

No. DSIR/MS/2022/07
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **July, 2022**
(Part-I Unclassified)

Major achievements during the month of July, 2022:

Council of Scientific & Industrial Research (CSIR)

New Technologies/Process Development/Transferred

- **CSIR-CEERI**
 - Developed a Process for fabrication of blue LED with flip chip configuration.
 - Developed Colposcope Technology & demonstrated to M/s Divine Meditech Pvt. Ltd, Noida.
- **CSIR-CSIO**
 - Developed “Handheld Electrostatic Disinfection” device.
 - Transfer the Technology of UV Disinfectant retro-fit systems for HVAC Ducts (Renewal) to M/s QUALITY NEEDS AUTOMOTIVES, Alwar; M/s Koyna Engineers, Nashik; M/s Devintec Electrical Technologies, Jalandhar; and M/s Ganesh Industry, SAS Nagar, Punjab.
- **CSIR-CSMCRI**
 - Developed a Process for preparation of Liquid Seaweed Plant Bio-stimulant (LSPB) from brown algae – Sargassum.
 - Developed Anti-cancer, immunomodulatory composition and nanocellulose from waste root biomass of Simarouba Glauca.
 - Developed Copper-Coumarin compounds and its method of preparation thereof.
- **CSIR-IIP**
 - Licensing Agreement was signed for Improved Jaggery Making Plant (Gur Bhatti) with Dr.Anuj Kumar, Village Nirawali, Post Office Mawana, Nirwali, Meerut, UP.
 - Developed new polymeric products from petroleum refinery streams such as light cycle oil, heavy gas oil, light coker gas oil, heavy sulfur light cycle oil, light gas oil and one crude oil. Synthesized various DMC catalyst for polyether polyol synthesis.
 - Recovery of aromatics from cracked Naphtha Updates on Process development.

- **CSIR-CBRI** Transferred the technology of “Design of High Draught Brick Kiln with Zig-zag setting” to M/S Ray Techno Solutions, Hooghly, West Bengal. The kiln developed by this institute is basically an archless, top-fed, coal-fired continuous kiln in which the fire follows a zig-zag path. Coal consumption of this type of kiln is very low 100 to 120 kg per 1000 bricks as compared to 160 to 180 kg in the Bull kilns. It is expected that by using this technology, the SPM emission level can also be brought down to a level below 250 mg/Nm³.
- **CSIR-CFTRI**
 - RTS developed a process of Fruit juices and beverages - M/s IngeX Lab Pvt. Ltd., Bengaluru.
 - Preparation of shelf stable biriyani paste - M/s Curry Factory, Coimbatore and M/s Mahashian Di Hatti Pvt. Ltd., Gurgaon, Haryana.
- **CSIR-IHBT**
 - Transfer of Technology agreement to transfer manufacturing/ processing of (i) chikki and bars - (immunity extract based) products, and (ii) immunity based beverage mixes products/ variants with The Vigada Care Private Limited, Kalkaji, New Delhi.
 - Transfer of Technology agreement to take the technology on the (i) cultivation of Shiitake/ Oyster mushroom and (ii) indigenous cold-tolerant efficient hydrolytic bacterial formulation supplemented with biofertilizers for preparation of enriched compost/ vermicompost for its implementation at a large scale as per technical know-how of CSIR-IHBT with Sikkim State Council of Science and Technology, Gangtok.

Collaborations/Agreements/MoUs Signed (National)

- **CSIR-CBRI** signed an MoU with UPL limited, Mumbai, Maharashtra on July 1, 2022 for organising short term training sessions for the benefit of key stay holders in the area of Structural Pest Management, General Pest Management and Public Health Pest Concerns in different parts of India.
- **CSIR-CDRI** executed the following Agreement & MoUs:
 - For antimicrobial testing of air filters with M/s. Biomoneta Research Pvt. Ltd., Bangalore on 30/06/2022
 - For “Identification of molecular therapeutic target leading to development of chemo-resistance in non-GG DLBCL patients in India” With All India Institute of Medical Sciences, Delhi on 04/07/2022.
 - For “Targeting Nucleolin for Refining Anti-Neoplastic Chemo Immunotherapy and Immunomodulation in B-Gell Lymphoma” with All India Institute of Medical Sciences, Delhi on 01/07/2022.
- **CSIR-CFTRI** MoU was signed with Khadi and Village Industries Commission (KVIC), Mumbai on 5th July, 2022 to synergize the common area of expertise through skill upgradation/ development training to personnel associated with KVIC units approved under Prime Minister's Employment Generation Programme (PMGEP) and focus on entrepreneurship development of skilled people and food processing enterprises across the country.

- **CSIR-CIMFR** Tripartite Agreement between Mahanadi Coalfields Limited, Burla, Sambalpur, Odisha; Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL), Vidyut Bhawan, Janpath, Jaipur and CSIR-CIMFR, Dhanbad for Coal Sampling Work on 14.07.2022.
- **CSIR-CMERI**
 - MoU signed on 16/07/2022 with Sonalika Industries, Punjab for testing of agricultural implements of SI from CSIR-CMERI-CoEFM, Ludhiana from time to time
 - Assignment Deed signed with International Tractors Limited, Hoshiarpur, Punjab on extension of Assignment Deed for 35-60 hp Tractor for further period of 10 years w.e.f. 12.07.2022 to 11.07.2032.
- **CSIR-CRRI**
 - A project based agreement has been signed for "NCP-Focused Basic Research (FBR) on Development of Trip Generation Manual (TripGen)" with Indian Institute of Engineering Science and Technology (IEST), Shibpur, West Bengal on 02.06.2022.
 - A project based agreement has been signed "to carry out Noise mapping, identification of hot spots having violation of prescribed norms and mitigation plan to ensure compliance of noise pollution rules 2000 for four cities Ahmedabad, Surat, Rajkot & Vadodara" with Gujarat Pollution Control Board (GPCB), Gandhinagar, Gujarat on 11.07.2022.
- **CSIR-CSIO** Collaborative Research and Development Agreement signed with NMICPS-TIHAN, Hyderabad
- **CSIR-CSMCRI**
 - Agreement for multi-institutional GAP with Nirma University for the project entitled "Deployment of Sustainable Concrete for Reducing Brine Water Losses in Earthen Salt Pans: An Experimental Investigation at CSIR-CSMCRI, Bhavnagar"
 - Agreement for Technical services project with GUJARAT POLLUTION CONTROL BOARD (GPCB) entitled "Ambient Air Distribution and Source Apportionment Study of 2, 4-D (2, 4-dichlorophenoxy acetic acid) and Impact on Cotton and Pigeon Peas (Tuver) Crops in the Bharuch, Vadodara and Chhotaudepur Area"
- **CSIR-IHBT**
 - Signed MoU for a cooperative arrangement towards - strengthening Indian higher education and research through mutual resource sharing with Central University of Haryana, Mahendragarh, Haryana on 02.07.2022.
 - Signed MoU for strengthening Indian higher education and research through mutual resource sharing with Central University of Punjab, Bhatinda on 20.07.2022.
- **CSIR-NAL** Agreement signed with M/s. TATA Advanced Systems Limited (TASL) Hyderabad for technical support towards production of composite components / assemblies for LCA series production on 12-07-2022.

- **CSIR-NCL** Signed MoU with Chellaram Diabetes Research Centre, Pune for research in Diabetes.
- **CSIR-IIP** MoU signed between polymeric area of CSIR-IIP and Indian Rubber Manufacturers Research Association (IRMRA).

Patents Update

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad*	India	Abroad*	India	Abroad*
09	11	12	03	21	115

*Data reported to IPU, CSIR till 28 June, 2022 and may increase late during national phase entries

High impact S&T services offered

- **CSIR-CMERI** Agricultural machinery companies for "Testing of Agriculture machinery and Impliments, Plant protection equipment".
- **CSIR-CRRI**
 - Designing and guiding the implementation of remedial measures to rehabilitate MSE wall fascia at chainages Km 118+600 and Km 116+300 of NH-6 on Surat-Hazira Section for SURAT HAZIRA NH-6 TOLLWAY PVT LTD, Surat, Gujarat.
 - Design of Rigid Pavement for RD 0-9000 of Gurgaon canal connecting Vadodara Expressway to National Highway no. 19 (Delhi to Agra) inBallabgarh city for Haryana Irrigation Department, Faridabad.
- **CSIR-IHBT**
 - Flow cytometry and cytotoxicity analysis of samples.
 - Phytochemical investigation of Swertia chirayita, Thalictrumfolilosum and caryaillinoiensis.
 - Co-pigmentation of anthocyanins.
 - Stabilization of anthocyanins with different biopolymers.
- **CSIR-IIP** offered Wax deoiling Technology to CPCL Refinery for proposed expansion of CPCL Wax plant of 15000 TPA Capacity. Analysis of samples using various analytical techniques 1. Atomic absorption spectrometer (AAS) 24, Scanning Electron Microscope (SEM) 73, X Ray Diffractometer 28
- **CSIR-NAL**
 - Development of CF/SIC ceramic matrix composites (CMCS) for aircraft brake disc applications- mission mode project
 - Development of Indigenous 180°C cure aerospace grade epoxy - intermediate modulus carbon fiber unidirectional prepregs - mission mode project
 - Supply of scaled model of futuristic unmanned fighter aircraft for air intake measurement test + 2 items
 - Development of intermediate modulus grade carbon fibers (IMGCF)

- Development of structural health monitoring technology for the composite structures using fiber optic sensors
- Structural health monitoring of metallic airframe
- **CSIR-NCL** supplied around 1100 microbial strains and provided microbial identification services to industries and academia.
- **CSIR-SERC** Vibration testing of LCH Auxiliary Fuel Tank was carried to ensure that it meets the requirements of MIL-T-7378 standard.

Outreach Activities (Jigyasa, Skill Development, and others)

- **CSIR-4PI** celebrated World Youth Skills Day on 15th July 2022. 50 students and 3 teachers from JGRV institution visited CSIR-4PI campus and had a look at the CSIR-4PI research activities.
- **CSIR-CBRI**
 - Two days training programme on “Construction of Appropriate Green PMAY-G Demonstration Units & Technical Guidance to willing Beneficiaries for construction of Houses in Uttar Pradesh & Assam” was organized on 11 & 12 July, 2022, at CBRI, Roorkee for officials of Rural Development Department of UP and Assam. The aimed was to create awareness regarding typologies, methodologies, technologies, etc., among the officials involved in this project. 12 officials were participated.
 - On the occasion of World Youth Skills Day, 80 Students of two schools namely as Cantt Board School and Shivalik Ganga School along with their teachers visited the institute on July 15, 2022. Dr.Suvir Singh, Chief Scientist and Dr.Lokpratap Singh, Senior Principal Scientist delivered lectures on this occasion.
- **CSIR-CDRI** celebrated World Youth Skills Day 2022 on 15th July 2022.
- **CSIR-CEERI**
 - Atal Innovation Mission, CSIR and CSIR-CEERI Jigyasa Team Celebrated World Youth Skills Day on 15th July 2022. 67 School students alongwith 2 Faculty members attended the event.
 - Jigyasa Program is conducted on 18th July, 2022 for Subodh Public School, Jaipur.
 - Demonstrated various CSIR-CEERI technologies like Milk Scanalyzer, Edible Oil Analyzer, Honey Adulteration Detection System. Scientific experiments like fluorescence spectroscopy, Raman spectroscopy are demonstrated to the students in the analytical laboratory.
- **CSIR-CFTRI** organised, World Youth Skills Day (WYSD) in association with NITI Aayog on 15th July, 2022 which was attended by 30 students and 3 teachers of Adarsha Vidhyalaya, Chamarajanagar, Mysuru District.
- **CSIR-CGCRI** organised Skill Development Training on "Advanced Training on principle and application of UV-Vis Spectrophotometer, Atomic Absorption Spectrophotometer, ICP-AES and ISE Meter related to characterization of Glass, Ceramic and allied materials" held during July 26-29, 2022 at CSIR-CGCRI, Kolkata and attended by 16 Nos. MSc/B Tech/PhD students

- **CSIR-CIMFR** Skill Development Programme was organised Under CSIR Integrated Skill Initiative on " Mechanical Safety in Mines" during 21st June to 20th July, 2022
- **CSIR-CMERI** series of Skill Development training programme was organised:
 - Hands on training on Robot Building; July 01-15, 2022.
 - Advanced Manufacturing Technologies and Processes - I; July 04-06, 2022.
 - Hands on training on CNC Machining and Programming; July 04-09, 2022.
 - Advanced Manufacturing Technologies and Processes - II; July 04-06, 2022.
 - Embedded System Design for Real-Time Control; July 18-29, 2022.
 - Hands on Training on Real-Time Embedded System Design; July 18-29, 2022.
- **CSIR-CRRI** conducted five days regular training program on “Traffic Engineering and Road Safety Audit”, from July 25-29. 27 engineers from various parts of India participated.
- **CSIR-CSIO**
 - Celebrated "World Youth Skills Day 2022" in collaboration with NITI Aayog and organised demonstrations and hands-on training on "3 D Designing and Printing". Around 45 students and 6 teachers from different KVS/ATL schools participated in the event.
 - Organizing a webinar series "Vigyan Pe Charcha" in collaboration with VIBHA, NASI and INYAS Chandigarh Chapter on 30.07.2022. The first talk in the series is by Pof. Bhasin (NASI Senior Scientist Platinum Jubilee Fellow) at Government High Schools, Sector 30C on July 30, 2022.
- **CSIR-IHBT**
 - Dr.Damanpreet Singh provided training to Mr. Tathagata Pal of M.Sc. Biotechnology, Thapar University on “Hands-on training in Molecular Biology techniques in Pharmacology and Toxicology” (09.06.2022-25.07.2022).
 - Dr. Ankit Saneja imparted training for 1 Month to Ms. Pooja Devi, a student of M.Sc. Biotechnology, Chandigarh University, Gharuan, Mohali, Punjab.
 - Celebrated “World Youth Skills Day” on 15th July, 2022. On this occasion 52 students and 2 teachers from KendriyaVidyalaya, Palampur participated.
 - Under “CSIR-Jigyasa” programme, Dr.Yogendra S. Padwad, Principal Scientist of CSIR-IHBT visited Green Field Sr. Sec. School, NagrotaBagwan, District Kangra (H.P.) and delivered a lecture on the topic “Chemistry biology interface and medicine” to about 180 students and teachers. (on 18.07.2022)

- **CSIR-IIP** Skill Development Training Program on 'Analysis using Chromatography and Mass-spectrometry' was conducted during 27/6/2022 - 08/7/2022. A Mega Event "Rise in Uttarakhand" took place during 7th-9th July to showcased its technologies in the Exhibition.
- **CSIR-NAL** organised World Youth Skills Day under JIGYASA programme for students from Atal Tinkering Lab School on 15th July 2022
- **CSIR-NBRI**
 - Jigyasa and ENVIS centre of CSIR-NBRI jointly celebrated "World Nature Conservation Day" on 28th July, 2022 at RajkiyaKanya Inter College (ChotiJubilee), Nabiullah Road, Lucknow. On this occasion Environmental Quiz, Drawing Competition and Essay Writing Competition were organized for students of 9th to 12th class.
 - "World Youth Skill Day 2022" was celebrated at KendriyaVidyalaya, Gomati Nagar, Lucknow on 15-07-2022. Approximately 16 students of 9th to 10th classes and, one teacher participated in the event.
 - Organized three training programmes on different aspect of gardening - Home Gardening, 18-20 July 2022; Bonsai Technique, 21 July 2022; Dehydrated Floral Crafts, 22 July 2022. Total 81 trainees (51 females) participated in these programmes.
- **CSIR-NIIST** organised Skill development course on " Removal of organic dyes from aqueous solutions and textile wastewaters"
- **CSIR-NIO** organized an interactive session for the ATL schools under CSIR Jigyasa program, on July 15. Students got an opportunity to visit various laboratories and got their hands on training, learning about the zooplankton and Phytoplankton, they also learnt about different minerals present in rocks. Students also visited Marine Instrumentation Division where they were enlightened by the latest design in technology and working about of the CBOT, AUV, AVP and SREP. Fort-one students along with 9 teachers participated in the event.
- **CSIR-SERC** Five days Mason training program for government ITI mason trade participants was conducted between 18-22 July 2022 under the CSIR skill development initiative. Dr.N. Anandavalli, Director, CSIR-SERC inaugurated the training programme under "CSIR Skill Development Initiative" to students. The following topics were discussed during the training programme.
 - Masonry Works- Demonstration and practical execution: different bonding techniques like, Header and stretcher bond, English bond, Flemish bond, diagonal bond, zig zag bond and rat trap bond were trained.
 - Usage of different tools, equipments, operations and safety aspects related to construction industry were explained and educated to the participants.
- **CSIR-URDIP** Dr.Nishad Deshpande, Senior Scientist delivered an online lecture on "Role of IPR in Idea Generation" organized by VidyaPratishthan's

Arts, Science and Commerce College, Baramati, Pune as part of Impat Lecture Series 2022-23. ~50 students/faculty attended the online lecture which was held on 23rd July 2022.

Major Conferences, Seminar/Webinars, Workshops organized

- **CSIR-CGCRI**
 - Celebrations of the International Year of Glass (IYoG) – 2022; 6th Monthly Webinar Series 2022: Glass Science and Technology held on 28th July, 2022.
 - IYoG-2022: Webinar on "Optical fiber technology - Reshaping the world through light", organized by Indian Ceramic Society Student's Chapter of NIT Jamshedpur on 29-7-2022.
- **CSIR-CRRI** conduct 2-day workshop on “Advance technologies, use of waste plastic in road construction and road safety measures in Ladakh” was organized by Rural Development and Panchayat Raj Department (RD&PRD) UT Ladakh in collaboration with CSIR-CRRI during July 12-13, 2022 at Kargil, Ladakh
- **CSIR-CSMCRI**
 - organized 5-days training program entitled “Advanced Workshop on Academic Writing” in July 2022.
 - Jointly organised Marine Chemicals Conclave E-Conference 2022 with Indian Chamber of Commerce (ICC) on 27th July 2022.
- **CSIR-HRDC**
 - Induction Programmes for Newly Recruited Scientists held during 11/07/2022 to 16/07/2022 and 18/07/2022 to 23/07/2022
 - Awareness Programme on Gender Sensitization and Sexual Harassment of Women at Workplace: Prevention, Redressal and procedures on 14-07-2022
- **CSIR-IHBT**
 - Celebrated its 40th Foundation Day on 02.07.2022. Dr. T. Ramasami delivered a foundation day speech on “Towards Sustainable Bioeconomy Path of Himalayan Biosphere: IHBT as the Path Finder”.
 - मातृभाषादिवसकेउपलक्षमेंशुक्रवार, 22.07.2022को “जैवसंसाधनअभिलक्षण, प्रसंस्करणवउत्पादविकासमेंइंजीनियरिंगकीभूमिका” विषयपरवेबिनारकाआयोजनकियागया।इसवेबिनरमेंनिम्नलिखितप्रस्तुतिकरणहुए:-
 - “राष्ट्रनिर्माणमेंइलेक्ट्रॉनिक्सइंजीनियरिंगकेक्षेत्रमेंनवीनतमप्रगति”, डा. पी. सी. पंचारिया, निदेशकसीएसआईआर-सीरी, पिलानी, राजस्थान, द्वारा।
 - “खाद्यप्रसंस्करणमेंइंजीनियरिंगकेअनुप्रयोग, डा. महेशगुप्ता, प्रधानवैज्ञानिक, सीएसआईआर-आईएचबीटी, पालमपुर, द्वारा।

- औषधीयपौधोंपरआधारितउद्योगोंमेंआभियांत्रिकी, डा. दिनेशशर्मा, वरिष्ठवैज्ञानिक, सीएसआईआर-आईएचबीटी, पालमपुर, द्वारा।
- पहाड़ीक्षेत्रोंमेंअपशिष्टप्रबन्धन, उत्पादविकासऔरआजीविकासृजन, डा. रक्षककुमार, वैज्ञानिक, सीएसआईआर-आईएचबीटी, पालमपुर, द्वारा।
- **CSIR-NIIST** organised an International Conference on Chemistry and Applications of Soft Materials (CASM 2022)
- **CSIR-NIO** to commemorate the World Mangrove Day, the Mangrove Society of India in collaboration with CSIR-NIO organised a two-day skill training program on Sustainable Utilisation of Mangroves during 26-27 July, 2022 at CSIR-NIO, Goa.

Visit of high level dignitaries to the Institute/Laboratory

- **CSIR-CEERI** Director and Senior Officials from DIBER DRDO, Haldwani visited CSIR-CEERI for possible collaboration on Micro-PCR, Micro-Heaters, Battery Management Systems and Microwave & Plasma based Devices.
- **CSIR-CIMFR**
 - Prof.Chetan S. Solanki, Professor, IIT Bombay (Brand Ambassador of Solar Energy Govt. of MP) was discussed cum sensitized interactive session on "Energy, Climate change and I" on 22nd July, 2022 at CSIR-CIMFR, Dhanbad.
 - Visit of Shri Ajay Kr. Singh, Former International Football Player at CSIR-CIMFR Dhanbad during 51st SSBMT First Zonal Football Tournament, 25th-27th July,2022.
- **CSIR-IHBT** Dr. T. Ramasami, Former Secretary, Department of Science and Technology, Government of India and Distinguished Professor of Eminence, Anna University, Chennai visited CSIR-IHBT on 1-2 July, 2022.
- **CSIR-NAL** Visit of Shri S Somanath, Secretary, Dept of Space & Chairman, ISRO on 22nd July 2022
- **CSIR-NBRI** Prof.Rabinarayan Acharya, Director General, CCRAS, Ministry of Ayush visited the institute on 22 July 2022. He also interacted with scientists working in the area of AYUSH research and visited Raw Drug Repository &Botanic Garden of the institute.

COVID related developments/research

- **CSIR-IHBT** COVID-19 samples testing for Kangra district of Himachal Pradesh continued.

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

- **CSIR-4PI** ICEN-56 "Climate Change through the lens of modelling , Artificial Intelligence and Machine Learning" co-ordinated by CSIR-4PI along with IITM-Pune, MOES on 21st July.
- **CSIR-CFTRI** National Hindi Webinar was organised on 20th July, 2022.
- **CSIR-CIMFR** organized 51st Shanti SwarupBhatnagar Memorial Football Tournament-2022 from 25th-27th July,2022.
- **CSIR-CRRI** coordinated i-Connect (Industry Connect) Event on “Safe, Smart and Sustainable Mobility (iCEN-43a)” on 8th July 2022 (14:00 - 17:30 hrs) as part of AzadiKaAmritMahotsav and forge partnership(s) with industries.
- **CSIR-CSMCRI**
 - Organized a webinar on “Marine Chemicals Conclave” (iCEN-61A), jointly with Indian Chamber of Commerce, on 27th July 2022 under i-Connect program.
 - Represented CSIR in Garvi Gujarat 2022 Mega Exhibition, which was organized by Achievers Foundation on 8th, 9th and 10th July 2022 in Mehsana, Gujarat. The event, focusing on “Atma-Nirbhar Bharat” theme was organized to celebrate Azadi Ka Amrit Mahotsav and was supported by the Government of Gujarat. Shri Bhupendra Patel, Hon'ble Chief Minister of Gujarat, inaugurated the event.
- **CSIR-IHBT** coordinated the iConnect event entitled "climate change and its impact on various sectors and ecosystems (iCEN-58)" on 22.07.2022 along with Indian Institute of Tropical Meteorology (IITM), Pune.
- **CSIR-IIP** National Conference on "Aerospace & Defence Technologies" in Kannada on 15th July 2022
- **CSIR-NBRI** ENVIS-RP-NBRI celebrated “Hariyali Week” on 8th July, 2022 at “Sai Aagan” Vikas Nagar, Lucknow. online and offline competitions were organized for general public - Environmental Quiz (online), Drawing Competition (offline), Video Making Competition, Plantation Drive Campaign. Total of 114 participants were registered for the event from different states and UT of the country.
- **CSIR-NIO** conducted regular talks every Thursday on the occasion of Azadi ka Amrit Mahotsav.
- **CSIR Success story webinar** on “Advance in Metrology by the Custodian of Indian National Standards” was organised with CSIR-NPL on 29/07/2022 under Azadi Ka Amri tMahotsav and CSIR@80.

DEPARTMENTAL ACTIVITIES

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

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

- 07 in-house R&D units of industries were granted recognition as well as registration certificates.
- 64 in-house R&D units of industries were granted renewal of recognition as well as renewal of registration certificates.

Scientific and Industrial Research Organisation (SIROs)

Recognition/ Registration and renewal of SIROs

- 06 SIROs were granted recognition and 05 were granted registration certificates
- 27 SIROs were granted renewal of recognition and 15 were granted renewal of registration certificates

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 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).

- (i) Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM) :**
Successfully completed one project.

(ii) **Building Industrial Research & Development - Common Research Facilities (BIRD-CRF) program** - The scheme focuses on creation of Common Research and Technology Development Hubs (**CRTDH**) for micro, small and medium enterprises.

CCMB, Hyderabad:

- I. CRTDH-CCMB has organized a workshop – “Dagar: Pathway to Success” on 6th July 2022. The founders of MSMEs got an opportunity to interact with financial advisors to structure their firms and plan for the future. This interaction was focused on understanding the challenges involved in the financial planning of a MSME & start-up.
- II. An Information & interaction session was organized dated 12th July 2022 in order to provide information on various funding avenues at BIRAC. Students, researchers, innovators, and founders of MSMEs participated in the session to understand the opportunities.

IITR, Lucknow: High-End Workshop-KARYASHALA was conducted on “Application of Statistics and Computational Models for Air and Water Quality Research” at CSIR-IITR from 06th to 12th July, 2022.

IIT, Kharagpur: Lab demonstration and training with Start-ups, local schools and colleges: CRTDH at IIT Kharagpur organized a demonstration and awareness program on low-cost point-of-care medical devices (manufacturing and processes). Almost 39 people from startups, local high schools and colleges took part in the program. A demonstration was given related to the lab and other facilities. PI of CRTDH gave a seminar on the importance of the Point of Care (PoC) devices and the different facilities, processes, and knowledge available to them at the CRTDH. They were encouraged to take part and start their own ventures with CRTDH at IIT Kharagpur.

National Institute of Technology (NIT), AP: First PGRC meeting to review the financial and technical progress of CRTDH supported to NIT, AP was conducted on 19.07.2022. This CRTDH is in the area of Electronics / Renewable Energy. PGRC was chaired by the Head-CRTDH (DSIR), and attended by DSIR officials, external members from other government agencies and team CRTDH from NIT, AP.

CSIR-National Chemical Laboratory (NCL), Pune: First PGRC meeting to review the financial and technical progress of CRTDH supported to CSIR-NCL Pune was conducted dated 22nd July 2022. This CRTDH is in the area of New Materials/Chemical Process. PGRC was chaired by the Head, CRTDH (DSIR), and

attended by DSIR officials, external members from other government agencies and team CRTDH from CSIR-NCL Pune.

- (iii) **Access to Knowledge for Technology Development and Dissemination (A2K+)** - The sub-scheme has four components viz: (i) 'Technology Development and Utilization Programme for Women (TDUPW)' (ii) 'Support to Studies' (iii) 'Support to Events' (seminars, workshops, conferences, exhibitions etc.) and (iv) Technology Development and Demonstration Programme.

A2K+ Technology Development and Utilization Programme for Women

(TDUPW): 367 Women Beneficiaries have been trained under the various ongoing TDUPW projects aiming at 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 for the first time 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.1836.53 Lakhs during July, 2022.
- Sale of items worth Rs.1452.05 Lakhs was realized during July, 2022.

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 also individual inventors.

- NRDC has been assigned one technology and NRDC licensed two technologies i.e. technology on '20 HP Tractor' to M/s International Tractors Ltd (ITL), Hoshiarpur, Punjab and technology on 'Poshan – Multinutrient Foliar Spray for Mulberry' to M/s SERI-CON TECHNOLOGIES, KARNATAKA during July, 2022.
- NRDC has collected premia of Rs.41.25 Lakhs and Royalty of Rs 6.63 Lakhs from respective technologies during July, 2022.
