

CSIR IN MEDIA



सीएसआईआर

CSIR

भारत का नवाचार इंजन

The Innovation Engine of India

NEWS BULLETIN

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Dr Jitendra Singh proposes mechanism to follow up the progress of StartUps

CSIR

22nd June , 2023



Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today said that a mechanism needs to be put in place to follow up the progress of Startups as their number have risen to more than a lakh.

“Such a mechanism is sought to be developed that will closely follow up the growth of these Startups, see how to sustain them so as to ensure that they are not lost out, especially those Startups that have received technical and financial support from the Government,” the Minister said, chairing a high-level joint meeting of different Science Ministries and Departments, including Science & Technology, Biotechnology, CSIR, Earth Sciences and Atomic Energy.

Dr Jitendra Singh had, some time back, desired that a presentation be prepared, in collaboration with the NITI Aayog, seeking to identify factors which could possibly be constraints for some StartUps. Accordingly, a presentation was made at today's meeting by Dr Chintan Vaishnav from the NITI Aayog.

It was projected in the presentation that lack of innovation, lack of skilled workforce or lack of funds could possibly be the major factors adversely affecting the sustainability of some Startups. The Minister proposed that an exercise could be undertaken to assess whether the Startups could be identified by a "Unique ID" for effective monitoring across all sectors.

Dr Jitendra Singh said, this is the age of innovation and ideas. Under Prime Minister Narendra Modi, the government is providing every kind of technical as well as financial support for ideas and innovations to grow and sustain. As a result, India has emerged as the leading StartUp ecosystem in the world with more than one lakh StartUps and more than 100 Unicorns and the time has come to strategise sustainability, he added.

The meeting was held as part of the monthly review meetings of Science Secretaries, initiated by Dr Jitendra Singh in order to break the silos and evolve a synergistic integrated approach among different scientific streams.

Principal Scientific Advisor to Government of India, Prof Ajay Kumar Sood and CEO, Atal Innovation Mission, Dr Chintan Vaishnav also addressed the meeting.

Secretary, DSIR & DG, CSIR, Dr N Kalaiselvi; Secretary, Department of Science & Technology, Dr Srivari Chandrasekhar; Secretary, DBT, Dr Rajesh Gokhale; Secretary (Earth Sciences), Dr M Ravichandran; and Chairman, AEC & Secretary, DAE, Dr AK Mohanty attended the deliberations. Senior Officers of the Science Ministries and Departments, including Science & Technology, Biotechnology, CSIR, Earth Sciences and Atomic Energy were also present.

IMTECH's One Week One Lab (OWOL) Campaign concludes in presence of DG CSIR CSIR-Institute of Microbial Technology (IMTECH) concluded its weeklong celebration of One Week One Lab campaign today in presence of Director General of CSIR Dr. (Mrs.) N. Kalaiselvi.

CSIR-IMTECH

24th June , 2023



CHANDIGARH,24.06.23-IMTECH's One Week One Lab (OWOL) Campaign concludes in presence of DG CSIR CSIR-Institute of Microbial Technology (IMTECH) concluded its weeklong celebration of One Week One Lab campaign today in presence of Director General of CSIR Dr. (Mrs.) N. Kalaiselvi. MOU was also signed during the event with Punjab Biotechnology Incubator (PBTI) for giving a thrust to startup ecosystem in the region. To facilitate exchange of ideas, training, internship and boost Skill Development initiatives; 2 more MOUs were signed by IMTECH with Gujarat State Biotechnology Mission (GSBTM) & Guru Angad Dev Veterinary and Animal Sciences University(GADVASU). Dr Sanjeev Khosla, Director CSIR-IMTECH, presented the summary of the week-long OWOL program to the audience and lauded the efforts of all IMTECH staff for their efforts in making OWOL a success. From dedicating GMP accredited National Repository of Microbial Cell Banks for Biopharmaceutical products facility to the nation to organizing Industry Academia conclave that brought incredible congregation of brilliant minds under one roof and paved the path for IMTECH to forge new R&D partnerships and alliances.

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Indianewscalling

CSIR chief visits CSIO, inaugurates four projects

CSIR-CSIO, IMTECH

25th June , 2023

Chandigarh: The Director General, Council for Scientific and Industrial Research (CSIR), Dr N Kalaiselvi, visited the Central Scientific Instruments Organisation (CSIO) on Saturday and inaugurated four technical and infrastructural projects.



She inaugurated CSIO's new Central Analytics Facility, which will provide scientific solutions to other government departments, universities as well as research and development organisations.

The Director General also laid the foundation stones for a Micro Nano Optics Fabrication, a state-of-the-art facility to be built at a cost of Rs 10 crore for carrying out research in cutting edge nano technology, and a 100-room hostel for research scholars.

Besides this she also inaugurated a state-of-the-art information services centre with centralized and upgraded infrastructure in centralized building. CSIO has become first campus having 300 PNG gas connections in its campus thus shifting to greener and cheaper technology. The project is being implemented in collaboration with Indian Oil Adani Gas Private Limited (IOAGOL).

Dr Kalaiselvi also inaugurated a composting facility which will generate enough compost to meet CSIO's annual demand. A wet waste composting facility has also been set up to process all kitchen waste from CSIO's residential colony, canteen and guest house. Prof SA Ramakrishna, Director CSIO and Dr Sanjiv Khosla, Director, Institute of Microbial

Technology (IMTECH), a sister laboratory, were also present on the occasion. Earlier, Dr Kalaiselvi presided over the valedictory function of CSIR's One Week – One Laboratory programme at IMTECH.

From startups to temples, change agents at work in Delhi

CSIR-CRRI, NPL

25th June , 2023

The national capital continues to suffer the menace of plastic pollution despite several attempts to restrict it, including a ban last year on 19 types of single-use plastic and bags thinner than 120 microns. But across Delhi-NCR, TOI found examples of best practices in plastic waste management and proponents of alternative materials that could all add up to make a difference.

Arpit Dhupar's Faridabad-based startup Dharaksha Ecosolutions, for instance, offers sustainable packaging to replace polystyrene (thermocool) with biodegradable materials made of crop stubble and mushroom roots. Though some polystyrene products are banned, the material is still widely used in packaging and continues to make its way to landfills. "Thermocol is worse than plastic as it isn't recyclable.

Almost 95% of it reaches landfills and catches fire easily. So, we developed an alternative biodegradable material that can be moulded in any shape and decomposes within 60 days," said Dhupar. India produces at least a million tonnes of thermocol annually, of which about 2% is recycled, he said.

Meanwhile, scientists at CSIR-CRRI and National Physical Laboratory (NPL), are converting multi-layered plastic, like food packaging, into high-quality tiles for roofs, pavements, etc. Not only do these tiles reuse plastic waste, they also repurpose 'red mud', waste generated by the aluminium industry, CSIR-NPL's Dr Rajiv Kumar said. Delhi-based NGO Why Waste Wednesdays, founded by Ruby Makhija, is among organisations helping people break the plastic habit.

Its Project Vikalp offers exchangeable cotton bags - each comes with a unique QR code and can carry up to 10kg weight - for a refundable deposit of Rs 20. More than one lakh bags are

now in circulation across Delhi. Also, the Shree Adya Katyayani Shaktipeeth Mandir in Chhatarpur has taken steps towards sustainability by banning plastic inside the temple. "We have replaced polybags with jute bags and plastic bottles with unbreakable glass," said temple trust CEO Kishor Chawala.

Food industry avers harmonisation of stds to spur global market presence

CSIR-CFTRI

24th June , 2023

Indian food industry avers that harmonisation of food safety standards will propel its global market presence. Currently, even as India is among the top in food production countries, its international presence in this segment is limited. Technologies like Blockchain, Internet of Things and Artificial Intelligence help achieve accurate, consistent and convenience to ensure food safety practices are maintained right through the value chain.

Experts in the food industry and research institutes across India attribute it to lack of awareness, infrastructure and human resources. Food safety is critical from production to consumption. This brings traceability and transparency to the fore. The rising consumer awareness on the importance of food safety and quality, and rapid globalisation, food companies are increasingly realising the importance of food safety, they said.

Food safety is important from production to consumption. This is where advanced food testing takes centre stage. From pathogen detection, identification confirmation, quality control organisms, allergen detection, GMO (genetically modified organism) screening and quantification, next generation sequencing for species identification are deployed to ensure food safety.

At the India Food Safety Conclave organised by Food Safety Works with the theme, Connecting India for Safer Food, Dr Sridevi Annapurna Singh, director, CSIR-CFTRI, Mysuru, noted food injuries to health is a hazard. It brings in the need to ensure safety practices are maintained right from agriculture where seeds, soil, water, fertilisers need to be carefully looked into. Even during post-harvest, there is need to closely watch over moisture content of the produce. From farm to plate there have been several instances of unsafe food with contamination. Quoting World Health Organization statistics that 1 in 10 fall ill worldwide because of food safety issues, the CFTRI chief, noted that these instances occur

because of microbiological contamination, food additives like flavours, colours and antioxidants, veterinary drug residues, toxic metal content. There are environmental factors and allergens too that can result in foods to be unsafe.

Food industry is driven by cost, convenience and technology. Commercial processing has improved the shelf life of products, provided variety and value addition. This is we see that food standards are put in place to offset a food-borne disease, stated Dr Singh.

Noting that packaging has a major role to play, Dr Singh said barrier packs are expensive and 30 per cent of the food is packed with single-use plastics. There is scope for research and development of eco-friendly packs.

On a concluding note, Dr Singh, in her inaugural address, reinstated that India needs to further accelerate its efforts in food safety. "This is by putting in place a rapid food safety management system, robust packaging and labelling, efficient testing and validation protocols."

Dr Sanu Jacob, director, National Food Laboratory, Chennai, FSSAI, provided a global perspective on the food regulations and the India story - going forward it is transparency and traceability in food supply chains with data driven blockchain verifications from farm to fork. Authentication, analysis of contaminants based on the new regulatory requirements of FSSAI, prediction of spoilage, automation and strengthening of laboratory will augur well for the Indian food industry. This would require augmenting the lab infrastructure. "Currently India has only 232 food labs catering to a 1.4 billion population. Every district needed a lab," said Dr Jacob. Deliberating on the food safety management systems, was Sarika Agarwal, founder and managing director, Food Safety Works, along with Prakash Mylar, associate manager, MTR Foods, Ramesh Mallegowda, quality assurance, Herbalife, and Benz Thomas, BRCGS, stated food safety culture needs to be embedded with training and strong reporting practices.

Published in:

[Fnbnews](http://fnbnews.com)

Leather from fish skin, chicken feet

CSIR-CLRI

24th June , 2023

The Central Leather Research Institute (CLRI), which is one of the laboratories of the government-funded research body Council for Scientific and Industrial Research (CSIR), has developed technology for producing leather products from the skin of fish and chicken feet. CLRI lists products such as pouches, small handbags, wallets and watch straps that can be made from fish skin and chicken feet. The



technology is market-ready. The one related to chicken feet has already been licensed to a company, says CLRI. The process is cost-effective as it uses waste material, it says.

Anti-UV bio furanic polymer

The Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar, Gujarat, has developed furanic polymers from biomass. This 'biomass-derived furanic polymers' (BFP) can be used both as a UV-shielding agent as well as for improving mechanical strength in various products such as thin films, bottles, tablet strips for pharmaceutical uses, windows, display screen guard, sun-protective glass, welding glass, vertical blind, cloths, paints, varnish, dispersant, and sunscreen lotion and cream, says CSMCRI.

The institute is offering this technology for licensing. Replacing petroleum-derived products with biomass-derived products is an emerging area of interest. The use of a biomass-derived polymer as a UV-shielding agent with higher efficiency than petro-derived commercial polymers would be highly beneficial, the institute says.

Fire detector from BARC

Agni-rakshak is a Raman optical fibre distributed temperature sensor system that can detect distributed and local fire events along a lengthy section. The Bhabha Atomic Research Centre is offering it for licensing.

Agni-rakshak measures the distributed temperature along the length (few hundred metres or more) of the sensing fibre. Here, the optical fibre itself acts as an array of distributed sensing elements. The system can detect a fire outbreak by sensing the heat, says BARC. It can pinpoint the location, width and temperature of the fire zone, and generate audio-visual alarms.

Agni-rakshak has use in fire monitoring in hospitals, buildings, road and rail tunnels, stations, power cables, transformers, coal conveyors, warehouse, cement industry, oil and gas industry, nuclear industry, and other sensitive installations.

Mobile robot from IIT-Delhi

Researchers at IIT-Delhi have developed a mobile robot called 'Robomuse 5.0', suited to various industries, to carry payloads up to 100 kg and perform object manipulation through an arm on top. This mobile robot is also a good research platform for various teaching and research organisations, says a pressrelease from IIT-Delhi.

A licensing agreement has been signed between IIT-Delhi's technology innovation hub, named IHFC, and a Pune-based company, SVR InfoTech, for the technology transfer of Robomuse 5.0.

The origin of Robomuse 5.0 goes back to a robot built by IIT-Delhi students for the Doordarshan-Robocon competition in 2008. To test its reliability, it was later installed at the institute's student activity centre.

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Thehindubusinessline

CFTRI to organise culinary contest on July 4 and 6

CSIR-CFTRI

24th June , 2023

In connection with its 'One Week, One Lab' (OWOL) campaign, Central Food Technological Research Institute (CFTRI) is organizing a culinary contest on July 4 and 6.

A statement from CFTRI said the contest aims to recognize Mysuru's diverse culinary dishes and promote the Institute's link to 'Gen Z' of this vibrant heritage city. The contest will be held on two themes – traditional foods with a modern twist or fusion foods scheduled for July 4 and novel dishes with millets scheduled for July 6. The contest is open for men and women, but fireless cooking is open only to men.

According to the criteria for participation, only a single contestant can participate along with one help. The contestants have to submit their entries online and last date to do so is June 30 before 5.30 p.m. The submitted entries will be screened by a committee of experts for nutrition of the product and creativity. The committee will choose promising recipes based on the photo of the prepared product with recipe details. Vegetarian dishes only will be allowed in the contest. The top ten contestants will be chosen from the total number of entries received in each category.

The top ten contestants selected will compete for the finale and prepare and present the dishes at CFTRI. While the top three dishes will be selected by a team of judges and receive a prize and certificate, all the participants will receive a participation certificate, the statement said.

The contestant, whose entry is selected, will be informed through email and mobile. The selected contestant will be invited to participate in the contest on the specific theme on the specific date and they have to reach the venue – CSIR-CFTRI, Mysuru, on their own.

The time allowed for cooking and presentation of the dish is 45 minutes at the CFTRI campus. Pre-preparations can be done at home, the statement from CFTRI said. The culinary contest will begin at 10 a.m. and end at 11 a.m. No extra time will be provided, the statement added.

Contestants have to be present with all their paraphernalia (required materials) at the venue by 9.30 a.m. For more information, interested persons can contact 77959-24466 and find details at www.cftri.res.in.

CSIR-IMTECH

24th June, 2023

इमटेक में जीव विज्ञान से जुड़ी स्टार्टअप मीट का आयोजन हुआ

चंडीगढ़ | सीएसआईआर-माइक्रोबियल टेक्नोलॉजी संस्थान (इमटेक) के सहयोग से पंजाब बायो टेक्नोलॉजी इन्क्यूबेटर ने शुक्रवार को जीवन विज्ञान स्टार्टअप का आयोजन किया। ये प्रोग्राम वन वीक वन लैब के तहत कराया गया था, जिसमें फाउंडेशन फॉर इनोवेशन एंड टेक्नोलॉजी ट्रांसफर, स्टार्टअप पंजाब, सॉफ्टवेयर टेक्नोलॉजी पार्क ऑफ इंडिया (एसटीपीआई) और अटल इन्क्यूबेशन ऑर्गेनाइजर रहे। करीब 50 स्टार्टअप ने इसमें पार्टिसिपेट किया। पंजाब बायोटेक्नोलॉजी इन्क्यूबेटर की सीईओ डॉ. अजीत दुआ ने पीबीटीआई में उपलब्ध स्टार्टअप सपोर्ट इकोसिस्टम के बारे में बताया। इसका मकसद है नए उद्यमियों को निवेशकों के नेटवर्क और ग्लोबल नेटवर्क से जोड़ना। एसटीपीआई के निदेशक डॉ. अजय श्रीवास्तव ने अपने



विचार साझा किए। उन्होंने बताया कि आर्टिफिशियल इंटेलिजेंस के क्षेत्र में स्टार्टअप के लिए उपलब्ध सुविधाएं मौजूद हैं। पंजाब के ज्वाइंट सेक्रेटरी दीपिंदर ठिल्लों ने पंजाब सरकार की पहल और इस बारे में विभिन्न योजनाओं की जानकारी दी। कई स्टार्टअप के संस्थापकों द्वारा सफलता की कहानियां और उद्यमशीलता यात्रा साझा की। अलग-अलग स्टार्टअप के प्रतिनिधियों ने कहा कि प्रत्येक स्टार्टअप की एक अलग यात्रा होती है। तकनीकी सहयोग और फंडिंग पर भी बात हुई।

Diamond Jubilee Workshop On “Decarbonisation & Sustainability Challenges In Raw Material Preparation For Steel Industries” At CSIR-IMMT

CSIR-IMMT

23rd June , 2023

Bhubaneswar : Diamond Jubilee Workshop on “Decarbonisation & Sustainability Challenges in Raw Material Preparation for Steel Industries was organized” at CSIR-IMMT Bhubaneswar on 23rd June 2023. The workshop was inaugurated in the presence of Chief Guest, Mr. N.D. Rao, President, Atha Group of Industries, Dr. Ramanuj Narayan, Director, CSIR-IMMT , Dr. S. K. Biswal,



President, 4MSI, Shri Debasish Nanda, Director, Coal India Ltd, Shri Arun Kumar Rath-Head Brown field Projects, Arcelor Mittal Nippon Steel India.

Delivering the welcome address Dr Ramanuj expressed his happiness for participating in this workshop Dr Ramanuj said, this is the diamond Jubilee year of CSIR, IMMT. During these years each members of IMMT contributed a lot towards research and innovation. This is brainstorming session where the industry experts will discuss on Decarbonisation & Sustainability Challenges in Raw Material Preparation for Steel Industries.

Speaking on this occasion Chief Guest, Mr. N.D. Rao, President, Atha Group of Industries said, I am delighted to be present here and excited to share that we have successfully established a state-of-the-art iron ore beneficiation plant, with a capacity of 10 million tons, at TSPL. I am associated with this institute since last 3 decades. This institute has gained international recognition and has successfully executed industrial projects on a global scale. Such workshop gives a great opportunity to discuss further in terms of innovation and research work. There are many challenges in front of the industry and the institute as well. We the industry houses come to you looking for the solutions of our problems, because are the

innovators. You have tremendous experience and expertise in iron Ore beneficiation. I extend my congratulations to all the scientists and employees for their remarkable contributions for the steel industry.

Speaking on this occasion Shri Debasish Nanda, Director, Coal India Ltd, said, and interacting with the youthful population gives me a lot of enthusiasm. With the growth of the Indian steel sector, we are one of the countries challenging China. When you look at capacity, you can see that it is gradually expanding while demand is also increasing. India, as a developing country, aspires to have a 47 billion dollar GDP by 2047.

Praising CSIR-IMMT for organizing such workshop Shri Arun Kumar Rath-Head Brown field Projects, Arcelor Mittal Nippon Steel India, introduced the Arcelor Mittal Climate Action Report, which highlighted the concept of Smart Carbon. Smart Carbon is a strategy that utilizes circular carbon approaches to produce carbon-neutral steel. He also provided further details on the vision for carbon neutrality and explained how Arcelor Mittal and Nippon Steel, as the parent companies, addressing climate change through innovative initiatives and sustainable practices in the steel industry By Dr. T. Pavan Kumar, Sr. Scientist, SPBD interacted with the Startups and Entrepreneurs.

During the workshop, Dr. Ashok Sahu, CSIR-IMMT Chief Scientist of Mineral Processing and Business Development delivered a special lecture. At his retirement moment Dr. Sahu, was honored for his invaluable contribution.

Shri R.K Sahu, Mrs A.K Sahu were felicitated for their contribution towards the research work.

CSIR-CSMCRI

23rd June, 2023

सीएसएमसीआरआई ने किया विद्यार्थियों के लिए योग पर कार्यक्रम



आयोजन किया गया। इस कार्यक्रम में गुजरात प्रांत के कई केंद्रीय विद्यालयों, जवाहर नवोदय विद्यालयों, अटल विद्यालयों के विद्यार्थियों सहित प्रधानाचार्यों तथा अध्यापकों ने भाग लिया। संस्थान के वरिष्ठ वैज्ञानिक एवं पीआरओ डॉ.

भावनगर। नौवें अंतरराष्ट्रीय योग दिवस के अवसर पर सीएसआईआर-केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान, (सी एस एम सी आर आई) भावनगर में जिज्ञासा के अंतर्गत 'योग द्वारा तनाव और मानसिक स्वास्थ्य प्रबंधन' विषय पर एक ऑनलाइन संगोष्ठी का

कान्ति भूषण पाण्डेय ने बताया कि इस कार्यक्रम में अटल बिहारी वाजपेयी शासकीय कला व वाणिज्य कॉलेज, इंदौर, मध्य प्रदेश की डॉ. अरुणा लोहिया ने योग के जीवन में कई महत्वपूर्ण फायदे बताते हुए विद्यार्थी वर्ग को विशेषकर ध्यान में रखते हुए अपना व्याख्यान दिया।

CSIR-NBRI

22nd June, 2023

एनबीआरआई में किया योग, बताए फायदे



लखनऊ, लोकसत्य।
अन्तर्राष्ट्रीय योग दिवस के
अवसर पर आयुष मंत्रालय,
भारत सरकार द्वारा जारी
दिशा निर्देशों एवं सामान्य
योग अभ्यासक्रम के अंतर्गत
वै.औ.अ.प.-राष्ट्रीय वनस्पति
अनुसंधान संस्थान,

लखनऊ द्वारा दिनांक 21, जून, 2023 को प्रातः 06.00 बजे से 07.00 बजे तक संस्थान के केएन कॉल ब्लॉक में एक योग शिविर का आयोजन किया गया। प्रशिक्षित योग विशेषज्ञों ने योग के फायदों, योग द्वारा हम अपने शरीर को कैसे स्वस्थ रख सकते हैं और योग को अपने दैनिक जीवन में अपनाकर कैसे हम अपने तन और मन को स्वस्थ रख सकते हैं, की बारीकियों की जानकारी प्रतिभागियों को दी तथा विभिन्न योगासनों का अभ्यास कराया गया। संस्थान के वैज्ञानिकों, विद्यार्थियों, स्टाफ एवं अन्य लोगों ने इस योग शिविर में भारी संख्या में उत्साह के साथ भाग लिया।

CSIR-CRRI

21st June, 2023

Prestigious International Award for CSIR-CRRI's Steel Slag Road Innovation

Enviro Annotations
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New Delhi: In a moment of pride for the Central Road Research Institute (CSIR-CRRI), their Delhi Steel Slag Road Technology has been honored with a prestigious award from Germany. Principal Scientist Satish Pandey has become the first Indian scientist to receive the Global Slag Personality of the Year Award 2023, recognizing CSIR-CRRI's significant contributions in promoting the environmentally-friendly use of iron and steel slag generated as solid waste in the steel industry since 2007.

The technology developed by CSIR-CRRI has played a crucial role in the construction of India's first steel slag road in Surat, Gujarat in 2022. Following this success, the technology was utilized in the construction of NH-33 and NH-66 in Jharkhand and Maharashtra, respectively. Moreover, the Border Roads Organization successfully implemented the steel slag road technology in the construction of roads near the China border in Arunachal Pradesh.

These roads, built using the innovative technology, not only exhibit greater strength compared to conventional roads but also prove to be cost-effective by utilizing steel slag waste from steel plants.

The development of steel slag road technology by CSIR-CRRI aligns with the Indian government's vision of turning waste into wealth.

Dr. Satish Pandey's leadership in the steel slag road research project has made a significant contribution to the construction of steel slag roads across the country. It is noteworthy that India produces around 19 million tons of steel slag as solid waste from various steel plants each year, with this number expected to reach approximately 60 million tons by 2030. Effectively utilizing steel slag in an environmentally friendly manner remains a major challenge for the steel industry.

Expressing his elation, Dr. Satish Pandey described the recognition as a proud moment for the CSIR-CRRI team. He emphasized the importance of steel slag valorization through processed steel slag aggregates and its utilization in constructing the world's first heavy-duty 100% steel slag road in Gujarat, as well as the high-altitude border road in Arunachal Pradesh. The esteemed "Global Slag Personality of the Year Award 2023" was conferred upon him at the Global Slag Conference in Dusseldorf, Germany.

The recognition bestowed upon CSIR-CRRI not only acknowledges their accomplishment but also underscores the immense potential of steel slag road technology in revolutionizing sustainable infrastructure development, not only in India but also globally. This achievement showcases the true essence of the circular economy and the concept of turning waste into wealth.

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