

No. DSIR/MS/2024/12
Government of India
Ministry of Science & Technology
Department of Science & Industrial Research

(Part-I Unclassified)

Subject: MONTHLY SUMMARY (For the month of December 2024)

Major achievements during the month of December 2024

Council of Scientific & Industrial Research (CSIR)

New Products/Processes/ Technologies developed

- **CSIR-CSMCRI**
 - Developed process for Immobilized Bacterial Consortium for Removal of PAHs
- **CSIR-IHBT**
 - Developed process for Endophyte mediated enhanced stigma production in *Crocus sativus*.
- **CSIR-IICB**
 - Developed process for Blue fluorescence silver quantum dots with a specific flavonoid
- **CSIR-IIP**
 - Developed process for Topanol-A synthesis
- **CSIR-NBRI**
 - Developed 90K Cotton SNPs Chip: Useful in molecular-assisted breeding and association-based mapping of agronomically traits in cotton.
- **CSIR-NIIST**
 - Developed process for La and Ce added aluminium alloys for Aerospace applications

Technologies licensed/transferred

- **CSIR-CFTRI**
 - Technology for
 - Dipping oil formulation for grapes transferred to M/s LRS Biosure, Belgavi. (KA).
 - Gluten free biscuit transferred to M/s SS Gas Lab Asia Pvt Ltd, Delhi.
- **CSIR-IHBT**
 - Technology for the Liliium bulb processing transferred to Shansha Cut Flower Cluster (SCFC), Lahaul and Spiti (H.P.) on 01/12/24.
- **CSIR-NIIST**
 - Technology for
 - Single-use biodegradable tableware from rice husk transferred to Thinaipporul Wares Private Limited, Tamil Nadu.
 - Jaivam transferred to Agro Bio Tech Research Centre Ltd, Kottayam.
 - Onsite treatment of organic wastewater and resource recovery (NOWA) transferred to Memfill Tech Pvt Ltd, Karaikudi (TN) & Purifying Systems and Technics, Ernakulam.

Number of New Projects initiated (01/12/24-31/12/24)

| Lab/Institute | CSIR | Ministry/Govt./PSU | Industry/sponsored/ Pvt |
|---------------|------|--------------------|-------------------------|
| CSIR-CBRI | Nil | 07 | 14 |
| CSIR-CCMB | Nil | 02 | Nil |
| CSIR-CECRI | Nil | 02 | 01 |
| CSIR-CFTRI | Nil | Nil | 03 |

| | | | |
|--------------|-----|-----|-----|
| CSIR- CGCRI | Nil | 01 | Nil |
| CSIR- CIMFR | Nil | 06 | 11 |
| CSIR- CLRI | Nil | 01 | Nil |
| CSIR- CMERI | 01 | Nil | Nil |
| CSIR- CRRI | 01 | 07 | 05 |
| CSIR- CSMCRI | Nil | Nil | 01 |
| CSIR-IICB | Nil | 01 | Nil |
| CSIR- ICT | Nil | Nil | 03 |
| CSIR- IIP | Nil | 02 | 01 |
| CSIR- NAL | Nil | 01 | 01 |
| CSIR- NEERI | Nil | 03 | 04 |
| CSIR- NIIST | Nil | Nil | 02 |
| CSIR- NIO | Nil | 29 | 31 |
| CSIR-SERC | Nil | 01 | 12 |

Number of Ph.D. scholars joined/ completed (01/12/24-31/12/24)

| Lab/Institute | Joined | Completed |
|---------------|--------|-----------|
| CSIR-CBRI | Nil | 02 |
| CSIR-CDRI | Nil | 09 |
| CSIR-CECRI | Nil | 01 |
| CSIR-CFTRI | Nil | 01 |
| CSIR-CIMAP | Nil | 03 |
| CSIR-CIMFR | Nil | 01 |
| CSIR-CMERI | Nil | 01 |
| CSIR-CSMCRI | Nil | 02 |
| CSIR-IGIB | 04 | 08 |
| CSIR-IHBT | Nil | 05 |
| CSIR-IICB | Nil | 01 |
| CSIR- ICT | Nil | 16 |
| CSIR- IIM | Nil | 02 |
| CSIR- IIP | Nil | 01 |
| CSIR- NAL | Nil | 01 |
| CSIR-NBRI | Nil | 03 |
| CSIR- NAL | Nil | 01 |
| CSIR- NEERI | Nil | 01 |
| CSIR- NGRI | Nil | 01 |
| CSIR- NIIST | Nil | 05 |
| CSIR- NIO | Nil | 03 |

National Collaborations/Agreements/MoUs Signed

- **CSIR Hqrs**
 - MoU signed with AIIMS, New Delhi to promote collaboration in healthcare, emerging technologies, their applications and policy development on 18/12/24.
- **CSIR-CBRI**
 - MoA signed with M/s HSCC India Ltd, Noida , UP to undertake the health assessment for the G+5 super specialty block of SP Medical College, Bikaner on 04/12/24.
- **CSIR-CDRI**
 - MoA signed with DBT, New Delhi and CSIR-CDRI, Unraveling the novel interplay of ubiquitination in the regulation of gene expression on 09/12/24.

- MoU signed with Manipal Academy of Higher Education, Manipal & IIT, Kanpur to promote institutional linkage on 11/12/24 & 18/12/24 respectively.
- **CSIR-CECRI**
 - Agreement signed with Kansai Nerolac Paints Limited, Mumbai for Manufacturing of Epoxy and Polyurethane paints for Coating of Concrete Structures.
 - MoU signed with High Energy Batteries (India) Limited, Chennai for Heat and Energy Balance Study for 2.4kW Air Cooled Stack via Modelling.
- **CSIR-CEERI**
 - MoU signed with SAMEER for development of Cathode support- heater assembly for 8kW S-band CW Magnetron.
 - Agreements signed with
 - Metals & Steel Private Limited, Mumbai, Maharashtra.
 - Exigo Recycling Pvt. Ltd Gurugram, Haryana.
- **CSIR-CIMAP**
 - Agreement signed with M/s. Sri Ananda Enterprises, Bangalore for Essential oil on 02/12/24.
 - MoUs signed with
 - Flora Fauna Science Foundation, U.P. for research & industry oriented development programs in the area of medicinal and aromatic plantson 04/12/24.
 - Prof. HS Srivastava Foundation for Science and Society (PHSSF) for R&D collaborations on 04/12/24.
- **CSIR-CMERI**
 - MoA signed with Department of Biotechnology, New Delhi for monitoring “A handheld, electrochemical-based PoC device for cancer diagnosis through on-chip isolation and detection of Circulating Tumor Cells (CTCs) and Tumor-Derived Extracellular Vesicles (tEVs) in blood samples” on 23/12/24.
- **CSIR-CRRI**
 - MoUs signed with
 - Rajasthan Technical University (RTU), Kota, for Academic and research collaboration on 01/01/24.
 - Praj Industries Limited, Maharashtra, for Technical collaboration on 21/12/24.
 - A Project Based Agreement (PBA) signed with THDC India Ltd, Rishikesh, Utrakhand, for Consultancy services for Steel Truss Bridge over river Alaknanda on 06/12/24.
- **CSIR-CSIO**
 - MoUs signed with
 - M/s Kova Fastener, Ludhiana, for R&D and organizational Collaborations
 - IIT Mandi R&D collaboration in Semicon, Engineering & Biomedical on 07/12/24.
- **CSIR-CSMCRI**
 - Collaborative agreement with Memtrix Technologies LLP for Polyamide composite reinforced hollow fiber membrane for extraction of clean water from saline wastewater on 04/12/24.
- **CSIR-IHBT**
 - MoU with Axis Institute of Pharmacy, Kanpur (U.P.) for R&D and Academic Collaborations on 20/12/24.
 - MoU signed with NDMC, New Delhi for the supply of tulip bulb on 12/12/24.
- **CSIR-IICT**
 - MoU with Mohanlal Sukhadia University (MLSU), Udaipur, Rajasthan R&D and Academic Collaborations.
- **CSIR-IIP**
 - MoUs signed with
 - Degrees Cli-Con Pvt. Ltd. Hyderabad for the development of innovative technology for recycling of identified waste
 - Graphic Era University, Dehradun for Academic and Joint Research Programs
 - MoA signed with HPCL, Bangalore for Joint Collaborative Project on Tailored Design and Development of Nano materials.
- **CSIR-NAL**

- MoU signed with M/s. Spacefields Private Limited, Bengaluru for collaboration, testing and analysis of aerospace domain technologies on 17/12/24.
- **CSIR-NBRI**
 - MoA signed with DBT, New Delhi on Characterization of cotton fiber-specific microRNA-encoded peptides (miPEPs) to promote agricultural research on 12/12/24.
- **CSIR-NGRI**
 - Agreement signed with Central Railway, CST, Mumbai for carrying out geophysical investigations for central railway projects.
- **CSIR-NIIST**
 - Agreements signed with
 - Greenscape Eco Management Pvt. Ltd., New Delhi, for the extraction of rare earth metals from spent automotive catalysts and motor magnets.
 - Devaki Engineering Enterprise Pvt. Ltd. for intellectual property related to the plant and machinery used in the large-scale production of biodegradable plates and cutlery.
 - The Centre of Excellence in Microbiome (CoEM) to collaborate in cutting-edge microbiome research, focusing on pre- and probiotics.
 - Plant Lipids Pvt. Ltd., Cochin, for
 - ❖ Development of technology on microencapsulation, retention, flavors and colors.
 - ❖ Process optimization of vanillin production.
 - ❖ Fingerprinting Shatavari extracts.
 - MoU signed with the Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, R&D and organizational Collaborations.

Patents Update

| Patents Filed | | | Patents Granted | | | Patent Prosecutions | |
|--|--|----------------------------------|-----------------|--|----------------------------------|---------------------|---------|
| India | Abroad* (Unique Patent Application) | Abroad (Multiple Countries) * | India | Abroad* (Unique Patent Application) | Abroad (Multiple Countries) * | India | Abroad* |
| 37 | 11 | 16 | 05 | 07 | 10 | 03 | 139 |
| Number of Copyright Applications filed | | | | | | 05 | |
| Number of Trademark Applications filed | | | | | | 01 | |
| Number of Design Applications filed | | | | | | 02 | |

* Data reported to IPU during December 2024 and may change later during national phase entries. The unique filed/ granted patent may appear in the next months also if its corresponding application is filed/ granted in the respective months.

High impact S&T services

- **CSIR-CDRI**
 - Provided analytical services to one MSME during December 2024.
 - Supplied 441 experimental animals to outside research organizations for research purposes.
 - Provided service for analysis of sample by IR (Infrared), Mass, NMR (Nuclear Magnetic Resonance) and EM (Electron Microscopy); 465 external samples analysed.
- **CSIR-CMERI**
 - Provided Technical services for Methoding, Standarization of Composition & Astempered heat treatment of Ductile Iron Components to Govind Steel Company Limited, Kolkata.
- **CSIR-CRRI**
 - Quality Audit of NH-709A Garhmukteshwar Chainage-83+200 of NH-24 to Meerut (chainage 9+860 of NH-235) including connector to NH-119 Package XII for NHAI.

- Evaluation of Muzaffarnagar-Miranpur Section of NH-709AD from Km 97.450 to 123.450 towards suggesting rectification measures for NHAI.
- Rehabilitation/Strengthening of Noida Link Road by cold Milling and Recycling process under Division East Road (M-212)/Sub Division East Road-IV through Falling Weight Deflectometer (FWD) for Public Works Department (PWD), Delhi
- Traffic Study for Rimuli to Koida Section of NH-215 & Singhara to Binjabahal Section of NH 49 in Odisha for Monte-Carlo Ltd., Gujarat.
- Mix design and technical advice for FDR technologies for Roads under 7 Package HP-08-557, 558, 560, 561, 562, 563, 564 in nerchowk & Karsog divisions of Mandi for PWD, HP.
- Pavement design for Industrial sector Ecotech 7 Greater Noida for 60m and 115m wide road for Greater Noida Industrial Development Authority.
- Structural Safety Audit of ROB at Jhajjar-Charkhi Dadri-Loharu Section on NH-334 for NHAI.
- Traffic and Pavement Studies for Identified Corridor Improvement in Kota city for Kota Development Authority, Rajasthan.
- Assessing the feasibility of Geo-composites as a Sustainable Replacement for Conventional GSB in Rigid Pavement Structure for Techfab (India) Industries Ltd.
- **CSIR-IHBT**
 - VC/MS (oil analysis) technical service provide to CSK Himachal Pradesh Krishi Vishavidyalaya, Palampur
 - Supplied 97 plantlets of different bamboo genotypes to Regional Horticultural and Training Station, Jachh (Nurpur), Kangra (HP).
- **CSIR-IIIM**
 - Lavender plantation. on Banihal -Ramban Highway stretch for NHAI
- **CSIR-IIP**
 - Provided Analytical Services for XRD, FE SEM, TGA DSC, AAS, ICP OES, FTIR, FTNMR Solid & Physicochemical analysis; 309 samples.
- **CSIR-NAL**
 - Testing of honeycomb sandwich panel used for the spacecraft for M/s. Space Pixxel Technologies Pvt Ltd, Bangalore.
 - Development of NITI shape memory alloy (SMA) staples for orthopaedic application for DBT, New Delhi
- **CSIR-NEERI**
 - Sustainability Analysis for the Proposed Expansion of Surajagarh Iron Ore Mine and Implementation of Ore Beneficiation Unit at Konsari , Gadchiroli, Maharashtra.
 - Feasibility Study for Processing Solid Waste in Landfills through Biomining Process at Devachi Urali Site.
- **CSIR-NIIST**
 - Provided consultancy for one pilot scale trail for 2G ethanol for ICT Mumbai.
- **CSIR-SERC**
 - Monotonic Fracture Tests on Full Scale Notched Pipe Welds to Study the Effect of Thermal Ageing on its Fracture Behaviour for Bhabha Atomic Research Centre, Mumbai
 - Seismic Qualification of Battery Rack with Cells for M/s. Exide Industries Ltd., WB.
 - Evaluation of Dynamic Characteristics & Vibration Qualification of Mast Hoisting Gear (MHG) System using Shake Table &Pseudo Dynamic Test Facilities for M/s. Larsen & Toubro Ltd., Maharashtra
- **CSIR-URDIP**
 - Provided IP analysis support services to CSIR laboratories.

Outreach Activities

- **CSIR-4PI**
 - Organised Scientific Aptitude Assessment for Jaigopal Garodia Rashtrorathana Vidyalaya , Kalyannagar on 20/012/24.
- **CSIR-CBRI**
 - Organised lab visits for

- Govt. Inter College, BHEL, Haridwar for the celebration of Janjatiya Gaurav Varsh 2024-25 on 11/12/24, 112 participants.
- PM Shri Central KV, D.L., Meerut Cantt. on 18/12/24; 110 participants.
- Govt. Girls Inter College, Sector-51, Noida U.P. on 26/12/24; 57 participants.
- Govt. Girls Inter College, Deoband, Sahranpur on 27/12/24; 220 participants.
- **CSIR-CDRI**
 - Organised Student Scientist connect programs for
 - Era College of pharmacy, Era University, Lucknow (U.P.) on 03/12/24; 13 participants.
 - K. P. Singh Pharmacy College, Sitapur (U.P.) on 06/12/24; 61 participants.
 - Army Public School, LBS Road, Lucknow (U.P.) on 09/12/24; 90 participants.
 - Govt. Higher Secondary School, Barwan, Hardoi (U.P.)&Govt. Girls High School, Rousa, Sandi, Hardoi (U.P) on 17/12/24; 177 participants.
 - Govt. Higher Secondary School, Khairigadh, Nighasan Kheri (U.P) on 20/12/24; 137 participants.
 - Pt. Deen Dayal Upadhyay Rajkiya Model Inter College, Ludhari, Nighasan Kheri (U.P.) on 23/12/24; 120 participants.
 - Govt. Jubli Inter College, Chowk, Lucknow(U.P.) on 30/12/24; 187 participants.
- **CSIR-CECRI**
 - Organised Skill Development Training Programmes on
 - Solar Energy Materials: Fundamentals to Device Fabrication during 16-20/12/24, 16-17/12/24 & 16-17/12/24; 36, 07 & 28 participants respectively.
 - Designing Electrocatalyst Materials: Theory and Methods Trainings during 18-19/12/24; 07 & 20 participants respectively.
 - Organised School visits for
 - Green Valleys Matriculation Hr. Sec. School, Hosur, Krishnagiri Dt., Govt. Girls Hr. Sec. School, Polur, Tiruvannamalai (Dt.) & Govt. High School, Meppathurai, Tiruvannamalai (Dt.) on 02/12/24; 25 participants.
 - Avvaiyar Govt. Girls Hr. Sec. School, Dharmapuri, Govt. Girls Hr. Sec. School, Pappireddipatti, Dharmapuri (Dt.), & Government Hr. Sec. School, Theerthamalai, Dharmapuri (Dt.) on 09/12/24; 232 participants.
 - Organised Scientific Aptitude Assessment on 20/012/24; 29 participants.
 - Organised lab visits for State Council of Educational Research and Training, Chennai on 04/12/24; 55 participants.
- **CSIR-CEERI**
 - Organised Scientific Aptitude Assessment on 20/012/24; 30 participants.
 - Organised lab visits for PM Shri KV Churu & Rewari in December 2024; 500 participants.
 - Organised Skill Training program on PLC programming and its application during 28/11/24-05/12/24; 18 participants.
 - Organised Level B Training Programme for Assistant Section Officers of CSIR (Gen./F&A/S&P) completed on 20/12/24.
- **CSIR-CFTRI**
 - Organised lab visits for Jawahar Navodaya Vidhyalaya, Ramnagar on 13&20/12/24 respectively; 159 participants
 - Organised Skill Development Training Programmes on
 - Food Process Engineering and Recent Advances during 02-06/12/24; 11 participants.
 - Baking Science and Technology during 09-13/12/24; 08 participants.
 - Nutri-Cereal Process & Products Technology during 09-13/12/24; 07 participants.
 - Awareness Program On Nutrition Intervention for Children and Women on 10/12/24; 24 participants.
 - Hands on training on Fruits and Vegetables during 05-08/12/24; 20 participants.
 - Awareness Program On Nutrition Intervention for Children and Women on 12/12/24; 33 participants.
 - Processing of Turmeric and Value Added Products on 13/12/2024; 15 participants.

- Spices and Flavours Current Trends in Processing, Formulations and Quality Evaluation during 16-20/12/24; 37 participants.
- **CSIR-CGCRI**
 - Organised Skill Development Training Programmes on
 - Soft Skills and Technical Skills Upgradation on Stoneware Manufacturing and Processing during 02-05/12/24; 39 participants.
 - Ceramic Tiles, Sanitaryware and Bricks during 11-13/12/24 & 27-29/12/24; 27 & 40 participants respectively.
 - Ceramic Membrane Technology, Water & Wastewater Analysis using Advanced Instrumental Techniques on 10/12/24; 25 participants.
 - Ceramic Membrane Technology, Drinking Water, Wastewater and Water Analysis during 19-20/12/24; 41 participants.
- **CSIR-CIMAP**
 - Organised Skill Development Training Programmes on
 - Economically Important Medicinal and Aromatic Plants during 02-04/12/24; 40 participants.
 - Aroma Mission and SIDBI Project for Village-Bhagharpurwa, Dhakherwa, Lakhimpur Kheri, Uttar Pradesh on 20/12/24; 100 participants.
 - Aromatic and Medicinal Crops at Baran District, Rajasthan on 23/12/24; 75 participants.
 - Utilization of Offered Flowers for Making Incense Sticks and cone on 06/12/24; 23 participants.
 - Entrepreneurship development in Essential, Natural Fragrance and Aromatherapy to MSMEs during 16-20/12/24; 20 MSMEs participated.
- **CSIR-CIMFR**
 - Organised Vidyarthi Vigyan Manthan (VVM) State Level Camp on 15/12/24; 101 participants.
 - Organised Skill Development Training Programme for Ranchi University, Vinoba Bhave University and IIT(ISM), Dhanbad on Fundamentals on Coal and Hydrocarbon Geosciences during 16-17/12/24; 28 participants.
 - Organised Teacher Training Workshop during 17-18/12/24.
- **CSIR-CLRI**
 - Organised Lab Visit for
 - Akal Academy Cholang, Jalandhar on 04/12/24; 40 participants.
 - PM Shri Kendriya Vidyalaya in Pallavan Salai, Chennai, 05/12/24.
 - Indian Institute of Forest Management (IIFM) Sustainability, Bhopal on 23/12/24; 12 participants.
 - Organised Skill Development Training Programme for leather goods making & rexine based articles for Village-Khedbhrama, Dist-Sabarkantha during 22/08/24-21/11/24; 29 participants.
 - Organised Scientific Aptitude Assessment for KV, CLRI on 20/012/24; 35 participants.
- **CSIR-CMERI**
 - Organised Lab Visit for
 - KV-CMERI, Durgapur on 05/12/24; 68 participants.
 - St. Xavier's school on 09/12/24; 99 participants.
 - Government College, Durgapur on 10/12/24.
 - Organised Scientific Aptitude Assessment for Jawahar Navodaya Vidyalaya, Durgapur on 20/012/24; 32 participants.
- **CSIR-CRRI**
 - Organised Skill Development Training Programme on Design, Construction, Quality Control and Maintenance of Rigid Pavements during 09-13/12/24; 11 participants.
 - Organised Student Scientist Connect Program for
 - JNV, Sardhana, Meerut, Uttar Pradesh on 12/12/24; 69 participants.
 - KV Ghaziabad, JNV Mungeshpur (Bawana) & Sarvodaya Kanya Vidyalaya, (Bawana) on 13/12/24; 150, 70 & 25 participants respectively.
 - Organised Scientific Aptitude Assessment for Kendriya Vidyalaya, Noida on 20/012/24; 35 participants.
- **CSIR-CSMCRI**

- Organised industry visit to M/s. General Industries Services, Chitra GIDC, Bhavnagar for fabrication of salt house for sustainable and efficient salt production on 19/12/24.
- Organized a hands-on training for the isolation of DNA from saliva/ banana at PM Shree JNV School, Trapaj, Bhavnagar on 20/12/24.
- **CSIR-IHBT**
 - Organised Lab Visit for
 - Govt. Sr. Sec. School Chowki Maniar,(Una), G.A.V. Sr. Sec. School, Saliana, (Kangra), KV Mandi, Govt. High School, Gawali, (Mandi) & PM SHRI Kendriya Vidyalaya, Dharamshala Cantt. in December 2024; 260 participants.
 - Shaheed Capt. Vikram Batra Govt. College Palampur Govt. College Naura, Dist. Kangra, Himachal Pradesh on 10/12/24; 31 & 03 participants respectively.
 - Maulana Azad National Urdu University, Hyderabad, and NIT Hamirpur (H.P.) on 24/12/24; 65 participants.
 - Organised School Visit for PM SHRI Kendriya Vidyalaya Palampur on 13/12/24; 105 participants.
 - Organised training on Dry flower technology at Bhunad gram panchayat, Salooni, Chamba on 06/12/24.
 - Provided 390 ornamental plants to six government senior secondary schools in Himachal Pradesh, as part of Plant for Mother campaign on 20/12/24.
 - Supplied tulip bulbs to NDMC, New Delhi on 12/12/24.
 - Celebrated the 5th Anniversary of DST-SHRI Scheme at Prithvi Bhawan on 16/12/24.
- **CSIR-IICB**
 - Organised Scientific Aptitude Assessment for PM Shri Kendriya Vidyalaya Santragachi and PM Shri Kendriya Vidyalaya No 2, Saltlake on 20/012/24; 30 participants.
 - Organised Scientist Student program at PM Shri Kendriya Vidyalaya Santragachi, Howrah on 13/12/24.
- **CSIR-IICT**
 - Organised Skill Development Training Programme on
 - Advanced Synthetic Organic Chemistry on 04/12/24; 43 participants.
 - Animal Cell Culture Techniques during 11-16/12/24; 19 participants.
 - Organised Teachers Professional Development camp during 05-06/12/24; 65 participants.
- **CSIR-IIIM**
 - Organised Scientific Aptitude Assessment for RRL High school on 20/012/24; 31 participants.
- **CSIR-IIP**
 - Organised Lab visit for
 - The Doon School, Welhams Girls and international students from Taiwan, Germany, Italy, Australia on 06/12/24; 100 participants.
 - GGIC Rishikesh and GGIC Raipur during December 2024; 350 participants.
 - Organised Scientific Aptitude Assessment for PM Shree KV-IIP school on 20/012/24.
 - Organised Training Programme for Scindia Kanya Vidyalaya during 09-13/12/24.
- **CSIR-NAL**
 - Organised Student Scientist Connect Programme at GHS, Angondahalli, Kolar Dist on 14/12/24.
 - Organised Scientific Aptitude Assessment for RRL High school on 20/012/24.
- **CSIR-NBRI**
 - Organised lab visits for
 - PM Shri Kendriya Vidyalaya, Gonda on 02/12/24; 51 participants.
 - PM Shri Kendriya Vidyalaya, OEF, Kanpur Nagar during 09-10/12/24; 350 participants.
 - PM Shri Kendriya Vidyalaya, New Cantt., Prayagraj on 18/12/24; 43 participants.
 - Sunbeam School, Ballia in December 2024; 27 participants.
 - Organised school visit for PM Shri Kendriya Vidyalaya, Shivgarh on 19/12/24; 96 participants.
 - Organised Scientific Aptitude Assessment for PM Shri Kendriya Vidyalaya, Gomti Nagar on 20/012/24; 15 participants.
- **CSIR-NEERI**
 - Organised Skill Development Training Programme on

- Wastewater Management for Domestic, Commercial and Industrial Entities during 11-12/12/24.
- Ecology and Biodiversity Studies for EIA Projects on 17-19/12/24.
- Organised Scientific Aptitude Assessment for Kendriya Vidyalaya (KV) Ambajhari, Nagpur on 20/012/24.
- **CSIR-NGRI**
 - Organized training program on Seismology-Theory, Practice and Applications during 16-27/12/24; 18 participants.
- **CSIR-NIO**
 - Organized training program on Molecular Identification of Marine organisms and metabolite profiling during 27-29/12/24; 30 participants.
- **CSIR-SERC**
 - Organised Student Scientist Connect Programme at Sri Ramana Vidyalaya, Virudhunagar, Chennai on 05/12/24; 114 participants.
 - Organised Scientific Aptitude Assessment for PM SHRI Kendriya Vidyalaya, Meenambakkam, Chennai on 20/012/24; 27 participants.
- **CSIR-URDIP**
 - Organised Patent Filing Activity & Review meeting at CSIR-NEERI, Nagpur & CSIR- CSMCRI, Bhavnagar during 18-19/12/24 & 23-24/12/24 respectively.

Conferences, Workshops, Major Events

- **CSIR Headquarters**
 - Gujarat Global Expo 2024 at Veer Narmad South Gujarat University, Surat, Gujarat during 19-21/12/24.
 - 4th Rising Madhya Pradesh Expo 2024 at CIAE Ground, Nabi Bagh Bersia Road, Bhopal, Madhya Pradesh during 20-22/12/24.
 - Organised 14th AMRIT Series Lecture (Hybrid mode) on Towards Viksit Bharat 2047- Expectations and Challenges delivered by Prof. V. Kamatoti, Director, IIT Madras on 20/12/24.
 - Organised 6th IKS-TKDL workshop on Traditional Knowledge-Intellectual Property & People's Rights during 10-13 & 16/12/24.
- **CSIR-4PI**
 - Organised webinar series on History and applications of Computer vision delivered by N Mithun Babu, Scientist during 02-03/12/24.
 - Organised Hindi Workshop for the Administration/Finance & accounts/Stores & Purchase Officers/Staff on 16/12/24.
- **CSIR-CBRI**
 - Participated in IISF 2024 at IIT Guwahati during 30/11/24-03/12/24.
 - Participated in 3rd International Symposium on One Health One World 2024 at University Malaysia dated 10-12/12/24
 - Conducted Full-scale Seismic Test on 3 Storey PPVC (Prefabricated Prefinished Volumetric Construction) building on 17/12/24.
 - Celebrated the 5th Anniversary of DST-SHRI Scheme at Prithvi Bhawan on 16/12/24.
- **CSIR-CDRI**
 - Organised 7th Nobel Symposium to acknowledge & celebrate the ground breaking findings of Nobel Prize winners on 11/12/24.
 - Organised Translational Lecture Series on Immediate kangaroo mother care and mother newborn care unit: Journey from evidence to practice delivered by Dr. Sugandha Arya, Professor of Pediatrics and In-charge Mother- NICU, VMMC and Safdarjung Hospital, New Delhi, on 10/12/24
- **CSIR-CECRI**

- Organised Workshops on
 - Prevention of Sexual Harassment at Workplace on 06/12/24.
 - X-Ray Diffraction: Fundamentals to Applications during 10-11/12/24.
- **CSIR-CFTRI**
 - Organise inauguration of Centre of Excellence for Millets and Incubation Centre on 06/12/24.
- **CSIR-CGCRI**
 - Organised 1st Platinum Jubilee Distinguished Lecture delivered by Dr. Debashish Bhattacharjee on 23/12/24.
- **CSIR-CIMFR**
 - Organised workshop on Recent Advances in Underground Metal Mining (RAUMM-24) during 23-24/12/24.
 - Celebrated Indian Mining Day was celebrated on 27/12/24.
- **CSIR-CLRI**
 - Organised Technology Popularization Program for members of Indian Finished Leather Manufacturers & Exporters Association (IFLMEA) on 12/12/24.
 - Organised Stakeholders consultation on Indigenous Development of Membranes for Sewage Treatment and Reuse on 19/12/24.
- **CSIR-CMERI**
 - Organised lecture on "Unmanned Aerial Vehicle and its application" on 02/12/24.
- **CSIR-CRRI**
 - Participated in 7th Edition of Bauma Conexpo India 2024 at Greater Noida, Uttar Pradesh during December 11-14/12/24.
- **CSIR-CSMCRI**
 - Celebrated 9th Ayurveda Day Celebration on 03/12/24.
 - Organized workshop on Ecology, Environment, Earth & Ocean Sciences and Water-2024 (E3OW-2024) on 12/12/24.
- **CSIR-HRDC**
 - Organised Level A/B Programme for JSA/SSA/ASO(Gen./F&A/S&P) of CSIR during 25/11/24-20/12/24.
 - Organised on Gender Sensitization and Sexual Harassment of Women at Workplace on 06/12/24.
 - Organised Hands-on Workshop on IGOT MDO Portal for CSIR Lab IGOT Nodal Officers during 17-19/12/24.
- **CSIR-IICB**
 - Organised Lecture on 'Genomic bookmarking by nuclear receptors: a novel dimension in epigenetic control' delivered Dr. Rakesh K Tyagi, Professor, JNU, New Delhi 06/12/20.
 - Organised on Gender Sensitization and Sexual Harassment of Women at Workplace on 09/12/24.
 - Organised talk on 'Structure guided design to enhance stability and efficacy of viral vaccines' delivered by Prof. R. Varadarajan, IISc on 20/12/24.
 - Conducted Hindi workshop on 24/12/24
- **CSIR-IICT**
 - Organised Dr. U.T. Bhalerao memorial lecture on 18/12/24.
 - Organised lecture on Connecting Mind and Body for Healthy Living delivered by Padma Bhushan Sri M on 17/12/24.
 - Launched Greenworksbio: an alternate to single use plastic (SUP) on 07/12/24.
- **CSIR-IIIM**
 - Celebrated 84th Foundation Day on 01/12/24.
- **CSIR-NAL**
 - Organised Aerofest during 18-20/12/24.
- **CSIR-NBRI**
 - Organised National Conference on Advances and Perspectives in Cryptogam Research with Indian Lichenological Society, Lucknow during 9-11/12/24
 - Organised Chrysanthemum & Coleus – 2024 show during 14-15/12/24.
- **CSIR-NEERI**

- Organised workshop on Sustainable Waste Management: Challenges & Opportunities on 16/12/24.
- **CSIR-NGRI**
 - Celebrated Diamond Jubilee of Hyderabad Magnetic Observatory (HYB during 28-30/12/24)
- **CSIR-NIO**
 - Organised Stakeholder conclave on Ecology, Environment, Earth, Ocean Sciences & Water (E3OW) in the month of December.
- **CSIR-NIScPR**
 - Coordinated "S&T Media and Communicators Conclave"& "Vigyanika- Science Literature Festival" at IISF 2024 during 01-02/12/24.
- **CSIR-SERC**
 - Organised Indo-German Pre-Conference Workshop on Advanced NDT&E for Civil Infrastructure on 11/12/24.

Visit of high level dignitaries

- **CSIR-CFTRI**
 - Sri N. Chaluvaryaswamy, Hon. Minister for Agriculture, Govt. of Karnataka visited on 06/12/24.
- **CSIR-CSMCRI**
 - Dr. V. Geethalakshmi, Vice Chancellor of Tamil Nadu Agricultural University, Coimbatore, visited CSMCRI-MARS, Mandapam on 09/12/24.

Honours/ Awards

- **CSIR-4PI**
 - Mr. Pankaj Saini, Scientist, received GOLD at National level Abilympics in Computer Programming.
- **CSIR-CECRI**
 - Dr. M. Sathish, Principal Scientist, awarded the MRSI-2024 Medal by The Material Research Society of India (MRSI) at IUMRS-ICA-2024-International Conference in Asia during 03-06/12/24.
- **CSIR-CIMFR**
 - Dr. Santosh Kumar Behera, Sr. Scientist received "IEI Young Engineers Award 2024-25" in Mining Engineering by The Institution of Engineers (India).
- **CSIR-CLRI**
 - Dr. K. J. Sreeram, Director received Padma Bibhushan Dr R A Mashelkar Medal and CHEMCON Distinguished Speaker Award at CHEMCON 2024.
- **CSIR-IHBT**
 - Dr Vikram Patial, Principal Scientist received the Dr B.L. Purohit Memorial Best Toxicopathologist Award-2024 by the Indian Association of Veterinary Pathologists (IAVP).
- **CSIR-IICT**
 - Dr. Chittaranjan Patra received the "ABAP Gold Medal 2024 for Advanced Research in Nanoscience and Technology" from Association of Biotechnology and Pharmacy. And also received the prestigious MRSI Medal-2024.
- **CSIR-NBRI**
 - Dr. AK Shasany, Director, received INSA FNA Fellowship Award at 90th Anniversary General Meeting of INSA.
- **CSIR-NIIST**
 - Dr. C. Anandharamakrishnan, Director received the prestigious 2024 Tata Transformation Prize.
 - Dr. Rakhi R B, Principal Scientist received the prestigious "MRSI Medal for 2024".
- **CSIR-SERC**
 - Dr. R. Balagopal & Dr. P. Prabha, Principal Scientists, received "Outstanding Engineer Award 2024".
 - Dr. C. Bharathi Priya, Principal Scientist, selected as "INAE Young Associate 2024".

DEPARTMENTAL ACTIVITIES

DSIR is the nodal department for granting recognition to in-house R&D units established by corporate companies, Scientific and Industrial Research Organizations (SIROs) and registration to Public funded research Institutions like universities, IIT's, IISc, Regional Engineering College (RECs) other than hospitals. R&D units recognized by DSIR are eligible for customs duty and weighted tax deductions on R&D expenditures by Industry.

Industrial R&D Promotion Programme (IRDPP)

Recognition/ Registration and renewal of In-house R&D in Industry

- 16 in-house R&D units of industries were granted Recognition and 16 were granted Registration certificates
- 16 in-house R&D units of industries were granted renewal of Recognition and 16 were granted renewal of Registration certificates.

Scientific and Industrial Organizations (SIRO)

- 28 SIROs were granted Renewal of Recognition and 20 were granted Renewal of Registration Certificate.

Public Funded Research Institutions (PFRI)

- 3 PFRIs were granted Renewal of Registration Certificates

Fiscal Incentives for Scientific Research u/s 35(2AB) of IT Act 1961

- 4 in-house R&D units of industries were granted Approval and 9 in-house R&D units of industries were granted Extension of Approval in Form 3 CM u/s 35(2AB) of IT Act 1961.
- 20 Reports in Form 3 CL certifying R&D expenditures of Rs 157.14 Crores were issued to CCIT (E) for benefits u/s 35(2AB) of IT Act 1961.

DSIR Central Sector scheme 'Industrial Research and Development (IRD)' comprises of the four sub-schemes (i) Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM), wherein financial assistance is extended to independent innovators for converting innovative ideas into demonstrable working models / prototypes / processes that may take the form of new or improved products, processes, or services; and assist them to become incubatees / techno-entrepreneurs, (ii) Patent Acquisition and Collaborative Research and Technology Development (PACE), wherein support shall be provided to industries and institutions for development and demonstration of innovative technologies, (iii) Building Industrial R&D and Common Research Facilities (BIRD), wherein support shall be provided for creation of Common Research and Technology Development Hubs (CRTDH) for use by entrepreneurs and industries and (iv) Access to Knowledge for Technology Development and Dissemination (A2K+) wherein studies and conferences in upcoming areas of industrial research shall be taken up besides undertaking a Technology Development and Utilization Programme for Women (TDUPW).

Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM)

Two new innovation projects on "Radio Frequency Energy harvesting" & "A user friendly and affordable head movement based computer and smartphone designed for the upper-limb disabled" were successfully completed during the period.

A2K+ Studies:

- A Stakeholder Consultation Meeting was organized at Central Leather Research Institute (CLRI), Chennai, on 19th December 2024 under ongoing A2K+ Study awarded to TERI, New Delhi with academic and industry experts in indigenous membranes development for Sewage Treatment.
- A project finding validation workshop was conducted by IIM, Vishakhapatnam, under ongoing A2K+ Study, on 13th December with agenda for discussion on the adoption of digital technology for solid waste management (SWM) by Visakhapatnam, Tirupati, Amaravathi, and Kakinada); Key measures for improving SWM practices with technological support and validation of measurement model were developed under ongoing A2K+ Study with stakeholders' input.

A2K+ Events:

The following two events supported by DSIR under A2K+ Events Program were successfully organized:

- “Recent Advances in Drug Discovery and Development 2024” organized by Sri Venkateshwara College of Pharmacy, Madhapur, Hyderabad from 12th to 13th December, 2024. Approximately 170-200 participants including academicians, faculty, students, researchers, Industry representatives participated in the event.
- “First International Conference on Advanced Materials and Manufacturing” organized by JISIASR, JIS University, Kolkata from 18th to 19th December, 2024. Approximately 174 participants including academicians, faculty, students, researchers, Industry representatives participated in the event.

Technology Development and Utilization Program for Women - TDUPW /A2K+:

- A new TDUPW -Skill Satellite Centre awarded to Guwahati Biotech Park, Guwahati, Assam -The center will focus on social and economic empowerment of women in Guwahati district of Assam by technology capacity in the field of Quality Spawn production of Mushroom and Mushroom cultivation
- Around 105 Women Beneficiaries were trained during the month of December in the field of sericulture, Aquaculture, food fortification and processing, Ready to Eat food preparation & packaging, paper recycling, handicraft/handloom, agri-technology under TDUPW/A2K+ Program of DSIR.

Asian and Pacific Center for Transfer of Technology (APCTT):

The Department provided comments on the draft Terms of Reference for the independent feasibility study on the Digital Solutions Centre for Sustainable Development to be commissioned by UNESC AP to Embassy of India, Bangkok.

PUBLIC SECTOR ENTERPRISES

Central Electronics Limited (CEL)

CEL is an Enterprise under DSIR having an objective to commercially exploit the indigenous technologies developed by national labs and R&D institutions in the country. CEL has developed a number of products through its own R&D efforts and continues to emphasize its leading role in the area of solar photovoltaic systems, electronic gadgets for Railway and other strategic electronic equipment/components among others.

- The company manufactured electronic components/systems/SPV products worth Rs. 2853.47 lakhs during the month.
- Sale of electronic components/systems/SPV products worth Rs. 3032.24 lakhs was realized during the month.

National Research Development Corporation (NRDC)

The Corporation continued to lay emphasis on broadening and strengthening the technology resource base by nurturing long-term relationships with R&D institutions, Universities as well as industry.

- The Corporation licensed technology on “Navrakshak PPE kit” to M/s Trusted Medical Equipments Industries for commercialization.
- The Corporation signed following MoA/MoU for Technology licensing and providing IPR assistance:
 - National Institute of Design, Madhya Pradesh
 - M/s Combat Robotics India Private Limited, Pune
 - Vishwakarma University, Pune
 - M/s Adiuvo Dagnostics Pvt. Ltd.
 - Track Pack Innovations LLP, New Delhi
- NRDC celebrated its 71st Foundation Day on December 31, 2024. Dr. N. Kalaiselvi, Secretary, DSIR and DG CSIR, presided over the event as Chief Guest and inaugurated the Design Clinic Facility set-up in partnership with the National Institute of Design, Madhya Pradesh. This state-of-the-art center is designed to support startups, small and medium enterprises (SMEs), and foster design innovation across industries.
- NRDC was honoured with the prestigious 4th IP Excellence Award by ASSOCHAM, recognizing the significant contributions of NRDC towards Intellectual Property. The award was presented in august presence of Prof. Dr. Unnat P. Pandit, CGPDTM.
