

In the News

CSIR Celebrates International Women's Day 2023



From L to R: Prof. Ranjana Aggarwal, Director, CSIR-NIScPR; Dr N Kalaiselvi, DG, CSIR; Mrs Manju Singh; Ms Nivruti Rai, Country Head, Intel India; S&T Minister Dr Jitendra Singh; and Prof. Ajay K Sood, PSA, GoI

THE Council of Scientific and Industrial Research (CSIR) celebrated the International Women's Day 2023 on 9 March 2023 at the CSIR-National Physical Laboratory (CSIR-NPL), New Delhi. The celebration was graced by Hon'ble S&T Minister, Dr Jitendra Singh as Chief Guest

along with his wife Mrs Manju Singh. Ms Nivruti Rai, Country Head, Intel India; was the Guest of Honour. Prof. Ajay K Sood, Principal Scientific Adviser (PSA), GoI, also graced the occasion.

Welcoming the gathering, Dr N Kalaiselvi, DG-CSIR and Secretary DSIR, GoI,

During the programme, Hon'ble S&T Minister Dr Jitendra Singh launched an exclusive women's portal for research grants and funds – CSIR-ASPIRE.



proudly mentioned that, “CSIR is an organisation where out of 37 labs, six labs have women Directors and in Delhi itself, the CSIR Headquarters has eight women leaders as heads of various departments.” Recalling this year’s theme #EmbraceEquity, she said that it is not equality, it is equity because equality can be the destination where equity should be the medium to reach equality.

Hon’ble Minister Dr Jitendra Singh in his address mentioned that over the years women have achieved great heights and will continue to do so in the future also. Highlighting various initiatives, he added that the government is committed to providing equal opportunities for women in all fields and will continue to strive for gender equality. He congratulated the CSIR family for their efforts and motivated them to keep up the good work.

During the programme, Dr Jitendra also launched an exclusive women's portal for research grants and funds – CSIR-ASPIRE (CSIR-A Special Call for Research Grants for Women Scientists).

Addressing the gathering, Prof. Ajay K Sood mentioned that this theme Embrace Equity is very crucial as we move towards a technologically advanced society.



Kuchipudi dance performance during the International Women's Day celebration

He said that in this modern era, technology plays a vital role in transforming women’s life, enhancing access to digital tools and enabling their participation in the workforce, education and community engagement. However, we note that women still face significant barriers in accessing and utilising resources and this creates a further gender divide in a digital world that must be addressed. We must create an inclusive environment that supports women in the S&T sector, encouraging women entrepreneurs and technologists to develop their skills and contribute to industry and society.

Ms Nivruti Rai in her presentation, “Breaking Barrier: Advancing Women in S&T”, shared her experiences and discussed advancing the role of women in S&T, breaking barriers at every stage of the work life. The woman is at crossroads where the contribution of women to innovation in critical and emerging technologies will define the future, she said.

Concluding the programme, Prof. Ranjana Aggarwal, Director, CSIR-NIScPR (CSIR-National Institute of Science Communication & Policy Research), New Delhi, presented the vote of thanks.

A weeklong Celebration of International Women's Day at CSIR-CSMCRI



A weeklong celebration of International Women's Day was organised from 1-10 March 2023 at CSIR-Central Salt & Marine Chemicals Research Institute (CSIR-CSMCRI), Bhavnagar. The week was inaugurated with a grand event in which Princess Brijeshwari Kumari Gohil, Founder, Bhavnagar Heritage Preservation Society and Vice President, Princeps Auction House and Gallery was the Chief Guest.

Dance, drama and poetry recitation were organised on this occasion. Discussion on breast cancer awareness by cancer specialist Dr Vividha Dubey on March 3, discussion on "Women's

mental health and work-home life balance, stress management" by psychologist Mrs Neeta Yadav on March 6, medical camp for contractual women employees, and drawing competition were organised during the week.

On 10 March 2023, during the valedictory function Chief Guest, Dr Namrata Chindarkar, Associate Professor and Chair, JSW School of Public Policy, Indian Institute of Management, Ahmedabad, addressed the gathering. Various cultural programmes were organised throughout the week in which both male and female employees participated enthusiastically.

DG-ICMR Releases Health Special Issues of *Vigyan Pragati* & *Science Reporter*



Release of the Health special issues of *Vigyan Pragati* and *Science Reporter*, popular science magazines published by CSIR-NIScPR

Apart from disseminating scientific information, science communication could also bring about behavioural changes in people – Dr Rajiv Bahl, DG-ICMR.

IN view of the World Health Day 2023, CSIR-NIScPR, New Delhi, brought out health-focused special issues of its two monthly popular science magazines — *Vigyan Pragati* in Hindi and *Science Reporter* in English. The special issues were released by Dr Rajiv Bahl, Secretary, Department of Health Research (DHR) and Director General, Indian Council of Medical Research (ICMR) at the ICMR headquarters on 10 April 2023. Also present on the occasion was Prof. Ranjana Aggarwal, Director, CSIR-NIScPR.

During the release ceremony, Dr Rajiv Bahl said that most people are concerned about their health, and the recent COVID pandemic has motivated everyone to know about the nitty-gritty of health and scientific research. He said, apart from disseminating

scientific information, science communication could also bring about behavioural changes in people. In this regard, he said, popular science magazines like *Vigyan Pragati* and *Science Reporter* play a very effective role.

Briefing about the magazines and other publications of CSIR-NIScPR, Prof. Ranjana Aggarwal said that these two magazines of CSIR carry a legacy of seven decades and a great responsibility of inculcating scientific temper in the society through the dissemination of authentic S&T knowledge.

Editor, *Science Reporter*, Mr Hasan Jawaaid Khan, Chief Scientist & Head Popular Science Division, CSIR-NIScPR, briefed about the *Science Reporter* special issue focusing on health with an emphasis on healthy eating — including articles on millet, dental

care, mental health, and a vision for a healthier future. The issue is an attempt to spread awareness among the readers helping them to take the right decisions for their health, he said.

Dr Manish Mohan Gore, Editor, *Vigyan Pragati*, discussed the special issue which deals with a range of health-related areas such as mental health, epidemiology, lifestyle diseases, maternal & oral health, and health consequences of child marriage. He further informed that the authors of the issues are working scientists of

ICMR labs who came together at a workshop at CSIR-NIScPR on 16 November 2022 – this special issue was a tangible outcome of that workshop.

During the release ceremony, Dr Rajeev Roy, Sr Financial Advisor, ICMR; Dr Rajni Kant, Director, RMRC, Gorakhpur and Head P&C, ICMR; Dr Enna Dogra, Scientist, ICMR; Ms Sonali Nagar, Sr Scientist, CSIR-NIScPR; Ms Shubhada Kapil, Assistant Editor, *Vigyan Pragati*; and Shri Pallav Bagla, Science Journalist also joined.

One Week, One Lab

CSIR-IITR's "One Week, One Lab" Showcase



CSIR-IITR (CSIR-Indian Institute of Toxicology Research), Lucknow, celebrated the national campaign "One Week, One Lab" from 27 February to 3 March 2023.

As a prelude to the event, a two-day conference on "Women in Academia, Research and Management of Food Safety and Toxicology (WARM-FoST)", was organised by CSIR-IITR in association with the CSIR-Central Food Technological Research Institute (CSIR-CFTRI), Mysuru, and Association of Food Scientists

and Technologists of India (AFSTI), Lucknow Chapter, on 24 and 25 February 2023.

In her inaugural address, Dr N Kalaiselvi, DG, CSIR, said that this conference shall provide a platform for women scientists, technologists & entrepreneurs to showcase their achievements in multidisciplinary aspects of food safety, toxicology, public health, technology and entrepreneurship.

Dr Kalaiselvi dedicated a "Jigyasa Aroma Garden" at CSIR-IITR main campus and also

DG CSIR, Dr N Kalaiselvi dedicated a "Jigyasa Aroma Garden" at CSIR-IITR main campus and also unveiled the new logo of the institute that signifies the renewed vigour and energy of the institute.



Dr Bhaskar Narayan, Director, CSIR-IITR, echoed that with efficient, well-trained Manpower, Machines (resources), and Mechanisms, our country too would soon join the league of developed Nations.

unveiled the new logo of the institute that signifies the renewed vigour and energy of the institute. She launched the “One Week, One Lab” campaign and also released a *Millet Recipe Book* coinciding with the International Year of Millets declared by the United Nations.

The inaugural event was enriched by the presence of Padma Shri Mrs Usha Chaumar, President, Sulabh International; Olympian and Padma Shri Ms Sudha Singh; Dr Radha Rangarajan, Director, CSIR-CDRI, Lucknow; and Dr Sridevi Annapurna Singh, Director, CSIR-CFTRI, Mysuru.

The Chief Guest Prof. Pratibha Goyal, Vice Chancellor of the Dr Ram Manohar Lohiya Avadh University (RMLAU), Ayodhya, inaugurated the “One Week, One Lab” endeavour of CSIR-IITR on 27 February 2023. She appreciated CSIR’s contributions to humanity and highlighted the severe health problems that society has been facing due to the blatant use of pesticides and overexposure to different types of toxic chemicals. Prof. Goyal was hopeful that an elite organisation like the CSIR-IITR would continue to do meaningful research.

Dr Bhaskar Narayan, Director, CSIR-IITR, echoed that with efficient, well-trained Manpower, Machines (resources), and Mechanisms, our country too would soon join the league of developed nations. Dr Narayan spoke about the need for connecting science transpiring within the labs with the public at large and emphasised the importance of “robust, well-built systems”.

During the function, a workshop on the “Importance of NABL accreditation in the laboratory management system of testing laboratories” was also organised. Dr Avijit Das, Senior Director, NABL, and the Guest of Honour of the programme spoke about the importance of quality systems in laboratories. He hoped that the participants of this workshop would be able to learn new skill sets and use them to improve efficacy at their respective workplaces.

On this occasion, CSIR-IITR signed a Memorandum of Understanding with RML Avadh University, Ayodhya. The Chief Guest Prof. Pratibha Goyal inaugurated the “Research Scholars Poster Showcase Event” that was put up by the AcSIR PhD scholars of the institute. She interacted with the youngsters and hoped that each one of them would become a brand ambassador of the CSIR.

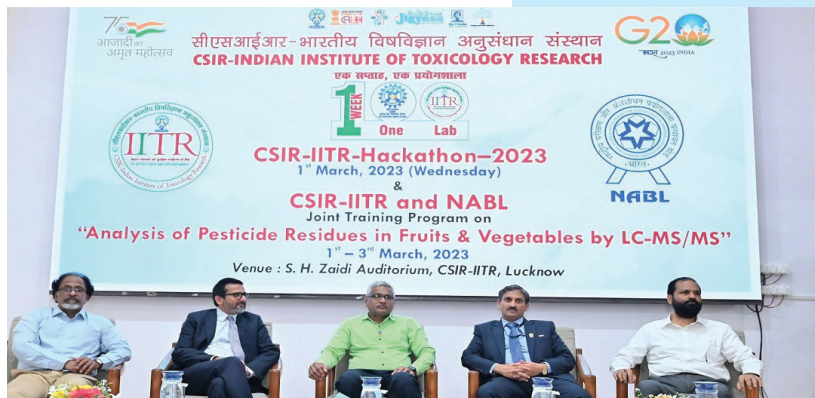
The National Science Day-2023 coincided with the second day of the CSIR-IITR “One Week, One Lab” campaign. Reverberating the theme of this year’s National Science Day “Global Science for Global Wellbeing”, Shri ASKVS

Sharma, former Chief Scientist, CSIR-CFTRI & Guest of Honour at the function talked about India's emerging global role and rising visibility in the international arena. Addressing a large gathering of school students, he aptly talked about how curiosity in science should be channelled into a driving force towards making good things better.

Delivering the keynote address, Shri Tarun Sridhar, IAS, Former Secretary to Govt of India & Chief Guest of the function shared his thoughts on how science may be used to ensure effective policymaking. He opined that the S&T ecosystem in the country has made rapid strides in recent years and several new landmark reforms in science administration with far-reaching implications have been initiated. Delivering the presidential address, Dr Bhaskar Narayan opined that the true potential of any scientific outcome is only realised when it traverses the distance from the lab to the land.

During this programme, awards were given to the winners of the CSIR-IITR *Jigyasa* programme in which a total of 80 entries were received, out of which 20 were shortlisted for final pitching. The best five entries were awarded.

Day three of the week-long campaign at CSIR-IITR marked the start of a three-day CSIR-IITR and NABL joint training programme on 'Analysis of Pesticide Residues in Fruits and Vegetables' which was inaugurated by Shri N Venkateswaran, CEO, NABL. Speaking at the inaugural



event Shri Venkateswaran expressed confidence that this was just the beginning of a series of such training programmes to be organised jointly towards the mission of skilling the youth and making them employable. He urged the participants of the training programme to use their time at the institute judiciously and make the maximum of the exposure that they will get.

The other highlight of the day was the finale of the CSIR-IITR Hackathon 2023. Out of a total of 32 entries received in different areas of 'Digital Intervention for Food Safety and Environmental Sustainability Solutions', seven finalists were shortlisted for the final round of evaluations. They presented their innovative proposals and business models on ideas including 'anti-nicotine chocolate and digital de-addiction tracking'; 'IoT based technology to fight air pollution'; 'carbon trade in cars using blockchain'; 'early diagnosis of lifestyle diseases', 'nontoxic plastic alternatives in packaging', etc.

Inaugurating the event, Shri Hemang Jani, Secretary, Capacity Building Commission, Govt of India; exhorted the participants and the

The S&T ecosystem in the country has made rapid strides in recent years and several new landmark reforms in science administration, with far-reaching implications, have been initiated, opined Shri Tarun Sridhar, IAS, Former Secretary, GoI.

In the current data-centric world, industries should work on utilising the expertise of the research institutions, particularly regulatory decision-making, said Shri Pawan Agarwal, IAS, CEO & Founder, Food Future Foundation.

scientific community to desist from working in silos, and instead work towards larger collaborative and multi-disciplinary projects. He stated that though the Nation has made tremendous progress in recent times, there is a lot of ground to be covered towards achieving our goal of Atmanirbhar Bharat.

Delivering the presidential address, Dr Bhaskar Narayan, reiterated the institute's commitment to being a true value addition proposition to all its collaborators and stakeholders. He said that CSIR-IITR believes in the principle of working together for everyone to be successful.

On day four, CSIR-IITR launched a trinity system for ease of serving industry and society. CSIR-IITR intends to boost, facilitate and expedite 'industrially relevant' R&D by understanding requirements, clearing the bottlenecks, accelerating research and charting out an implementable action plan that would meet the demands of the stakeholders. Towards this end, the Institute launched an ambitious platform named CAiRES (Consultative Arrangement for Innovation in Research by Engaging Stakeholders). CAiRES intends to bridge the gaps between 'research production' and 'research use' by better carving of the problem statements, efficient resource utilisation, manpower deployment and effective harnessing of 'market acceptable' outputs — with the consensus of all stakeholders.

Another endeavour that CSIR-IITR embarked upon was the launch of the Government Academia & Industry Network (GAIN) platform

which intends to demonstrate sharing of purpose, synergy, collaboration and cooperation amongst academia, industry and Government organisations. GAIN would be a forum to strengthen the collaboration and accountability between these pillars of scientific innovation — each having its own unique strengths and functional models.

On this occasion, CSIR-IITR brought several industries & start-ups to showcase their technologies and innovative products. The exhibition was inaugurated by Shri Pawan Agarwal, IAS, CEO & Founder, Food Future Foundation. The highlight of the day's events was the award ceremony of the CSIR-IITR Hackathon 2023. Shri Agarwal congratulated the participants and appreciated the efforts of the institute to bring a collaborative system to enable the most demanding task of the country to engage diverse stockholders and sustain their businesses. He said, in the current data-centric world, industries should work on utilising the expertise of the research institutions, particularly regulatory decision-making.

In his address, the Guest of Honour Dr G Narahary Sastry, the then Director, CSIR-NEIST, lauded the efforts of CSIR-IITR towards tackling air, water, and soil pollution.

In the afternoon, a roundtable discussion involving representatives from the Government, Academia, and Industry, was organised. The discussions were spearheaded by Dr KC Khulbe, Chief Scientist,

CSIR-IITR with about 24 industry representatives participating. An academic collaboration MoU was signed between CSIR-IITR and ICAR-CIFE, Mumbai. CSIR-IITR also signed MoUs with Marico Limited, Mumbai; Community Empowerment Lab, Lucknow; Centre for BioMedical Research, Lucknow; Farelabs, New Delhi; EFRAC, Kolkata; Blessings Advertising; and, Philtons Bioengineering Pvt. Ltd.

The institute is celebrating the Centenary Year of Dr CR Krishnamurti, an eminent environmental scientist and a pioneer in the field of occupational health and the second Director of CSIR-IITR (from 1978 to 1983) who was instrumental in establishing the Gheru Campus of the institute as a Centre for Ecotoxicology testing. Shri Brajesh Pathak, Hon'ble Deputy Chief Minister, Government of Uttar Pradesh was the Chief Guest for the Centenary celebrations during which he unveiled a bust of Dr Krishnamurti and a Memory Wall as a token of remembrance and appreciation for his over five decades of contribution to the institute. The Gheru Campus of the institute was renamed as CRK Campus in honour of Dr CR Krishnamurti.

Speaking on the occasion, Shri Brajesh Pathak lauded the services of the institute in the niche area of environmental monitoring and in developing technologies to tackle air, water and soil pollution. Several former colleagues and students of Dr CR Krishnamurti shared their experiences of working with him. His long-sighted vision



towards converting laboratory findings into actual field settings in environmental toxicology, bioremediation, and occupational health is visibly demonstrated by the laboratories at the Gheru Campus, they opined.

In the concluding programme, Shri Indrajeet Singh, IAS, Municipal Commissioner, Lucknow Municipal Corporation was the Chief Guest and Dr Ajit Kumar Shasany, Director, CSIR-NBRI, was the Guest of Honour. Awards were given to the prize winners of the research scholars poster presentation competition that was held as a part of the celebrations on 27 February 2023. Also, participants of the three-day CSIR-IITR and NABL joint training programme on Analysis of Pesticide Residues in Fruits and Vegetables were felicitated.

Shri Brajesh Pathak, Deputy Chief Minister, Govt of UP, lauded the services of the institute in the niche area of environmental monitoring and in developing technologies to tackle air, water and soil pollution.

CSIR-IICT Celebrates “One Week, One Lab” Programme



AS a part of the "One Week, One Lab" campaign launched by the Hon'ble Minister and Vice President of CSIR, Dr Jitendra Singh, the CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, conducted a programme during 7-12 March 2023.

Dr Jitendra Singh launched the “One Week, One Lab” event at CSIR-IICT on 7 March 2023. Dr Krishna Ella, Executive Chairman

of Bharat Biotech International Limited; Dr MSN Reddy, Founder and CMD MSN Group and Mr Pradip Dave, President, Pesticides Manufacturers & Formulators Association of India (PMFAI) and Chairman, Aimco Pesticides were Guests of Honour for the Inaugural function. The Director of the Institute Dr D Srinivasa Reddy delivered the welcome address.

Addressing the gathering, Dr Jitendra Singh, pointed out that



Hon'ble Minister, Dr Jitendra Singh during the exchange of MoU between CSIR-IICT & Mangalore Refineries and Petrochemical Ltd



Dr Jitendra Singh and dignitaries visiting the stalls in the Exhibition

CSIR-IICT has developed several technologies for life-saving generic drugs such as AZT required in controlling AIDS, which ultimately brought down the cost of the drug in the world market. Similarly, anti-viral drugs and vaccine adjuvant for Covaxin developed by the institute played a pivotal role in limiting the spread of the COVID-19 virus.

Addressing an exclusive session of business leaders including CEOs, CMDs and MDs from industries, startups and innovators, Dr Jitendra Singh said that Hyderabad is known to be a destination of health and wealth as the pharma capital of the region. Therefore, the specialised and skilled manpower developed by IICT should find a naturally integral place in the pharma and biotech industry of Hyderabad in particular and India in general.

During the inaugural function of the week-long programme, CSIR-IICT exchanged several MoUs in the presence of the

Hon'ble Minister, including with M/s Mangalore Refinery and Petrochemicals Ltd (MRPL), M/s Granules India Limited, and M/s Aragen, Kewaunee Lab way India Pvt. Ltd.

During the programme, booklets on posters and exhibits were released. Besides, CSIR-IICT audio video clip and super food were also launched. The Hon'ble Minister inaugurated the Expo where the archives, products, technology demonstrations and scientific posters were displayed. Around 5000 people including students

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During Kisan Mela and Technologies for Society, Director, CSIR-IICT, Dr D Srinivasa Reddy with a section of farmers

The week-long programme showcased CSIR-IICT's contributions during the last eight decades of its journey in the service of mankind, since its inception in 1944.



Dr USN Murty, Director, NIPER, Guwahati, lighting the lamp. Incharge Director, CSIR-IICT Dr B Jagadeesh is to his right and Dr M Chandrasekharam, Nodal Officer of the campaign is at his right. Dr Gangagni Rao, Chief Scientist is to the left of Dr USN Murty.

representing 120 educational institutions, researchers, teachers, industrialists, start-ups, the general public and press and media visited during the “One Week, One lab” event.

The week-long programme showcased CSIR-IICT's contributions during the last eight decades of its journey in the service of mankind, since its inception in 1944. The programme also included the celebration of International Women's Day on 8 March 2023 during which Dr Hemalatha, Director, ICMR-National Institute of Nutrition (ICMR-NIN), Hyderabad, was the Chief Guest and Ms Rani Kumudini, IAS, Special Chief Secretary to the Govt of Telangana, was the Guest of Honour. Women achievers from different walks of life shared their experiences on this occasion.

Kisan Mela & Technologies for Society was organised on 9 March 2023. Shri B Janardhan Reddy, IAS, (Retd), Telangana State Public Service Commission graced the occasion as Chief Guest;

Prof. P Appa Rao, Former Vice Chancellor of Hyderabad Central University; Dr G Raji Reddy, former World Bank consultant and Director of Extension PJTSAU (Retd), were Guests of Honour.

Researcher's Conclave was organised on 10 March 2023 where Prof. Gopal Reddy, Vice Chancellor, MG University, Nalgonda, was the Chief Guest. During the conclave, Dr Vinay Nandicoori, Director CSIR-CCMB, and Prof. Rene Gree, University of Rennes, France, were the Guests of Honour.

During the Outreach – Science Communication and Ethics in Science on 11 March 2023, Prof. Manoj Dhar, Director of the Academy of Scientific and Innovative Research (AcSIR) was the Chief Guest, Mr Pallava Bagla, Photo Journalist & Former Science Editor, NDTV was the Guest of Honour.

The valedictory function on 12 March 2023 was graced by Dr USN Murty, Director, NIPER, Guwahati as the Chief Guest.

Outstanding Multi-functional Luminescent Pigment Based Golden Ink with Innumerable Security Features to Curb Counterfeiting of Passport

IN this evolving world, counterfeiting is also evolving in advanced ways and counterfeiters are turning out to be more proficient to counterfeit security features effectively by utilising all advanced technologies and tools to perform their unethical activities.

Over the decades, a huge amount has been invested in developing several anti-counterfeiting technologies to limit the opportunities for passport fraud, but authorities are still struggling to stay one step ahead of the counterfeiters. So far, numerous multimodal luminescent materials have been explored using various combinations for the fabrication of security inks. But the biggest concern with these anti-counterfeiting technologies is that they all entirely rely on luminescence only. Although the pairing of materials is rare, they still get easily decoded using advanced technological instruments and tools by deciphering their chemical composition, structures, and ratio.

To overcome these obstacles a new class of multi-functional security pigments has been introduced with two properties combined – optical and magnetic – to obtain more efficient security



inks for important documents such as banknotes and bank cheques which can be easy to detect and trace

but hard to replicate.

CSIR-National Physical Laboratory (CSIR-NPL), New Delhi, has proposed a cost-effective golden ink that is one step ahead to provide more security to important documents. It is a new strategy to design a novel and inexpensive Multi-functional Luminescent Pigment (MLSP) based Golden Ink and has demonstrated its potential applications to save the authenticity of passports with a golden appearance in visible light.

The MLSP is successfully synthesised using three ingredients of $Gd_{0.8}Eu_{0.2}VO_4$ rods, $Zn_{0.98}Cu_{0.02}S$ particles, and $Gd_{0.87}Tm_{0.03}Yb_{0.1}VO_4$ rods luminescent materials, which are responsible for red, green and blue emission with excitation wavelengths of 254 nm, 365 nm and 980 nm, respectively. Additionally, another important feature is also incorporated to enhance the security feature in terms of magnetic character recognitions using magnetic nanoparticles in the same MLSP to encrypt the personal and secret information of passport.

The proposed security ink could be considered as a next-generation higher-level security feature to stop the counterfeiting problem.

The proposed MLSI security ink with a golden appearance having entangled RGB luminescent and magnetic features in single pigment formulated ink could be considered as a next-generation higher-level security feature to stop the counterfeiting problem of passport as well as bank cheques, government documents, pharmaceuticals, military equipment and many more.

This work was published in the journal *Small*.

Reference

Kanika, Kedawat, G, Srivastava, S, & Gupta, BK (2023). A strategic approach to design multi-functional RGB luminescent security pigment based golden ink with myriad security features to curb counterfeiting of Passport. *Small*, 2206397. <https://doi.org/10.1002/sml.202206397>

Seminar/Workshop/Training Programme

Online Training Programme on “Popular Science Writing” by CSIR-NPL

CSIR-NPL, New Delhi, organised an online training programme on “Popular Science Writing” on 16 March 2023, under the aegis of the CSIR integrated skill initiative. The online training programme was specifically designed for students, researchers, academicians and aspiring popular science writers. Around more than 60 participants attended the programme.

Dr Nidhi Singh, Senior Principal Scientist, CSIR-NPL, inaugurated and briefed the online training programme to the audience.

The speaker during the programme included Mr Hasan Jawaaid Khan, Chief Scientist, CSIR-NIScPR, and Head, Popular Science Division, which brings out three popular science magazines — *Science Reporter* (English), *Vigyan Pragati* (Hindi) and *Science Ki Duniya* (Urdu); two newsletters, apart from

popular science books and reports. Mr Khan has been in the field of science communication for the past more than 30 years and has been the Editor of *Science Reporter* for the past 15 years. He is also the Editor of *CSIR News*.

Mr Khan delivered his talk on an immensely significant topic “The Role of Science Communication in Combating Misinformation” wherein he cited various examples and discussed the importance of science communication in this era of misinformation, emphasising the need for disseminating accurate information to society. He also mentioned certain fact-checking ways to tackle this issue. Finally, he concluded his talk by stressing the need for collective efforts from everyone to combat the problem of misinformation.

Mr Hasan Jawaaid Khan, Chief Scientist, CSIR-NIScPR, stressed the need for collective efforts from everyone to combat the problem of misinformation.

The other speaker Ms Sonali Nagar, Senior Scientist, CSIR-NIScPR, and Associate Editor of *Science Reporter* & *CSIR News* delivered her talk on “Popular Science Writing”. In her talk, she outlined the importance of making complex scientific topics interesting and accessible to a wide audience. Citing several examples, she explained the ways to communicate science to the public in a clear, compelling and authentic manner. She concluded by emphasising the power of

science communication to increase public understanding towards science thereby also inculcating scientific temper among citizens. The session was extremely informative. The participants actively participated and enjoyed the training programme.

In concluding remarks, Dr Girija Moona, Principal Scientist, CSIR-NPL, extended heartfelt gratitude to both the eminent speakers for sparing their valuable time and delivering such enlightening talks.

Workshop to Promote Science Communication in Assamese by CSIR-NIScPR

PROMOTING science communication in Indian languages is important to break the language barrier. Aligning with this, CSIR-NIScPR, New Delhi, organised a workshop on 'Engaging and Creative Ways of Communicating Science in Assamese: Popular Stories, Videos, Podcasts and Social Media' on 6 March 2023 in hybrid mode. The workshop aimed at training budding science communicators and create a network of communicators to strengthen science communication activities in Assamese.

In his introductory remarks, Dr Paramananda Barman, Scientist, CSIR-NIScPR, outlined the importance of communicating science in Indian languages and the use of modern platforms like



social media, popular science writing, etc.

Welcoming the audience, Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, elaborated on the importance of communicating science in regional languages and the benefits of having workshops that focus on a specific language such as Assamese. She also described the role of CSIR-NIScPR and the mission SVASTIK (Scientifically Validated Societal Traditional Knowledge) in providing a platform for communicating the traditional knowledge of India in 16 regional languages including Assamese.

Prof. Ranjana Aggarwal elaborated on the importance of communicating science in regional languages and the benefits of having workshops that focus on a specific language such as Assamese.

Dr Subhra Priyadarshini, Chief Editor, Nature India, discussed the growth of new tools and platforms such as social media and AI to communicate science.

Prof. Aggarwal also mentioned CSIR-NIScPR's collaboration with CSIR-NEIST to promote science communication in Assamese.

During the session, Dr Bornali Sarma, University of Delhi, delivered a lecture on "Popularisation of Science Communication in the Assamese Language: Evolution-Efforts-Effects", which covered the basics and need of science communication and the ongoing efforts to communicate science in Assamese.

Dr Subhra Priyadarshini, Chief Editor, *Nature India*, discussed the growth of new tools and platforms such as social media and AI to communicate science. However, she also emphasised the importance of science writing as a foundation. She further pointed out how the use of regional language to communicate science can make the content more relatable to the audience and how efforts such as translations can be used to take these local stories to a global audience.

The Technical Session I of the workshop was on "Science Filmmaking" and included a talk by Shri Vivek Kannadi, Science Media Centre, IISER Pune, on the importance of a visual medium like film to communicate science. He also covered important aspects of filmmaking such as the script and how it should be structured.

The Technical Session II on "Popular Science Writing" included talks by leading Assamese science communicators Shri Abhijit Sarma Barua, Dr Dinesh Chandra Goswami and Dr Mantu Bhuyan.

Abhijit Sharma Barua outlined the various strategies of science communication to attract readers. He highlighted the key points for writing a popular science article and added examples of how science comics, scitoons and science fiction writing can be effective in attracting science readers as well as disseminating scientific findings to a lay audience.

Dr Dinesh Chandra Goswami discussed the need for science communication in light of recent scientific advancements such as genetically modified crops, among others. He also noted the significance of science communication in fostering a scientific mindset in the common people and winning over the public's confidence in scientific advancements. Dr Goswami also mentioned the value of skill development in helping science communicators to overcome challenges.

Dr Mantu Bhuyan emphasised the importance of accuracy and relevance to the current developments in science writing and used the example of the book *Silent Spring* by Rachel Carson which raised awareness about DDT and its effect on the environment.

The Technical Session III on "Social media, Reels, Shorts and Podcasts for SciComm" included talks by Dr HS Sudhira, Director, Gubbi labs, on "Social Media for Science Communication", and Dr Charu Lata, Principal Scientist, CSIR-NIScPR and Dr Paramananda Barman on "Reels, Shorts and Podcast: SVASTIK as a case study".

Dr HS Sudhira spoke about the benefits and importance of social media for scientists and how having a good online footprint can help reach a wider audience. Dr Charu Lata provided glimpses of SVASTIK, its objective and footfall in the digital space. Dr Paramananda Barman and team members demonstrated the creation of digital content such as infographics, videos, and podcasts using free tools available online.

The technical sessions were followed by a discussion with Shri Hasan Jawaid Khan, Chief Scientist, CSIR-NIScPR and Editor,

Science Reporter on the various aspects of science communication including some interesting questions from the participants on the challenges of creative writing and science communication.

The Valedictory Session included remarks from Dr Sujit Bhattacharya, Chief Scientist, CSIR-NIScPR, Dr Kalyani Medhi, Principal Scientist, CSIR-NEIST, and Shri Madhurjya Saikia, CSIR-NEIST, on the various topics discussed during the workshop followed by a vote of thanks by Dr Manish Mohan Gore, Scientist, CSIR-NIScPR.

CSIR-HRDC Organises various Programmes

Programme on Noting, Drafting and Service Rules

CSIR-Human Resource Development Centre (CSIR-HRDC), Ghaziabad, organised two days programme on Noting, Drafting and Service Rules, at CSIR-IITR, Lucknow, during 6-7 February 2023. Around 120 participants from Lucknow-based CSIR labs (IITR, CDRI, NBRI and CIMAP) participated in this programme.



Workshop on Government e-Marketplace (GeM)

CSIR-HRDC conducted one day Workshop on Government e-Marketplace at CSIR-CLRI, Chennai on 13 February 2023. Five CSIR labs (CECRI, CFTRI, NAL,



SERC and NIIST) other than CLRI participated in the workshop. The programme covered all nuances related to the procurement of goods, order processing & payments; hands on practice session; procurement of services on the GEM Portal and processes followed

in CSIR. Shri Ramesh Mahadevan, Business Facilitator, GEM, was the resource person for the workshop. Forty-eight participants joined the programme. Dr KJ Sreeram, Director, CSIR-CLRI, inaugurated the workshop and gave the presidential address.



Coordinators' Conclave-cum-Workshop at Goa

CSIR-HRDC in association with CSIR-NIO, Goa, conducted the Coordinators' Conclave-cum-Workshop for the "CSIR Integrated Skill Initiative Programme" during 16-17 February 2023. Intending to review and prepare future course of action, CSIR launched a national-level unique Programme "CSIR Integrated Skill Initiative" in 2016. The major focus of this initiative is to equip young minds with the necessary technological skills through exposure to CSIR labs and address the critical needs for the technical gap created by the enormous usage of advanced technology.

The program was inaugurated by the Chief Guest Prof. BK Mishra Director, IIT Goa, and the welcome address was delivered by Prof. Sunil Kumar Singh, Director, CSIR-NIO, Goa. Dr RK Sinha Head, CSIR-HRDC, spoke about the role of CSIR

in Skill Development and Dr Vinay Kumar, Sr Principal Scientist, CSIR-HRDC, presented the status report on various activities under the programme. Mr Sanjeeva Singh, Executive Vice President (CSR and Skill Development Financing), National Skill Development Corporation (NSDC) talked about the ways and means for joint effort by CSIR & NSDC in improving Skill Ecosystem.

CSIR has so far trained over one lakh personnel under this initiative, including special programmes for rural citizens and women. Broad scientific areas covered are Biological, Chemical, Engineering and Physical Sciences. CSIR targets to train over 100000 personnel under this programme in phase II (2020-2025). This programme was attended by all the CSIR labs all over India.

Mr RA Sreepada Sr Principal Scientist, CSIR-NIO, proposed the vote of thanks.



Induction Programme for Newly Recruited Scientists

CSIR-HRDC organised the programme at CSIR-IHBT, Palampur, during 13-18 February 2023. The programme was coordinated by Dr Nadir Sheikh, Principal Scientist. Eighteen newly recruited scientists from different CSIR labs participated in this programme which

covered CSIR vision, mission, & culture of CSIR, National & global S&T and industrial scenario, Societal application in S&T, IPR, Procurement, administrative matters, financial system of CSIR, preventive vigilance, gender sensitization, etc. The programme also included hands-on-exercises, case studies, role plays, interactive sessions, laboratory visits, etc.

Awards & Honour

CSIR-CEERI Scientist Receives IETE-CEOT (94) Award

Dr Suchandan Pal, Chief Scientist, CSIR-Central Electronics Engineering Research Institute, Pilani, received the IETE-CEOT (94) Award (Biennial)-2022 for remarkable contributions in the field of opto-electronic materials, devices and technology developments, particularly for optical fibre/waveguide gratings, integrated-optic and nano-photonic devices and GaN-based blue, white and UV-LEDs. The award was presented to Dr Pal at the 65th Annual IETE (The Institution of Electronics and Telecommunication Engineers) Convention of the institute held on 25 September 2022 in Hyderabad.



Dr Suchandan Pal receiving the CEOT (94) award (Biennial)-2022

The award consists of a medal, a citation and a cheque for Rs 10,000. Following the award, Dr Pal delivered a lecture on the work leading to the award on 20 December 2022 at CSIR-CEERI, organised by IETE-Pilani Centre.

Dr Rajesh Jha, CSIR-CDRI Scientist, Conferred International Fellowship for Young Biomedical Scientists 2022-23

DR Rajesh Kumar Jha's research group from CSIR-Central Drug Research Institute (CSIR-CDRI), Lucknow, is working on the biology and management of gynaecological endocrine and metabolic disorders such as endometriosis and Polycystic Ovarian Syndrome (PCOS). These disorders are routinely observed in nearly 10% of infertile women visiting gynaecological clinics and affect women's day-to-day life along with pregnancy/conception. Thus, his group is studying the disturbed endocrine/hormone-associated molecular signalling in the ovary and uterus for disorders management and successful pregnancy.



For his outstanding work in this field, he has received the prestigious ICMR-DHR International fellowship for Young Biomedical Scientists 2022-23 to explore the gene-specific function of the ovary and endometrium using advanced Genome editing (also called gene editing) transgenic approach such as CRISPR-Cas9 system at Baylor College of Medicine, Houston, Texas, USA.

At Baylor College of Medicine, he will study the endometrial tissue-specific modified gene response on the ovarian and endocrine molecular signalling for ovulation and pregnancy using the CRISPR-Cas9 system, which will help in the ovarian and uterine disorders effective management.

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