ્વારા ભૂજ કેન્દ્રીય વિદ્યાલયમાં તાજેતરમાં વિદ્યાર્થીઓ-વિજ્ઞાનીકો વચ્ચે જિજ્ઞાસા કાર્યક્રમ અંતર્ગત વાર્તાલાપ યોજવામાં આવ્યો હતો. ભૂજની ૩ કેન્દ્રીય વિદ્યાલયો જેવી કે એએફએસ ભૂજ, આમી ભૂજ, એએફએસ નલિયામાંથી ૩૨૫થી વધારે વિદ્યાર્થીઓ અને ૧૮થી વધારે વિજ્ઞાન શિક્ષકોએ આ કાર્યક્રમમાં ભાગ લીધો હતો. સી.એસ.એમ.સી. આર.આઈ.માં ફરજ બજાવતા વિજ્ઞાનીકો ડો. બિપીન વ્યાસ અને ડો. અંશુલ યાદવે કેન્દ્રીય વિદ્યાલયની મુલાકાત લીધી હતી.

કેન્દ્રીય વિદ્યાલયના આચાર્ય એ.પી. રાયે બંને વિજ્ઞાનીકોનું સ્વાગત કર્યું અને સહભાગિયોને સંબોધ્યા હતા. તેમણે વિદ્યાર્થીઓને વિજ્ઞાનિક અભિગમમાં પ્રગતિ કરવા માટે પ્રોત્સાહન આપ્યું અને આવા વિજ્ઞાનિક - વિદ્યાર્થી વાર્તાલાપોનો લાભ લેવા પ્રેરિત કર્યા હતા.

કાર્યક્રમના પ્રથમ સત્રમાં ડો. બિપીન વ્યાસે મીઠું (નમક) વિશેની રસપ્રદ અને રોચક માહિતી આપવામાં આવી. તેઓને મૂળભૂત મીઠું કે જે આપણા રોજિંદા આહારમાં ઉપયોગમાં લેવામાં આવે છે તથા તેની પ્રાથમિક માહિતી, તેનું ઉત્પાદન કઈ રીતે કરવામાં આવે છે તથા તેની આપણા દેશમાંથી કેટલી આયાત અને નિકાસ થાય છે અને તેના મુખ્ય ઉપયોગો વિશેની માહિતી આપી હતી. વિદ્યાર્થીઓ સાથે આયોડિન અને આયર્ન ની ઉણપથી થતા રોગોએ આપણા દેશની મુખ્ય બે જાહેર આરોગ્ય સમસ્યા છે તે વિશે વાતચીત કરી હતી. અત્યારે આપણા દેશમાં ૩૫૦ મિલિયન લોકો કે જે આયોડિન અપૂરતી માત્રામાં મળવાના કારણે જોખમમાં છે. ભારતમાં દર વર્ષે ૯ મિલિયન ગર્ભવતી મહિલા અને ૮ મિલિયન નવજાત બાળકો IDD (આયોડિન ડેફિસિયન્સી ડિસઓર્ડર)ની ખામી હોય છે. આયોડિન અને આયર્નની ખામી ને કારણે ગાળાના રોગો, ગોઈટર તથા એનિમિયા જેવી ગંભીર બીમારી થાય છે. CSMCRI દ્વારા ડબલ ફોર્ટીફાઇડ મીઠાની નવી વિચારધારા વિકસાવવામાં આવી છે. જેમાં આયો ડીન અને આયર્ન બંનેનો સમાવેશ થાય છે. આ ડબલ ગુણવત્તાવાળું મીઠુંએ શરીરને પૂરતા પ્રમાણમાં સુસ્મ પોષણો પુરા પાડે છે જેથી આ ઉણપથી થતા ગંભીર રોગોને અટકાવી શકાય.



વરસાદી પાણીને ઘર વપરાશમાં લેવા પ્રાયોગિક નિદર્શન

ડો. અંશુલ યાદવે પીવાના પાણીની કટોકટી અને પાણીના શુદ્ધિકરણ વિશે વિદ્યાર્થીઓને જાગૃત કર્યા હતા. પીવાના પાણીનું મહત્વ, કટોકટી, પાણીના શુદ્ધિકરણની વિવિધ પ્રક્રિયાઓ જેમકે ક્લોરિનેશન/રિવર્સ ઓસ્મોસિસ વગેરે વિષયો પાર ભાર દેવામાં આવ્યો હતો. વાર્તાલાપ પછી વરસાદના પાણીને કેવી રીતે સાફ કરી ઘર વપરાશ માં વાપરી શકાય એનું પ્રાયોગિક નિદર્શન કરવામાં આવ્યું હતું. આ દરમિયાન વિદ્યાર્થીઓએ વિજ્ઞાનિક કેવી રીતે બનવું, મીઠુ ને તેણી ઉપયોગિતા, રિવર્સ ઓસ્મોસિસ નું મોડ્યુલ કેવી રીતે કામ કરે જેવા વિવિધ પ્રશ્નો પૂછ્યા હતા.

વિદ્યાર્થીઓની જાગૃતિથી વૈજ્ઞાનિકોને આનંદ

વિજ્ઞાનીકોને એમની જાગૃતિ જોઈને અચરજ તથા આનંદ થયો. એમણે તેમના પ્રશ્નોને હાલ કરવાના પ્રયાસો કર્યા તથા યુવાન દિમાગોમાં ઉત્પન્ન થતા પ્રશ્નોથી તેમને નવા સંશોધન અભિગમો તરફ વિચારવાની તક મળી હતી. કાર્યક્રમના અંતે વિદ્યાર્થીઓ દ્વારા વિવિધ પ્રશ્નો પૂછવામાં આવ્યા હતા. વિદ્યાર્થીઓની આ જિજ્ઞાસા જોઈને વિજ્ઞાનીકોને ખુબ આનંદ થયો હતો. આજની પેઢીની સમજ જોતા એવું લાગે છે કે વિજ્ઞાન અને ટેકનોલોજીનું ભવિષ્ય બહુ ઉજ્જવળ છે.

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