

**No. DSIR/MS/2023/07**  
**Government of India**  
**Ministry of Science & Technology**  
**Department of Science & Industrial Research**  
**MONTHLY SUMMARY FOR THE CABINET**  
**(For the monthly of July 2023)**  
**(Part-I Unclassified)**

**Major achievements during the month of July 2023**

**Council of Scientific & Industrial Research (CSIR)**

**New Technologies/Processes Developed/Transferred**

- **CSIR-CBRI**
  - Transferred the Technology for preparation of Nano Silica to S.P. Conacre Pvt. Ltd., Sangli, Maharashtra on 25.07.2023.
- **CSIR-CDRI**
  - Substituted 3-methylbenzo[d]thiazol-3-ium compounds and use thereof
- **CSIR-CECRI**
  - Developed following Processes and transferred to:
    - Preparation of Hexagonal BORON NITRIDE through Molten Salt Technique to Multicoat Coating Technologies Private Limited, Kolkata
    - Mixed Metal Oxides Coating Technology for anode of electrochemical cell for the production of hypochlorite from brine and sea water to RSVP Chloro tech, Chennai and AGIL Power Control System, Chennai
- **CSIR-CSMCRI**
  - Novel kit based on modified membrane, its use thereof for detection of bacterial community along with antibiotic resistant profile from clinical samples
  - Oxy-tethered cation exchange membrane from fluorinated polymer and its method of preparation thereof
- **CSIR-IIP**
  - Production of beta-glucan from deoiled yeast cake;
  - Purification of lutein and beta-carotene from yeast pigment mixture;
  - Ethanol fermentation with corn starch (post saccharification) and sorghum juice with detailed fermentation kinetics, and detailed characterization of ethanol-free fermentation spent broth;
- **CSIR-NIIST**
  - Knowhow and technical guidance to ADC for the Fabrication of the Equipment-Antony David Thrissur

**Collaborations/Agreements/MoUs Signed (National)**

- **CSIR-4PI**
  - Signed MoU with National Centre for Medium Range Weather Forecasting, Ministry of Earth Sciences on July 13, 2023 for collaboration and promotion of academic and research cooperation and exchange of student's research programs.
- **CSIR-CBRI**
  - Signed following MoU with:

- National Institute of Rural Development and Panchayati Raj (NIRDPR) Rajendranagar, Telangana to explore Capacity Building Initiatives towards Construction Technologies / Habitat Planning and Promotion of various Construction materials etc. on July 1, 2023
  - Kamaraj College of Engineering and Technology (KCET) to create an extensive reservoir of highly qualified manpower in all fields of Building Science and Technology and to club their efforts by pooling their expertise and resources on July 11, 2023.
  - Pimpri Chinchwad College of Engineering & Research (PCCOER), Pune for promoting excellent quality manpower in the area of Civil Engineering, Building Science and Technology, Engineering Technology, Architecture and Planning and other areas of engineering on July 18, 2023.
  - International Institute of Information Technology Hyderabad (IIT-H) for enhancing within the country the availability of highly qualified manpower in the area of Civil Engineering, Building Science and Technology, Engineering Geology, Architecture and Planning and other areas of engineering on July 21, 2023.
- **CSIR-CDRI**
  - A Memorandum of Cooperation executed with INMAS, DRDO, New Delhi on 05-07-2023 to Formulation development of topical drug for combined radiation injury
  - A Clinical Trial Agreement executed with King George's Medical University, Lucknow on 13-07-2023 w.r.t. "A Phase III, multicenter, randomized, double-blind, placebo-controlled, interventional study on efficacy and safety of Standardized fraction of Picrorhiza kurroa Royal Ex Benth (Picroliv®) for 24 weeks in the Management of Non-Alcoholic Fatty Liver Disease (NAFLD)."
  - Collaborative Research Agreement executed with Ardent Clinical Research Services, Pune on 26-07-2023 to identify and develop PARP-1 selective inhibitors for BRCA mutated cancer.
- **CSIR-CECRI**
  - Collaborated with
    - Multicoat Coating Technologies Private Limited, Kolkata for preparation of Hexagonal BORON NITRIDE Through Molten Salt Technique.
    - AGIL Power Control System, Chennai and RSVP Chloro tech, Chennai for Mixed Metal Oxides Coating Technology for Anode of Electrochemical cell for the production of hypochlorite from brine and sea water.
- **CSIR-CFTRI**
  - Signed MoU with International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Telangana on 6th July 2023 to develop co-operation and collaboration in research and development in the areas of nutrition, agro-food processing and value addition with focus on nutritious and climate resilient crops such as millets, pulses etc.
- **CSIR-CIMFR**
  - Signed MoU with Hutti Gold Mines Company Limited, Dist. Raichur, Karnataka State for Geotechnical assessment of Rock mass, Determination of Physico-mechanical properties, Sequencing of mining operations work on date 14.07.2023
- **CSIR-CRRI**
  - Signed Agreement with Arjas Steel Private Limited for Development of customized steel slag valorisation Technology for LD/BOF steel slag for Arjas Steel Private Limited, Tadipatri Plant, Andhra Pradesh for conversion of BOF Steel Slag as Road Making Aggregates on 18 July 2023.

- Signed Technology Transfer Agreement with Somani Ecobuild Products LLP for development of cementitious material for stabilization of Sub-Base & Base course in Flexible Pavement on 18 July 2023.
- Signed MoU with Indian Institute of Technology (IIT), Guwahati, Assam for Academic and research collaboration in the areas of mutual interest on 22 July 2023.
- **CSIR-CSMCRI**
  - Signed Agreement with:
    - Public Health Engineering Directorate, Govt. of West Bengal, Kolkata for design, development, and commissioning of a 10,000 LPH desalination plant.
    - Shree Somnath Sanskrit University, Veraval, Gujarat for Maintenance of 1200 LPH brackish water reverse osmosis (BWRO) plant installed by CSIR-CSMCRI at SSSU, Veraval.
- **CSIR-IGIB**
  - Signed following MoU with:
    - National Institute of Biomedical Genomics, Kalyani on 07-07-2023 for collaborative research in the area of Biomedical Genomics.
    - Sri Shankara Cancer Hospital and Research Centre, Bangalore on 28-07-2023 for collaborative research in the area of multi-omics cancer profiling
- **CSIR-IHBT**
  - Signed MOU with Municipal Corporation, Palampur, Himachal Pradesh for strategic partnership as well as implementation partnership based on principles of mutual strengths and benefits for the purpose of livelihood promotion and rural development in M.C., Palampur area of Himachal Pradesh on 02.07.2023.
  - Signed MoU with Veer Chandra Singh Garhwali Uttarakhand University of Horticulture and Forestry, Bharsar, PauriGarhwal (Uttarakhand) for academic and research on 02.07.2023.
  - Signed Agreement with Deccan Health Care Limited, Punjagutta, Hyderabad to transfer of manufacturing/ processing of iron enriched bars on 02.07.2023.
  - Signed Agreement with Deccan Health Care Limited, Punjagutta, Hyderabad to take the lab scale technology on formulation promoting cartilage health at large scale on 02.07.2023.
  - Signed MOA with Adviser, Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi for establishing efficient platform for Genetic Engineering in Indian Tea on 19.07.2023.
- **CSIR-IICT**
  - Executed an MoU with VJIT-Hyderabad to promote cooperative research and to facilitate the exchange of ideas, the development of new knowledge and to enhance high quality research on 19/7/2023.
  - Signed an MoU with SEWA-THDC to implement one CSR project to provide drinking water in various water scarce places of Uttar Pradesh by using AWG-Meghdoot technology.
- **CSIR-IIP**
  - Signed MoU with Central Pulp & Paper Research Institute (CPPRI) Saharanpur for Joint Research Projects.
- **CSIR-IITR**
  - Signed MoA with Fare Labs Private Limited, Gurgaon for collaborative project on "Development of Certified Reference Materials (CRM) as per ISO 17034:2016 for Multi element solution in water matrix on 23 July 2023.

- **CSIR-NEIST**
  - Collaboration with Swasti Veda Pvt Ltd, Raipur, for producing quality planting material of medicinal plants and herbs.
- **CSIR-NIIST**
  - Linked MoUs with:
    - HHV Advanced Technologies, Bangalore for jointly developing perovskite solar cells and modules.
    - IPS Academy, Institute of Engineering & Science, Indore to establish the initial framework for cooperation.
    - Khadi Village Industries Corporation Govt of Kerala (MoU signed on 26.07.2023 in presence of Honble Industry Minister of Kerala) for the value addition rural technologies for the regional crops such as jackfruit, banana, honey etc for better income and employment generation in rural sector.
    - Carborundum Universal Limited, Chennai for Development of Carbides, Nitrides and Borides from Oxides/Minerals and its characterization.
    - Mahatma Gandhi University, Kottayamin the areas of mutual interests like microbial processes and synthesis of various types of biopolymer synthesis and production of plant based Nano cellulose and the production of Nano cellulose using bacterial origin.
    - Antony David Thrissur for knowhow and technical guidance to ADC for the Fabrication of the Equipment
- **CSIR-NIO**
  - Agreement with Power Grid Corporation of Indian Limited on Oceanography studies for power evacuation system of offshore wind energy 21-07-2023 to 20-07-2028
- **CSIR-NML**
  - Transfer of technological KNOW-HOW Licensing with Novasensa Pvt. Ltd., New Delhi for:
    - Extraction of Cu, Al and Au as Metals/ salts from waste PCBs.
    - Recycle spent Lithium-Ion Batteries (LIBs) to produce value added products of Li, Co, Mn, Cu, Ni, as metals/ salts.

#### **Collaborations/Agreements/MoUs Signed (International)**

- **CSIR-NIO**
  - Signed MoU with Bangabandhu Sheikh Mujibur Rahman Maritime University, Dhaka, Bangladesh (BSMRMU) to Establish a framework for activities in the area of Ocean Sciences to advancement of research and development for the benefit of society at large towards the blue economy mission between both the countries and will strengthen cooperation in terms of capacity building and human resource development. 07-07-2023 & 06-07-2028
- **CSIR-SERC**
  - Signed MoU with DhayaMaju Infrastructure (Asia) SDN Berhad, Malaysia, for "Fatigue Life Evaluation of Alumino-Thermit Welded Rail Joints for Klang Valley Double Track Project in Malaysia" on 24 July 2023

#### **Patents Update**

<b>Patents Filed</b>			<b>Patents Granted</b>			<b>Patent Prosecutions</b>	
India	Abroad*	Multiple Countries	India	Abroad*	Multiple Countries	India	Abroad*
6	13	16	21	4	7	14	205

\* Data reported to IPU 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 two MSME, and consultancy for new drug product development to two MSME in the Pharmaceuticals sector. One project for 'stabilization of diagnostic kit reagents' is under negotiation with M/s. Achira Labs, Bengaluru.
  - Sophisticated Analytical Instrument Facility: Provided service for analysis of sample by IR spectroscopy, Liquid Chromatography–Mass Spectrometry (LC-MS), Electro spray Ionization Mass Spectrometry (ESI-MS), High Performance Liquid Chromatography (HPLC). In the month of July-2023, total 126 external samples have been analysed for 31 users.
- **CSIR-CIMAP**
  - Manufactured three products Face wash-Kleenzie 80 kg, Lipbalm 50kg, Geranium active shampoo 80 kg for Nirmal Nature, Gurgaon.
- **CSIR-CMERI**
  - Structural Stability of Shop Building & Shop Structures (TSP - 1497)
  - Service stability and health assessment of 11 nos. gates of Kangsabati Dam (TSP - 1501).
- **CSIR-CRRI**
  - Expert advice, guidance and assessment of the overall quality of cement concrete roads of Phase-II in Nagpur City for Nagpur Municipal Corporation
  - Investigation Performance Evaluation and corrective measures of FDR work executed on PMGSY roads in Gonda Uttar Pradesh for Rural Engineering Department, UP
  - Structural safety Audit and Health Assessment of the 8- lane (4+4) 5 nos of Underpasses (LUPs at Km. 49.002,51.028,52.024,58.105 & 73.560) Interchange at km 66.587 and Minor bridge at km. 50.340. from km 47.00 to km. 78.800 in Delhi Vadodara Expressway for NHAI, Haryana.
- **CSIR-IICT**
  - Center for Analysis of Chemical Toxins (CACT) of CSIR-IICT has obtained the prestigious OPCW Designation status for the analysis of CWC chemicals on 14th July2023.
- **CSIR-IIP**
  - Testing services offered under various ongoing projects of the institute, industrial clients and AcSIR activities. These tests include gaseous fuels (ASTM D7833, D5504), liquids fuels (D6730, UOP744, D5623, D4815, D6584 and IP 391), engine oils (ASTM D3524, D3525), lubricating oils (ASTM D7419), waxes (ASTM D5442), GC-MS and HRMS of petroleum fuels and general chemicals.
    - Draft report on Simulation model development for Crude Distillation Unit-II at CPCL Refinery Chennai was submitted.
    - Import substitute Low melting Wax is fractionated for Molbio Diagnostics for their end use application
- **CSIR-IITR**
  - Collection and Testing of samples from Obra Thermal Power Project, Obra.
- **CSIR-NAL**
  - Design and preparation of wind tunnel model of 1:2.5 scaled models of Artillery Shell – ARDE, Pune

- **CSIR-NEERI**
  - Inspection of Grossly Polluting Industries in River Ganga and Yamuna Basin.
  - Assessment of Environmental Impacts due to Operation of MRPL on Air, Noise and Ground water in surrounding Village.
  - Joint International Workshop on, "Exploring the science of risk based chemical assessment".
  - Study on the assessment of Air, Groundwater, soil and agricultural crops within the 5 Km radius of M/s. Hetero Infrastructure SEZ Ltd.
  - Large Scale Dissemination of Low cost Improved Chulhas and Estimation of Health and Environmental Benefits.
- **CSIR-NIIST**
  - One CSIR mission mode project was sanctioned in the area of Millet Processing and initiated. The key focus of NIIST work component is for the development of Life Cycle Assessment and Block Chain mechanism for better cultivation and processing for millets
- **CSIR-NML**
  - Smelting tests in submerged arc furnace to investigate the melting behavior of chromite tailing briquettes to investigate the melting behavior of chromite tailing briquettes in the 50 KVA submerged arc furnace
- **CSIR-SERC**
  - Seismic test of 1 no. of 30 KVA inverter using shake table, M/s.BGR Energy Systems Pvt Ltd (for Keltron,) Tamil Nadu
  - Testing of 400 KV D/C Tension Tower Type 'DC' (15°-30° Dev.) with Twin ACSR Moose Conductor

#### **Outreach Activities (Jigyasa, Skill Development, and others)**

- **CSIR-4PI**
  - One Week One Lab (OWOL) campaign of CSIR Fourth paradigm Institute (CSIR-4PI), Bangalore was inaugurated on July 10.
- **CSIR-CBRI**
  - Conducted the following training Programmes
    - Three days' training course on "Conservation and Restoration of Heritage Structures" during July 19-21, 2023.(30 professionals/students participated across the nation participated)
    - Five days' advance training programme on "Repair & Retrofitting of Buildings" during July 10-14, 2023, sponsored by Himachal Pradesh Council for Science, Technology & Environment, Himachal Pradesh (HIMCOSTE). (participated 33 Engineers of Himachal Pradesh Government)
    - Three days' training programme on "Building Construction Systems" during July 05-07, 2023. (40 trainee Students participated)
- **CSIR-CDRI**
  - Conducted following Skill Development Programs:
    - Skill Development Program (Healthcare & Life Science);
    - Skill Development Program (Training/Dissertation) for students pursuing Postgraduate courses;
    - Advance Training Program for the research scholars and employees of R&D Institutions/Univ./ Industry etc.;
    - Training Program for Scholarship Awardees and Summer Fellows. A total of 39 students received training under above programs.



- Intellectual Property Awareness Lecture under Rashtriya Bauddhik Sampada Mahotsav and JIGYASA was organized on:
  - 180 number of Research scholars and 25 Scientists & 20 technical staff member of Institute actively participated in the scientific discussion with the Experts of IPR on 14th July 2023
  - 100 number of students and 25 faculty & 20 staff Member of SRMU, Barabanki university, UP actively participated on 18th July 2023
  - 120 number of students and 25 faculty & 20 staff Member of Hygia College of Pharmacy, Faizullaganj, Lucknow, UP actively participated in the scientific discussion with the Scientists of CDRI on 19th July 2023
- Under Rashtriya Bauddhik Sampada Mahotsav following program were organized:
  - An Entrepreneur Development program in association with SIIC IITK @incubator IITK on Biotechnology Ignition Grant (BIG) for Biotechnology-oriented Bench-To-Bedside solutions on 25<sup>th</sup> July, 2023
  - An IPR awareness program for the students of City International School, Lucknow, UP. Total 50 number of students and 4 faculties actively participated on 26<sup>th</sup> July, 2023
  - An IPR awareness program for the students of S R Global School, Lucknow, UP. Total 100 students and 4 faculty participated on 27<sup>th</sup> July, 2023
  - An Entrepreneur Development Program for the young entrepreneur from Biotech Park, Lucknow, UP. Total 25 participants and 2 faculty participated on 28<sup>th</sup> July, 2023
  - An awareness program for the students of Mahrshi University of Information Technology, Lucknow, UP. Total 100 number of students and 20 faculties participated on 31<sup>st</sup> July, 2023
- **CSIR-CECRI**
  - Conducted the following Training Programme:
    - Five-day Skill Development Training was conducted on "Basics of High-resolution Imaging Techniques and their Applications to Science & Technology" during 03.07.2023 - 07.07.2023. (43 Participated).
    - One day Skill Development workshop on "Patent Drafting" on 27.07.2023 (275 participated)
  - Organized students rally & society connect programme in connection with 76th Foundation Day celebration of CSIR-CECRI on 25.07.2023. (142 students and 7 teachers Participated)
  - One Week One Lab programme was demonstrations of DIY kit and distribution to the school students, Welcome Address by Dr. T. Raju, Chief Scientist, CSIR-CECRI Presidential Address by Dr. K. Ramesha , Director, CSIR-CECRI, "Padma Shri" Prof. Anil K. Gupta, Honey Bee Network, National Innovation Foundation, Ahmedabad was chief Guest of this event. Name of the DIY kit and developers' details are as:
    - Solar-based Li-ion Battery Power Bank, Rechargeable LED Torch Light Using Li-ion Battery and Li-ion Battery powered heart rate Monitoring system were developed by Dr. S. Hemavathi , Scientist, CSIR-CECRI
    - Super capacitors and LED developed by two of the Research Scholars viz. versa Shri. S. Gokulnath and Shri. P. Sriram.
    - Automated Robot Arm for Manufacturing, Smart Solar Panel for Home Appliances Kit, Home Automation Kit and Fire and Hazard Safety Intimation

- Kit were developed by Shri. S. Jamal mohammed, Research Scholar, CSIR-CECRI.
  - Electronic gadgets developed by Er. SP. Thipperudraswamy, Scientist, CSIR-CECRI.
  - **Vigyana Vindhai:**
  - Delivered speeches to Alagappa University Community Radio by:
    - Mr. S. Gunasekaran, Project Associate I, delivered talk on “Electroplating” on 04.07.2023.
    - Dr. V. Murugan, Sr. Scientist, delivered talk on “Bio-Nano technology” on 07.07.2023.
    - B.Tech first year students discussed on “Waste to wealth” on 19.07.2023.
    - Ms. D. Manjubahashini, Project Associate I, delivered talk on “Acid balance in Physiology” on 25.07.2023.
  - Visit of college and school students:
    - 110 students and 6 faculty members from Sri Bharathi Engg., College for women, Kaikkurichi, Pudukkottai visited on 04.07.2023.
- **CSIR-CEERI**
  - 15 Students and 3 faculty members from Dr B. Lal Institute of Biotechnology, Jaipur, visited the CSIR-CEERI Jaipur center as part of a one-day educational tour cum scientific interaction program under CSIR-SDP on 13th July 2023.
  - 20 Students and 2 faculty members from Jodhpur Institute of Engineering and Technology, Jodhpur, visited the CSIR-CEERI Jaipur center as a part of a one-day educational tour cum scientific interaction program under CSIR-SDP on 12th July 2023.
  - 53 Students from Govt. School Kuharu (Mandawa, Rajasthan), visited CSIR-CEERI Pilani to attend the JIGYASA events on Climate Emergency Week and AI for All demonstrations on 25th July 2023.
- **CSIR-CFTRI**
  - As a part of Azadi ki Amrit Mahotsav National Intellectual Property festival, six events were organized on July 14th, 19th, 21st, 24th and 26th, 2023 on IP awareness to the students and faculty of various colleges and also staff and research scholars of CSIR-CFTRI. 900 students and faculty participated in the programme.
  - Jigyasa: During the OWOL program of the Institute, a student-scientist connect program was organized for the students of Kendriya Vidyalaya, Mandya, Mysuru, Chamarajanagar, BRBNMPL (RBI), CFTRI school, Geetha Barathi School and Mahabodhi school, Mysuru which was attended by 97 students and 10 teachers; Two Skill Development programs were conducted:
    - Basics in flour milling and quality evaluation of flour was conducted from 03.07.2023 - 07.07.2023 and was attended by 20 participants;
    - Value addition of agri commodities & CFTRI technologies for rural development (Exclusively for NRLM) was organized from 26.07.2023 to 28.07.2023 and was attended by 23 participants.
- **CSIR-CGCRI**
  - Two Skill development training programmes have been conducted in the Month of July 2023.
    - Advanced instrumental analysis for chemical characterization of glass, ceramics and allied materials by modern instrumental methods of analysis from 25th to 28th July 2023. Total 17 nos. of students have participated in the programme.



- Skill Development Programme on Terracotta Processing has been organized at Dutta Pukur, North 24 Parganas from July 26th to July 27th 2023. The programme was attended by 30 ruralartisan.
  - Organized One Jigyasa Programme- Vigyan Jyoti
    - Students-Scientist Connect Program” had been organized on 7th July, 2023. Three hundred schools students and teachers attended from six different schools in and around Kolkata.
- **CSIR-CIMAP**
  - Four-day entrepreneurship and Skill Development Programme through Medicinal and Aromatic plants-based formulations was organized from 25 to 28 July, 2023 for nodal farmers and officials of Govt. of Meghalaya sponsored by Institute of Natural Resources & Meghalaya Basin Development Authority (MBDA) Aroma Mission -III
  - Four Awareness programs on IPR were organized under National Intellectual Property Festival from 01-31 July, 2023.
- **CSIR-CIMFR**
  - Organized Skill Development Programme on “Mechanical Safety in Mines” from 28.06.2023 to 27.07.2023.
  - Organized an Awareness cum Interactive Program on “Intellectual Property Rights: Understanding of General Principles in association with:”
    - BIT, Sindri, Dhanbad on 20/07/2023.
    - University Department of Geology, Binod Bihari Mah to Koyalanchal University on 24.07.2023.
    - KNU, Asansol, W.B on 27.07.2023.
- **CSIR-CLRI**
  - Conducted one day visit for School students on 26 July 2023. Various demonstration sessions on wastewater analysis, solid-waste management, hydrophobic/ super hydrophobic materials, microbes, leather products were organized by scientists. 70 students from 3 schools along with their faculties members participated.
  - Conducted a popular talk program on 'Unleashing the power of Artificial Intelligence(AI) & Robotics in shaping the future' on 28 July 2023. 92 students along with 35 faculties participated in the programme.
  - Jointly organized National Intellectual Property Festival with CSIR-SERC and CSIR-Madras Complex, Chennai during 17-20 July 2023 on "Nurturing ideas to Innovation".The theme of this IP festival had been 3M (Mind to Market Management) for ATMANIRBHARATA. 250 participants comprising students, research staff and industry personnel attended the technical lecture.
- **CSIR-CRRI**
  - Conducted 5-day Regular training program on “Traffic Engineering & Road Safety Audit” during July 10 – 14, 2023and attended by 25 participants from various parts of India.
  - Conducted one day interactive programme for the students of Kendriya Vidyalaya Noida, Uttar Pradesh and Kendriya Vidyalaya Pushp Vihar, Delhi as part of CRRI's One Week One Lab event on “Student Scientist' Connect” under Jigyasa Interactive Meet and launched of Road Safety Game for the students.
  - Orientation programme of NQM at CRRI for the Officials of NRIDA for National Rural Infrastructure Development Agency (NRIDA)
- **CSIR-CSIO**
  - Conducted one day workshop on "Fundamentals of Additive Manufacturing Techniques" on 4th July, 2023 under CSIR-Integrated Skill Initiative (CSIR-ISI) Programme. Dr. Kapil Kumar Goel, Assistant Professor and Dr. Bikash Kumar, Assistant Professor from NIT Jalandhar, Dr. Vijay Kumar Meena, Pricipal Scientist,

CSIR-CSIO delivered expert lectures during the event. Mr. Narinder Singh Jassal, CSIR-CSIO delivered awareness lecture on PRISM Scheme of DSIR to promote innovation.

- Science Teacher Workshop CSIR-CSIO under CSIR-JIGYASA initiative has conducted the science workshop for school teachers on 6th July, 2023 at Sri Guru Harkrishan Sr. Sec. Public School, sector-40 C, Chandigarh on "Science for Human Enrichment". The session was covered the talk and the hands-on activity based on the topic of "Selenium detection in water" and " HMI gauge for water chlorine testing". 15 teachers have attended the workshop.
- **CSIR-CSMCRI**
  - Climate clocks were distributed to the Kendriya Vidyalaya, a Bhavnagar and Jawahar Navodaya Vidyalaya, Bhavnagar
  - Dr Khanjan Trivedi visited Atmiya University and Saurashtra University, Rajkot to deliver talks aimed at encouraging students to pursue their careers at CSMCRI.
- **CSIR-HRDG**
  - On the occasion of 41st Foundation Day Celebration of CSIR- IHBT, 50 girl students and teachers from three schools (JNV, Paprola, Government Sr. Sec. School, Baijnath and Kendriya Vidhyalaya, Alhilal) participated in the program under CSIR-Jigyasa
  - CSIR-NGRI while attending the 28th general assembly of International Union of Geodesy and Geophysics at Berlin, Germany, also presented Jigyasa activities at CSIR-NGRI with the poster titled "Jigyasa for Geoscience: Role of CSIR-NGRI, India".
  - CSIR-CRRI organised session at kandriya vidyalaya Noida By Ms. Nidhi under AKAM program in intellectual property rights on 25.07.2023.
  - CSIR-IHBT team comprising scientists and research scholars visited Kendriya Vidyalaya, Palampur on 27.07.2023 as part of the ongoing IP Campaign and explained IPR & showcased technologies developed by the Institute.
  - On 28th July, 2023, CSIR-CSIO under CSIR-Jigyasa initiative has celebrated the National IPR Festival month and also conducted the programme on AI based activity. A lecture of IEEE AcSIR scholars on the title "The Evolution of Artificial Intelligence: From Siri to Self-driving cars" was organised. 145 students and 9 teachers have participated in the event
  - A virtual lecture on "Artificial Intelligence opportunities in Agriculture" was organized on 28.07.2023 by CSIR-CIMAP for the students of Jain Bal Vidya Mandir, SVVP inter college, KGS Inter college GGIC, Jila Parishad Inter College. 110 students participated.
  - Under the CSIR-Jigyasa, a workshop on "Cyber Security" was organized for 42 girl students and 03 teachers of Jawahar Navodaya Vidyalaya Paprola and Kendriya Vidyalaya Ahilal, District Kangra (H.P.) on 28.07.2023 by CSIR-IHBT
  - Professional development workshop for science teachers by CSIR-NEERI organized jointly with RSC during 31 to 1 August 2023
- **CSIR-IHBT**
  - One-day exposure cum training visit was conducted for the seven-member team of Ayurvedic doctors from Ayurvedic College Chandigarh at the Chandpur Farm of Agro technology Division on 05.07.2023. Team was apprised about medicinal plants, usages, cultivation practices and value addition.
  - 45 students and 4 teachers from three different schools (Jawahar Navodaya Vidyalaya, Paprola, Kendriya Vidyalaya, Alhilal and Govt. Sr. Sec. School, Baijnath,

Distt. Kangra) of Distt. Kangra visited the Institute on the occasion of CSIR-IHBT Foundation Day on 2nd July, 2023.

- Students and teachers from Green Field Sr. Sec. School, Nagrota Bagwan, Distt. Kangra (H.P.) visited CSIR-IHBT, Palampur on 04th July, 2023. They were guided for making projects for “National Children’s Science Congress” by the scientists of the Institute.
- **CSIR-IICT**
  - Conducted First event of 'Rastriya Boudhik Sampada Mahotshav (National Intellectual Property Festival-NIPF)' on 14th July 2023. The second event of the same was organized online on 17th July 2023 and around 600 participants participated and benefitted from the programmes.
  - Conducted Skill Development Training course on "Water Purification and Water Analysis" to Chemical Engineering graduates from an academic institute.
  - Organized Seminar on "Recent Trends in Fluoro Chemicals & Traditional Knowledge of Natural Products" on 25/07/2023.
- **CSIR-IIP**
  - Organized one-day Awareness program on AI and Analytical Techniques was for 150 students of Nancy International School, Dehradun on 26 July 2023.
  - Conducted Skill Development Training on 'Analysis with Elemental, Microscopic and Thermo-gravimetric Tools' on July 10-21,203
- **CSIR-IITR**
  - Organized the third Intellectual Property Rights Awareness event for more than 500 young students of Ramadhin Singh Inter College, Lucknow. Scientists addressed the diverse interesting topics on science, creativity, innovation, technological brilliance, intellectual property rights and monetization of the protected rights for economic gains.
  - Organized an Intellectual Property Rights awareness training session on “Nurturing Ideas to Innovation,” on July 14, 2023. 50 research scholars from IIT-Roorkee, Shoolni University, Karnataka University, Delhi University, Central University of Punjab, Kumaun University, Patna University, Integral University, Aligarh Muslim University, University of Hyderabad etc. and R&D labs like CSIR-CDRI, ICAR-NBAIM, and CSIR-CIMAP participated.
  - Organized two-day workshop on “Oxidative and Cellular Stress Assay” on July 27th - 28th, 2023.
- **CSIR-NEIST**
  - Conducted 3-days workshop at Balya Bhawan School, Jorhat, Assam, on 5 July,2023 on Waste-to-Value under CSIR-JIGYASA initiative. 200 students participated.
  - Organized a AI based popular talk program on 10 July, 2023 under CSIR-JIGYASA initiative to create awareness and dissemination about AI to school students, under this year's Jigyasa theme, "Artificial Intelligence". Science enthusiastic students from Axel Public School, Guwahati, Assam, was invited where 30 students participated along with 2 faculty members.
  - Students from Upper Deori School visited on 13 July, 2023 under the Student-Scientist Connect program.
  - Students from Duliajan Jatiya Vidyalaya visited on 14 July, 2023 under the Student-Scientist Connect program.
- **CSIR-NIIST**
  - Started Skill training program on "Synthetic Organic Chemistry - Hands on training on fundamentals and specialized reactions ".

- Conducted Skill Development program on:
  - "Hydrogen Energy from renewable resources and circular economy" on 24th July 2023
  - Food Microbiology and Food analysis from 31.07.2023 to 04.08.2023 in collaboration with FICSI
- **CSIR-NIO**
  - Conducted a laboratory visit and hands-on training on "Elementary Laboratory Practices in Oceanography" for school students on 27 June 2023. 30 students from government schools (GHSS Edapally, GHSS Elamkunnappuzha, and HSS JESUS Kothad) were trained in basic principles and practices in ocean sciences.
  - Celebrated National Intellectual Property Festival during July 13 – 14, 2023, conducting workshops on the theme "Protection & management of Intellectual Property Rights" for students & faculties of the institute as well as at different colleges in Goa.
- **CSIR-NML**
  - Organized One day Visit for DBMS Kadma, Xavier English School, Tamulia and Xavier Public School, Kitadih on 14<sup>th</sup> July, 2023. 198 students trained.
  - Organized One day Visit for Jamshedpur Public School -Baridih, Kasidih High School and BPM High School on 21<sup>st</sup> July, 2023. 205 students trained.
  - Organized Intellectual Property (IP) Awareness Programme with the theme-IP life Cycle under the CSIR's IP Campaign- Celebration of "Rashtriya Boudhik Sampada Mahotsava (National Intellectual Property Festival)".
- **CSIR-SERC**
  - Jointly organized with CMC the "Climate Clock Installation" programme on 11th July 2023 at Sri Sankara Vidyashramam Matriculation Higher Secondary School, Thiruvannamiyur, Chennai, Senior Principal Scientist, CMC-CSIO Chennai Unit, delivered a lecture about climate change & its importance to the students, and also demonstrated to the students the assembly, display of the Climate Clock and installation. 250 Students and 15 Teachers participated.
  - Organized Customized Short-Term course for officials of National Thermal Power Corporation Limited (NTPC Ltd) and Indian Oil Corporation Limited (IOCL) on:
    - Geotechnical Investigations during 03 - 07 July 2023. 18 participated.
    - Steel Structures during 17-20 July 2023. 25 participated.
  - Organized Stakeholder Meeting for Army, academia, Defence laboratories, representatives from CSIR Headquarters and private industries on:
    - MLP-220, High Velocity Multi-hit Resistant Movable Protective Booth/Shack for Security Personnel (FTT Project) on 24 July 2023.
    - OLP-223, Bio-Inspired Functionally Graded Cementitious Composite Panels for Enhanced Impact Resistance on 24 July 2023.
    - OLP-227, Sustainable and Reliable Steel Lattice Structures - SaRSS on 28 July 2023. In total 66 participants representing line ministry, research council, academia, standardization and industry (manufacturers, design offices, contractors) had joined.
- **CSIR-URDIP**
  - Dr. Kishore Sreenivasan, Head, CSIR-URDIP delivered a keynote lecture on "IP Value- The 'Portfolio' Perspective" at CSIR-CIMAP on 24th July 2023 as part of "National Intellectual Property Festival"
  - Conducted 2-day IP Filing Review Meeting by staff of CSIR URDIP and CSIR-IPU. Dr. Kishore Sreenivasan, Head, CSIR-URDIP along with his team visited CSIR-CIMAP from 25-26 July 2023 and reviewed the progress in IP filing & addressed queries on patentability criteria, techno-commercial evaluation & inventions.

- Dr. Sivakami Dhulap, Sr. Principal Scientist, delivered an invited talk on "Patents and Patent Practices –The Patinformatics Homework" as part of the workshop on "Intellectual Property Management: Generation, Protection and Commercialization" at CSIR-CIMFR, Dhanbad on 31st July 2023.

### **Major Conferences, Seminar/Webinars, Workshops organized**

- **CSIR-Hqrs.**

- CSIR-Central Food Technological Research Institute(CSIR-CFTRI), Mysore organized One Week One Lab (OWOL) campaign from 3-7 July, 2023; CSIR-Fourth Paradigm Institute(CSIR-4PI), Bengaluru from 10-15 July, 2023; CSIR-Central Road Research Institute(CSIR-CRRI), New Delhi from 16-22 July, 2023; CSIR-Central Electro Chemical Research Institute (CSIR-CECRI), Karaikudi, TamilNadu from 24-29 July, 2023.
- CSIR organized third lecture of the CSIR AMRIT Lecture Series on 31 July, 2023. The Lecture on "CSIR Racing One Hundred: Challenges and Opportunities" delivered by Dr. Swaminath Sivaram, Honorary Prof. Emeritus and INSA Emeritus Scientist IISER, Pune & Honorary Prof., IISER, Kolkata.
- CSIR and its lab participated in the Food & Technology Expo-2023 at Pragati Maidan, New Delhi during 21-23 July, 2023. Labs participated were CSIR-IHBT, CSIR-CFTRI.

- **CSIR-CECRI**

- Organized One Week One Lab (OWOL) campaign from 24-28, July 2023. Eminent personalities, Scientists, Technologists, Speakers of high repute and caliber, Researchers, Students, Entrepreneurs, Licensees and the public took part in this event.
- Celebrated 76th Foundation Day.

- **CSIR-CEERI**

- Organized Intellectual Property Awareness Workshop during National Intellectual Property Festival from 11-12 July 2023. 650 students participated.
- Participated in Ujwal Rajasthan Exhibition at Udaipur, 27-29 July 2023. CSIR Bagged the best informative stall award.

- **CSIR-CLRI**

- Organized National level workshop on "Statistics and Data Analytics using SPSS Software" on 5th July 2023. 100 candidates participated.
- Organized a Seminar on Biomedical Materials on 18 July 2023. Professor Elżbieta Pamuła delivered a lecture on 'Multifunctional biomaterials for tissue engineering and drug delivery'.
- Organized a dissemination workshop on 'Sustainable treatment of organic fractions of municipal solid waste for smart cities' on 19 July 2023. Prof. Dirk Weichgrebe, Leibniz university, Hannover, Germany and Dr S V Srinivasan, Senior Principal Scientist, CSIR-CLRI, Project investigators presented the outcome of the Indo-German projects funded by the IGSTC.

- **CSIR-CMERI**

- Organized High-end workshop (SERB Karyashala) on:
  - Internet-of-thing (IoT) and Artificial Intelligence (AI) and its Industrial Applications; June 26-July02, 2023.
  - Artificial Intelligence (AI) Assisted Surveillance and Security: Accelerating Collaborative Public Safety; July 22-29, 2023.

- **CSIR-CRRI**



- Organized One Week One Lab (OWOL) Campaign during July 16-22, 2023, the following events / workshops were organized at different cities across India.
  - Curtain Raiser at CSIR-IGIB Auditorium, New Delhi on July 16, 2023
  - Student Scientists' Connect at CSIR-CRRI, New Delhi on July 17, 2023
  - Industry Meet at CSIR-CRRI, New Delhi on July 18, 2023
  - Young Researchers Conclave at CSIR-CRRI, New Delhi on July 19, 2023
  - Engaging with State Government at Convention Centre, Lokaseva Bhavan, Bhubaneswar on July 20, 2023
  - Next Generation Transport at IIIT-Hyderabad, Hyderabad on July 21, 2023
  - Mobility @ North East at NEC Auditorium, Shillong on July 22, 2023
- **CSIR-IICT**
  - In association with Luminescence Society of India (LSI), Organized an International conference on Luminescence and its applications (ICLA 2023) during 3rd July to 6th July, 2023. The conference mainly focused on Luminescence Materials and its applications to Optoelectronics such as photovoltaics, OLEDs, FETs, etc. and Biological applications such as Bio imaging and Cancer therapy etc.

### **Visit of high-level dignitaries to the Institute/Laboratory**

- **CSIR-CBRI**
  - Prof Venkatesh Kodur, Michigan State University delivered a lecture under CSIR-CBRI Expert Lecture Series at the Rabindranath Tagore Auditorium, CBRI on July 17, 2023 on "Condition Assessment and Refurbishment of Fire Damaged Structures: From Reconnaissance to Advanced Analysis".
- **CSIR-CDRI**
  - Shri. S Gopalakrishnan, Special Secretary (Health), Ministry of Health visited on 25th July-2023.
- **CSIR-CFTRI**
  - Mrs. Shubha Sarma, IAS, Commissioner-cum-Secretary, Women & Child Welfare Dept., Govt. of Odisha along with officials visited on 25.07.2023 to discuss the possible collaboration for improving the Take Home Ration of ICDS scheme.
- **CSIR-CIMFR**
  - Ms. Volha Roshchanka, Co-Chair (Coal Mines Subcommittee), Global Methane Initiative (GMI) from US Environmental Protection Agency and Mr. Jonathan Kelafant, Sr Vice President at Advanced Resources International, USA visited during 13-14 July, 2023.
- **CSIR-CLRI**
  - Shri Dhammjyoti Gajbhiye IPoS, Managing Director, Leather Industries Development Corporation of Maharashtra LIDCOM & other delegation members visited on 04 July 2023.
  - German delegates from Leibniz University, Hannover (LUH) visited on 20 July 2023. The President of Leibniz University, Prof. Dr. Volker Epping along with his delegates met Dr K J Sreeram, Director, CSIR-CLRI & Dr N Anandavalli, Director, CSIR-SERC and discussed about the Indo-German projects and future opportunities for collaboration.
- **CSIR-CRRI**
  - Dr. Jitendra Singh, Hon'ble Minister of State (Independent Charge) in the Ministry of Science & Technology, Govt. of India was the Chief Guest of One Week One Lab Campaign event/ workshop on "Student Scientists' Connect" on July 17, 2023.



- Dr. V.K. Saraswat, Member NITI Aayog, Govt. of India and Chancellor, Jawaharlal Nehru University visited during One Week One Lab (OWOL) Campaign event/ workshop on “Curtain Raiser” on July 16, 2023.
- Shri Faggan Singh Kulaste, Hon’ble Minister of State in the Ministry of Steel, Govt. of India visited CSIR-CRRI as Chief Guest of CSIR-CRRI One Week One Lab Campaign event/ workshop on “Industry Meet” on July 18, 2023.
- Mrs. Ruchika Chaudhry Govil (IRS), Add. Secretary (Minister of Steel) visited CSIR-CRRI to be the Chief Guest for CSIR-CRRI One Week One Lab Campaign event titled “Industry Meet” on July 18, 2023.
- **CSIR-IIIM**
  - Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh visited on 23-07-2023
  - Cannabis Subcommittee of HP government comprising of Sh. Kewal Singh Pathania, Hon. MLA, Dr. Janak Raj, Hon. MLA, Sh. M Rajan Hon. MLA, Dr. Rajeev Dogra, Addl. Commissioner State Taxes & Excise, Prof. RajanKatoch, Scientist HPAU visited on 25th & 26th July 2023.

#### **COVID related developments/research**

- **CSIR-CSMCRI**
  - Developed a process to prepare Air separation grade Zeolite X granules with nitrogen adsorption capacity comparable with commercially available adsorbents for industrial and medical grade oxygen generation from air.
- **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-CBRI**
  - An Intellectual Property (IP) awareness programme was conducted for school students to educate them about the significance of IP rights and their role in fostering creativity and innovation:
    - Army Public School, Meerut on 28.07.2023 (417 students and 9 faculty members participated).
    - Scholars Academy, Roorkee (304 students and 8 faculty members participated).
- **CSIR-CDRI**
  - A workshop on Introduction to Patent Search Platform Orbit Intelligence was organized by KRC, CSIR-CDRI in association with @ Questel\_Group to celebrate Rashtriya Bauddhik Sampada Mahotsav (RBSM).

- **CSIR-CECRI**
  - CSIR-CECRI in association with Society for Advancement of Electrochemical Science & Technology (SAEST) organized a monthly Lecture Series on 'Electrochemical Science and Technologies: A Path Forward to Sustainable Society'. Following lectures organized during July 2023:
    - Prof. Sangaraju Shanmugam, Professor, Department of Energy Science & Engineering, Daegu Gyeongbuk Institute of Science and Technology (DGIST), South Korea delivered a lecture on "Nanostructured Materials for Green and Sustainable Future Energy Technologies" on 4th July, 2023
    - Prof. Balaji Subramanian, Department of Physics and Astronomy, Trent University, Peterborough, Canada delivered a lecture on "Electrochromic and photochromic Materials / Devices" on 6th July, 2023.
    - Celebrated 75th Foundation Year of "CSIR-CECRI's In-House Symposium" was initiated, an annual event, in which Scientists of all divisions presented their R&D work. The first In-House Symposium was held during 07.07.2023 (Day 1) and 14.07.2023 (Day 2).
    - IP Campaign - Celebration of "Rashtriya Boudhik Sampada Mahotsav" (RBSM) across CSIR laboratories: CSIR-CECRI conducted the One-day programme on IP awareness.
- **CSIR-CRRI**
  - As part of National Intellectual Property Festival 2023 under Azadi Ki Amrit Mahotsav, CSIR-CRRI organized the following lectures on:
    - "Basics of Intellectual Property Rights" on July 17, 2023.
    - "Technology Development Conundrum: Researcher's Perspective" on July 19, 2023.
    - "Intellectual Property- What, Why and How?" on July 19, 2023.
    - "Competing through Intellectual Property Rights (IPR)" on July 28, 2023.
- **CSIR-CSIO**
  - CSIR-CSIO and CSIR-IMTECH jointly organised an IPR Awareness program as part of Azadi Ka Amrit Mahotsav (AKAM)- IP Campaign – Celebration of "Rashtriya Boudhik Sampada Mahotsav" during July 11-12, 2023.
- **CSIR-IMMT**
  - National Intellectual Property Festival (NIPF) under Azadi Ka Amrit Mahotsav, CSIR – Institute of Minerals & Materials Technology (IMMT), Bhubaneswar, flagged off "CSIR- IP Rath" on July 17th, 2023, to unleash the IP knowledge to greater masses. The two-week CSIR-IP Rath Yatra covered schools, colleges, institutions, universities, MSME, local villages and industrial units within the proximity of about 100 km from Bhubaneswar.
- **CSIR-IHBT**
  - Celebrated "Azadi Ka Amrit Mahotsav – Rashtriya Boudhik Sampada Mahotsav/National Intellectual Property Festival", from 21-28 July, 2023.
  - Senior Scientist, CSIR-IMMT, Bhubaneswar delivered a lecture on "The IP Spectrum - An Overview" on 21st July, 2023. The program was attended by students, scholars and trainees.
  - Director, IHBT flagged off IP Awareness Campaign to schools and colleges being organized under AKAM-Rashtriya Boudhik Sampada Mahotsav.
  - Scientists and scholars from CSIR-IHBT apprised school children of Jawahar Navoday Vidyalaya, Paprola on 25.07.2023 about IPR and showcased technologies developed by the Institute.
- **CSIR-IICT**

- Celebrated the successful commencement of commercialization of Hydrazine Hydrate (HH) by GACL on 19th July 2023. GACL and CSIR-IICT, Hyderabad, have jointly received patents from India and the USA for the indigenous process to manufacture Hydrazine Hydrate (H<sub>6</sub>N<sub>2</sub>O). A commercial plant of 10,000 TPA 80% Hydrazine Hydrate was designed by CSIR-IICT and was established by GACL at their Dahej complex.
- Dr. Irfan Khan, Senior Scientist, Dow Chemical Company, TEXAS, USA, delivered a talk on 'Product and Process Development in Chemical Industry to Meet Sustainability Needs' on 26th of July 2023.
- Dr. Srinivas Banala, Group Leader for Probe Design from Institute for Experimental Molecular Imaging, University Hospital RWTH Aachen, delivered a talk on "Development of Bright and Black Dyes for Molecular Imaging Applications" on 24th July, 2023.
- **CSIR-IIIM**
  - Conducted 6 days IP Festival program from July 17-24, 2023 to promote knowledge sharing, collaboration, and the protection of intellectual property rights in the Pharma, Traditional Knowledge & Agrotech industry and 2000 participants attended this event. The following events were organized:
    - Pharma IP conference (Hybrid Mode) on “Shaping the Intellectual Property Landscape in Drug Innovation” on July 17, 2023.
    - Agrotech IP Conference on “Nurturing Innovation and Intellectual Property in Plant Varieties and Agri-Startups” on July 18, 2023.
    - IPR Awareness Workshop for the students, scholars & faculty members of Government Women College, Parade Ground, Jammu was conducted on 19th July, 2023.
- **CSIR-NAL**
  - Role of IPR in Academia & Research for Engineering & Technology Students at East Point College of Engineering & Technology Bangalore on July 4, 2023
  - Importance of IP in R&D Institutions for employees of CSIR-NAL, at PBMD Seminar Hall, CSIR-NAL, 06th July, 2023
  - IP Literacy for Creative and Innovative India for School Students (11th & 12th Class) and Schools - Jigyasa Student Program, ASDC, CSIR-NAL, Bangalore on 21st July, 2023
  - Patenting from Inventor Perspective for Engineering & Technology Students at East Point College of Engineering & Technology Bangalore, 21st July, 2023
  - Need of IP Literacy for Academic and Research institutions, AI and Condition Monitoring, For Engineering & Management Students at Aryabhata Seminar Hall, K S School of Engineering and Management, Bangalore on 27th July, 2023
- **CSIR-NEERI**
  - One day intellectual Property Rights Awareness cum interactive programme on July 14.
- **CSIR-NEIST**
  - Online Awareness program on Promotion and Protection of Traditional Knowledge of NEIndia' organized on 14 July, 2023 on the occasion of National Intellectual Property Festival 2023.
  - Awareness program on Promotion and Protection of Traditional Knowledge of NEIndia' organized on 25 July, 2023 held at The Assam Kaziranga University on the occasion of National Intellectual Property Festival 2023.
- **CSIR-NIIST**

- IPR Seminar in view of National Intellectual Property Festival being conducted at CSIR NIIST on 26th July 2023
- Webinar on IP awareness at Lourdes Matha College of Science & Technology on 29th July 2023
- Lecture on IP awareness at CSIR-CECRI, Karaikudi on 17th July 2023
- Lecture on IP awareness at Sree Chitra Thirunal College of Engineering, Pappanamcode on 11th July 2023

## **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**

- 2 in-house R&D units of industries were granted Fresh Recognition and 2 were granted Registration certificates.
- 85 in-house R&D units of industries were granted Renewal of Recognition and 92 were granted renewal of Registration certificates.

#### **Scientific and Industrial Organization (SIRO)**

- 4 SIROs were granted Fresh Recognition and 2 were granted Registration Certificates.

#### **Public Funded Research Institutes( PFRI)**

- 5 PFRI were granted renewal of Registration certificates.

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

Under the aegis of Azadi Ka Amrit Mahotsav (AKAM) to mark the 75 years of India's Independence, Department of Scientific and Industrial Research (DSIR) & Department for Promotion of Industry and Internal Trade (DPIIT) along with the partners Council of Scientific and Industrial Research (CSIR), O/o Controller General of Patents, Designs, and Trade Marks (CGPDTM), Protection of Plant Variety and Farmers' Rights Authority (PPVFRA), National Research Development Corporation (NRDC) and Sanrachna Foundation launched a month-long celebrations of Rashtriya Boudhik Sampada Mahotshav (RBSM) - National Intellectual Property Festival from 1st July 2023 to 31st July 2023. The objective of RBSM was to bring in large scale awareness and highlight the importance of value creation therein using Intellectual Property and converting them into assets. The campaign was a focused, time bound, target led initiative to increase patent, trademark, copyright, GI, designs, layout of semiconductor, plant variety registration, etc. DSIR with NRDC organized five workshops on Intellectual Property Rights (IPRs) at National Sugar Institute, Kanpur on 6<sup>th</sup> July, 2023; Agharkar Research Institute (ARI), Pune on 14<sup>th</sup> July, 2023; Guwahati Biotech Park, Assam on 19<sup>th</sup> July, 2023; Andhra Pradesh Innovation Society (APIS), Vishakhapatnam on

20<sup>th</sup> July, 2023; and Tagore College of Arts and Sciences, Puducherry on 25<sup>th</sup> July, 2023. The workshops were attended by participants from Individual Innovators, Inventors, Research Scholars, members from Academia and R&D Institutes.

**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):**

7 innovation projects were reviewed and 2 projects were successfully completed during the period.

#### **Common Research and Technology Development Hubs (CRTDH) Scheme:**

##### **CRTDH –ChintanShivir-CRTDHs Empowering MSMEs was organized on 27<sup>th</sup> July 2023 at IIT Kharagpur**

The “Chintan Shivir-CRTDHs empowering MSMEs” was organized at the Common Research and Technology Development Hub (CRTDH) at IIT Kharagpur on the 27<sup>th</sup> July 2023. The event started with the Inaugural address of Secretary, Department of Scientific and Industrial Research (DSIR) and was focused on connecting MSMEs/Startups/Innovators with the cutting-edge facilities at CRTDH. The daylong event provided a platform for the MSMEs/Startups/Innovators to understand how these resources can bolster their capacity, enhance productivity, and drive forward innovation in the realm of affordable health solution.

#### **A2K+ Studies**

Project Guidance cum Review Committee (PGRC) meeting was conducted on 17<sup>th</sup> July, 2023 to review technical and financial progress of the study entitled “**Readiness and Interest of Organizations for Adopting Emerging Technologies like AI and ML**” conducted by Indian Institute of Technology, Indore (IIT-I). 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.

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

Project Review Committee (PRC) meeting of TDUPW Project entitled “**Empowerment of women through silk and cocoon based handicrafts, (“Wealth from Sericulture waste”)** of Department of Biosciences and Sericulture, Sri Padmavati Mahila Visvavidyalayam, Tirupati, Andhra Pradesh was held on 6<sup>th</sup> July, 2023 to review technical and financial progress of the project. PRC meeting was Co-Chaired by Scientist-G & Head, A2K+ TDUPW and attended by DSIR Officials, Expert Members of PRC from other academic institute and research institute.

Project Review Committee (PRC) meeting of TDUPW Project entitled “**Training of Rajasthan rural women on use of biofertilizer for crop productivity enhancement**” jointly of Amity Institute of Microbial Technology, Amity University, Noida and Arid Forest Research Institute (AFRI), Jodhpur, Rajasthan was held on 11<sup>th</sup> July, 2023 to review technical and financial progress of the project. PRC meeting was chaired by Scientist-G & Head, A2K+ TDUPW and attended by DSIR officials, Expert members of PRC from other academic institute and research institute.

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

## **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. 835.38 lakhs during July 2023.
- Sale of items worth Rs. 1939.70 lakhs was realized during July 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 POSHAN: a Multi Nutrient Formulation for Correcting the Nutrient Deficiencies in Mulberry to M/s Anil Industries; Components of Met Ocean Buoy I to M/s NextEng Enviro Pvt. Ltd; Components of Met Ocean Buoy II to M/s NextEng Enviro Pvt. Ltd; Saline Water Lantern to M/s Saurashakthi; Multigrain Cereal-Legume Bar and Puffed Rice Bar to M/s Sanjeevani Foundation.
- NRDC has collected premia of Rs. 4.75 Lakhs from respective technologies during July 2023.
- A delegation of officials from the National Office for Technology Acquisition and Promotion (NOTAP), Nigeria visited NRDC headquarter in New Delhi on July 10, 2023 to explore Business opportunities of mutual interest.