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Foundation Day Special 2022

Hon'ble Prime Minister Shri Narendra Modi Chairs CSIR Society Meeting



On 15 October 2022, Prime Minister Shri Narendra Modi, who is also the President of the Council of Scientific and Industrial Research (CSIR), chaired the meeting of the CSIR Society in New Delhi. Embracing a

circular economy and addressing India's energy needs are key priorities, said the PM. He called on industry, academia, and research groups to work seamlessly and collaboratively.

Appreciating the 80 years of efforts of CSIR, the Hon'ble PM encouraged the development of a vision for its 100th anniversary in 2042.



Appreciating the 80 years of efforts of CSIR, the Hon'ble PM encouraged the development of a vision for its 100th anniversary in 2042. He also discussed the significance of documenting the history of 80 years as a way to identify any gaps that need to be filled and review advancements made. “One person, one lab” approach was encouraged by the Hon'ble PM to advance scientific research and development. He also called for developing new technologies not just for India, but for the world, and exploring alternative solutions to address energy needs.

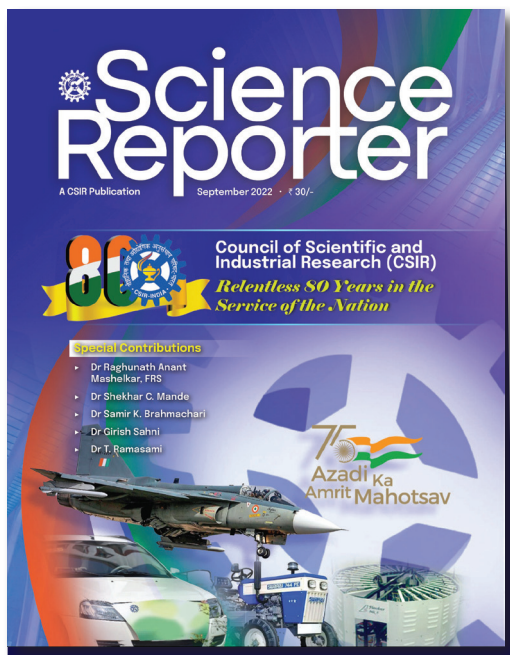
The CSIR Society meeting was attended by eminent scientists, industrialists, and Secretaries of scientific and other ministries in the government, including Dr Jitendra Singh, Union

Minister of State (Independent Charge) Science & Technology & Vice President of CSIR, and Shri Piyush Goyal, Union Minister of Commerce and Industry.

It is an incredibly significant milestone for CSIR to celebrate 80 years this year as India celebrates 75 years of independence, said Dr Jitendra Singh. He said that the two have traversed the journey together during this period. Industry, academia, and research should be integrated, synergized, and desiloed, he stressed.

A presentation by Dr N. Kalaiselvi, Director-General of CSIR, highlighted recent achievements and contributions of CSIR. Her presentation also focused on CSIR's Vision 2030 Road Map, which aligns with national goals and Vision 2047.

Science Reporter Special Issue on 80 years of CSIR in the Service of the Nation



On the occasion of the 80th anniversary of CSIR, *Science Reporter*, the monthly popular science magazine published by CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi, brought out its September 2022 issue dedicated to the S&T contributions and achievements of CSIR during the 80 years of its existence.

The special September 2022 issue of *Science Reporter* had special contributions from all the past Director Generals of CSIR, including Dr R.A. Mashelkar, Dr Samir K. Brahmachari, Dr Girish Sahni and Dr Shekhar C. Mande. The past DG's reflected on the glorious past of the Council of Scientific and Industrial Research, tracing its growth trajectory and its immense S&T contributions to the progress of the country, often at crucial junctures in its history.

The issue also contained contributions from leaders of all the eight Theme Directorates of CSIR, underlying the specific and significant

contributions of CSIR in innumerable S&T sectors from agriculture to oceanic research, minerals & metals to scientific instruments, chemicals & drugs to biotechnology & leather, and so on.

The special September issue of *Science Reporter* was the fifth among the series of special issues brought out to mark the Azadi ka Amrit Mahotsav programme of the Government of India. The effort has been to highlight the immense S&T contributions of various institutions & organisations in the country during the past 75 years after the country's Independence and also trace the future trajectory and promise of Indian S&T.

The first issue in the series was the August 2021 issue highlighting the country's major scientific achievements after Independence. The issue contained a special Message by Dr Jitendra Singh, Union Minister of S&T, apart from contributions by the Dr K. VijayaRaghavan, Principal Scientific Adviser (PSA); Dr Ashutosh Sharma, DST Secretary; Dr K. Sivan, Secretary, Department of Space; Dr Balram Bhargava, Secretary, Department of Health; Dr Shekhar C. Mande,





Secretary, Department of Scientific and Industrial Research; Dr K.N. Vyas, Secretary, Department of Atomic Energy; Dr M. Rajeevan, Secretary, Ministry of Earth Sciences; Dr G. Satheesh Reddy, Secretary, Department of Defence Research & Development; Dr Trilochan Mohapatra, Secretary, Department of Agriculture and Dr Renu Swarup, Secretary, Department of Biotechnology. The issue was released by Dr Jitendra Singh during a ceremony at Prithvi Bhawan, New Delhi on 13 August 2021.

The next special issue was focussed on “International Mega Science Projects – Indian Contributions” giving a bird’s eye view of major contributions of Indian S&T organizations in international mega projects like CERN, LHC, INO, ITER, Square Kilometre Array, Facility

for Antiproton and Ion Research, and Thirty Meter Telescope.

While the March 2022 special issue focused on the journey in science of some of the most eminent women scientists in the country, the May 2022 issue presented an overview of significant S&T missions launched by India such as the Deep Ocean Mission, Semiconductor Mission, Waste to Wealth Mission, Digital India Mission, Electric Vehicles Mission, Quantum Frontier Mission, Hydrogen Mission and Biodiversity & Health Mission. The issue was brought out on the occasion of the National Technology Day and was released by Hon’ble Ministers Dr Jitendra Singh and Dr Nitin Gadkari.

All five special issues by *Science Reporter* were much demanded, appreciated and shared.

CSIR Foundation Day Celebrations at CSIR-CDRI



Dr Radha Rangarajan, Director, CSIR-CDRI

CSIR-Central Drug Research Institute, Lucknow, celebrated the 81st CSIR Foundation Day on 29 September 2022. Director, CSIR-CDRI, Dr Radha Rangarajan welcomed the guests on this auspicious occasion and said we feel proud to be a part of CSIR which was established in 1942. It has contributed significantly to the growth of Indian science & industry and in nation-building.

On this occasion, Dr G.P. Talwar, Director Research, Talwar Research Foundation, New Delhi, graced the occasion as chief guest and delivered an informative Foundation Day Lecture on "Mission-oriented Research to Develop Products of High Utility". In his oration, he emphasised that for the delivery of high-utility products we need a mission-oriented research approach.

Using the example of an immunotherapeutic vaccine developed for multi-bacillary leprosy, he explained how this MIP (*Mycobacterium indicus*



Chief Guest Dr G. P. Talwar, Director Research, Talwar Research Foundation, New Delhi

pranii) is serving its purpose through faster bacterial clearance and shortened recovery time. Leprosy still represents significant public health challenges, especially in low- and lower-middle-



Dr Mridula Kamboj Award-2022

Dr G.P. Talwar emphasised that for the delivery of high-utility products we need a mission-oriented research approach.

income countries. These poverty-related mycobacterial diseases require better tools to improve disease control. Therefore MIP can drastically change the ugly scars to normal and the relapse rate is also very low in MIP-vaccinated patients.

During the occasion, Dr Atul Goel, Dr Divya Singh and their team received the prestigious Dr Mridula Kamboj Award for the year 2022 for the discovery and development of the technology “A Novel Orally Active Fracture Healing Drug Candidate S-007-1500: From Lead Identification to Phase-I clinical Trial”.

Chief Scientist and Project leader Dr Atul Goel informed that there is no oral FDA-approved drug available in the market worldwide. However, pre-clinical studies with S-007-1500 have shown 40-50% accelerated bone regeneration at the fracture site with good bone strength. CDRI has received Phase-I clinical trial approval from CDSCO and the technology of S-007-1500 has been successfully transferred by Dr Goel to Troikaa Pharmaceuticals Limited, Ahmedabad, for conducting Phase-I clinical Trial at KGMU, Lucknow, early next year.

CDRI colleagues who have superannuated in the previous year and those who have completed 25 years of service in CSIR were felicitated on this occasion. Besides the meritorious wards of CDRI colleagues who have secured more than 90% in science in High School and Intermediate also received cash prizes and certificates for outstanding academic performances. For academic excellence, Ms Madhusnuhi Panda and Mr Anant Gauniyal got Rs 5000/- cash prize for securing more than 90% marks and 100% marks in one science subject and Ms Ishani Sharma and Mr Pranjal Dwivedi got Rs 3000/- cash prize for securing more than 90% marks in 12th Class.

Besides, concluding the Hindi Pakhwada, the winners of various events organised during the celebration and the employees performing their duties in Hindi throughout the year were also felicitated with certificates and cash prizes.

The programme was concluded with a vote of thanks by the Chairperson, Organising Committee Dr Smrati Bhadauria.

CSIR-IIIM Celebrates 81st Foundation Day of CSIR



Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, celebrated the 81st Foundation Day of CSIR on 3 October 2022. The celebrations were largely attended by eminent scientists, faculty members of research & educational institutions, entrepreneurs, invited dignitaries, guests and staff members of CSIR-IIIM. Prof. Amitabha Chattopadhyay, CSIR Bhatnagar Fellow was the chief guest of this function who delivered the foundation day lecture entitled “Cholesterol Sensing by GPCRs: Challenges and Excitement”. Dr Padma Gurmet, Director, National Institute of Sowa Rigpa, Leh, was the guest of honour.

Er Abdul Rahim, Chief Scientist & Acting Director, IIIM Jammu, introduced the chief guest as a scientist of international repute and recipient of all top awards & recognitions of science.

On this occasion, the chief guest also distributed prizes for different activities conducted as part of foundation day celebrations.

During the programme, the staff members who have superannuated from the council service during the last year were also honoured. The merit scholarship for wards of Council employees who secured more than 90 per cent marks was also given. Snehal Gupta, son of Shri Rajesh Gupta, Administrative Officer, was awarded one-time merit scholarship for securing 96.4 per cent marks.

Dr Deepika Singh, Head Quality Management & Instrumentation Division conducted the proceedings while Dr Zabeer Ahmed, Head Pharmacology & CSIR-IIIM (Branch), Srinagar, presented the vote of thanks.

Prof. Amitabha Chattopadhyay, CSIR Bhatnagar Fellow was the chief guest of this function who delivered the foundation day lecture entitled “Cholesterol Sensing by GPCRs: Challenges and Excitement”.

CSIR-NIScPR Celebrates 81st Foundation Day of CSIR



The year 2022 marks the completion of 80 years of the Council of Scientific & Industrial Research (CSIR) which was set up on 26 September 1942. This year, CSIR, one of the largest R&D organisations in India, celebrated its 81st Foundation Day. The Delhi-based CSIR laboratory, the National Institute of Science Communication & Policy Research (NIScPR) celebrated the 81st Foundation Day of CSIR on 27 September 2022 at the National Agricultural Science Complex (NASC), New Delhi.

Distinguished guests Prof. Virendra K. Vijay, IREDA Chair Professor, CRDT, IIT Delhi & National Coordinator, Unnat Bharat Abhiyan (UBA) and Dr

Ashok Jain, former Director, CSIR-NISTADS, graced the occasion. During the Foundation Day celebration, a book published by CSIR-NIScPR bringing together different formats of science communication literature was released. The book is an outcome of a workshop organised by CSIR-NIScPR aimed at science communication in the regional languages of India. Prominent formats like science fiction, poetry, puppet, science blog, etc. have been discussed in the book.

The guests also awarded retirees, staff on 25 years' service completion and 10th & 12th class brilliant wards of NIScPR staff. Later, a cultural programme on various themes was



performed by the staff members of NIScPR. Dr Mohammad Rais, Chief Scientist, CSIR-NIScPR, proposed the vote of thanks.

Earlier, CSIR-NIScPR also organised an open day programme at Vivekanand Hall, NIScPR, Pusa Campus, New

Delhi, on 27 September 2022. During the open day, 130 school students visited various institute facilities. CSIR-NIScPR Director, Prof. Ranjana Aggarwal addressed the students and motivated them for a bright future ahead.

During the Student-Scientist Connect



An interactive session of the students with Prof. Virendra Kumar Vijay, Chief Guest (IREDA Chair Professor, IIT Delhi, National Coordinator, UBA), Dr Ashok Jain (Former Director, CSIR-NISTADS) & Prof. Ranjana Aggarwal (Director, CSIR-NIScPR)

Session of the Open Day, a special lecture was delivered by Dr G. Mahesh, Chief Scientist, CSIR-NIScPR. Dr M. Rais, Chief Scientist, CSIR-NIScPR and Chief Coordinator of CSIR's 81st Foundation Day Celebration at NIScPR and Shri C.B. Singh, Sr Principal Scientist, CSIR-NIScPR, also shared their thoughts with the students.

During the open day, the exhibition of CSIR-NIScPR publications, Ayur Vatika and RHMD visits were other special attractions for the visiting students. Special issue of NIScPR's monthly popular science Hindi magazine *Vigyan Pragati* focused on Indian organisations engaged in science popularisation was also distributed among the students.

IMTECH Celebrates CSIR Foundation Day

The 81st Foundation Day of CSIR was celebrated at the CSIR-Institute of Microbial Technology (IMTECH), Chandigarh, with a prestigious Foundation Day Lecture delivered by Prof. Dulal Panda, Director, National Institute of Pharmaceutical Education and Research (NIPER), Mohali. During his lecture, Prof. Panda focused on "Lessons from 55 years of tubulin research and its implications in human health and disease".

Prof. Panda in his talk made some important reflections on the research on tubulin that has laid the foundation for understanding several important cellular processes such as mitosis, cell division, cell motility, differentiation, and neuronal growth and development. In his address, he outlined that cancer therapeutics have greatly benefited from the effective anti-tumour action and limited toxicity of anti-tubulin drugs.

Dr Sanjeev Khosla, Director, IMTECH while welcoming the guests and faculty to CSIR's Foundation day apprised the audience of CSIR's service to the nation in the last eight decades and how scientific and technological interventions from CSIR have helped society. In his welcome address, he exhorted young scientists and students to set global benchmarks in science and stressed that the coming 25 years would be an 'Amrit Kaal' (perfect time) for the Indian science ecosystem to grow.

As part of the celebrations, CSIR-IMTECH also observed 'Open Day' during which about 350 school students, graduates and the general public from in and around tricity visited the institute and interacted with scientists to get a firsthand account



Dr Sanjeev Khosla, Director, CSIR-IMTECH, felicitating Prof. Dulal Panda, Director, NIPER after the Foundation Day talk



Students visiting research facilities at CSIR-IMTECH

of various facets of microbiology and biotechnology. Institute also felicitated meritorious wards of its staff for their outstanding performances in various academic and extracurricular activities and also gave mementoes to its staff who retired in the last two years.

Prof. Vidita Vaidya Delivers the CSIR Foundation Day Lecture at CSIR-NCL



Prof. Vidita Vaidya while delivering the CSIR Foundation Day Lecture



Dr. Ashish Lele, Director, CSIR-NCL, while giving the welcome remarks

Prof. Vaidya said that psychedelics' powerful substances like coffee, tea, chocolate, etc., can potentially treat many diseases which are like drugs that alter cognitive processes and produce hallucinogenic effects.

Prof. Vidita Vaidya, Tata Institute of Fundamental Research, Mumbai, delivered the CSIR Foundation Day Lecture at CSIR-National Chemical Laboratory (CSIR-NCL), Pune, on the topic "Serotonergic Psychedelics: A revival" on 29 September 2022.

Prof. Vidita Vaidya shared an aspect of the work done in collaboration in the field of Serotonergic Psychedelics. She introduced the audience to psychedelics, talking about how serotonergic psychedelics came into use thousands of years ago. There was possible use of compounds that eventually produce Serotonergic Psychedelics, and people were consuming them. These compounds were derived from plants, mushrooms, etc., and invoked psychedelics. Humans have been consuming psychoactive compounds as long as they have been eating things. She showed evidence that people were consuming psychoactives for as long as they have been grinding out foods and eating them. She covered drugs, the history of psychedelics, psychoactive foods, psychedelic substances, and their effects on the human brain through specific biochemical pathways.

Prof. Vaidya said that psychedelics' powerful substances like coffee, tea, chocolate, etc., can potentially treat many diseases which are like drugs that alter cognitive processes and produce hallucinogenic effects. In ancient times mushrooms were used as a therapeutic agent. The psychoactive plants were categorised according to cultural affiliation and psychoactive uses like hallucinogen, stimulant, anxiolytic, antidepressants, sedative, analgesics, and aphrodisiac. She gave an overview of psychedelic substances; psilocybin and ketamine profoundly affect neurotransmission and act on various molecular targets. Psilocybin activates 5-HT_{2A} receptors; ketamine blocks subset of NMDA (N-methyl-D-aspartate) receptors on GABA (Gamma-aminobutyric acid) interneuron, which in turn disinhibits pyramidal cells and that exerts stimulatory effect on neurons.

Prof. Vaidya explained the psychedelics, stigma, and counter-culture. Psychedelics have a history rich in stigmatization and misunderstanding. Most psychedelics are illegal because they dissolve opinion structures and culturally laid down behaviour and information processing models. But in the last decades, there has been a renaissance in psychedelic science, and people are coming out to support these substances containing treatments for mental illness problems. Prof. Vaidya talked about DOI (2,5-Dimethoxy-4-iodoamphetamine) psychedelic drug, psychedelic and hallucinogens, anxiety, psychedelics and mitochondria, the activity of the enzymes in 2-AG biosynthesis or signalling, and their influence on humans.

Earlier, Dr Ashish Lele, Director, CSIR-NCL, gave the welcome remarks and threw light upon the history of the CSIR. He informed about the key strengths of the CSIR, diversity, and geographical presence across the country. This decade is of critical importance to India and the planet as a whole. Entrepreneurship and innovation, tech start-ups, sustainability, self-reliance, digitalisation and virtualisation,

decentralisation, and global supply chains are indeed some of the megatrends that are going to shape the science and technology landscape in this decade for India.

On the occasion, NCL Research Foundation Awards for Scientists, Staff, and Research Scholars for 2020-21 were also presented at the hands of the Chief Guest.



NIO Celebrates CSIR Foundation Day 2022

CSIR-National Institute of Oceanography, Goa, celebrated the 81st Foundation Day of the CSIR on 26 September 2022. On this occasion, CSIR-NIO invited students and the public at large for its Open Day, to know more about the scientific endeavours in ocean research. The

students got an opportunity to visit the exhibition on marine resources and instruments and view films on ocean sciences. A lecture on 'Careers in oceanography' was delivered on this occasion for the students of standards XI and XII at CSIR-NIO auditorium.



CSMCRI Celebrates 81st Foundation Day of CSIR

The 81st Foundation Day of The Council of Scientific & Industrial Research (CSIR) was celebrated with great pomp on 13 October at CSIR-Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar, Gujarat. In this programme, which lasted for the whole day, a scientific-educational tour was organised in the institute for the students and teachers of various schools of Bhavnagar under the banner of Jigyasa to commemorate the Amrit Mahotsav of freedom.

CSIR is known for its cutting-edge research and development knowledgebase in diverse science and technology areas from diagnosis to drugs, from hygiene to health, from energy to environment, from health drinks to drinking water, from in-house to industry, from arterial to aeroplanes and from industrial waste to wealth. Having a pan-India presence, CSIR has a dynamic network of many national laboratories, outreach centres, Innovation Complexes and units.

Having a pan-India presence, CSIR has a dynamic network of many national laboratories, outreach centres, Innovation Complexes and units.



Dr Kannan Srinivasan in his address elaborated on recent contributions of CSIR in the energy sector – aviation fuel, batteries, hydrogen, dimethyl ether, water – heliborne survey for water mapping, desalination, IoT-enabled quality water delivery, etc.

Sr Scientist and PRO, Dr KB Pandey informed that as per direction of DG, CSIR, and Dr N Kalaiselvi, various research activities of the institute were made aware to the students to inculcate interest in science. The students enthusiastically learned about the reverse osmosis bus, cultivation and use of seaweed, workshop and production technology and the principles and uses of tissue culture. In the afternoon the Foundation Day lecture titled “Environmental Management to address Sustainability” was delivered by chief guest Prof. Aniruddha Bhalchandra Pandit, Vice Chancellor, Institute of Chemical Technology, Mumbai.

Director of the Institute, Dr Kannan Srinivasan in his address elaborated on recent contributions of CSIR in the energy sector – aviation fuel, batteries, hydrogen, dimethyl ether, water – heliborne survey for water mapping, desalination, IoT-enabled quality water delivery, etc. Besides, he also discussed disaster relief management including efforts in fighting against COVID citing a very recent discovery of a drug developed at a lab in CSIR that is undergoing Phase III clinical trial.

Dr Kannan also mentioned the flagship projects being carried out at CSIR-CSMCRI on the establishment of world-class salt farm, a seaweed mission in identifying potential locations for seaweed cultivation on a pan-India basis,

installation & commissioning of a mid-sized desalination plant for providing guidelines and protocols, projects that are of national importance and relevance.

Recently CSIR-CSMCRI organised international conferences on water, seaweed, chemicals, etc. with an endeavour to connect with industries and stakeholders. As part of outreach, CSIR-CSMCRI also conducted several skill development programmes for the youth and Jigyasa programmes for the students/teachers of Gujarat.

Dr Kannan also referred to the appeal of the Director General, CSIR, for addressing these complex problems and challenges, reorientation and revitalisation of CSIR. He reiterated that industry-institution necessity gaps, visibility & outreach, image building of CSIR are critical. He said that the progress of any institution depends on its employees. He called upon the path forward to make CSIR a leading institution in the world.

During the programme, employees who completed 25 years of regular service in CSIR were felicitated and the annual report 2021-22 of the institute was also released. The programme was coordinated and welcomed by the senior most scientist Dr Bishwajit Ganguly and concluded by the Controller of Administration Mr Subhash Chander.

CSIR-NEERI Celebrates 81st Foundation Day of CSIR



Chief Guest Prof. Rohini Godbole addressing the audience



Prof. Amitav Mallik speaking on energy and environment challenges

CSIR-National Engineering Research Institute (CSIR-NEERI), Nagpur, celebrated 81st CSIR Foundation Day on 28 September 2022. Prof. Rohini Godbole (Padmashri-2019), Honorary Professor, Centre for High Energy Physics, Indian Institute of Science (IISc), Bengaluru, was the Chief Guest and Prof. Amitav Mallik (Padmashri-2002), Defense Technologist & Green-Tech Adviser and Former Member, National Security Advisory Board was the Guest of Honour. Dr Atul N. Vaidya, Director, CSIR-NEERI and Mr Prakash Kumbhare, Sr Principal Scientist, CSIR-NEERI, were also present on this occasion.

While addressing the audience, Prof. Godbole highlighted the importance of inclusion in the vision of the new CSIR. She informed that the Science, Technology, and Innovation Policy (STIP)-2020 was drafted to form a nurtured ecosystem that promotes research and innovation on the part of both individuals and organisations. To create an inclusive culture in the practice of science, equal opportunity in academics and research should be provided to women, she added.

She pointed out that diversity, inclusion and equity are not only for the people who are excluded, but these are also required for the development of Science, Technology and Innovation.

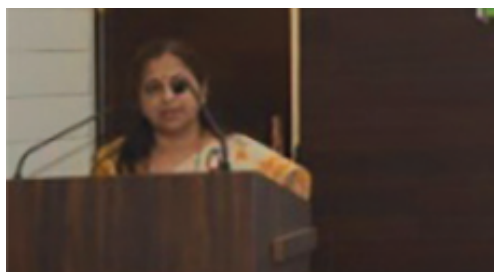
She hoped that the STIP-2020 will provide access to the grass root innovators for converting innovations into products. Prof. Godbole said that women are keepers of traditional knowledge which can lead to significant innovations. She advocated that CSIR should work more to encourage young women entrepreneurs.

Speaking on 'India at 75 – Energy and Environment Challenges', Prof. Amitav Mallik said that India needs to promote sustainable energy policies that spur economic growth and environment protection, particularly in terms of reducing greenhouse-gas emissions that contribute to climate change. He urged scientists to participate in Science and Technology Development activities even after their retirement. He briefed about the initiatives taken by Pune International Centre under his leadership to combat the challenges of energy, environment and climate change. We need specific and concrete policy pathways for deep decarbonisation in India which should work at the corporation and gram panchayat level, he added.

In his welcome address, Dr Atul Vaidya, Director, CSIR-NEERI, informed that CSIR has formulated a 10-point programme on its 81st Foundation Day for revitalisation of CSIR. Industrial application, techno-feasibility, and societal benefits are



Dr Atul N. Vaidya, Director, CSIR-NEERI delivering the welcome address



Dr Aabha Sargaonkar, Sr. Principal Scientist, CSIR-NEERI briefing about SAFRA-WDS portal

CSIR-NEERI launched the SAFRA and WDS portals for data management to ensure a safe drinking water system.

some of the important features of this programme. Dr Shalini Dhyani, Sr Scientist, CSIR-NEERI, conducted the proceedings.

CSIR-NEERI launched the SAFRA and WDS portals for data management to ensure a safe drinking water system. *'Handbook on Water and Wastewater Analysis'* was also released on this occasion.

The staff members of CSIR-NEERI, who had completed 25 years of service, and those who had retired during the current and preceding years, were honoured on the occasion. Besides, Science Models Competition was also organised and prizes were given away to the winners. In the first category (5th to 7th standards), the first prize was conferred to Bhavan's B.P. Vidya Mandir, Ashti for presenting the model on 'Multifunction Heating System'; the second prize was given away to Centre Point School, Katol Road, Nagpur for the model on 'Eco Smart Village'; the third prize was jointly awarded to the South Public School, Ring Road, Nagpur for the model on 'Manual Briquette Model'



The dignitaries releasing a handbook on water and wastewater analysis

and NEERI Modern School, RPTS Road, Nagpur, for the model on 'Green Vehicle'. In the second category (8th-10th standards), the first prize was given away to School of Scholars, Wanadongri for the model on 'Auto Power Cut Off for Increased Noise Pollution'; second prize to Montfort School Nagpur for the model on 'Waste Management: River Cleaning Model'; and third prize was conferred to Somalwar High School & Junior College, Nikalas Branch, Nagpur for the model on 'Air Pollution Control-Pollution Free City'.

In the third category (11th to 12th standards), first prize was conferred to The Swaminarayan School, Nagpur for presenting the model on 'Oil Separation from Water Using Ferrofluids'; second prize was given away to J.N. Tata Parsi Girls' H.S. & Junior College, Nagpur for the model on 'Eco Bricks-Solution for Plastic Pollution'; and third prize to Bhavan's B.P. Vidya Mandir, Ashti for the model on 'Low Humidity Air Cooler'.

The winners of the poster competition organised for Research Scholars (UDAAN 2022) were also given away prizes during the Foundation Day function.

The Institute was kept open to the general public including students. 2169 students of 36 schools and colleges from Nagpur and Vidarbha visited the institute. CSIR-NEERI scientists briefed the visitors about significant R&D activities and achievements of the Institute with some practical demonstrations at the laboratories and Harit Sangrahalaya. The visitors interacted with CSIR-NEERI scientists on various issues relating to

environmental science and engineering. Students from various schools presented

science projects depicting effective solutions to environmental problems.

81st Foundation Day of CSIR-SERC

The 81st foundation day of CSIR was celebrated with great enthusiasm on 26 September 2022 and 28 September 2022, by CSIR-Structural Engineering Research Centre (CSIR-SERC) and CSIR Madras Complex (CMC), Chennai.

Open Day was observed on the occasion. All laboratories in the CSIR Campus were kept open for the general public. And technologies, products and state-of-the-art facilities were showcased and demonstrated for the benefit of the visitors. Around 6500 visitors including school and college students, teachers, professionals from the industry, entrepreneurs and the general public from Tamil Nadu, Andhra Pradesh and Karnataka visited the CSIR campus and the Tower Testing & Research Station (TTRS) campus of CSIR-SERC with great enthusiasm. They had a first-hand glimpse of multifarious and multi-discipline R&D programmes currently going on in the laboratories and the technologies developed. The visitors showed keen interest and passionately interacted with the scientific staff.

The foundation day function was held on 28 September 2022 at 2 PM and was presided over by Dr N. Anandavalli, Director, CSIR-SERC, and Coordinating Director, CMC. Shri U.K. Bhattacharya, Director (Projects), National Thermal Power Corporation (NTPC) Pvt. Ltd, New Delhi, was the chief guest of the function. In her foundation day address, Dr Anandavalli talked about the genesis, history and transformation of CSIR in the eight decades of its existence. She also highlighted the contributions and significant achievements of CSIR and

its pivotal role in nation-building and in shaping the growth of science and technology in the country, since its inception on 26 September 1942.

She said that CSIR has placed itself as a contemporary R&D organisation with a pan-India presence covering a wide spectrum of scientific and industrial research. Paying tributes to the dynamic leadership of CSIR since its genesis, she pointed out that in the last two decades CSIR has emerged as a leader in new technologies. Dr Anandavalli also highlighted the achievements and contributions of CSIR-SERC and CSIR-CMC for nation-building in last year and called upon the scientists and staff members of the campus for rededicating themselves to a promising future.

Dr B.H. Bharatkumar, Chief Scientist & Advisor (M), CSIR-SERC, introduced the chief guest to the audience and described CSIR as a temple of knowledge covering almost all areas of science & technology, and lauded the efforts and contributions of CSIR in fundamental and applied research in the country.

Emphasising the importance of knowledge in the times to come, he said that CSIR has a greater and active role to play in meeting the needs of the nation. He greatly appreciated the collaborations of CSIR-SERC and NTPC in the past and present and lauded the expertise and role played by CSIR-SERC in reviving the NTPC's Tapovan project.

He credited CSIR-SERC for its continuous and active role in assessing the structures and extending the life of power stations in India. Referring to the Memorandum of Understanding (MoU) signed by CSIR-SERC and



Dr Anandavalli said that CSIR has placed itself as a contemporary R&D organisation with a pan-India presence covering a wide spectrum of scientific and industrial research.



NTPC, Shri Bhattacharya said that CSIR-SERC is an important knowledge partner to NTPC and that he looks forward to all possible collaborations in future including collaboration on modular houses by CSIR-SERC. He also said that collaboration of CSIR-SERC and NTPC on specific areas can be a force at the international level.

Every year, during the foundation day function, Dr M. Ramaiah Prize is presented for the best technical papers published by the scientists of CSIR-SERC. For the year 2021-2022, two papers were selected by the Committee as best papers and two papers were chosen for the certificate of merit. The Director congratulated all the authors of the papers selected. The selected papers are as follows:

Best technical papers

- Detection and quantification of damage in bridges using a hybrid

algorithm with spatial filters under environmental and operational variability, published in *Structures*, authored by K. Lakshmi

- Nanoengineered smart cement composite for electrical impedance-based monitoring of corrosion progression in structures, published in *Cement and Concrete Composites*, authored by Rajani Kant Rao, and Saptarshi Sasmal

Certificate of merit papers

- Structural Performance Characteristics based Seismic Damage Gradation Schema for Single Storey URBM Buildings in India with a Rigid Diaphragm, published in *International Journal of Architectural Heritage*, authored by S.R. Balasubramanian, K. Balaji Rao, R. Goswami and A. Meher Prasad

- Breathing crack damage diagnostic strategy using improved MFCC features, published in journal of *Intelligent Material Systems and Structures*, authored by J. Prawin

Every year, as a part of CSIR foundation day celebrations, an inter-school quiz programme, Eureka, and CSIR open-day science competitions for the wards of employees of CSIR-SERC and CMC are organised. This year, Eureka 2022 was organised on 15 September 2022 at the CSIR Campus which turned out to be a humongous success. Forty-nine schools from in and around Chennai and Pondicherry participated in the event. CSIR open day science competition was held on 21 August 2022 at the CSIR campus and more than 100 students participated.

Prizes were distributed for the winners of the competitions on 28 September 2022, during the foundation day function.

As a part of the function, Director, CSIR-SERC and Coordinating Director, CMC, along with the Chief Guest, honoured the employees of CSIR-SERC and CMC, who have superannuated during the past two years. The employees who have completed 25 years of service in CSIR were also felicitated. Cash and studentship awards were also presented to the wards of the employees of CSIR-SERC and CMC for their meritorious educational achievements. A brief report on open day was presented by Dr M. Thirunavukkarasu, Chairman, Common Core Committee. Dr C Kumaravelu, Chairman, Open Day Committee, CSIR-CMC proposed a vote of thanks at the end of the function.



Awards

CSIR Innovation Award for School Children-2022

Honouring the spirit of Innovation of Young Minds



CSIR Innovation Award for School Children 2022



CSIR announced the Diamond Jubilee Invention Award for School Children on 26 April 2002 to enhance creativity amongst school children. The day is also celebrated as 'World Intellectual Property Day'. The objectives of this competition are to capture creativity and innovativeness amongst school children and create awareness about IPR (Intellectual Property Right). From

the year 2011, the Award was renamed as CSIR Innovation Award for School Children.

The award comprises a cash prize, a trophy and a certificate. The result of the CSIR Innovation Award for school children (CIASC-2022) has been declared. Following are the students awarded the prizes:

Awards

S.No.	School Name	Student Name	Invention Title	Prize*
1.	FIITJEE Junior College, Safiabab, Hyderabad, Telangana	Sarvesh Prabhu	A Novel Study of Bio-insecticidal properties of <i>Annona reticulata</i>	1st Prize
2.	M.K.H Sancheti Public School, Besa, Nagpur, Maharashtra	Krish Yadav	BHASHAX	2nd Prize
3.	Panchayat Union Middle School, Bagyanagar, Ooty, The Nilgiris, Tamilnadu	Bhuvaneshwari. M.	Low cost innovative recycled paper matchstick production machine	2nd Prize
4.	Velammal Matric. Hr. Sec. School, Chennai, Tamilnadu	K.Rudhayan, K. Aadhya Saaini	Hybrid bio nano composite material from agriculture and market waste for plant and other packaging purposes	3rd Prize
5.	Amity International School, Noida, Uttar Pradesh	Urja Kohli	AGRILIEF	3rd Prize
6.	Sri Aurobindo Memorial School, Bangalore, Karnataka	Chi. Neal Sanjay	Push assist for pushcart	3rd Prize
7.	Zilla Parishad High School, Kancharam, Rajam, Andhra Pradesh	P.Jhansi, Saidala Laya	Homemade millets mixture-A resistance booster	4th Prize
8.	Lotus Valley International School, Noida, Uttar Pradesh	Aarush Mahajan	Sewer guard	4th Prize
9.	Madhava Kripa English Nursery & Higher Primary School, Udupi, Karnataka	Pradyumna S. Adiga, Sidharth S. Adiga	Smart flush retrofit	4th Prize
10.	Venkateshwar International School, Vikaspuri, New Delhi	Arnav Dixit, Manan Suri Jaideep Singh Anand	Neer Sanchayan S-Shalankund	4th Prize
11.	Government Boys Senior Secondary School, Rajokari, New Delhi	Ansh Tiwari	Dhanwantari: An Android Application to Increase Service Delivery in Healthcare Industry	5th Prize
12.	St augustine's School, Kalimpong, West Bengal	Mehar Raj Pradhan	Mission protector with raj feature	5th Prize
13.	Shiv Nadar School, Noida, Uttar Pradesh	Oorjit Mahajan, Vaidehi Saxena Tvisha Raj, Subah Raman Madhavi Ojha, Viryansh Rastogi	DextraBot	5th Prize
14.	Amity International School, Saket, New Delhi	Anika Jha, Niharika Roy	Phoenix IIIA-The Indian army helmet	5th Prize

*One No. of the fifth Prize has not been given.

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