

Subject: MONTHLY SUMMARY FOR THE CABINET (For the month of April 2024)

Major achievements during the month of April 2024

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (CSIR)

New Products/Processes/ Technologies developed:

- **CSIR-CLRI**
 - o A process for preparation of Regenerated Leather (Genocorium)
- **CSIR-IHBT**
 - o Eco-friendly process for textile fiber from plant resources for various applications
- **CSIR-IICT**
 - o Process for production of (a) Nanocellulose - Powder and (b) Nanocellulose - Aqueous/Gel from Microcrystalline Cellulose
- **CSIR-IIP**
 - o Developed Polyether carbonate polyols from heterogenous double metal cyanide catalyst. Optimization and calibration of sulfur content in the XRF instrument. Synthesis of polyester modified bitumen and its characterizations.
- **CSIR-NAL**
 - o Method for manufacturing super elastic stent rings for a variety of stent-graft applications and stent rings.
- **CSIR-NIIST**
 - o Instant tender coconut payasam mix
 - o Vegan diary alternatives for animal butter, cheese and mozerila, feta
- **CSIR-NML**
 - o Recovery of Zinc as valuable product (Zinc sulfate monohydrate/zinc carbonate/zinc/metal) from zinc dross (TRL 6)

Technologies licensed/transferred

- **CSIR-CFTRI**
 - o Tamarind Candy - M/s Hamsavahini Eco Products, Mysore.
 - o Multigrain cereal bar and puffed rice bar - M/s EcoBambrin India Pvt Ltd, Rajendra Nagar, Ghaziabad – 201005
- **CSIR-IICT**
 - o Nanocellulose - Powder and Nanocellulose - Aqueous/Gel from Microcrystalline Cellulose to Sigachi Industries.
 - o Demonstration of the Process of Carbomer 971P to Relco Pharma Chem. Pvt Ltd.
- **CSIR-NIIST**
 - o Single-use biodegradable tableware from rice husk to M/s Agriware, Andhra Pradesh
- **CSIR-NML**
 - o Pyro-hydrometallurgical process for holistic recycling of variable zinc dross high and low grade to recover zinc metal and its salts to M/s. Chandigarh Chemicals, Haryana

Number of New Projects initiated (01/04/24-30/04/24)

Lab/Institute	CSIR	Ministry/Govt./PSU	Industry/sponsored/ Private
CSIR-CCMB	02	01	01
CSIR-CECRI	08	Nil	02
CSIR-CEERI	08	Nil	Nil
CSIR-CFTRI	Nil	02	Nil
CSIR-CGCRI	17	Nil	Nil
CSIR-CIMFR	03	02	01
CSIR-CLRI	05	Nil	02
CSIR- CMERI	06	Nil	03
CSIR- CRRRI	09	03	14
CSIR- IGIB	04	Nil	01
CSIR- IHBT	14	Nil	Nil
CSIR- IICB	07	02	Nil
CSIR- IICT	10	02	04
CSIR- IIP	04	02	02
CSIR- NAL	14	01	03
CSIR- NCL	01	Nil	Nil
CSIR- NEIST	Nil	01	Nil
CSIR- NGRI	01	Nil	Nil
CSIR- NIIST	12	Nil	Nil
CSIR- NIO	Nil	07	Nil

Number of Ph.D. scholars joined/ completed (01/04/24-30/04/24)

Lab/Institute	Completed
CSIR-CCMB	01
CSIR-CFTRI	02
CSIR-CGCRI	01
CSIR-CLRI	04
CSIR-CMERI	02
CSIR-IHBT	02
CSIR-IICB	07
CSIR-IICT	13
CSIR-IIP	02
CSIR-IITR	02
CSIR-NAL	01
CSIR-NCL	01
CSIR-NEIST	03
CSIR-NIIST	05

National Collaborations/Agreements/MoUs Signed

- **CSIR-CDRI**
 - o MoU signed with
 - University of Lucknow, on 08/04/2024 to promote institutional linkage to explore avenues for possible collaboration.
 - Central Ayurveda Research Institute, CCRAS, Kolkata on 20/03/2024 to evaluation of effect of on AYUSH-M3 and Prabhakarvati on cardiovascular parameters.

- **CSIR-CEERI**
 - o MoU Signed with NIT Silchar, Assam on 31/04/2024.
- **CSIR-CFTRI**
 - o MoU signed with Padmashree Institute of Management & Sciences, Bangalore on 19/04/2024 for strategic positioning through collaborations in meeting emerging scientific and technological challenges of the society.
- **CSIR-CLRI**
 - o Consultancy Agreement signed with
 - M/s. UPL Limited, Mumbai for evaluation of Sodium sulphide for application in leather processing.
 - M/s. World Wide Fund for Nature-India, New Delhi for Cleaner Technologies in Kanpur Tanneries.
 - M/s. Coromandel International Limited, Ennore for Hazard & Operability (HAZOP) and Risk Assessment Study for the Fertilizer Manufacturing.
- **CSIR-CMERI**
 - o MoU signed with
 - Banwarilal Bhalotia College, West Bengal on 08/04/2024 for hands-on skill promotion on Water Quality Assessment.
 - IIT, Kharagpur-West Bengal on 07/04/2024 to Facilitate exchange of students, scientists, faculty members, experts, officials to carry out Industrial as well as academic R&D activities.
- **CSIR-CRRI**
 - o MoU signed with National institute of Technology, Karnataka (04/04/2024) & National institute of Technology, Jalandhar (22/04/2024) for academic and research collaboration in the areas of mutual interest.
- **CSIR-CSMCRI**
 - o Transferred Technology to Rite Water Solutions (I) Pvt. Ltd, Nagpur, Maharashtra for Self-powered mobile van for water purification/desalination to provide safe potable water
 - o An MoU signed for Collaboration with Envision Enviro Technologies Pvt.Ltd., Surat.
- **CSIR-IHBT**
 - o An MoU signed with University of Petroleum and Energy Studies, Dehradun, on 01/04/2024 for close research and academic activities in field of mutual interest.
- **CSIR-IICT**
 - o MoU signed with
 - Telangana Mahila University [TMU], Koti, Hyderabad, on 10/4/2024 to promoting cooperative research and to facilitate the exchange of ideas, the development of new knowledge, and to enhance high quality research acumen.
 - Collaboration in research and development with Gurugram University, Haryana on 15/4/2024 in the area of Chemistry and other relevant areas.
 - A joint development programme BHEL Hyderabad on 19/4/2024 on Carbon Capture and Utilization (CCU) technology into the existing Coal-to-Methanol Pilot Plant in facility.
 - o Agreement signed with
 - ICAR- Central Tobacco Research Institute (CTRI) for Quantification of five marker compounds in the germplasm accessions of Ashwagandha (*Withaniasomnifera*).

- KIMS Foundation and Research Center, Hyderabad for Synthesis of the medical grade embolic agent consisting of Polyvinyl Alcohol (PVA) for embolization.
- Metrochem API Ltd to evaluate and identify the cost-effective enzymatic route and enzyme suppliers.
- **CSIR-NAL**
 - o MoU signed with
 - M/s. VEM Technologies Private Limited, Hyderabad on 05/04/2024 for Joint preparation of Detailed Project Report (DPR) on the design, development and testing of Loitering munition UAV.
 - Nitte Meenakshi Institute of Technology, Bengaluru on 05/04/24 for establishing academic and research linkage in the areas of mutual interest more particularly Skill based training, laboratory visits, guest lectureship and internship.
- **CSIR-NGRI**
 - o AnMoU signed with Khanij Bidesh India Limited (KABIL) on 23/04/2024 for R&D collaboration.
- **CSIR-NIIST**
 - o MoU signed with
 - M/s Tata Steel Limited for evaluation of Sorbents for Capturing CO₂ from Blast Furnace Top Gas and Stove Waste Gas.
 - M/s BRAGA Industries LLP, Chennai for collaborative research projects in the area of Aluminium Alloy based Materials.
 - o Agreement signed with
 - Kerala Rural Water Supply Sanitation Agency, Thiruvananthapuram to promote and develop cooperation in the fields of wastewater treatment and management with.
 - M/s Vanam India Foundation Ltd, Tirupur to strengthen, promote and develop co-operations in the field of Science and Technology and Inter Disciplinary Research.
- **CSIR-NML**
 - o An MoU Signed with M/s. Chandigarh Chemicals, Haryana for holistic recycling of variable zinc dross high and low grade to recover zinc metal and its salts.

International Collaborations/Agreements/MoUs Signed

- **CSIR-CDRI**
 - o A Co-Ownership and Commercialisation Agreement signed for Target Identification and hit to lead Optimization of SRI-12742 targeting MDR Acinetobacter baumannii (SRI12742-H2L-MDRAB) with Helmholtz Centre for Infection Research, Germany, IIT Kanpur and CSIR-CDRI, Lucknow on 08/04/2024.
- **CSIR-IGIB**
 - o Collaborative Agreement Signed with Melanoma Research Foundation, Washington DC, USA on 01/04/2024.
- **CSIR-NIIST**
 - o MoU signed for evaluating the functional properties of protein and starch products with M/s Relsus Pte Ltd, Singapore.

Patents Update

Patents Filed			Patents Granted			Patent Prosecutions	
India	Abroad*	Abroad	India	Abroad*	Abroad	India	Abroad*

	(Unique Patent Application)	(Multiple Countries) *		(Unique Patent Application)	(Multiple Countries) *		
09	21	50	15	01	01	16	184

* Data reported to IPU during April 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-CCMB**
 - o Provided molecular diagnostic services for 218 families comprising 246 samples
- **CSIR-CDRI**
 - o Common Research and Technology Development Hub (CRTDH) provided analytical services to 06 MSME and product development services 01 MSME.
 - o Animal Facility Laboratory approved experimental animals (total no. 305) were supplied to outside research organizations for research purpose.
 - o Sophisticated Analytical Instrument Facility service for analysis of samples (233) by IR (Infrared), Mass, NMR (Nuclear Magnetic Resonance) and EM (Electron Microscopy).
- **CSIR-CMERI**
 - o Condition Assessment of Skelp Mill Baye (03nos) at SAIL Durgapur, West Bengal.
 - o Detailed investigation through Non Destructive evaluation (NDE) of Stage - II structures, Vindhyachal Super Thermal Power Project, Singrauli (MP)
- **CSIR-CRRI**
 - o Consultancy services for Design and recommendation of pavement for Indo-Bangladesh Border Roads in the States of Tripura and Mizoram for CPWD.
 - o Post construction Technical Quality Audit and investigation for the appearance of distress 4-laning of Varanasi Gorakhpur section of NH-29 from km 149.540 to km 215.160 (Package-IV) in the state of Uttar Pradesh under NHPD Phase for (NHAI).
 - o Visual Inspection of 8 Lane underpasses at Ch. 25+695 of Green field alignment of Delhi-Vadodara Express way Starting before KMP Expressway and ends at Ch.47+000 near Khanpur Ghati constructed under bharatmala pariyojna in the state of Haryana for Apco Infratech Pvt. Ltd.
 - o Suitability of Novo Crete additive as a soil stabilizer for Novo Crete India Pvt. Ltd.
 - o Expert advice on Repair and Strengthening of concrete roads in township area, office building area and Hydro Power Project site area at NTPC Bilaspur, H.P. for NTPC.
 - o Investigations to study causes of distress at Runway of Air Force Hindan Air Force Station, Hindan Ghaziabad and suggesting suitable remedial measures for CPWD.
 - o Feasibility study of using Module developed from end-of-life plastic for road and allied construction for Bharat Petroleum Corporation Ltd (BPCL).
 - o Failure Analysis and Design of Remediation Works for Rehabilitation of Retaining Wall, CRPF Campus, Srinagar for CPWD.
 - o Evaluation of
 - Damaged Rigid Pavement and remedial measure for the rehabilitation and upgradation of four/six laning of Puintola to Tangi section (Pkg-II) of NH 5 (New NH-16) only rigid pavement section about 29 km in Odisha for NHAI.

- Suitability of Palpa cement for cement concrete road construction for Palpa Cement Industries Ltd.
- Evaluation of stabilized pavement layers (Base/Sub Base & FDR) using stabilizer Road Packer Plus (Liquid) in the Laboratory for A R Thermosets Pvt Ltd
- Mechanical performance of Waste Plastic Road in comparison to conventional Speed Calming Measures using Thermal Sensor Technology through Artificial Intelligence for Pixuate (Cocoslabs Innovative Solutions Pvt. Ltd.)
- **CSIR-IHBT**
 - o Stabilization of lutein with different biopolymers and proteins.
 - o Synergistic studies of isolated compounds against diabetes.
 - o Phytochemical investigation of Paris polyphylla.
 - o Experimental trail of important species Polygnatumcirrihifolium.
 - o Installation of dry toilets in the Lahaul Valley.
- **CSIR-IIP**
 - o Samples analyzed:
 - Gas chromatography (11), High-performance liquid chromatography (36), FTIR (62), Solid state NMR (171), ICP (17), TGA (19), AAS (22), SEM (44), physicochemical analysis (26)
 - Testing and evaluation of "Witcol SM - 6450 (A - 263)" and "Witcol SM - 6550 (A - 233)" samples for Fire Resistance Characteristics submitted by M/s WITMANS Industries Pvt. Ltd.
- **CSIR-IITR**
 - o Analysis of water samples for Vasudha Sanrakshan, Amethi, UP.
- **CSIR-NAL**
 - o Service-design report, drawing and test report of scaled wind tunnel models of ck310ma for dynamic store separation tests. - M/s. Brahmos Pvt. Ltd.
 - o Validation and update of the aerodynamic database of kiran aircraft with flight data using system identification techniques - M/s. HAL, ARDE
 - o Indigenous design, development and certification of air cooled oil cooler (ACOC) for SARAS MKII aircraft application – CSIR
 - o Developing expertise and leveraging terahertz technology advancements in CSIR (delta) – CSIR
 - o Design and development of vhf com system (technology demonstrator) for HANS-NG aircraft – CSIR
- **CSIR-NCL**
 - o Supplied industrially important microbial strains and provided microbial identification services to industries and academia.
- **CSIR-SERC**
 - o Instrumented Load Test and Non-Destructive Testing of Steel Portals and Bridges in Mumbai Metro Line-2A (Dahisar (E) To D.N. Nagar) and Line-7 (From Goregaon East To Gundavali)
 - o Quality audit of superstructures of selected spans of steel structures of phase-II section of mumbai metro line-7 from Goregaon east to Gundavali.
 - o Feasibility Study on Safe Lowering of 24" & 18" Pipeline carrying Naphtha and Paraxylene.

Outreach Activities

- **CSIR Headquarters**
 - Organised CSIR College Connect Program at
 - St. Stephen college, DU, Delhi on 24/04/2024
 - Miranda House, DU, Delhi on 25/04/2024
- **CSIR-4PI**
 - Organised scientists - students connect program during 15-19/04/2024, 68 Participants.
- **CSIR-CBRI**
 - Organised scientists - students connect program on 24/04/2024, 265 Participants
- **CSIR-CCMB**
 - Organized 4-talk online series for students across India, called Futuristic Friday: AI in Biology and Health, published a children's science storybook on Story weaver, called Inside I.
- **CSIR-CDRI**
 - Organised scientists - students connect program for
 - Saroj Group of Institutions, Lucknow on 02/04/2024
 - Sri Sharda Group of Institutions, Lucknow on 04/04/2024
- **CSIR-CECRI**
 - Skill Development Training Programme on:
 - Surface coatings for value added products viz. decorative and functional applications during 01-05/04/2024, 46 participants.
 - Corrosion protection technologies for construction of buildings and structures during 22-26/04/2024, 38 participants.
 - Organised Lab Visit for Dept. of Chemistry, Velumanoharan Arts and Science College for Women, Ramanathapuram on 05/04/2024, 24 participants.
 - Organised Futuristic Fridays on "AI and Structural Biology to understand Biology" on 12/04/2024, 15 participants.
 - Installation and activation of global climate clock on 54th World earth day celebration on 22/04/2024, 37 participants.
- **CSIR-CEERI**
 - Organised Lab Visit for RPS Gol, Balana, Mahindergarh school, PM Shri JNV Kajra school & CVM Pilani on 06/04/2024, 351 participants.
- **CSIR-CIMFR**
 - Organized workshop on "An App Based Interactive Mineral Map of India" and "Microscope: A Journey To A Curious Exploration," on 26.04.2024, 30 participants.
- **CSIR-CLRI**
 - Organized two-day capacity-building cum awareness training programme on design and manufacture of leather goods at CSIR-IIIM, Srinagar on 15-16/04/2024, 50 participants.
 - Organized an Open day during 24-25/04/2024, 570 participants.
 - Participated in the Expert Panel Discussion on "Current Policies & Bottlenecks of the Indian Leather Industry" Organized by the ICC on 06/04/2024.
- **CSIR-CRRI**
 - Conducted Certification Course on "Road Safety Audit and Other Road related aspects" during 15-30/04/2024.
- **CSIR-CSMCRI**
 - Organised Lab Visit; 228 participants.
 - Participated in 'Kindergarten Day': an outreach event on 21/04/2024
- **CSIR-IHBT**

- o Organised Lab Visit for
 - Babasaheb Bhimrao Ambedkar University, Lucknow on 03/04/2024, 51 participants.
 - RVS Padmavathy College of Horticulture, Tamil Nadu on 03/04/2024, 79 participants.
 - University of Lucknow (U.P.) on 05/04/2024, 17 participants.
 - Govt. Sr. Sec. School, BirBaghera, Dist. Hamirpur (H.P.) on 08/04/2024, 48 participants. Govt. High School, Ropri, District Hamirpur (H.P.) on 08/04/2024, 31 participants.
- o Organised Visit to the Bamboo Museum during the month, 368 participants.
- **CSIR-IICB**
 - o Organised Lab Visit for Vidyasagar University on 25/04/2024, 11 participants.
- **CSIR-IICT**
 - o Organized Skill Development Training program on Synthetic Organic Chemistry for Telangana Social Welfare Residential Educational Institutions Society (TSWREIS), Govt. of Telangana commenced on 10/04/2024, and 22 participants.
 - o Organized Skill Development Training program on Basic Certificate course in Bioinformatics & Cheminformatics for Bhavans Vivekanada college, Hyderabad Telangana was commenced on 10/04/2024, 38 participants.
- **CSIR-IIP**
 - o Organised Lab Visit for Oak Grove School, Mussoorie on 27/04/2024, 170 participants.
- **CSIR-IITR**
 - o Organised Lab Visit for Kendriya Vidyalaya, Kanpur on 12/04/2024, 300 participants.
 - o Organized World Intellectual Property Day to enrich budding innovators, students, and start-ups about the significance of IP protection and filing, patent laws, empowering innovators on 26/04/2024.
- **CSIR-NAL**
 - o Organized Earth Day Celebrations on 22/04/2024
- **CSIR-NEIST**
 - o Conducted Yusuf Hamied Chemistry Camp in collaboration with Royal Society of Chemistry during 23-25/04/2024, 76 participants.
- **CSIR-NIIST**
 - o Skill development course on Food technology
 - o Hands on training programme for 02 days, 35 participants.
- **CSIR-NML**
 - o Organized Skill Development Training for
 - Material and metallurgical process on 23/04/2024, 46 participants.
 - E waste recycling on 26/04/2024, 83 participants.
 - Office management and entrepreneurship 13/11/2023 -12/05/2023, 28 participants.

Conferences, Workshops, Major Events

- **CSIR Headquarters**
 - o Installation and Activation of India's biggest Climate Clock during Earth day celebration on 23/04/2024, followed by talk by Prof. Chetan Singh Solanki, Professor, IIT Bombay & Founder of Energy Swaraj Foundation
 - o 8th CSIR-AMRIT Lecture on Unravelling Secrets of Triggered Earthquakes: The Lighthouse Project of Scientific Drilling in Konya delivered by Dr Shailesh Nayak, director, National Institute of Advance Studies on 23/04/2024.
- **CSIR-CECRI**

- o Lecture delivered by Dr. Chockkalingam Karuppaiah, Chief Technology Officer of Ohmium and Founder and Chairman of Vetri Labs, USA on "Evolving Energy Landscape and Electrochemistry" on 26/04/2024.
- **CSIR-CGCRI**
 - o Oration by Mr Munish Sudan, Head of IPR and Technology Intelligence, Tata Steel on WORLD IP DAY (26/4/2024).
- **CSIR-CLRI**
 - o Organized an online Science Seminar on Polymers and Nano materials was on 26 April 2024.
 - o Organized a lecture on PATENTS – An Insight by Mr. S. Udhaya Shankar, Deputy Controller of Patents & Designs, Chennai World Intellectual Property Day
- **CSIR-CRRI**
 - o Organised India Energy Swaraj Yatra during 23-26/04/2024.
 - o Organised a National workshop on "Advanced Traffic Safety using ADAS & DMS" on 19/04/2024 at IIT Hyderabad.
- **CSIR-CSMCRI**
 - o Lecture delivered by Mr. Jayant Marathe, the retired general manager of Reliance Industries Limited Electrical Safety Awareness 18/04/2024.
- **CSIR-HRDG**
 - o Training Program on Vigilance Matters from 04/04/2024 to 05/04/2024
- **CSIR-IGIB**
 - o Organised
 - NIBMG-IGIB conclave during 19-20/04/2024.
 - Mental Health Workshop on 25-/04/2024.
- **CSIR-IHBT**
 - o Organized workshop on the basics of laboratory animals, available alternatives and histopathological techniques in preclinical 15-21/04/2024.
- **CSIR-IICB**
 - o Dr. J. C. Ray Memorial Oration on Creativity in Organic Synthesis and its implication in Human Wellbeing and conducted a Science and Magic Workshop by Prof. Anil Kumar, IIT Bombay, Mumbai on 02/04/2024.
- **CSIR-IITR**
 - o Organised Indo-UK brainstorming session on Public Health Impacts of Landfill Sites - PHILS 04/04/2024.
 - o Organized program on IP Filing Activity and IP Portfolio Review Meeting on April 04-05/04/2024.
- **CSIR-NGRI**
 - o Organised a Brainstorming Session on Geothermal Energy on 26/04/2026
- **CSIR-NML**
 - o Organised technical talks by Prof. Dr. Ing. Wolfgang Bleck, Chair of Ferrous Metallurgy, RWTH Aachen University, Germany & Prof. Dr. - Ing. Dierk Raabe, Director, Max Planck Institute for Iron Research, Düsseldorf and professor, RWTH Aachen University, Germany on 12/04/2024.
 - o Showcased "Zincometer" a sensing device for real-time coating weight measurement in GI line at the world largest wire trade fair Düsseldorf Wire, Germany during 13-17/04/2024.

Visit of high level dignitaries

- **CSIR-4PI**
 - o Shri S. Somanath , Secretary, DoS/Chairman, ISRO & Mentor, CSIR-4PI visited on 02/04/2024
- **CSIR-CRRI**
 - o Officials from National Academy of Sciences of Belarus (NASB) visited on 15/04/2024 for exploring possible collaborations for R&D programmes.
 - o Prof. Chetan Solanki, IIT Bombay, Solar Man of India and Founder of Energy Swaraj Foundation visited on 26/04/ 2024
- **CSIR-CSMCRI**
 - o Principal Secretary to the Prime Minister; Dr Parmod Kumar Mishra visited Kori Creek, Kutch to monitor the progress of the seaweed cultivation project ton 20/04/2024.
- **CSIR-IICB**
 - o A delegation led by Academician Sergei Chizhik, the First Deputy Chairman of the Presidium, from the National Academy of Sciences, Belarus visited to explore opportunities of bilateral scientific cooperation.
- **CSIR-IICT**
 - o Dr. Santishree Dhulipudi Pandit, Vice-Chancellor of Jawaharlal Nehru University, New Delhi and CSIR Society member visited on 16/04/2024.
- **CSIR-IIP**
 - o Padma Bhushan Dr. V.K. Saraswat, Hon'ble Member NitiAayog visited on the occasion of CSIR-IIP Foundation Day.
- **CSIR-IITR**
 - o Padma Shree Dr. S Ayyappan, Former DG, ICAR & Secretary to Government, DARE visited to inaugurate "Innovation and Technology Showcase-ITS-CSIR" on 03/04/2024
- **CSIR-NAL**
 - o Dr V K Saraswat, Hon'ble Member, NITI Aayog on 20/04/2024.
- **CSIR-NGRI**
 - o Dr. M. Ravichandran, Secretary, MoES visited on 26/04/2024. Dr. Ranjit Rath, CMD, Oil India, visited on 26/04/2024.
- **CSIR-NIIST**
 - o Dr. G. Madhavan Nair, Former Chairman ISRO and Former Secretary, Department of Space visited for an insightful Dr .Baldev Raj Memorial lecture.
- **CSIR-NIO**
 - o Dr. Alexander Makarov, Director of Arctic and Antarctic Research Institute (AARI) and Dr. Maxim Tatarkin, Head of the External Affairs AARI; Saint Petersburg, Russia visited on 26/04/2024 to explore opportunities for bilateral cooperation.

Honours/ Awards

- **CSIR-CCMB**
 - o Dr Santosh Chauhan, Senior Principal Scientist, Awarded Sun Pharma Science Foundation Research Fellowship 2023
- **CSIR-CECRI**
 - o Dr. S. Vasudevan, Chief Scientist & Head, EPE Division has been appointed as Editorial Board Member of "The Journal of Water Process Engineering (JWPE)" published by Elsevier.
- **CSIR-CMERI**

- o Dr. Priyabrata Banerjee, Sr. Principal Scientist bagged the prestigious FRSC award 2024 from the Royal Society of Chemistry, UK
- **CSIR-IICB**
 - o Dr. Jayati Sengupta, Senior Principal Scientist has inducted in the Society as a Fellow of EMSI Award for the Year 2023 in the Life Science category.
- **CSIR-NGRI**
 - o Dr. A. Vasanthi, Senior Scientist, Elected as a Council Member IGU and Geological Society of India.

DEPARTMENTAL ACTIVITIES

DSIR's mandate is to promote Industrial Research and Development besides technology promotion, development and utilization. In order to promote and nurture Research and Development in the country, Industrial R&D Promotion Programme of the department gives recognition and registration to in-house R&D units of industries, not for profit Scientific and Industrial Research Organizations (SIROs), Public Funded Research Institutions (PFRIs) and periodically renews these recognition / registration under the respective Government Notifications (as amended from time to time), by virtue of which these organizations are able to obtain Customs duty exemptions and Weighted tax deductions on R&D expenditures by Industry (under section 35(2AB) of IT Act).

Industrial R&D Promotion Programme (IRDPP)

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

- 1 in-house R&D unit of industries was granted fresh Recognition and 1 was granted fresh Registration certificates.
- 22 in-house R&D units of industries were granted renewal of Recognition and 22 were granted renewal of Registration certificates.

Scientific and Industrial Organization (SIRO)

- 26 SIROs were granted renewal of Recognition and 16 were granted renewal of Registration Certificates

Public Funded Research Institutes(PFRI)

- 6 PFRIs were granted Registration Certificates and 6 were granted renewal of Registration certificates.

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

- 1 in-house R&D unit of industry was 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.
- 11 Reports in Form 3 CL certifying R&D expenditures of Rs 353.74 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.e (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 up-coming 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 innovation projects namely 'Development of Ambu Bag Pressing Machine' and Portable Apple Cleaning and Grading Machine ' were reviewed during the period. Three new projects namely 'Pallet Shuttle System", Development for Wearable Adaptive Optical Active Camouflage Technology" and " Development of Garbage Cleaning Machine" were sanctioned during the period. One project namely 'Any Time Medicine Dispensing Machine" was successfully completed during the period.

A2K+ Events:

International Conference on "Biotech Nexus 2024: Recent Advances in Biotechnology and Biomedical Sciences" was organized by SGVU-Biotechnology Business Incubator (BBI) and School of Applied Sciences, SGVU at the Suresh GyanVihar University, Jaipur, India from 26th to 27th April, 2024. 250 participants from research institute, industry and academic institutions, and international organizations participated in the conference. A total of 18 Plenary Lectures by Scientists from IISc Bangalore, IIT-Roorkee, IIT-Guwahati, IIT-Kanpur, NIPER, TIETPatiala, BHU-Varanasi, A*Star Bioinformatics Institute-Singapore, Dalhousie University-Canada, Albert-Einstein University, USA were delivered in hybrid mode.

A2K+ Studies:

A Meeting of Project Guidance Cum Review Committee (PGRC) to review the financial and technical progress of project "A study report on research on indigenous development of membranes for sewage treatment to promote it's recycle and reuse" supported to The Energy and Resources Institute (TERI) New Delhi under A2K+ Studies program of A2K+ scheme of DSIR was convened on 12th April, 2024.

A2K+ TDUPW:

The following 4 TDUPW projects were reviewed during the period:

- "Development of Women Entrepreneurship for low cost Sanitary Napkins production" supported to Department of Chemistry, JSS Academy of Technical Education, Noida was reviewed by Project Review Committee (PRC) on 8th April, 2024.
- "Empowerment of Rural Women through Capacity Building Training in Food Processing Sector" awarded to The Gandhigram Rural Institute (Deemed to be University), Gandhigram was reviewed by Project Review Committee (PRC) on 18th April, 2024.
- "Skill development program on processing, preservation & value-addition of food & agro-based products for commercial use in eight aspirational districts of UP with special emphasis on development of entrepreneurs" supported to CSIR – CFTRI, Regional Centre, Lucknow was reviewed by Project Review Committee (PRC) on 30th April, 2024.
- "Dehydrated Flowers and Foliages for Women Empowerment" supported to CSIR – NBRI, Lucknow for setting up Skill Satellite Centre was reviewed by Project Review Committee (PRC) on 30th April, 2024.

106 Women Beneficiaries have been trained under the various ongoing TDUPW projects aiming women empowerment through technology deployment and dissemination.

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

The 80th Commission Session of UN-ESCAP was held during 22nd to 26th April 2024 on the theme "Leveraging digital innovation for sustainable development in Asia and the Pacific" at Bangkok, Thailand. Shri Surinder Pal Singh, Joint Secretary, DSIR attended the 80th Commission Session and side event on the topic "Digital Public Infrastructure for Accelerating Implementation of SDGs in Asia-Pacific" on 22nd April, 2024, jointly organised by DSIR, DPIIT and APCTT.

Dr N. Kalaiselvi, Secretary, DSIR & Director General, CSIR delivered a special address (pre-recorded). Shri Surinder Pal Singh participated in the Panel Discussion on "Impact of Digital Public Infrastructure on Sustainable Development in India".

Following events were organized during Session of UN-ESCAP held during 22nd to 26th April 2024:

- "Digital Platforms for Knowledge Sharing and Cooperation in Climate Technologies" on 23rd April 2024. During the side event, Shri Surinder Pal Singh launched a Community of Practice (CoP) on Climate Technologies.
- "Digital financial technologies for sustainable development in the Asia Pacific" jointly organised by DSIR and APCTT on 24th April 2024. Dr. Vipin Chandra Shukla, Scientist-G, DSIR made a presentation on "Digital financial technologies for sustainable development in the Asia Pacific" during the side event.
- 'Workshop on Sustainable Municipal Solid Waste Management within the Circular Economy Concept' on 25th April 2024 which was jointly organized by APCTT of UN-ESCAP and Ministry of Higher Education, Science and Innovation (MHESI), Thailand and the Thailand Institute of Scientific and Technological Research (TISTR). Dr. Vipin Chandra Shukla participated in a panel discussion where he shared Swachh Bharat Mission and how this mission is aiming towards scientifically processing of all municipal solid waste (MSW) generated in the country. Various steps taken by the Government of India to guide the states on efficient MSW management processing to meet the targets were also shared with the participants.

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.401.24 lakhs during the month of April.
- Sale of electronic components/systems/SPV products worth Rs.435.89 lakhs was realized during the month of April.

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 was assigned technology on Development of non-invasive biosensor for early detection of lung cancer by IIT Roorkee for commercialization:
- The Corporation signed 3 MoAs with Dibrugarh University; NLC India Ltd, Neyveli; IOCL for technology transfer and providing IPR assistance.
