

No. DSIR/MS/2023/02
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **February, 2023**
(Part-I Unclassified)

Major achievements during the month of February, 2023:

Council of Scientific & Industrial Research (CSIR)

New Technologies/Processes Developed/Transferred

- **CSIR-CBRI**
 - Following technologies have been transferred to the M/s Sakarni Plaster India Pvt. Ltd, Pitampura, New Delhi.
 - Gypsum-Vermiculite-Fly Ash Light Weight Plaster
 - High Volume Fly Ash-Gypsum Composite Plaster
- **CSIR-CDRI**
 - Transferred the technology of “A New Fluorescence Quencher CDRI-Q2 (UniQ)” to M/s. Biotech Desk Pvt. Ltd. (BDPL), Hyderabad during February 15-24, 2023.
- **CSIR-CFTRI**
 - High performance advanced oxidation process for STP's grey water and industrial waste water (Food and Non-food) - M/s Global Technologies, Mahalakshmpuram, Bengaluru.
 - Production of soya proein hydrolysate - M/s Shrihari Nutrition Pvt. Ltd., Jalna, Maharashtra.
- **CSIR-CIMAP**
 - Aro Clean- A herbal Vaporizer Formulation and CIM-Suras variety of *Mentha piperita* were released on 3rd February, 2023 developed by CSIR-CIMAP Lucknow
- **CSIR-CLRI**
 - Fruit based leather-like material and a process for the preparation thereof
- **CSIR-CMERI**
 - License Agreement signed with M/s Vijay Fire Vehicles and Pumps Ltd., Valsad, Gujarat on 22/02/2023
 - on licensing of Know-how Transfer of Front Shovel of MCV.
 - on licensing of Know-how Transfer of Multi Barrel Tear Shell Launching System of MCV.

- **CSIR-CSMCRI**
 - Developed an integrated process for the preparation of alpha-campholenic aldehyde with iodine recovery
 - Developed following Technology:
 - “Utilization of 'dry sea mix' knowhow” and transferred to Stonaje Innovations Private Limited, Kangra, Himachal Pradesh
 - “Acid and oxidative resistant cation exchange membrane and its method of preparation thereof” and transferred to GFCL Solar and Green Hydrogen Products Limited, Panch Mahals, Gujarat
- **CSIR-IIP**
 - Development and Certification of new generation lubricant formulations for aerospace surfaces and components.
 - DMC catalyst with different ligands are made for the synthesis of polycarbonate polyols. It is observed that CO₂ is incorporated in 30-50%. Additionally, DMC catalyst is used for polyether polyols synthesis. Desulfurization of tire pyrolysis experiments were performed. The results found to be reducing the nitrogen content of the feed samples thereby increasing the calorific value of the sample. Synthesis of flow improvers at 250g and 1kg level is performed and testing of wax inhibition studies are under progress at the client site."
 - Vacuum Swing Adsorption (VSA) Technology for the up-gradation of raw biogas to CBG to meet Compressed Biogas (CBG) specification as per BIS 16087 (2016) with a methane recovery not less than 93% with Mailhem Environment Private Limited, Pune.
- **CSIR-NAL**
 - Development of NAL QPlane: All electric hybrid UAV (VTOL + Fixed Wing)
of Wingspan: 4 m Max Payload: 5 kg Endurance: 120 min Range: 30 Km. All Composite Operation structures.
 - Monolithic RAS IB Pylon Cover Indigenous Process Frequency range: X-band (8-12 GHz) Absorption: ~80-99 % Thermal stability: 180 °C Cost effective method for large scale production of precursor materials Multilayer epoxy-based radar absorbing composite Environment friendly process and source material

Collaborations/Agreements/MoUs Signed (National)

- **CSIR-CBRI**
 - Signed an MoU with Tata Steel Ltd. at Jamshedpur on February 15, 2023 for Science & technology interventions related to various aspects of Civil Engineering such as Affordable & Sustainable housing technologies for Relocation & Rehabilitation of families in the mining areas.
- **CSIR-CDRI**
 - A MoU executed DRDO-Institute of Nuclear Medicine and Allied Sciences, Delhi on 03-02-2023 to promote institutional linkage between

CSIR-CDRI and DRDO-INMAS and to explore other avenues for possible collaboration.

- A MoU executed with National Institute of Pharmaceutical Education and Research, Raebareli on 20-02-2023 to promote institutional linkage between CSIR-CDRI and NIPER-R and to explore other avenues for possible collaboration.
- A MoU executed with Centre of BioMedical Research, Lucknow on 20-02-2023 to promote institutional linkage between CSIR-CDRI and CBMR and to explore other avenues for possible collaboration.”
- A Sponsored Agreement executed with Themis Medicare Limited, Mumbai on 24-02-2023 w.r.t. “Pharmacokinetics study of Arteether formulation.”
- A First Addendum of MoU executed with Manipal Academy of Higher Education, Manipal on 24-02-2023 w.r.t. “Molecular characterization of clinical isolates in the areas of Antimicrobial Resistance.”
- A Second Addendum of MoU executed Manipal Academy of Higher Education, Manipal on 24-02-2023 w.r.t. “Recurrent UTI in Post-menopausal women.”
- **CSIR-CIMAP**
 - An agreement was signed with Institute of Natural Resources, Shilong, Meghalaya for making of Sanitary Napkin.
 - A MoU was signed with Uttarakhand Council & Technology (UCOST) Deptt. of Information and Science Technology, Govt. of Uttarakhand for expansion of Aroma Mission in Uttarakhand on 3rd February, 2023
 - A MoU was signed with Pravara Institute of Research and Education in Natural and Social Science (PIRENS) Loni, Ahmednagar (MH) for the purpose of beneficial relationship based on academic and scientific cooperation between the party in the field of MAPs for development of western Indian in general and Ahmednagar district of Maharashtra.
 - A MoU was signed with G.B. Pant University of Agricultural and Technology, Pantnagar, Uttarakhand for jointly undertaking various programmes in the field of agriculture and technology through scientific and technical cooperation with national programmes
- **CSIR-CLRI**
 - A MoU was signed with Troops Comfort Limited-Ordnance Factory, Kanpur for “User evaluation of Extreme Cold Weather Protective Gloves for Defense Personnel” at the “Bandhan Event” in AERO India 2023 on 15 Feb 2023 which was graced by Hon’ble Defense Minister and Hon’ble Chief Minister of Karnataka.
- **CSIR-CSMCRI**
 - Technical services towards “Supply of 50 gm of 4 types of melanin pigments produced by endophytic microbes” with L’OREAL INDIA PRIVATE LIMITED, Mumbai

- Technical services towards "Developing prototype to reuse the brine discharge from proposed desalination plant for salt pans as migratory birds' habitat" with Grasim Industries Limited (Unit: Indian Rayon)
- Consultancy project entitled "Expert Analysis and necessary technical inputs to increase salt purity, yield and pH management in solar salt works of M/s. Tata Chemicals operating in Devbhoomi Dwarka District in Gujarat" with Tata Chemicals Limited, Mithapur, Gujarat
- Consultancy project entitled "Bromine recovery from reject brines" with Tata Chemicals Limited, Mithapur, Gujarat
- **CSIR-IIP**
 - Licensing Agreement signed with M/s Mailhem Environment Private Limited, Pune to utilize the Technology for up-gradation of raw biogas to CBG meeting BIS 16087 (2016) specifications to set up a single 2 TPD product throughput PLANT at Rudrapur, Uttarakhand by MAILHEM.
 - MoU signed with Indian Airforce Air Headquarters, New Delhi on Sustainable aviation fuel and high-energy-density fuel, Aviation lubricants recycling, helicopter gearbox lubricants, precision instrument lubricants and Development of fuel from waste plastic
 - Academic MoU signed with THDC-Institute of Hydropower Engineering and Technology, Tehri, Uttarakhand
- **CSIR-IITR**
 - Following MoA was signed with:
 - M/s Phitons Bioengineering Private Limited, Bangalore on February 06, 2023 for jointly perform R&D activities as per term of reference for incubation at BIRAC-BioNEST, CSIR-IITR, Lucknow.
 - Farelabs Private Limited, Gurugram, Haryana on February 24, 2023 on the basis of collaboration in the areas of academics, education, training, consultancy and research.
 - Dr Rammanohar Lohia Avadh University, Ayodhya on February 27, 2023 for foster collaboration research programmes to provide advancement in scientific and technological knowledge for benefit of society at large.
- **CSIR-CRRI**
 - An agreement was signed with LEA Associate South Asia Private Limited on 08.02.2023 for selection of Consultancy services for Road Safety Audit and Design for the PWD North and North East Zone Roads in the State of Karnataka (Package-1) under KSHIP-3 Project.
- **CSIR-IICT**
 - Preparation and characterization of Pyroxasulfone agrochemical for UPL Limited.
 - Synthesis of urethane acrylates Phase II for Sai Lifesciences.

- Investigating the efficacy of SPIL compounds against palmitate-induced cell death/oxidative stress by modulating the AMPK activation for Sun Pharmaceuticals
- An MoU executed with University of Ladakh on 7/2/2023 on Teaching, Research and Training in selected and advanced thrust areas of mutual interest. It outlined the need of joint study on climate change, energy, biodiversity, rare medicine plants, introduction of green-house etc. Under the MoU, the students of Ladakh, specially from department of Chemistry and other related Departments would undertake their project work or Skill training based on the Government of India scheme for North-east, J&K and Ladakh regions.
- **CSIR-NAL**
 - License Agreement signed with Hindustan Aeronautics Limited, Bengaluru for transfer of Design Know-how of Fin & Rudder parts/assemblies for Series Production of LCA-Tejas on 15th Feb., 2023 during AERO INDIA 2023.
- **CSIR-NEERI**
 - Signed Project Specific Agreement with Nagpur Municipal Corporation (NMC) on 07.02.2023 to meet the ambient air quality standards at the identified cities within a stipulated time frame.
- **CSIR-NIIST**
 - Signed an agreement with M/s Sri Krishna Industries Tamil Nadu for Development of Friction dust resin from Cashew Nut Shell Liquid (CNSL)

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad*	India	Abroad*	India	Abroad*
15	26	22	06	18	26

* Data reported to IPU during the said period and may increase 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 one Medium-Sized Enterprise in the Pharmaceuticals sector.
 - Animal Facility Laboratory: The CPCSEA (Committee for the Purchase of Control and Supervision of Experimental Animals) approved experimental animals (total no. 89) were supplied to outside research organizations for research purpose. This includes 89 SD rats
 - Sophisticated Analytical Instrument Facility: Provided service for analysis of sample by IR (Infrared), Mass, NMR (Nuclear Magnetic

Resonance) and EM (Electron Microscopy). In the month of January, total 189 samples have been analyzed for 35 users.

- **CSIR-CIMAP**
 - 80 quintal nucleus planting material of Mentha and Geranium were distributed in the month of February, 2023 to farmers (Lakhimpur, U.P. 30 q. Mentha), (Haryana 20 q. Mentha), (Punjab 30 q. Mentha and 100 cuttings of Geranium), (Bihar 8 q. Mentha) and (Jharkhand 3 q. Mentha)
 - 1000 Lit. of Hand Sanitizer (Hankool Plus) was manufactured at TBIC, CSIR-CIMAP for M/s. Vyom organics Pvt. Ltd. Bareilly, Uttar Pradesh
- **CSIR-CMERI**
 - Condition assessment of Industrial Structures of different power plants, mines, steel industries.
 - Design, fabrication and installation of 1000 LPH water purification plant.
- **CSIR-CRRI**
 - Traffic Improvement Measures in view of the Proposed Maha Kumbh-2025 at Prayagraj Nagar for Prayagraj Development Authority, UP.
 - Evaluation of NDMC Roads for Determining the possibility of Cold Milling and Recommendations for Suitable Overlay for New Delhi Municipal Council (NDMC)
 - Customized Training Programme on "Capsule on Airfield Engineering" for the Officials of BRO for Border Road Organization (BRO) , Delhi Cantt
 - Laboratory Evaluation of CTSB Mixes for UP Rural Engineering Department, PIU Mathura, Uttar Pradesh
 - Investigation of study 6 Lane road (Widening work) from Deliper Trijunction to Pilibheet Trijunction 3.8 km-BDA Bareilly Uttar Pradesh for Bareilly Development Authority, U.P.
 - Consulting Services for Road Safety Audit and Design for the PWD North and North East Zone Roads in the State of Karnataka (Package-1) under KSHIP-3 Project for LEA Associates South Asia Pvt. Ltd., New Delhi
 - Expert Opinion on Maintenance Work for Baleshwar to Kharagpur Section of NH-60 for State Bank of India, Mumbai
 - Audit of Two Distressed PSC Girders of under construction Ganga bridge between Unchagaon, Distt Bullandsahar and Virampur, District Amroha of UP for Adycon Concrete LLP, Prayagraj
 - Conceptual Training Program on Pavement Design, Construction, Maintenance and New Technologies for rural roads for M. P. Rural Road Development Authority, Bhopal
 - Advising the department in adopting Full depth reclamation (FDR) technology for the suitable roads and giving Mix Design and Pavement design for selected R&B roads (Total length 100 km) in Andhra Pradesh for Roads & Building Department, Andhra Pradesh

- Structural Investigation of the Distressed ROB at the Ch. 307 on the UCHIT Expressway, on NH-76 for UCHIT EXPRESSWAYS PRIVATE LIMITED, Rajasthan
- Evaluation of Viatop Premium Pellets for application in Stone Matrix Asphalt (SMA) for Amaz Chemicals LLP, Mumbai
- Evaluation of LCR/MIF Value of MacGrid EG 30S (i.e. biaxial extruded polypropylene geogrid) for pavement design of Dantiwara-Piper-Merta city section of SH-21, Rajasthan for Maccaferri Environmental Solutions Private Limited, Maharashtra
- Testing of cellulose fiber pallets and design of SMA mix using cellulose fiber pallets (TOPCEL) for Organo Chemical Industries, Mumbai
- Condition Assessment Using Modern Data Collection Techniques and Preparation of Annual Maintenance Plan using HDM-4 of Odisha PWD Roads. For Odisha Works Department
- Evaluation of RAP material and Mix Design of DBM Grade-I(90mm thickness)and Grade-II(70 mm thickness)for Construction of 4 Lane Greenfield Delhi-Amritsar-Katra Expressway from junction with Patiala-Bathinda Road(NH-7) for Ceigall India Ltd., Ludhiana
- **CSIR-CSMCRI**
 - Dr Kamallesh Prasad has Conducted Viva-voce examination of Mr Sachin Shet–CNMS, Jain University, Bangalore.
 - An agreement has been signed with L'Oreal India Pvt. Ltd. to share four types of melanin (50 gm each) through Technical Service Project (TSP) on 6th February 2023 (Dr Pramod B Shinde).
 - Dr Ramavatar Meena: Nominated as a member of the Online Initial Screening Committee (OISC) by the Secretary, Technology Development Board (TDB), DST, Govt of India for the project in the domain of Green Technology.
- **CSIR-IHBT**
 - Raised sixty-four experimental animals for the external client to support their ongoing projects and activities.
- **CSIR-IITR**
 - Undertaken Safety/ preclinical toxicity studies of Nano fertilisers from Rashtriya Chemicals & Fertilisers Limited (RCFL), Mumbai.
- **CSIR-NAL**
 - Electroless nickel plating on ss substrate – LEOS-ISRO design, develop and propose a regulatory framework for model-based safety assessment towards software health management - Indo German science & technology Centre
- **CSIR-NML**
 - Development of Briquetting technique for utilization of steel plant solid waste –Phase 2 to utilize mainly high iron oxides in these fines, the briquetting study has been done as desired by Ferro Scrap Nigam Ltd. (FSNL).

- **CSIR-NEERI**
 - Review and Update of National Implementation Plans under the Stockholm convention on persistent organic pollutants for India.
 - Assessment of Air, Water and Soil in and around NTPC, Simhadri, Andhra Pradesh.
 - Evaluation of Environment Management plan with Environment Auditing and Monitoring in Amanora Park Town.
 - Emission Inventory, Source Apportionment and Carrying studies of the Air Environment for Ongole City.
 - Preparation of Feasibility and detailed Project report for in-situ drain treatment of dry weather flow entering into the drains of Eastern Suburbs of Mumbai.
- **CSIR-SERC**
 - Performance Evaluation of Composite Segments
 - The S&T services was carried out for R & D Establishment (Engineers), Pune Hydrostatic pressure test was carried out on two curved CFRP sandwich segments of size 4.50 m × 4.0 m and 0.0564 m thickness up to a uniform pressure of 1.5 bar. Out of two segments, one segment was manufactured with a joint at the Centre in 4.50 m direction. The test set-up consisting of a rectangular steel container and the required number of clamps for holding the segments is developed and fabricated by CSIR-SERC.

Outreach Activities (Jigyasa, Skill Development, and others)

- **CSIR-4PI**
 - ENGLISH and Kannada Essay Writing Competition on My dream of a Green Future, and nana hasiru bhavishyada kanasu, all these 6 students shall be invited to CSIR-4PI campus and Despatch of Cash Awards and Certificates to the Winners.
- **CSIR-CBRI**
 - Jigyasa team visited to following Schools and delivered popular science lectures by CSIR-CBRI Team.
 - GD Goenka Public School, Muzaffarnagar and had an interaction with teachers and students on February 22, 2023. More than 15 teachers and 50 students participated.
 - DAV Centenary Public School, Meerut and had an interaction with teachers and students February 22, 2023. More than 15 teachers and 200 students participated.
 - DPS Ghaziabad and had an interaction with teachers and students February 23, 2023. More than 15 teachers and more than 180 students participated.
- **CSIR-CDRI**
 - During CSIR one week one lab celebration following activities were conducted:

- Vigyan Jyoti Program for motivation of Girls in STEM at JNV Piparsand Lucknow.
 - Student Scientist Connect was organized at newly adopted Atal Tinkering Lab of SRGlobal School, bhainsamau Lucknow.
 - To Inculcate the scientific temperament among student and to motivate them to make Aatmanirbhar Bharat through scientific interventions, a student scientist connect program was organized at Army Public School, Lucknow
 - A webinar on the success story of REUNION for rapid fracture healing & osteoporosis management organized
 - Health Awareness program "Sawasthya Chaupal" was organized in village Pahiya Ajampur Kakori, Lucknow. Interactive session with villagers was organized along with Era Medical College & Hospital faculty to discussed about common gynecological problems and Gynae Cancer. Researchers interacted and completed written survey to understand the level of understanding among the village population. Villagers were sensitized about the Lymphatic Filariasis. How they can protect themselves and how they can cure it!
 - Health Awareness and Free Health Checkup program was organized in village Purseni Mohanlalganj Lucknow. Scientists interacted and gave the counseling and surveyed the villager's understanding towards health and fitness.
- **CSIR-CFTRI**
 - Organized Millet-Jigyasa 2023 program in association with Dept. of Public Instruction, Govt. of Karnataka and Prayoga Institute, Bangalore on 28.02.2023 which was attended by 100 high school students and 10 teachers. Scientific talks and quiz program were organized.
 - **CSIR-CGCRI**
 - Conducted Skill Development Programme on Terracotta Processing from February 7th -8th 2023 at CSIR CGCRI, Kolkata (44 Participated).
 - Another Skill development Training Program on Ceramic Whiteware Processing, at CSIR-CGCRI, Khurja Centre held during February 9th - 14th, 2023. (26 participated).
 - **CSIR-CIMAP**
 - Training on E-SDP through medicinal and aromatic plants and its value -added products sponsored by Ministry of MSME, Govt. of India, New Delhi was organized from 21 to 25 February, 2023. This programme was attended by 20 participants hailing from different states of India.
 - **CSIR-CIMFR**
 - Conducted "Career Counselling and Awareness Session" programme on 1st & 2nd February 2023 at Kasturba Gandhi Balika Vidhyalaya (KGBV) Jharia and Baliapur respectively.

- "Coin Battery Experiment" under Jigyasa Programme at Kasturba Gandhi Balika Vidhyalaya (KGBV) Baliapur on 14.02.2023.
- "Coin Battery Experiment" under Jigyasa Programme at Kasturba Gandhi Balika Vidhyalaya (KGBV) Govindpur on 15.02.2023.
- "Coin Battery Experiment" under Jigyasa Programme at Kendriya Vidyalaya No.1 on 17.02.2023.
- **CSIR-CLRI**
 - Around 14 students along with their academic faculties from the department of Biotechnology, VIT, Vellore visited CSIR-CLRI on 09 February 2023. Students interacted with the Scientists from different labs.
 - Around 15 students pursuing B. Tech Fashion Technology from VIT, Chennai visited CSIR-CLRI on 09 February 2023. The Scientists of CSIR-CLRI briefed about Leather Goods/Garments, CAD Designing, Leather Processing Technologies, and other ongoing research activities relevant to their part of the curriculum.
 - Around 110 students from B.E/ B.Tech Computer Science & Business System from R.M.K. Engineering College, Kavaraipettai & 4 Faculties visited CSIR-CLRI on 22 February 2023. The students interacted with Engineering Services Department – Glass Blowing Section, Shoe & Product Design Centre, Knowledge Portfolio Management Department and Leather Processing Technology.
 - Students from Sri GVG Visalakshmi College for Women, Udumalpet visited CSIR-CLRI on 16 February 2023. Students interacted with the Scientists from different labs.
- **CSIR-CMERI**
 - Jigyasa programme was organized on 10.02.2023 with DIY kit related with Solar Energy and demonstration of solar chullah & water purification system developed by CSIR-CMERI was done for the students of Saraswati Vidya Mandir, Bhuli, Dhanbad, Jharkhand.
 - SDP on Municipal Solid Waste Management; Feb 01-10, 2023.
 - SDP on Renewable Energy Systems; Feb 07-10, 2023.
 - MSME Advanced Entrepreneurship and Skill Development Programme (E-SDP) on 'Modern Agricultural Machines and Techniques'; February 13-17, 2023.
 - MSME E-SDP on 'Precision Agricultural'; February 20-24, 2023.
- **CSIR-CSMCRI**
 - AcSIR students under student-scientist interaction visited 30 schools (Govt., govt aided, and private schools). They interacted with students, gave presentation, talk, and demonstrated the research activities.
 - Conducted Skill Development Training program on "Microalgal Diversity and their Biotechnological Potentials" during 8-10 Feb 2023 (No. of participants – 15 nos.)

- Organized a Student-Scientist interaction program at KVs, Bhuj and Gandhi-Dham on 8th Feb 2023
- **CSIR-CSIO**
 - Lab visits have been conducted on 9.2.2023 for the school students of GMSSS Sec-8, Chandigarh to the labs of Fiber Optics and ISTC (Electrical/Electronic lab).
 - Lab visits have been conducted on 15.2.2023 for the school students of GMSSS Sec-33D, Chandigarh to the labs of ISTC (Electrical/Electronics/Mechanical/ Workshop) and Horticulture Nursery.
- **CSIR-IHBT**
 - 70 students and 2 teachers of Viveka Foundation school, Bhawarna, Palampur visited CSIR IHBT on one week one lab program on 24 Feb 2023.
 - 146 students and 19 teachers from Govt. Sr. Sec. School Gandhir, Distt. Bilaspur and Cambridge International School, Palampur visited CSIR-IHBT Palampur under CSIR-JIGYASA and CSIR-One Week One Laboratory Programme on 21.02.2023.
 - 91 students and 6 teachers from Cambridge International School Palampur and Green Field Sr. Sec. School Nagrota, Distt. Kangra (H.P.) visited CSIR-IHBT Palampur on 22.02.2023
 - Visit to floriculture fields, drawing, cultural activities were organized for 27 Differently-Abled Children. on 23 Feb at CSIR- IHBT
- **CSIR-IIP**
 - Under Jigyasa Program a Scientific lecture on Crude Oil and Its Properties was organized on 11 Feb 2023 at Kasturba Gandhi Balika Vidyalaya School, & Rajkiya Inter College, Kalsi, Dehradun.
 - Conducted Skill Development Training on 'Analysis with Elemental, Microscopic and Thermogravimetric Tools' February 20-March 03, 2023.
 - Participated and showcased the technologies at the Two-Day International Conference on "Communication and Dissemination Traditional Knowledge (CDTK-2023)" during 14-15 February 2023 organized by CSIR-NIScPR, New Delhi.
 - Visit of the Science undergraduates from Devbhoomi Uttarakhad University at CSIR-IIP on 22nd Feb. 2023.
- **CSIR-CRRI**
 - Conducted 3-day online customized training program on "Construction and Quality Control of Flexible and Rigid Pavements" during February 07-09, 2023. Programme attended by 51 participants nominated / sponsored by NRIDA, Govt. of India.
 - Conducted 9-day regular training program on "International Course on Dissemination of HDM-4" during February 02-10, 2023. Programme attended by 20 participants from various parts of India.

- Conducted 5-day regular training program on “Quality Assurance, Health Assessment and Rehabilitation of Bridge” during February 20-24, 2023. Programme attended by 26 participants from various parts of India.
- Jigyasa program was held at Kendriya vidyalaya, Tuglakabad, New Delhi on 14-2-2023
- **CSIR-CRRI**
 - organized Scientist-Student Interactive programme on February 14, 2023 under Jigyasa Programme. The interactive programme was attended by 60 students and 6 teachers from Kendriya Vidyalaya Tughlakabad, New Delhi.
- **CSIR-HRDG**
 - CSIR-IIIM organized 2 days young start-up conclave on 1-2 Feb 2023
 - CSIR-CIMAP, under One Week One Laboratory”, organized scientific student seminar attended by 200 students and 13 teachers
 - CSIR-CIMFR organized a laboratory visit and interactive session on February 6th,2023 for students from the 7 North-east Indian states of Arunachal Pradesh, Meghalaya, Tripura, Manipur, Mizoram, Assam and Nagaland.
 - 6th and 7th Class students visited the open-air Rock Garden in CSIR NGRI on 7th Feb 2023
 - Visit of scientists (CSIR-CSMCRI) to JNV, Jamnagar (Gujarat) on 6th Feb 2023
 - CSIR-CSMCRI organized Scientist student interactions at KV, AFS, Jamnagar (Gujarat) on 7th Feb 2023
 - ATL workshop organized on 6th February 2023 at Govt High School, Gandhinagar, Jammu on 7th Feb 2023
 - CSIR-NEIST organized two days teachers training program in collaboration with RSC on 7th and 8th February 2023. 52 teachers from 18 different schools of Jorhat and Golaghat district participated.
 - CSIR - HRDG as a part of the International Day of Women and Girls in Science organized a talk by Women Scientists, Policy makers and Researchers on 10th February 2023. 21 Girls children and 3 teachers from Rabea Girls public school participated
 - Student Scientist connect program was conducted for newly adopted ATL Schools on 13 Feb 2023.
 - CSIR-IMMT organized Science Experiments Demo program and Lab Visit on 17th Feb for 80 students and 8 teachers from a remote district.
 - CSIR- NIScPR organized a Science webinar on Science Communication and Citizen responsibility on 24th Feb 2023
 - 55 Girl Students of Javahar Navodaya Vidhyalaya, Kajra visited CSIR-CEERI Pilani on 20-02-2023 for interaction with Scientists.

- 50 students and 3 teachers from KV 2, Ambala participated in first day of the 'Open Labs' event during the National Science Week 2023 on 21 Feb 2023
- JIGYASA Team of CSIR-IMMT celebrated Sir Shanti Swaroop Bhatnagar's 130th Birth Anniversary with Memorial Lecture and laboratory Visit for students
- Teachers workshop was organized at IIIM Srinagar in collaboration with RSC on 22 Feb 2023
- A two-day workshop was organized by CSIR-IIIM Srinagar in collaboration with Royal Society of Chemistry UK-India Chapter on 22-23 Feb.
- **CSIR-IICT**
 - Organizing a Skill Enhancement Training program to 10th batch (Group A & B) officers from Central Revenue Control Laboratories (CRCL), Govt. of India, New Delhi on "**Advanced Chromatography and Spectroscopy Techniques**" for a period of one month. The training is being held from 6th Feb 2023 to 10th March 2023 under CSIR Integrated Skill Initiative (ISI).
 - Organizing a Skill Development Training program on "**Water Purification & Water Analysis**" for a period of one month from 13th Feb 2023 to 10th March 2023. The training is being attended by Chemical Engineering graduates from various engineering colleges.
 - Organized Skill Development training program exclusively for women on "**Analytical Food Chemistry**" from 20-27 Feb., 2023. 32 women graduates in Food Science participated in the training.
 - Under CSIR Integrated Skill Initiative, CSIR-IICT is organizing an "**Upskilling to PG students from Indrashil University**" for a period of 03 months. The internship is scheduled from 15th Feb to 15th May 2023 and 13 PG students are attending the same.
- **CSIR-NAL**
 - Ayurveda Camp, Diabetes Screening Camp by CARI on 6-7th Feb., 2023
 - CSIR-NAL Participated in Aero India 2023 Event during 13-17th Feb., 2023
 - International Mother Language Day on 21st Feb., 2023
 - JIGYASA Scientists Teachers Connect Programme on 23 – 24th Feb., 2023
 - National Science Day Celebration on 28th Feb., 2023
- **CSIR-NBRI**
 - Organized three training programme on various garden aspects viz. Home Gardening (From 20-22 Feb. 2023), Bonsai Technique (Feb. 23, 2023) and Dehydrated Floral Crafts (Feb. 24, 2023). A total of 45 participants were trained in these training programmes.

- Organized one day fluoride awareness programme was organized on 19-02-23 at Village Magrair, Block Bhigapur, Dist Unnao, UP, among the inhabitants of the village under SERB SSR activity of GAP3475.
- Scientist delivered a lecture on 'Plant diversity exploration, herbarium technique, importance of various plants' and discussed other relevant topics under Jigyasa Programme organized on 20.02.2023 at Kendriya Vidyalay, Shivgarh, Raebareli. 150 students and 08 faculty members attend this programme.
- कृषक संगोष्ठी एवं प्रशिक्षण कार्यक्रम : 21 फरवरी 2023 मंगलवार को उत्तर प्रदेश के बहराइच जिले के सुदूर नेपाल गंज के निकट कतर्नियाघाट के ग्रामांचल वनांचल में स्थित विकास खण्ड मिहीं पुरवा के ग्राम सिरसियन पुरवा, चहलवा में आयोजित कृषक संगोष्ठी एवं प्रशिक्षण कार्यक्रम में सहभागिता की। जिसमें हल्दी की उन्नत वेराइटी केसरी, परती व भराव वाली जमीन में नागरमोथा, पुष्प कृषि से आयवर्धन, जैव उर्वरकों का प्रयोग, शुष्क पुष्प कला उत्पाद बनाने हेतु व जड़ी बूटियों से स्वास्थ्य संरक्षण आदि विषयों पर लगभग 300 किसानों को व्याख्यान व प्रशिक्षण दिया गया, जैव उर्वरक का वितरण भी किया गया। कार्यक्रम स्थानीय सांसद श्री अक्षयबर लाल गोंड व उनके प्रतिनिधि डॉ आनन्द गोंड द्वारा संचालित भगवान दास सेवा संस्थान, व सीएसआईआर एनबीआरआई के संयुक्त तत्वावधान में आयोजित किया गया। संस्थान के वैज्ञानिकों डॉ संजीव ओझा, डॉ राकेश नैनवाल, डॉ देवेन्द्र सिंह, व तकनीकी अधिकारी डॉ सुरेश शर्मा डॉ श्वेता सिंह तथा डॉ शशांक मिश्रा द्वारा उद्बोधन दिया गया।
- Lectures on “Mission Life” in Student-Scientist Interaction programme was organized on 25.02.2023 in two Kendriya Vidyalay schools at Prayagraj. A total of 60 students and 03 teachers participated from Kendriya Vidyalay Bamrauli, Prayagraj and 45 students and 4 teachers also participated from KV Cannt., Prayagraj.
- **CSIR-NEERI**
 - Air Pollution Monitoring, Emission Inventory, Modelling and Management, Feb. 01-03,2023.
 - Climate Change Impacts Assessment and its Responses, Feb. 07-8, 2023
- **CSIR-SERC**
 - One day, CSIR JIGYASA ATL workshop was organized on 07 February 2023, exclusively for the students of the adopted schools in Ranipet (Vellore) districts of Tamil Nadu. Three scientists of CSIR-SERC visited the schools and delivered lectures on topics related to basic science, the latest scientific advancements and battery experimental workshops, etc., and also witnessed the facility created under the ATL program. About 140 students and 10 teachers were benefitted in the workshop.
 - Two-day, CSIR JIGYASA ATL workshop was organized during 23-24 February 2023, exclusively for the students of the adopted schools in Namakkal districts of Tamil Nadu. Seven scientists of CSIR-SERC and CSIR-CMC visited the schools and delivered lectures on topics related to basic science, the latest scientific advancements and battery

experimental workshops, etc., and also witnessed the facility created under the ATL program. About 300 students and 30 teachers were benefitted in the workshop

- Organized following customized training course:
 - "Condition Assessment and Retrofitting of Concrete Structures for Enhancement of Service Life for NTPC Engineers" during 07-10 February 2023. (15 Participated)
 - "Bridge Health Monitoring, Rehabilitation and Management (BREAM)" for Central Engineering Services (Roads) under Ministry of Road Transport and Highways (MoRTH), during 20-24 February 2023. (15 Participated)
- Conducted following Advanced courses:
 - "Geopolymer Concrete (GCON 2023)" during 02-03 February 2023. (15 Participated)
 - "Fatigue and Fracture Behaviour of Metallic Components (FFBMC-2023)" during 08-10 February 2023. (40 Participated)
 - "Conductive Green Concrete for Sustainable Infrastructure (CGCSI 2023)" during 15-16 February 2023. (17 Participated)
- Webinar (through online mode)
 - "Opportunities and Challenges for use of High Strength Steel in Construction" on 10 February 2023. (45 Participated)
 - "Effective Utilization of E-Waste Plastics in Concrete" on 20 February 2023. (30 Participated)

Major Conferences, Seminar/Webinars, Workshops organized

• CSIR-Hqrs

- CSIR and its labs participated in "Vibrant Haryana" at Karnal, Haryana on 24th Feb., 2023. Labs participated were CSIR-NIScPR and CSIR-IMTECH.
- CSIR and its labs participated in "Alluring Rajasthan" at Udaipur Rajasthan on 23rd Feb., 2023. Labs participated were CSIR-IHBT and CSIR-CEERI.

• CSIR-CBRI

- Celebrated Foundation Day on February 10, 2023. Shri Rajendra Singh, NDMA graced the occasion as chief Guest of the Function and delivered his Foundation Day lecture. Professor R Pradeep Kumar presides over the function.

• CSIR-CDRI

- Sir Edward Mellanby memorial oration (48th) was organized as a part of CSIR-CDRI annual day celebration, on 17th February, 2023. Prof. Srinath Reddy, Honorary Distinguished Professor, Public Health Foundation of India (PHIF) delivered the talk entitled, "Path of Science from purpose and process to public good"
- 72nd Annual Day celebration was organized by CSIR CDRI on 17th February 2023. Dr. Habil Khorakiwala graced the event as the chief guest addressed the gathering. The event was witnessed by former

directors, Padmashri Dr. Nityanand, Dr. VP Kamboj and Dr. Alok Dhawan.

- **CSIR-CFTRI**
 - Prof. Desirazu N. Rao, Indian Institute of Science, Bengaluru delivered a lecture on 17.02.2023 on the topic "Helicobacter pylori and humans: An ancient association".
- **CSIR-CGCRI**
 - 62nd RC Meeting held on 24.02.2023 under the Chairmanship of Prof. Dipankar Banerjee.
- **CSIR-CIMAP**
 - CSIR,s One Week, One Lab programme was organized at CSIR-CIMAP, Lucknow from 30 January to 7 February, 2023
- **CSIR-CIMFR**
 - Indo-French Workshop on “Clean and Sustainable Energy Technologies (Infinite)” during 21-24 February, 2023 at CSIR – National Physical Laboratory, Pusa, New Delhi
- **CSIR-CLRI**
 - The Curtain Raiser of One Week One Lab (OWOL) event of CSIR-CLRI has been launched on 02 February 2023 at India International Leather Fair (IILF) 2023. The curtain raiser of OWOL was unveiled by Dr T Ramasamy, Former Secretary, DST, and the first copy was received by Shri Susanta Mallick, Secretary, ILTA. The teaser video on OWOL of CSIR-CLRI scheduled to be held during 02 to 06 May 2023 was released during the occasion.
 - The 76th Meeting of the Research Council of CSIR-CLRI was held on 08 February 2023 at CSIR-CLRI.
 - As part of 75th Foundation day Celebrations, Invited Lecture was delivered by Prof. Dirk Weichegre, Leibniz University Hannover, Germany on the topic “Solid Waste Management within the Transition from Linear to Circular Economy” at CSIR-CLRI on 22 February 2023 and the other Invited Lecture was delivered by Prof M Muthukumar, Department of Polymer Science and Engineering, University of Massachusetts Amherst, USA on the topic “Electrostatic Self-assembly of Collagen and Charged Macromolecules” at CSIR-CLRI on 24 February 2023.
 - A technical seminar was organized as part of International Mother Language Day 2023 at CSIR-CLRI on 27 February 2023 wherein the researchers presented their research works in their mother language.
 - National Science Day jointly organized by CSIR-SERC, CSIR-CLRI and CSIR Madras Complex on 28 February 2023 at SERC campus.
- **CSIR-CSMCRI**
 - CSIR-CSMCRI Marine Algal Research Station (MARS) organized the statue unveiling of Prof. MOP Iyengar (father of Indian Phycology) and Prof. V Krishnamurthy (Founder of Marine Algal Research Station,

Mandapam) on 24-02-2023 at MARS, Mandapam. Dr. B. Ganguly (Senior-most Scientist and Scientist-in-charge of CSMCRI Bhavnagar) unveiled the statues.

- **CSIR-HRDC**
 - Programme on Noting, Drafting and Service Rules from 06-02-2023 to 07-02-2023
 - Induction Programme for Newly Recruited Scientists from 13-02-2023 to 18-02-2023
- **CSIR-IICT**
 - Participated in the 20th celebratory edition of BioAsia, Asia's largest life sciences and health-tech conference, organized by the Government of Telangana, during 24-26 February 2023 in Hyderabad with the theme 'Advancing for ONE: Shaping the next generation of humanized healthcare'.
- **CSIR-IITR**
 - Organized a two-day conference on “Women in Academia, Research and Management of Food Safety and Toxicology (WARM-FoST)”, in association with Association of Food Scientists and Technologists of India (AFSTI)–Lucknow Chapter on 24 and 25 February 2023.
 - Organized the One-Week-One-Lab (OWOL) campaign during February 27 – March 3, 2023. This nation-wide campaign was launched by Hon'ble Minister of State (I/C) S&T Dr Jitendra Singh Ji in January 2023 at New Delhi, with the expectation to showcase the legacy and achievements of CSIR laboratories to the society through various interactive events.
- **CSIR-NBRI**
 - Organized two-day workshop entitled 'Lichens in an ecosystem' for faculties during 6 – 7 February 2023 under Scientific Social Responsibility activity of Science and Engineering Research Board, Govt. of India, New Delhi. A total of 24 faculties from Lucknow and nearby colleges attended the workshop.
 - Organized one day student scientist meet on 'Role of taxonomy in biodiversity conservation' on 23 February 2023 under Scientific Social Responsibility activity of Science and Engineering Research Board, Govt. of India, New Delhi. A total of 25 students participated from Techno Institute of Higher Studies, Lucknow. Scientist of Plant Diversity, Systematics and Herbarium Division interacted with the students and showcased various facilities including Herbarium, Exposition and Botanic Garden.
- **CSIR-NIIST**
 - Workshop on Gender equality at workplace
 - Dr C Anandharamakrishnan, Director, CSIR-NIIST inaugurated the 10-day Refresher Course- Higher Secondary School Teacher Transformation Program (HSSTPP 2022-2023: Chemistry) on 25th

February 2023. The program is in collaboration with Directorate of General Education, Government of Kerala

- National Conference on Advanced Materials and Manufacturing Technologies (AMMT 2023) kicks off at CSIR-NIIST on February 23-24,2023. The two-day event showcases recent developments in advanced functional materials and manufacturing technologies

Visit of high-level dignitaries to the Institute/Laboratory

- **CSIR-CDRI**

- Shri Alok Kumar, Director General, Council of Science and Technology, UP, Dr. Huma Mustafa, Joint Director, UPCST and Mr. Prakash Bindu, Secretary UP CST, graced the event of launching of indigenous DNA staining GreenR dye, a product jointly developed by CDRI and Biotech Desk Pvt. Ltd. on 16th February 2023.

- **CSIR-IIP**

- Prof. Kamnio Chattopadhyay visited National Science Professor visited the TCD. Dr. S Pradhan director THDC Tehri visited the Tribology lab.

- **CSIR-NAL**

- DLR Delegates Visit on 21-23rd Feb., 2023
- Commandant, ASTE visit on 22nd Feb., 2023
- Institute of Aerospace Safety, IAF Palam visit on 24th Feb., 2023

- **CSIR-NBRI**

- Organized National Science Day Celebration on 28 February 2023 and Padma Bhushan Dr. Rajendra Singh Paroda, Founding Chairman, Trust for Advancement of Agriculture Sciences (TAAS), New Delhi; Former DG, ICAR, New Delhi & Former Secretary, Department of Agricultural Research and Education (DARE), Government of India was the Chief Guest.

COVID related developments/research

- **CSIR-IIP**

- Inhouse developed LiX zeolite beads from CSIR-NCL has been evaluated for dynamic N₂ uptake capacity under different pressures and feed flow conditions using a mixture of 28% O₂ balance N₂ as feed. The dynamic capacity values were compared with two commercial LiX zeolites i.e. OX19 (LiLSX) from M/s Arkema and JLOX-103 (LiX) from M/s Luoyang Jalon under identical process conditions. The dynamic N₂ capacity was found to be comparable with the commercial LiX. The encouraging results have been communicated to CSIR-NCL for taking it up further towards commercialization of an indigenous LiX zeolite technology for efficient air separation particularly in the context of medical grade oxygen production by P/VSA.

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

- **CSIR-CIMAP**

- CSIR One Week, One Lab programme was organized at CSIR-CIMAP, Lucknow from 30 January to 7 February, 2023.
- National Science Day will also be organized on 28th February, 2023.
- **CSIR-HRDG**
 - AKAM banners, posters and website links were updated on the CSIR-HRDG & SSBPrize Website.
 - On HRDG social media handles Facebook and Twitter.
- **CSIR-IHBT**
 - The Institute celebrated 74th Republic Day on 26th January, 2023 with great enthusiasm.
- **CSIR-IICT**
 - Following lectures were delivered at CSIR-IICT
 - "Organocatalyst and Pot Economical Synthesis" by Prof. Yujiro Hayashi, Department of Chemistry, Graduate School of Science, Tohoku University, Aoba-ku, Japan on Thursday, 16th February 2023.
 - 'Science +Poetry =The Best Society' by Prof. D.B. Ramachary, HoU
On the occasion of International Mother Language Day, Feb 21, 2023.
- **CSIR-CRRI**
 - On the occasion of International Mother Language Day, Hindi lecture was organized on February 21, 2023 on the topic: 'Roads - Kitni, Kiski Aur Kaisi'.

DEPARTMENTAL ACTIVITIES

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

- 14 in-house R&D units of industries were granted renewal of recognition and 14 were granted renewal of registration certificates.

Public Funded Research Institution (PFRIs)

Registration and Renewal of PFRIs

- 02 PFRIs were granted renewal of registration certificates.

Fiscal Incentives for Scientific Research

- 01 industry was approved for issuance of form 3 CM and 30 industries were approved for issuance of extension of 3CM under Section 35(2AB) of IT Act for weighted tax deduction.
- 12 reports in form 3CL submitted to CCIT under Section 35(2AB) of IT Act for weighted tax deduction on industrial R&D involving a total amount of Rs.242.95 Crores.

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 upcoming areas of industrial research shall be taken up besides undertaking a Technology Development and Utilization Programme for Women (TDUPW).

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

Three projects were successfully completed during February 2023.

Scheme CRTDH:

Project Guidance cum Review Committee (PGRC) Meeting was held on 16.02.2023 at IIT Roorkee to review the financial and technical progress of project supported to IIT- Roorkee, Uttarakhand under CRTDH scheme of DSIR. This project is towards establishing of DSIR - Common Research and Technology Development Hub (CRTDH) in the area of New Materials and the title of the project is "Development of Microwave Absorbing Materials and its Characterization Facilities for Social, Stealth and Electronic Applications".

A2K+ Studies: Knowledge Dissemination Program:

Project Guidance Cum Review Committee (PGRC) meetings were held to review the financial and technical progress of following studies :

- I. "Study of specific areas registering high failure rate of distribution transformers to analyze the cause of failure and suggest a solution to overcome this problem by applying IT technology and integrating it with metering solutions" supported to IITD&M, Jabalpur.
- II. "Studies on the implementation of stainless steel fabricated by additive manufacturing and computational forecasting technique for high temperature applications" supported to IIT-Jammu.
- III. Integrating AI, AR and VR in learning models and their impact" being conducted by Indian Institute of Technology Hyderabad.
- IV. "Techno-commercial assessment of TRL-6 and above technologies developed in India in academia, research labs and industry" being conducted by Technology Information, Forecasting and Assessment Council (TIFAC), New Delhi.
- V. "A study report on ICT tools catering to a wide range of learners, including children with special needs" has been supported to Cochin University of Science and Technology (CUSAT), Kochi, Kerala.
- VI. "A detailed study for enabling access to knowledge on advanced building material & design towards energy efficient buildings "has been supported to The Energy and Resources Institute (TERI), New Delhi .
- VII. "A Study of the Usability and Accessibility of Various ICT Tools related to English Language Speaking and Reading Skills of Children with Autism Spectrum Disorder (ASD)" have been supported to Malviya National Institute of Technology (MNIT), Jaipur.
- VIII. "A study report on research on indigenous development of membranes for sewage treatment to promote it's recycle and reuse" have been supported to The Energy and Resources Institute (TERI), New Delhi .

A2K+Events:

Nineteenth Meeting of the Technical Advisory Committee (TAC) of A2K+Events was held online through a virtual platform on 13.02.2023. Eight screened in proposals were put up for consideration of TAC as part of the agenda. Four proposals were recommended by TAC for consideration.

A2K+ Technology Development and Utilization Programme for Women (TDUPW):

- A Technical Advisory Committee (TAC) meeting was convened to review the financial & technical progress of the following projects –
 - i. 'Dissemination of Bio-Energy Technology Through Bio-Coal Preparation from Waste Green Coconut Shell as an Energy Rich and Smokeless Cooking Fuel Among Rural Women in Puri District of Odisha" by Socio Cultural Development Centre (SCDC), Jagatsinghpur, Odisha..
 - ii. "Socio-Economic Development of Women Weavers Community in Dakshina Kannada and Udupi districts of Karnataka" by Sahyadri College of Engineering & Management, Mangalore.

- 285 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.2268.22 Lakhs during February, 2023.
- Sale of items worth Rs.3168.20 Lakhs was realized during February, 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 also individual inventors.

- NRDC has been assigned technology on Protein fortified flakes of (i) foxtail millet (ii) little millet (iii) sorghum and (iv) white ragi by University of Agriculture Sciences, Bangalore and technology on 'NIRMOOL – A Disinfectant composition against silkworm pathogens' by CSR&TI, Berhampore . NRDC has licensed technology on 'Vijetha Supplement Powder Technology' to CSR&TI and technology on 'Dipping Oil Formulation for Grapes' to CSIR-CFTRI during February, 2023.
- NRDC has collected premia of Rs. 2.25 Lakhs and royalty of Rs. 17.2 Lakhs from respective technologies during February, 2023.
