

No. DSIR/MS/2023/08
Government of India
Ministry of Science & Technology
Department of Science & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the monthly of August 2023)
(Part-I Unclassified)

Major achievements during the month of August 2023

Council of Scientific & Industrial Research (CSIR)

New Technologies/Processes Developed/Transferred

- **CSIR-AMPRI**
 - Developed Evergreen Hybrid Composites of Parali (Agro Wastes) and Industrial Wastes and transferred to Amit Densified Doors Pvt. Ltd, Sonipat, Haryana
- **CSIR-CFTRI**
 - Transferred Coffee Concentrate technology to Hatti Food and Beverages Pvt.Ltd, Bengaluru
 - Transferred Preparation of protein, vitamin and mineral fortified chikkito KL Food Processors, YSR District, Andhra Pradesh.
- **CSIR-CIMAP**
 - Signed following Technology Transfer Agreements with:
 - Big M Health Care Private Limited, Puri for Tulsi drop- immune booster lequid on 11th August, 2023.
 - Ecobhumi Bioagri Concepts Pvt. Ltd., Kolkata for Medicated sanitary Pad (NAARI) on 11th August, 2023.
- **CSIR-CIMFR**
 - Transferred Improved Soft Coke Making Technology to S.R.K Minerals, Mauja-Suwara, Rohtas, Bihar.
- **CSIR-CLRI**
 - Cold Resistant Light Weight Leather and a Process for the preparation thereof.
 - Proteinaceous formulation for agricultural applications and a process for the preparation thereof.
- **CSIR-CMERI**
 - Developed Integrated Municipal Solid Waste Disposal System (iMSWDS) for Bulk Waste Generators Technology/Know-How and transferred to:
 - Ecosafe Zero Waste Solutions (P) Ltd., Patna, Bihar.
 - Joint Enterprise Engg.Co., Durgapur, West Bengal
 - Segregation Plant for Mechanized Segregation of Solid Waste (100-125 kg/h) of iMSWDS Technology/Know-How and transferred to:
 - SIYA InstrumentsMadri, Udaipur, Rajasthan
 - Compact Electric Tractor CSIR PRIMA ET11 Know-How/Technology transferred to M/s K.N.Biosciences India Pvt.Ltd., Hyderabad, Telangana

- **CSIR-IGIB**
 - "Indi Genome Allele Frequency Database" Technology Licensed to:
 - Indus Health Plus Pvt Ltd

- Semanctic Web India Pvt Ltd
- **CSIR-IICT**
 - Isolation and characterization of saponins from Shatavari (*Asperagusrecemosus*) transferred to Waleria Healthtech Private Limited, Hyderabad.
 - Developed Process know-how for conversion of Polyethylene Terephthalate (PET) scrap to Dioctyl Terephthalate (DOTP) Plasticizer and transferred to CDG Petchem Limited, Hyderabad.
- **CSIR-IIP**
 - Production of beta-glucan from deoiled yeast cake;
 - Purification of lutein and beta-carotene from yeast pigment mixture;
 - Ethanol fermentation with sorghum juice with detailed fermentation kinetics, and detailed characterization of ethanol-free fermentation spent broth;
 - Production of sophorolipid from yeast fermenter broth Pyrolysis of spent aromatic biomass
- **CSIR-NEIST**
 - Technology Transfer of Two Varieties viz. Jor Lab L9 and Jor Lab L14 on 31.07.2023 to the Directorate of Cinchona and other Medicinal Plants, Darjeeling, West Bengal.

Collaborations/Agreements/MoUs Signed (National)

- **CSIR-CFTRI**
 - Signed MoU with Jan Swasthya Sahyog, Bilaspur, Chhattisgarh on 1st August 2023 to collaborate mutually for promoting social entrepreneurship for livelihood generation in the area of millets and other cereals and to promote, enable and sustain the value chain of farmers and SHGs.
- **CSIR-CGCRI**
 - Signed an Agreement with Naval Materials Research Laboratory, NMRL(DRDO), Thane, on 10.08.2023 for “Development of transparent glass-ceramic blocks of dimension 100 mm X100mm X 10mm and evaluation of physical and mechanical properties”
- **CSIR-CIMAP**
 - Signed following Agreements with:
 - Sant Sanganeria Foundation & Ultra International Ltd, Ghaziabad to develop sustainable aromatic cluster under Aroma mission-III on 11th August, 2023.
 - Merino Industries Limited, Ghaziabad to provide technical know-how and quality planting material of aromatic crops under Aroma Mission-III on 11th August, 2023.
 - Hindustan Gum & Chemicals Ltd, Birla Colony, Bhiwani, Haryana for undertaking sponsored contract R&D project for exploring medicinal and aromatic plants as source of green agrochemicals on 21st August, 2023.
- **CSIR-CIMFR**
 - Signed following MoU with:
 - Hindustan Zinc Limited, Udaipur for R&D, for Academic Collaboration, Activities and Projects Consultation on 22.08.2023.
 - Tata Steel Limited, Jamshedpur for geo-tube filled with fly ash slurry on 22.08.2023
 - NMDC Limited, Hyderabad for the work of Third-Party Sampling and Analysis for dispatch of Iron Ore to Donimalai complex on 22.08.2023.
 - National Institute of Technology, Raipur for to encourages direct contact and co-operation between their faculty and administrative staff, departments, research institutions and centers on 22.08.2023.

- Indian Institute of Petroleum & Engineering, Vishakhapatnam for to encourages direct contact and co-operation between there faculty and administrative staff, departments, research institutions and centers on 22.08.2023
 - S.R.K Minerals, Rohtas, Bihar for Know How Transfer of Improved Soft Coke Making on date 22.08.2023.
- **CSIR-CMERI**
 - Signed following License Agreements on Technology Transfer of Integrated Municipal Solid Waste Disposal System (iMSWDS) for Bulk Waste Generators with:
 - Ecosafe Zero Waste Solutions (P) Ltd., Patna, Bihar on 21/8/2023
 - Joint Enterprise Engg.Co., Durgapur, West Bengal on 21/8/2023
 - SIYA Instruments, Madri, Udaipur, Rajasthan on 21/8/2023
 - Signed License Agreement with K.N.Biosciences India Pvt.Ltd., Hyderabad, Telangana on Technology Transfer of Compact Electric Tractor CSIR PRIMA ET-11 on 21/8/2023
 - Signed MoU with Bargachia Cluster of Metal Product Manufacturers, Howrah, West Bengal for joint technical collaborations on industrial solutions for various MSME units of BCMPM or other problems in different areas to enhance its product quality and productivity on 04/08/2023.
 - Signed MoU with Dept. of Biotechnology (D BT),New Delhi for “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 04/08/2023
 - Signed MoU with Centre for Development of Advanced Computing (CDAC-T), Thiruvanthapuram for “Design & Development of an AI-enabled dust suppression technology for open cast mines” on 24/8/2023
- **CSIR-CRRI**
 - A tri-party agreement signed between Council of Scientific and Industrial Research-Central Road Research Institute (CSIR-CRRI), National Mission for Himalayan Studies (NMHS) and Border Road Organization (BRO) on 23.08.2023 for "Prototype of Mobile Cold Mixer cum Paver (MCMP) for mixing and laying of cold bituminous layer"
- **CSIR-IHBT**
 - Signed MOU with Holir Technologies LLP., Gurgaon, Haryana to undertake joint collaboration in the area of floriculture on 01.08.2023.
- **CSIR-IIP**
 - Signed MoU with Upcharge Energy Solution LLP, Delhi for Conversion of diesel to a dual fuel mode and study of the converted gensets.
- **CSIR-NAL**
 - Signed MoU with 9 Base Repair Depot (9BRD), Indian Air Force for collaboration on indigenization of Avionics aggregates through Modular Open System Architecture in August, 2023.
- **CSIR-NBRI**
 - Signed MoU with Department of Agriculture, Lucknow, U.P. for work together to support the farmers of U.P. on 17.08.2023.
 - Signed MoU with Awadh Forest Division, Department of Forest, Lucknow, U.P., for work together to develop site specific urban forests conventional and Miyawaki for the studies of different aspects on 17.08.2023.
- **CSIR-NEIST**

- Signed Incubation cum Rental Agreement between CSIR-NEIST BioNest and Resolins Technology LLP, Bangalore on 9 August, 2023
- **CSIR-NIIST**
 - Development of A Clean Sustainable MSW Technology 10 TPB pilot plant for Management of Municipal Solid Waste-Center for Environment and Development (CED), Thiruvananthapuram & Nedumangad Municipality, Thiruvananthapuram
 - Review and Update on Biomedical Waste Management in Kerala State - Kerala State Pollution Control Board, Thiruvananthapuram
 - Collaborated with Department of Biotechnology, University Of Calicut, Malappuram for joint collaborative research, undertake multi centric research projects and promote inter-institutional cooperation.
 - Collaborated Sree Chitra Thirunal College of Engineering, Pappanamcode, Thiruvananthapuram for in the areas of mutual interest.
- **CSIR-SERC**
 - Signed MoU Damodar Valley Corporation Limited (DVC), Kolkata, for carrying out "Condition Assessment of Concrete and Steel Structures at DVC Establishment" on 8 August 2023
 - Signed MoU Modern Prefab System Private Limited, Delhi, for "Developing Advanced Protective Structures/Components for Ballistic/Bulletproof/ Baffle Range Products for Advance Protection of Personnel and Property in India in a Phased Manner" on 17 August 2023

Collaborations/Agreements/MoUs Signed (International)

- **CSIR-CRRI**
 - Signed project-based agreement with Road Development Authority, Sri Lanka to provide "training on highway Development and Management Tool (HDM-4)" to Engineers at Colombo, Sri Lanka on 24.08.2023.

Patents Update

Patents Filed			Patents Granted			Patent Prosecutions	
India	Abroad*	Multiple Countries	India	Abroad*	Multiple Countries	India	Abroad*
12	08	09	26	03	03	20	139

* Data reported to IPU during the above said period and may change later during national phase entries

High impact S&T services offered

- **CSIR-CDRI**
 - Common Research and Technology Development Hub (CRTDH): Provided analytical services to one MSME and consultancy for new drug product development to one Medium-Sized Enterprise in the Pharmaceuticals sector.
 - Sophisticated Analytical Instrument Facility: Provided service for analysis of samples by High Resolution Mass Spectrometry (HRMS), Liquid Chromatography-High-Resolution Mass Spectrometry (LC-HRMS), IR Spectroscopy, Elemental Analysis, Liquid Chromatography-Mass Spectrometry (LC-MS), Electrospray Ionization Mass Spectrometry (ESI-MS), High Performance Liquid Chromatography (HPLC). In the month of August 2023, a total of 119 external samples have been analyzed for 31 users.
- **CSIR-CMERI**

- Consultancy service for setting up of Municipal solid waste Management plant of 20TPD capacity (CNP- 1009), Sponsor - Jalandhar Smart City Limited, Jalandhar, Punjab.
- Development of low - cost Induction Melted Liquid Metal Additive Manufacturing Machine (IMMAMM) with Numerical and Experimental Investigations(GAP - 242612). Sponsor - Science and Engineering Research Board, New Mahrauli Road, New Delhi
- **CSIR-CRRI**
 - Implementation of Porous Asphalt Technology to construct asphalt roads in heavy rainfall/hilly regions for NHIDCL, New Delhi.
 - Development of Customized Steel Slag Valorisation Technology for LD/BOF steel slag for Arjas steel Pvt. Ltd., Tadipatri Plant, Andhra Pradesh for conversion of BOF Steel Slag as Road Making Aggregates for ARJAS Steel, Karnataka.
 - Utilization of Jarofix as a retained fill material in different approaches of RoB/VUP and its performance study at Kota, Rajasthan for Hindustan Zinc Ltd, Rajasthan.
 - Use of Refined Lignin as bitumen modifier (extender) i.e. bio-binder for PRAJ matrix R&D center, Praj Industries Ltd, Pune.
 - Vehicular Traffic Induced Road Dust Re-Suspension with S&T based Action Plans for Air Quality Improvement in Delhi NCR (Jointly by CSIR-NEERI and CSIR-CRRI) (CSIR-NEER; Main Partner) for Commission for air quality management (CAQM) CSIR-NEERI, Nagpur.
 - External Technical/Quality and Safety Audit of 16-lane carriageway in the stretches of UER-II (NH-344M& NH-344N) and Dwarka Expressway (NH-248BB), total 8 Construction Packages under PIU, NHAI, Dwarka, New Delhi for National Highway Authority of India (NHAI), New Delhi.
 - Condition Assessment and suggestions for remedial measures of Major and Minor bridges of Odisha Road Network using Modern test procedures of bridges under Public Works Department, Govt. of Odisha in the State of Odisha for Govt. of Odisha.
 - Geotechnical Expert Advice in Designing the Measures for Landslide Prevention/Slope Stabilization, Erosion Control/Drainage Design for World Bank,India.
- **CSIR-IICT**
 - Developed a unique, sustainable, and profitable high rate bio-methanation system based on the "ANAEROBIC GAS LIFT REACTOR (AGR)" for the production of biogas and bio-manure from organic solid waste.
- **CSIR-IIP**
 - Testing and evaluation of two samples (PETO, TMPTO) for Fire Resistance Characteristics submitted by M/s Godrej Industries Ltd., Thane.
 - Testing and evaluation of fuel samples for Gross Calorific Value for M/s Bharat Oil & Grease Co., Jhajjar, Haryana. Project Proposal submitted to CPCL for Type IIA Wax sample testing and Technical help rendered to NRL Wax Plant on High Oil Content Issue after Hydro finishing.
- **CSIR-IITR**
 - Third party monitoring and testing of environmental parameters in PTPP, Parichha, Jhansi.
- **CSIR-NAL**
 - Fabrication of Center Fuselage Composite parts for LCA Mk2 - Aeronautical Development Agency, Bengaluru
- **CSIR-NEERI**
 - Rapid Environmental Impact and Risk Assessment Study for the proposed Polysilicon production unit of Reliance New Solar Energy Ltd, Jamnagar.

- Air pollution Impact Assessment study for preparation of sectorial guidelines for the glass industries in the identified industrial area, Jalesar road Firozabad, UP.
- Groundwater Quality Assessment around Bhagiradha Chemicals and industries Ltd., ngole, Prakasam District, Andhra Pradesh.
- Bioaccumulation and Biomagnification study in and around low laying area filled with fly ash near Adani Power Maharashtra Limited.
- **CSIR-NGRI**
 - Conducting rigorous fieldwork and collecting various Geophysical, Geochemical and Geological datasets from Ladakh UT.
- **CSIR-NML**
 - A metallurgical investigation was conducted to analyze the failure of an API 5LX70M PSL2 grade line pipe steel, prompted by a 24 mm crack emerging during hydro testing. The study involved examining two segments of the pipe: the damaged section with the crack and an undamaged portion away from the crack site.
- **CSIR-SERC**
 - Studies on Capacity curve of factory made one room Building (TRICETECH, Coimbatore)

Outreach Activities (Jigyasa, Skill Development, and others)

- **CSIR-4PI**
 - The winners of CSIR-4PI's JIGYASA doodle competition were felicitated on Independence Day
- **CSIR-AMPRI**
 - Participated in All India Adhiveshan of Laghu Udyog Bharati, Udyami Sangam, New Delhi, 23rd to-25th August 2023.
- **CSIR-CDRI**
 - Offered various Skill Development Programs (SDP) with the following enrolment:
 - Healthcare & Life Science Skill Development Program, (16 participated).
 - Postgraduate Training/Dissertation Skill Development Program, (17 participated).
 - Advanced Training Program for research scholars, R&D Institutions/University employees, and industry professionals (3participated).
 - Scholarship Awardees and Summer Fellows Training Program, (4participated).
 - Organized the Student Scientist Connect program on 4th August 2023 for the tribal areas girl's students Sansad Bharat Darshan from the constituency of Shri Anurag Singh Thakur, Union Minister for Information & Broadcasting and Youth Affairs & Sports, Govt. of India. A total 21 number of 21 female students and 7 faculty members participated.
 - Organized Student Scientist Connect program on 8th August 2023 under JIGYASA for the students of the Nakhashtra Foundation, Lucknow. 15 number of students and faculty participated.
 - Conducted Artificial Intelligence Awareness & Student Scientist Connect program on:
 - 10th August 2023 for the students of Chand Bhanu Gupta Agriculture PG College, Bakshi Ka Talab, Lucknow. 55 number of students and faculty members participated.

- 11th August 2023 for Amity College of Pharmacy, Lucknow students. 150 number of students and 10 faculty members participated.
 - 17th August 2023 for JawaharNavodayaVidyalaya, Pipersand, Lucknow students. 150 number of students and 10 faculty members participated
 - 21st August 2023 for City College of Pharmacy, Lucknow students. 150 number of students and 6 faculty members participated.
 - 29th August 2023 for the Research scholars and scientists of CSIR –Central Drug Research Institute, Lucknow. 170 Research scholars & 25 Scientists participated and learned how Artificial intelligence is used in Health Care and drug Discovery.
- Organized Faculty Development Workshop on 23rd & 24th August 2023 for different school/college teachers from Lucknow Mandal. 45 number of school teachers Participated in this workshop and learned different mythologies and techniques used to improve their teaching skills.
- Organized meet on Role Model Program on 28th August 2023 under the Vigyan Jyoti program for the girls students of JawaharNavodayaVidyalaya, Pipersand, Lucknow. 50 number of 50 female students and 2 faculty members participated.
- **CSIR-CECRI**
 - Conducted following Skill Development Group Training Programme:
 - Operation and maintenance of analytical instruments from 01.08.2023 - 04.08.2023. (48 participated).
 - Artificial Intelligence Based Activities from 29.08.2023 – 30.08.2023 on:
 - For and against use of generative tools for teaching and learning for School and College students of IX-XII.
 - Data based mini research project for College students.
 - Talk on “Machine Intelligence: Why and How?”. 100 School and college students with teachers participated in this programme.
 - Talk on “Thin film based high efficiency capacitors and their applications” on 01.08.2023 in the Alagappa University Community Radio.
- **CSIR-CEERI**
 - Attended PM National Apprenticeship Mela at Govt ITI College at Banipark Jaipur on 14/08/2023. Different Apprentice ship schemes were discussed and the candidates were given information about CSIR and CSR-CEERI.
 - Conducted SDP for agricultural students of SKNAU, Jobner on 21 Aug 2023. 39 students and one faculty member participated.
 - Organized Faculty Development Program on "Recent Trends in MEMS for 6G communication" at CSIR-CEERI Jaipur Campus on 17-18 Aug 2023. 25 faculty members participated
 - 25 Student from SKIT, Jaipur and GIT, Jaipur visited CSIR-CEERI Jaipur Campus on 16-08-2023.
 - Organized SDP on "IIoT& Semiconductor High-Impact Learning Program" (SHILP) (45 Days High-End Skill Training). After completing the IIoT part, the training program for the SHILP for the new batch of 10 students from SKIT, Jaipur, has started from 21 Aug 2023 at CSIR-CEERI Pilani.
- **CSIR-CFTRI**
 - The mobile processing unit of CSIR-CFTRI was taken to Keelanapura Govt. High School, Mysore Taluk on 11.08.2023. The program was named as "CFTRI on Wheels" and demonstration of various products was made which was attended by 222 students and 10 teachers.
 - Five Skill Development Programs were conducted

- Application of liquid chromatography-mass spectrometry (LC-MS) in (Glyco)protein analysis from 07.08.2023 - 09.08.2023, (5 participated).
 - Baking Science and Technology from 07.08.2023 - 11.08.2023, (20 participated)
 - Post-Harvest Technologies of Fruits and Vegetables from 21.08.2023 - 01.09.2023, (47 participated).
 - Grain Process & Products for health & Wellness from 22.08.2023 - 26.08.2023, (28 participated).
 - Development of Pour over Millet Beverage and Curd through Probiotic bacteria from 28.08.2023 - 30.08.2023, (25 participated).
- **CSIR-CGCRI**
 - Two Skill development training programme has been conducted:
 - Advanced instrumental analysis for chemical characterization of glass, ceramics and allied materials by modern instrumental methods of analysis from 28th to 31st August 2023. 17 nos.of students participated
 - Skill Development Programme on Terracotta Processing was organized on August 22nd and 24th 2023 at Dutta Pukur, and Chalta Beria North 24 Parganas. The programme was attended by 56 nos. of rural Artisan.
 - Organized CSIR-CGCRI JIGYASA OWOL Students-Scientist Connect Program” on 25th August, 2023. 350 schools students and teachers attended the program from six different schools in and around Kolkata.
- **CSIR-CIMAP**
 - Organized training programme on Making Incense Sticks and Fragrant Cones under CSIR-Aroma Mission- III at CSIR-CIMAP Campus, Lucknow was organized on 9th August, 2023. 24 participated.
 - Organized sponsored (SIDBI) training programme on cultivation of medicinal and aromatic from 23-25 August, 2023. 59 participated from different states of country.
 - Organized Industry meet on 11th August, 2023. 25 numbers of Aroma industries representatives were participated in this event to discuss the real problems in the business in aroma industries.
- **CSIR-CIMFR**
 - Conducted " Vidyarthi-Jigyasa," Programme under "One Week One Lab" Campaign on 24.08.2023 at CIMFR Barwa Road Campus. The event included a lab visit, science exhibition, student interaction and an interactive quiz.
- **CSIR-CLRI**
 - Organized an awareness-cum-Product demonstration & Training program for Self-help group entrepreneurs & graduates from 02-05 August 2023 on leather product manufacturing in the region of Longleng, Nagaland in association with Yingli College, Govt. of. Nagaland and Phom Baptist Christian Association (PBCA), Longleng Nagaland. 51 members from Self-help group entrepreneurs and graduates were trained.
 - Organized the Hands-on Arduino Programming Workshop for school students on 11 August 2023. The different sessions focused on topics such as Exploring Arduino, Circuit Components & hands-on adventure, Arduino programming, Sensors & its interfacing with Arduino, Signal insights & control. 85 students participated.
 - Organized a 5-day Executive Training Programme on 'Identification and Examination of Leather and Leather Articles' from 21-25 August 2023 for Customs Officials from Netaji Subhash Chandra Bose International Airport, Kolkata.
 - Students from Lady Andal School, Chetpet, Chennai, visited on 22 August 2023 to understand the research programs of the Institute.

- **CSIR-CMERI**

- Jigyasa Programme was organized on 01.08.2023 for 35 nos. of students and three nos. of teachers of Burnpur Riverside School, Riverside Township on the topic " Robotic and Automation " and "Solar energy and its Applications"
- Jigyasa Programme was organized on 03.08.2023 for 70 nos. of students and two nos. of teachers of JawaharNavodayaVidyalaya, Durgapur on the topic "Introduction to basics of electricity and magnetism" and "Overview of Artificial Intelligence"
- Vigyan Jyoti Program was organized on 08.08.2023 for 44 nos. of students and two nos. of teachers of JawaharNavodayaVidyalaya, Birbhum on the topic "Introduction to the fascinating world of Artificial Intelligence(AI)" and "Water quality parameters and its effect on health". site.
- Jigyasa Programme was organized on 10.08.2023 for 38 nos. of students of and 3 nos. of teachers of Burnpur Riverside School,Chittaranjan on the topic "Introduction to the fascinating world of Artificial Intelligence(AI)" and Visit to Municipal Solid Waste Management.
- Jigyasa Programme was organized on 17.08.2023 for 115 nos. of students and 2 nos. of teachers of Army Public School, Panagarh participated in do it yourself kit "Experiment with DIY kit related to Electricity and Magnetism"
- Jigyasa Programme was organized on 24.08.2023 for 60 nos. of students and 3 nos. of teachers of Bhiringi Girls' High School,Benachity on the topic "Internet of thing (IOT) and Artificial Intelligence in Robotics" and on the topic "Solar energy and its Applications".

- **CSIR-CRRI**

- Conducted 5-day Regular training program on "Design, Construction, Quality Control and Maintenance of Rigid Pavements" during August 28 – September 01, 2023. 50 participated from various parts of India.
- Conducted one day Fire Awareness / Safety Training program on August 22, 2023 for the staff members of the Institute. During the program, a team from Delhi Fire Service, Govt. of NCT of Delhi demonstrated firefighting skills and a mock-drill also carried out. Many staff members of the Institute participated in the training program enthusiastically.
- As part of All India Adhiveshan organized by Laghu Udyog Bharati at Adhyatm Sadhna Kendra, New Delhi during August 23-25, 2023, a technical exhibition was organized to showcase latest products & technologies and CSIR-CRRI participated in the exhibition on August 25, 2023.

- **CSIR-CSIO**

- Conducted the lab visits and experimental demonstration for school students of Class 11th and 12th from Vivek High School, Chandigarh on 11th August, 2023.The labs demonstrated by PhD Scholars for today's session were:
 - Material Science Lab
 - Food and Agricultural Instrumentation
 - Biomedical Instrumentation.
 - Isens

62 students and 4 teachers have joined for the session.
- Handed over the climate clock developed by Energy Swaraj Foundation to GMSSS Sec-8, Chandigarh on 18th August,2023.The demonstration cum interactive session was conducted for the school students and teachers. 40 students and 2 teachers have joined us in the following awareness program.

- Organized INSPIRE-MANAK mentorship workshop in collaboration with NIF, India to showcase the innovative ideas and the student's creativity in the best possible manner in the presence of eminent scientist panel during 23rd-24th August, 2023.
- Organized webinar under AI awareness program themed "Importance of Machine Learning" on 28th August, 2023, presented by Dr.Rajeev Kumar, Professor (DTU).90 students & teachers from different school participated.
- **CSIR-HRDC**
 - Capacity Building Training for Nodal Officers of CSIR Integrated Skill Initiative on 3 August 2023
- **CSIR-IGIB**
 - One-Day Hand-On Workshop on 10X Genomics by Premas Life Sciences on 18August, 2023
- **CSIR-IHBT**
 - Conducted one-day training program on August 2, 2023 on cultivating Himalayan Rosa damascene at Chandpur Farm, Agrotechnology Division. Farmers from KothiKohar, Distt. Kangra, H.P. actively participated and understood the cultivation practices, harvesting and processing techniques of the Damask Rose.
 - An exhibition stall was organized by CeHAB on the occasion of Tribal Fair at Keylong, District Lahaul and Spiti from 14-16 Aug 2023. The Tribal Fair was inaugurated by Hon'ble DC, Lahaul and Spiti and various activities of CSIR-IHBT at CeHAB was showcased to the local people and the staff from Line departments and the Administration.
 - 68 students and faculty members from different schools/colleges/Universities have visited the Herbarium and they were appraised about the role of herbarium and various technologies made by the CSIR-IHBT.
 - CSIR-Jigyasa and the "Vigyan Jyoti Program" have jointly organized three-day skill development workshop for Vigyan Jyoti Scholars from 28-31 August, 2023. 41 girl students and 3 teachers participated.
- **CSIR-IICT**
 - In association with Aragen Life Sciences Ltd, Hyderabad and Kewaunee Lab Way India Pvt Ltd, Bangalore, first batch of 4 months Finishing School Program on "Advanced Synthetic Organic Chemistry Training" was commenced on 9th Aug 2023. 20 candidates attended this Skill Development Training.
 - Jigyasa programme was organized on 22nd August 2023, at Zaheer Science Foundation, Delhi to showcase CSIR Labs research work for science-based learnings through video presentations, interactive sessions, poster presentations and hands on to the students from class IX to XII from CBSE affiliated schools in Delhi.
- **CSIR-IIIM**
 - Organized workshop on Artificial Intelligence on "Unseen Presence of Artificial Intelligence:Weaving into the Fabric of Everyday Life" on 12th August, 2023. 60 students and teachers from JNV Gharota and GHSS Sohal, Akhnoorparticipated and 500 students from various schools participated through Online mode.
 - IIIM-Technology Business Incubator (TBI) has conducted two awareness program cum road show at Cluster University Srinagar AAAMC college, Beminaand IIED Centre, NIT, Srinagar on 04-08-2023.
- **CSIR-IIP**
 - Under the Jigyasa program, a Scientific Lecture on Crude Oil and its Properties was organized on 04 Aug 2023 for students of The Sapience School, Herbertpur&Doon Public Academy school, Dehradun. Conducted Skill Development Training on 'Analysis using Chromatography and Mass- Spectrometry' July 31- August 11, 2023

- **CSIR-IITR**
 - Conducted the Workshop on Genotoxicity on 14.07.2023 with 44 participants pan-India. Knowledge regarding Chromosomal aberrations, Micronucleus assay, Comet assay, and Ames test, was imparted. All these tests are pertaining to genetic toxicity caused by environmental and other factors. T
 - Inaugurated a two-day workshop on “Oxidative and Cellular Stress Assay” under the CSIR-Integrated Skill Initiative on July 27th - 28th, 2023.
 - Organized a Hands-on Training on Biostatistic for beginners during 18-21 August, 2023 and taught about data handling, experimental design, Data analysis on dummy data, different statistical software, descriptive statistics.
- **CSIR-NAL**
 - Conducted Scientist Teacher Connect Programme from 10-11 August 2023
- **CSIR-NBRI**
 - During ‘One Week One Lab’ Celebration of CSIR-NBRI following workshops and competition were organized:
 - Bonsai Technique & Dehydrated Floral Crafts on August 14, 2023. 200 participated.
 - Traditional Recipes with Millets on August 19, 2023. Out of 60 registered participants 25 were screened for the actual competition and 3 were given prizes.
 - Organized visits of students at Exposition, Herbarium & Exhibition at Central Lawn, KN Kaul block, CSIR-NBRI, Lucknow. 350 students visited the Institute.
- **CSIR-NEERI**
 - Organized following Skill Training Programs:
 - Soil Quality Assessment and Land Management from 09-10August,2023.
 - Development of Capacity on Climate Change in Water Sector from 23-24,2023
- **CSIR-NEIST**
 - Organized one day Science Motivation cum demonstration program on 11 August,2023 at Branch Laboratory, Itanagar. 50 students of Bunny’s Fantasy World School, Itanagar Arunachal Pradesh attended.
 - Organized an AI-based popular talk on the 18 August,2023 to create awareness and dissemination about AI to school students.60 students and 6 faculty members from Modern Public School, Guwahati, Assam participated.
 - Organized an AI-based awareness program on 25/08/2023 under the theme "Artificial Intelligence". 54 students along with 4 faculty members participated from Jorhat Kendriya Mahavidyalaya participated.
 - Beekeeping training and Honey bee distribution program was conducted under CSIR-Floriculture Mission at Hamren, West LarbiAnglong of Assam in collaboration with Hamren Natural Foods Processor, hamren, where 40 nos of bee colonies with bee boxes, honey extraction machine and other accessories as well as seedlings of floriculture crops have been distributed among farmers on 22 August, 2023.
- **CSIR-NGRI**
 - Organized a training program on “Hydrogeophysical Techniques for Groundwater Exploration” from July 31 - August 12, 2023 under CSIR Integrated skills development. 28 participated.
- **CSIR-NIO**
 - Organized in collaboration with The Royal Society of Chemistry, UK the Yusuf Hamied Chemistry Camp (Residential program) for Grade IX school students under

Dr Yusuf Hamied's Inspirational Science Programme from August 08 - 10, 2023. The aim of the camp is to enable students to explore the fun of Chemistry and Oceanography and encourage them to develop a long-term interest in it.

- **CSIR-NIIST**
 - In association with Kerala Govt Dept. of General Education, jointly organized Energy & Climate Awareness Programs at two different, rural Govt Higher Secondary Schools in Thiruvananthapuram. 450 students and 20 teachers participated.
 - Organized an Artificial Intelligence Awareness Program at Kendriya Vidyalaya Aakkulam, Thiruvananthapuram on Aug 17, 2023. 120 students and 12 teachers from 10 KV Schools in KV Ernakulam Cluster Participated.
 - Industry Stakeholders Meet on Spice Processing - Perspective from a consumer and commercial angle" where all the leading manufacturers in Spices processing & export sector, representatives from State and Central Govt agencies, research institutes, machinery suppliers participated and discussed about various opportunities and challenges related to spice export and value chain.
 - Industry Connect Meet on Herbal Drugs & Nutraceuticals held at CSIR-NIIST. Distinguished representatives from leading botanical drug manufacturers attended the event
- **CSIR-NML**
 - One Day NML Visit of St. Mary's English High School, Bistupur & Student-Scientist Interaction program on Introduction to AI & ML was organized on 11/08/2023. 124 participated.
 - 6th Scientific Excursion 2023 Exclusively for KAMP-NASTA Students was organized on 17/08/2023. 126 participated.
 - Organized ATL School Visit at JNV Chaibasa on 22/08/2023. 30 participated.
 - Certificate distribution on Job Oriented Training (JOT) programs on "3D printing, Basic Computer Software, Innovative product development, and Waste Management" for women at CSIR-NML organized on 28/08/2023. 65 participated.
- **CSIR-SERC**
 - Demonstration of Cost-Effective Toilet units by CSIR-SERC at Govt Panchayat Middle School, Mootaikaaran Chavadi, Chennai, on 02 August 2023.
 - Organized customized Short-Term Course on "Tall Structures" for officials of National Thermal Power Corporation Limited/ Indian Oil Corporation Limited, held during 07-11 August 2023. 15 participated.
 - Organized customized Short-Term course on 'Tall Structures' for officials of NTPC Ltd. and Indian Oil Corporation Limited (IOCL) during 7-11 August 2023.
- **CSIR-URDIP**
 - Conducted onsite IP Training Programme for IP Co-Ordinators for CSIR labs from 8-10 August 2023.
 - Along with CSIR-IPU visited CSIR-CFTR on August 24-25, 2023 to review and discuss the patent filing activity at CSIR-CFTRI.

Major Conferences, Seminar/Webinars, Workshops organized

- **CSIR Headquarters**
 - CSIR organized fourth lecture of the CSIR AMRIT Lecture Series on 25 August, 2023. The Lecture on "Basic Scientific Research: Drowned in Translation" delivered by Prof. Padmanabhan Balam, former Director, Indian Institute of Science, Bangalore & Chair Prof., National Centre for Biological Science, Bangalore.

- CSIR and its lab participated in the 26th National Science Exhibition, 2003 held at Central Park Maidan, Salt Lake, Kolkata during 24-27 August, 2023. Labs participated were CSIR-IICB, CSIR-NML.
 - Live Telecast of Chandrayan-3 soft landing event was organized at CSIR Hqrs in the presence of Hon'ble Minister (I/C) S&T Dr Jitendra Singh and Principal Scientific Advisor (PSA) to the Govt. of India, Prof A.K. Sood. The DG, CSIR, Dr. N. Kalaiselvi and Directors/Heads of CSIR Labs/Institutes along with Scientist, Technologists, School Students and other members attended the event.
 - CSIR HQ and its Labs celebrated 77th Independence Day across the Nation along with the CSIR family members.
- **CSIR-CCMB**
 - CSIR-CCMB, Hyderabad organized One Week One Lab (OWOL) campaign from 1-5 August, 2023.
 - **CSIR-CGCRI**
 - CSIR-CGCRI, Kolkata organized One Week One Lab (OWOL) campaign from 22-26 August, 2023.
 - **CSIR-CIMFR**
 - CSIR-CIMFR, Dhanbad organized One Week One Lab (OWOL) campaign from 22-26 August, 2023.
 - **CSIR-CMERI**
 - Hon'ble Minister (I/C) S&T, Dr. Jitendra Singh unveiled the e-tractor developed by CSIR-CMERI during the Curtain Raiser of OWOL of CSIR-CMERI held on 21.08.2023 at CSIR-NPL Auditorium, New Delhi.
 - **CSIR-IGIB**
 - Indo-Vietnam workshop on "Hands on training on sequencing techniques" from 2-6, August, 23
 - **CSIR-IHBT**
 - Institute organized "Pushp KrishiMela" under CSIR Floriculture Mission II on 10th August, 2023 at DIHAR, DRDO, Leh. It was inaugurated by Hon'ble Lt. Governor Brig. (Dr.) B. D. Mishra (Retd.). Chief Executive Councillor, LAHDC, Leh, Advocate Tashi Gyalsen, Member of Parliament, Ladakh, Shri Jamyang Tsering Namgyal, Shri Ravinder Kumar (IAS), Secretary Agriculture/Horticulture UT Ladakh and Dr. O.P Chaurasia, Director, DIHAR, DRDO, Leh, Ladakh were present as guest of Honour.
 - **CSIR-NAL**
 - Industry Meet for Commercialization of Eco-Friendly NALSUN-NG Coating on 30-08-2023
 - **CSIR-NBRI**
 - Organized One Week One Lab Programme during August 14-19, 2023. Each R&D area of the institute displayed and showcased their R&D achievements during the campaign. The programme was also marked by the launching of various R&D outcomes of CSIR-NBRI.
 - **CSIR-NIO**
 - Workshop on Mainstreaming Research, Technology & Innovation in Ushering Blue Economy in India was inaugurated on 17th August 2023 at CSIR- National Institute of

Oceanography, Goa, at the hands of Shri. Arunabh Bose, TM Commander, DIG, ICG, Goa and Prof. Pradeep Srivastava, Executive Director, TIFAC, DST, New Delhi in the presence of Prof. Sunil Kumar Singh, Director, CSIR-NIO, Shri. R.A. Sreepada, Sr. Principal Scientist, CSIR-NIO and Dr. RakheeKhandeparker, Principal Scientist and Organising Secretary of the programme.

- **CSIR-NML**

- 79th Research Council Meeting (09.08.2023): The meeting was chaired by Prof. Indranil Manna, Vice Chancellor, BIT Meshra, and other members present were Prof. JyotsanaMajumdar, IIT Kharagpur and Dr. DebahishBhattacharjee, Vice President, Tata Steel. Dr. AK Srivastava, Director,CSIR-NML felicitated the current RC members, as the term of the current RC will be ending soon. Other members joined in the online mode also.

Visit of high-level dignitaries to the Institute/Laboratory

- **CSIR-AMPRI**

- Ms. Vaishali Surawar, Vice President, Sustainability, Hindalco Industries Limited, Mumbai, visited on 19th August 2023.

- **CSIR-CEERI**

- Shri. Sidharth Pokharna, Additional Director General Telecom, Raj-LSA, DOT, Gol, Jaipur. Visited CSIR-CEERI Jaipur Campus on 17-08-2023

- **CSIR-CIMAP**

- Dr. Anil Prakash Joshi, Environmentalist & Padam Shri and Padma Bhushan Awardee, Dr. G.N. Singh, Advisor to Hon'ble Chief Minister, Govt. Uttar Pradesh, U.P. and Ex. Drug Controller General of India and Shri Awanish Kumar Awasthi, I.A.S. (Ret.) Administrative Advisor to Hon'ble Chief Minister, Govt. Uttar Pradesh, U.P. visited on 45th Annual Day of CSIR-CIMAP, Lucknow on 11th August, 2023

- **CSIR-CIMFR**

- On the occasion of Open Day " Vidyarthi-Jigyasa," Programme on 24.08.2023, Shri Varun Ranjan, DC, Dhanbad district graced the occasion as Chief Guest.
- On the occasion of Thematic Lecture "Gyanodaya" Shri Bhola Singh, CMD, NCL grace the Inaugural Session as Chief Guest, Shri Rajive Kumar, IFS (Retd.) Chairman, Expert Appraisal Committee MoEFCC, Govt. of India visited on 25.08.2023.
- Prof. J K Pattanayak, Director, IIT ISM as a Chief Guest on the occasion of Startup Meet (Udaan) under "One Week One Lab" Campaign on 26.08.2023
- Shri Prabhat Kumar, Director General, DGMS, Dhanbad as a Chief Guest on the occasion of Closing Ceremony (SamapanSamaroh) of "One Week One Lab" Campaign of CSIR-CIMFR.

- **CSIR-CMERI**

- Prof Chin Tsan Wang, Director & Ms. Yi Ting Chiang (Ellie), Assistant Director of S&T Division, Taipei Economic & Cultural Center visited on 23.08.23 to explore possibility of collaboration between CSIR-CMERI & Taiwanese research institutes and universities.

- **CSIR-CSIO**

- Vice Admiral Sanjay Mahindru, Deputy Chief of Naval Staff visited CSIO Prof. Giridhar U Kulkarni, President, JNCASR Bangalore visited.

- **CSIR-NBRI**

- Dr. Jitendra Singh, Hon'ble Union Minister S&T, Shri Brajesh Pathak, Deputy CM, UP Govt. Shri DS Mishra, Chief Secretary, UP Govt., Shri Surya Pratap Shahi, Hon'ble Cabinet Minister, Agriculture and Dr. Arun Kumar Saxena, Hon'ble Minister of State

(Independent Charge), Environment & Forest, UP Govt. visited during One Week One Lab Celebration (14-19 August, 2023).

- **CSIR-NIIST**

- The second day of Sravanotsav 2023, the Onam Cultural Fiesta was graced with presence of Prof. V Madhusoodanan Nair, Shri. Shyama Prasad and Shri K.K Gopalankrishnan.
- Shri. V. Sivankutty, Minister for General Education and Laborur, Govt. of Kerala graced the occasion with his presence during Onam celebrations at CSIR-NIIST.

COVID related developments/Research

- **CSIR-IGIB**

- Analysing T cell responses in PBMCs from Covid 19 patients as part of a multi centric proposal.
- Conducting host response to COVID-19 disease caused by different variants of concern (VOC) - Alpha, Delta and Omicron.
- Setting up MicroLabs in different parts of India for SARS-CoV-2 sequencing.
- Active surveillance for potential new SARS-CoV-2 variant.

- **CSIR-NEIST**

- Under the project entitled with "Spatiotemporal Dynamics of SARS-CoV-2 Variants in Wastewater Systems in Northeast India through Genomic Surveillance and Epidemiology for Forecasting its Spread "; CSIR-NEIST has been carried out the wastewater-based surveillances for SARS-CoV-2 from different wastewater bodies of Jorhat District. In the month of June-July 2023; 50 wastewater samples have been collected from different parts of Jorhat District and all samples have been tested negative.
- Establishment of the protocol for Wastewater based detection of SARS-CoV-2 and the target-based genome sequencing.
- Genome sequencing activities are in progress. However, during the month of July there is no samples received for sequencing.

Details of events celebrated to mark India@75 or Azadi Ki Amrit Mahotsav / 75 Years of Indian Independence

- **CSIR-CDRI**

- Celebrated The World Organ Donation Day on 3rd August-2023

- **CSIR-CLRI**

- CSIR-CLRI observed Indian Organ Donation Day (IODD) on 03 August 2023 to raise awareness of the importance on Organ donation and to dispel the myths and misconceptions about Organ donation.
- Blood Donation Camp was jointly organized by CSIR – CLRI & Cancer Institute (WIA), Chennai at CLRI premises on 09 August 2023.
- Zaheer Science Foundation in association with CSIR-IICT, CSIR-CLRI and CSIR-IGIB organized JIGYASA 2.0 for Kendriya Vidyalaya and other public schools from NCR region of New Delhi on 22nd August, 2023 at Udyan Marg, New Delhi.

- **CSIR-CMERI**

- Celebrated Sadbhavana Diwas on 18.08.23. The employees & staffs took pledge to work for unity & harmony of all people of India.

- **CSIR-CRRI**

- Celebrated "National Sports Day" on August 29, 2023. As part of this, a FIT INDIA PLEDGE was taken by the staff members of the Institute to promote Fitness. Large number of staff members participated in various sports activities.

- **CSIR-IHBT**
 - Director, CSIR-IHBT administered the Pledges to the staff and scholars of the Institute on the occasion of Indian organ donation day related pledge on 03.08.2023 and Sadbhavana Diwas pledge on 18.08.2023.
- **CSIR-IICT**
 - Celebrated 80th Foundation Day of CSIR-IICT on August 7, 2023. The event was graced by Prof. V. Ramgopal Rao, Vice-Chancellor of Birla Institute of Technology & Science (Pilani) as the Chief Guest and he delivered the Foundation Day lecture on “How do we create an Innovation Driven Research Eco-system in our Higher Educational Institutions”.
- **CSIR-IIIM**
 - Hosted a live telecast of the Chandrayaan 3 landing for Scientist, Technical Staff and Students of the institute. Entire staff rejoiced the momentous occasion when India scripted the history of soft landing.
- **CSIR-IIP**
 - A Pledge was taken by the Staff on the occasion of Sabbhawna Diwas on 18th August, 2023
- **CSIR-NAL**
 - Curtain Raiser Event of One Week One Lab Programme on 02-08-2023
 - Research Council Meeting of CSIR-NAL on 2nd August 2023
 - Celebrations NAL Foundation Day on 17 August 2023
- **CSIR-NEIST**
 - Celebrated the National Sports Day-2023 on 29 August, 2023 wherein the students and staff participated in various sports event in the day long program followed by the valedictory and prize distribution

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 (PFRI) 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 by Industry (under section 35(2AB) of IT Act). This scheme helps in encouraging industrial R&D in the country.

Industrial R&D Promotion Programme (IRDPP)

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

- 6 in-house R&D units of industries were granted Fresh Recognition and 6 were granted Registration certificates.
- 51 in-house R&D units of industries were granted Renewal of Recognition and 56 were granted renewal of Registration certificates.

Scientific and Industrial Organization (SIRO)

- 4 SIROs were granted Fresh Recognition and 3 were granted Registration Certificates.

Public Funded Research Institutes(PFRI)

- 2 PFRIs were granted Registration certificates.
- 3 PFRIs were granted renewal of Registration certificates.

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

- 7 in-house R&D units of industries were granted Approval in Form 3 CM u/s 35(2AB) of IT Act 1961.
- 13 in-house R&D units of industries were granted Extension of Approval in Form 3 CM u/s 35(2AB) of IT Act 1961.
- 17 Reports in Form 3 CL certifying R&D expenditures of Rs. 2127.52 Crores were issued to CCIT (E) for fiscal benefits u/s 35(2AB) of IT Act 1961.

DSIR Central Sector scheme ‘Industrial Research and Development (IRD)’ comprise 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):

2 projects namely “ An Automated Panipuri vending machine” and “ Development of Osteoporosis estimation device application” were successfully completed during the period.

Common Research and Technology Development Hubs (CRTDH) Scheme:

CRTDH –ChintanShivir-CRTDHs Empowering MSMEs was organized on 24thAugust, 2023 at CSIR-IITR, Lucknow:

- The “Chintan Shivir-CRTDHs empowering MSMEs” was organized at the Common Research and Technology Development Hub (CRTDH) at CSIR-IITR, Lucknow on 24th August 2023. The gathering was addressed by the Secretary, Department of Scientific and Industrial Research (DSIR) and Director, IITR, Lucknow and Head, CRTDH, DSIR. Officials from DSIR, IITR, Lucknow and stakeholders from MSMEs, Startups, Innovators, and Industry Associations attended the event. The event was intended to connect MSMEs/Startups/Innovators with the cutting-edge facilities of CRTDH. This event gave MSMEs, startups, and innovators a chance to learn how these resources may boost their capabilities, increase productivity, and advance innovation in the area of environmental interventions.
- First meeting of Project Guidance cum Review Committee (PGRC) for DSIR-Common Research and Technology Development Hub (CRTDH) set up at Indian Institute of

Technology Guwahati in the area of New Materials/ Chemical Processes was held on 17th August, 2023 in virtual mode.

- Second meeting of Project Guidance cum Review Committee (PGRC) for DSIR-Common Research and Technology Development Hub (CRTDH) set up at CSIR-National Chemical Laboratory (NCL), Pune in the area of New Materials & Chemical Sciences was held on 29th August, 2023 in virtual mode

Scheme A2K+:

A2K+: Studies

- Second Project Guidance cum Review Committee (PGRC) meeting was conducted on 18th August, 2023 to review technical and financial progress of the study entitled “Forecast Model to predict Leather Footwear Trade Data for the Year 2030 using Artificial Intelligence Approach” Supported to CSIR-CLRI, Chennai. PGRC was chaired by Scientist-G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PGRC from other academic institute and research institute.
- Second Project Guidance cum Review Committee (PGRC) meeting was conducted on 21st August, 2023 to review technical and financial progress of the study entitled “Assessing the Techno-commercial Status of TRL 6 and above Technologies in the field of Food Processing and Agriculture Technologies” Supported Indian Institute of Technology (ISM) Dhanbad, Jharkhand. PGRC meeting was chaired by Scientist-G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PRC from other academic institute and research institute.
- Second Project Guidance cum Review Committee (PGRC) meeting was conducted on 22nd August, 2023 to review technical and financial progress of the study entitled “Techno-commercial Assessment of TRL-6 and above Technologies developed in India, in Academia, Research Institutions, Research Labs & Industry (Sector: Materials & Manufacturing)” conducted by IIT, Jammu. PGRC was chaired by Scientist-G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PGRC from other academic institute and research institute.
- Second Project Guidance cum Review Committee (PGRC) meeting was conducted on 22nd August, 2023 to review technical and financial progress of the study entitled “Techno-commercial Assessment of TRL-6 and above Technologies developed in India, in Academia, Research Institutions, Research Labs & Industry (Sector: Transportation & Energy)” conducted by Foundation for Innovation and Technology Transfer (FITT), IIT Delhi. PGRC was chaired by Scientist-G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PGRC from other academic institute and research institute.
- Second Project Guidance cum Review Committee (PGRC) meeting was conducted on 28th August, 2023 to review technical and financial progress of the study entitled “Performance Evaluation of Advanced Dielectric Materials in Transformers” conducted by NIT, Srinagar. PGRC was chaired by Scientist-G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PGRC from other academic institute and research institute.
- Second Project Guidance cum Review Committee (PGRC) meeting was conducted on 30th August, 2023 to review technical and financial progress of the study entitled “Techno-commercial assessment of TRL-6 and above technologies developed in India in academia, research labs and industry” (Sector: Manufacturing & Electronics and Telecommunication)” Supported to Indian Institute of Technology, Roorkee (IITR). PGRC was chaired by Scientist-

G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PGRC from other academic institute and research institute.

- First Project Guidance cum Review Committee (PGRC) meeting was conducted on 30th August, 2023 to review technical and financial progress of the study entitled “A study on application of effective digital technologies for managing municipal waste in smart cities: A case of Andhra Pradesh” Supported to IIM, Vishakapatnam. PGRC was chaired by Scientist-G & Head, A2K+ Studies and attended by DSIR officials, Expert members of PGRC from other academic institute and research institute.

A2K+: Events

- 21st Meeting of the Technical Advisory Committee (TAC) of A2K+Events was held online through a virtual platform on 04.08.2023. Five screened in proposals were put up for consideration of TAC as part of the agenda. Three proposals were recommended by TAC for consideration.
- **“International Conference on Smart and Innovative Development in Science, Engineering & Technology (SIDSET-2023)”** was held at Bhilai Institute of Technology Campus Scheduled from 16.08.2023 to 18.08.2023 under A2K+ Events Program. The conference was organized by Bhilai Institute of Technology, Durg, Chattisgarh. The main objective of the conference was to promote active interaction among academicians, scientists, researchers, and research scholars to exchange and share their experiences and research results on all aspects of Smart and Innovative Trends in Science, Engineering and Technology, to showcase all IDEA's, Lab activities, and to promote collaboration at national and international level labs. The conference was attended by 295 participants out of which 3 International Keynote Speakers, 2 National Keynote Speakers, 6 Session Chairs, 83 Research Scholars (PG Students & Research Scholars), 70 Academicians, 21 Industry Personnel with 75 Oral Presentations & 35 Poster Presentations.

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

- Second Project Review Committee (PRC) meeting of TDUPW Project entitled “Promotion of Stevia – A gift of Nature “0” calorie bio-sweetener – for Income Generation of Female Farmers in Chandrapur District” of AFORD, Chandrapur, Maharashtra was held on 18th August, 2023 to review technical and financial progress of the project. PRC meeting was chaired by Scientist 'G' & Head-TDUPW, DSIR and attended by DSIR officials, Expert members of PRC from other academic institute and research institute.
- **206 Women Beneficiaries** have been trained under the various ongoing TDUPW projects aiming women empowerment through technology deployment and dissemination. Imparted the training to 25 women on preparation of custard apple, 12 weavers on weaving technologies, 35 women on sericulture, 50 women on food processing, 4 women are undergoing for master trainer for imparting skills on making CFTRI model of Spices and Masala mixing, processing and packaging technologies to identified women, 45 women on Handicraft, Embroidery and Textile and 35 women on poultry and goatery.

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 in the country through its own R&D efforts and it 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.1881.67 lakhs during August, 2023.
- Sale of items worth Rs. 2089.38 lakhs was realized during August 2023.

National Research Development Corporation (NRDC)

NRDC continues to lay emphasis on broadening and strengthening the technology resource base by nurturing long-term relationships with R&D institutions as well as universities, technical organizations, industries and individual inventors.

- National Research Development Corporation (NRDC) has licensed five new technologies on Spurlina Chocobar & Sprulina Cereal Bar to M/s Esynze; Graphene from Waste Plastics to M/s. Shivi Graphene; Seaweed Extract Fertilizer to M/s. Kisan Agrovet; Seaweed Extract Fertilizer to M/s. Agrolife Biotech during August 2023.
- NRDC has collected premia of Rs. 14.30 Lakhs from respective technologies during August 2023.
- A Keynote address on “Upscaling Innovation ecosystem of India through Technology Transfer” was delivered during G20 S20-Regional conclave held at Bhubaneswar.
