

No. DSIR/MS/2019/12
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **December, 2019**)
(Part-I Unclassified)

Ministry/Department: Department of Scientific and Industrial Research (DSIR)

Major achievements during the month of DECEMBER, 2019 :

1. Council of Scientific & Industrial Research (CSIR) :

- Union Minister of S&T, MoES and HFW, Dr Harsh Vardhan laid foundation stone of CSIR Innovation Centre for Next Generation Energy Storage Solution (ICeNGESS) at CSIR-CECRI, CSIR-Madras Complex, Chennai. The facility will help in perfecting the indigenously developed Li-ion battery technology such that industries can commercialize and promote capability building in the area of indigenous energy storage. The Honorable Minister appreciated CSIR-CECRI scientists for their efforts and congratulated scientists for the successful development of indigenous Lithium-ion battery technology, applicable to e-gadgets and EV purpose. Dr Harsh Vardhan also inaugurated the fuel cell test station facility.
- Union Minister of Petroleum & Natural Gas and Minister of Steel, Shri Dhramendra Pradhan, visited CSIR- IMMT, Bhubaneswar and appreciated the institute's mineral processing pilot plant & pilot scale fluidized bed reactor that have developed technology to utilize low grade iron ore and thermal grade coal for the industry.
- Parliamentary committee on Science and Technology, Environment, Forest & Climate change visited CSIR-CLRI and appreciated the efforts of institute and suggested that CLRI should expand its activities to all states.

CSIR Activities for Societal Benefit

- CSIR-CBRI is providing Technical Advice on Conservation and Structural Safety Assessment of UNESCO World Heritage Chhatrapati Shivaji Maharaj Terminus (CSMT) Railway Station Building, Mumbai. It has performed several scientific investigations for load assessment and distressed diagnostics of the structure and remedial measures for the structure are suggested for implementation and building will be monitored by CSIR-CBRI for three years.
- CSIR-IIP launched a Repurpose Used cooking Oil (RUCO) express with FDA, FSSAI, and GATI Foundation Dehradun that would collect used cooking oil from households and others to make biodiesel using its technology. CSIR-IIP also set up a sixth plastic bank in Dehradun to collect plastic that can be converted diesel.

R. Gupta

[Signature]

- CSIR-NEERI has developed a framework for environmental damage cost assessment, which will act as a 'baseline tool, providing platform to assess damage done to the environment in monetary terms that will contribute to policy-making, environmental regulations, and implementation.
- CSIR-CMERI has developed outdoor air purifier prototype, which can be integrated with solar streetlight in the traffic areas. The air purifier is able to remove PM 2.5, PM10, VOCs, CO2, odors from the ambient air effectively to make breathable air.
- CSIR-CMERI has also developed streetlight controller to save electrical energy up to 60% and technology has been transferred for commercialization.
- CSIR-CEERI has developed "ProSil-4" a stone dust precipitator system that can help stone workers breath easy and to prevent them from incurable disease "Silicosis" and has been deployed at Sirohi in Rajasthan
- CSIR-NEERI celebrated National Energy Conservation Day 2019 by organizing Cycle rally & Walkathon to campaign about cleaner transportation, energy saving & spread awareness for energy conservation, highlighting individual's role to the cause

Farmer and Rural Centric Activities

- MoU signed between CSIR and Khadi Village Industries Commission (KVIC) India to formalize the working relationship in areas such as honey testing, promotion of Honey Mission alongside the CSIR Aroma Mission and the proposed CSIR Floriculture Mission.
- CSIR-IHBT Palampur signed a MoU with Mizoram Rural and Agriculture Development Society, Aizawl, Mizoram for installation of processing unit under aroma mission. Seed of wild marigold and matricaria were also given to the society for plantation in Mizoram
- CSIR-IHBT signed MoU with SAMPDA (Samagra Adivasi Medicinal Plants Development Association) Kondagaon, Chhattisgarh for installation of distillation unit for extraction of essential oils at Vill. Chikhalputti Distt. Kondagaon Chhattisgarh under Csir Aroma mission
- Licensing agreement was entered by CSIR-CIMAP with M/s. Nandan Impex Pvt. Limited, for the products, developed by CSIR-CIMAP Relexomap-pain relieving oil, Painzaa, Acne Preventive Face wash, Pain Chhoo and Flomop
- Marine Algal Research Station of CSIR-CSMCRI of Mandapam, Tamil Nadu has conducted seaweed cultivation training program in Mulapeta, Kakinada.
- 25 women from different Self Help Groups were trained in cultivation of mushroom and production of vermicomposting technology by CSIR-NEIST at Itanagar.
- Group of framers from Mizroram visited CSIR-IHBT to learn about aromatic crops and agro-technologies.
- CSIR-IHBT organized a training program on hydroponic cultivation where in plants are grown without soil using water solvent containing mineral nutrients for progressive farmers
- CSIR-IHBT Team conducted training cum seed distribution programs in Nainital, Chamoli, Bageshwar and Champawat districts of the Uttarakhand

R. G. S. V.

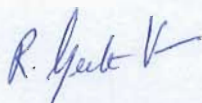
[Signature]

state. About 110 progressive and young farmers participated in the training programs

- For Establishing stevia plantation, MoU signed between CSIR-IHBT and Aman Van Vatika Pvt. Ltd, Maidapur Distt. Nabrangpur (Odisha)

Industrial Sector & Technology Transfer

- CSIR-IICT's Nuclear Magnetic Resonance (NMR) test facility has successfully passed the U.S. Food and Drug Administration (USFDA) inspection. The NMR spectroscopy is an important technique for structural characterization of pharmaceutical and other chemical molecules and the clearance by FDA provides further impetus to the wide range of quality analytical R&D services for Active Pharmaceutical Ingredients vital to Pharma industry.
- CSIR-CDRI has signed an agreement with Pharmaceutical giant Cipla Ltd to jointly develop new drugs for treating various medical conditions and repurposing of drugs for India and global markets.
- CSIR-NEERI transferred know-how on Bio-Culture to Wotastic Solutions Pvt Ltd, Pune, an all women entrepreneurs start up
- CSIR-NIIST has licensed its patent on eco-friendly technology for waste water treatment to Victoria Innovative Ltd., Kochi
- CSIR-CSIO, Chandigarh transferred the technology of 'Electrostatic Disinfection Machine' to M/s. Jhosna Corporation, a Karnataka based company
- Technology on High performance moisture compatible corrosion resistant protective coating system has been transferred to Fosroc Chemical Limited, Bangalore by CSIR-CECRI.
- Technology on Electrochemical conversion of dl-homocysteine thiolactone hydrochloride from dl-homocystine has been transferred to Aurore Life Sciences Private Limited, Hyderabad by CSIR-CECRI
- MoU signed with BHEL today towards commercialization and implementation of indigenously developed technologies by CSIR. First project will be commercialization of various water purification/ sewage disposal related technologies
- CSIR-NEERI inked MoA and NDA with BHEL for commercialization of outdoor air pollution control and mitigation systems at New Delhi under the umbrella MoU between CSIR & BHEL
- Technical Services Agreement signed between CSIR-CSMCRI and SNAP Natural and Alginate product Pvt Ltd., Tamil Nadu
- Dr. Shekhar C. Mande, DG, CSIR and Secretary, DSIR inaugurated Soil Testing Laboratory at CSIR-CSMCRI Bhavnagar for various Indian standard tests of soil, which will be helpful for salt manufactures and Salt industry and building Industry.
- Technology of Municipal Waste Water Treatment using Immobilized Microbial Culture – Bioculture Knowhow was transferred to M/s. Wotastic Solutions Pvt. Ltd. (WSPL), Pune by CSIR-NEERI
- Technology Transfer of "HRTS-NEERI" Knowhow to M/s SMS Envocare Limited, Nagpur by CSIR-NEERI



- An agreement was signed between CSIR-IITR, Lucknow and NBI Biosciences Pvt Limited, New Delhi for development of inhibitor molecules from plant origin to the enzymes.
- License Agreement with M/s TEQUITY Ventures, Maharashtra on transfer of CNC based laser micro machining technology on polymers by CSIR-CMERI
- License Agreement with M/s Unibro Infraseriv Pvt.Ltd, Siliguri, WB on transfer of "High flow rate Iron Removal filter" Technology by CSIR-CMERI
- License Agreement with M/s Sre Senthil Engg.Co., Coimbatore, Tamilnadu on transfer of "High flow rate Iron Removal filter"; "Community Level Fluoride Removal Plant" and Community Level Arsenic Removal Plant, Model-II" Technology by CSIR-CMERI
- License Agreement with M/s Capricans Aqua (P) Ltd., Shibpur, WB on transfer of "High flow rate Iron Removal filter" Technology by CSIR-CMERI
- License Agreement with M/s Aquagrants Water Purifier Pvt.Ltd., Alinagar, Patna on transfer of "High flow rate Iron Removal filter" Technology by CSIR-CMERI

Patents Update

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad	India	Abroad	India	Abroad
15	19	18	07	39	38

International Activities

- Memorandum of Understanding (MoU) signed between Council of Scientific & Industrial Research and National Centre for Scientific Research (CNRS), France for promotion and support of scientific and technological research
- CSIR-NEERI-KZC hosted participants from the Ministry of Local Government, Rural Development & Cooperatives (LGRD), Government of People's Republic of Bangladesh and showcased institute's knowledge/ experience on environmental management and urban solid waste management
- A Taiwanese delegation comprising of from National Research Institute of Chinese Medicine (NRICM), Taipei, Taiwan visited CSIR-IHBT and discussed the area of collaboration of mutual interest. A MoU was signed for exchange of scientists and students for the R & D activities on medicinal plants.
- European Research & Innovation delegates comprising of the STI counselors, attaches and directors of institutes from EU visited CSIR-CLRI to learn about various cooperation and funding opportunities for collaborative research/innovation, skill development, Horizon 2020 etc.
- International Conference on "Building Energy Demand Reduction in Global South (BUILDER'19) was organized by CSIR-CBRI, with consortium partners IIT Roorkee, IIT Delhi and University of Bath, UK as a part of INDO-UK Joint Research Program on 'Zero Peak Energy Building Design for India', sponsored by DST Gol and Engineering & Physical Sciences Research Council, UK (DST-EPSRC). The aim of conference was to share the expertise of both the countries, and to find joint solutions to the challenges in the field of building

R. Gupta

[Signature]

energy efficiency, reducing peak building energy demand and making clean energy more affordable to all.

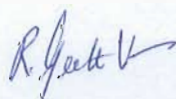
MoUs Signed

- CSIR signs MoU with TCS for collaboration in research, Ph.D & Human resources development
- MoU signed between CSIR-NEIST and Kaziranga University objective to promote co-operation in Scientific Education & Research. The mutual collaboration will enable the utilization of each others strength in teaching and research
- To promote institutional linkage between CSIR-CDRI and Indrashil University (IU), Mehsana, Gujarat to explore for possible collaborative research programs in specific fields of interest
- To promote institutional linkage between CSIR-CDRI and SASTRA, Thanjavur to explore for possible collaborative research programs in specific fields of interest.
- CSIR-CBRI has signed the MoU with Indian Institute of Technology, Indore to promote cooperative research, to facilitate the exchange of ideas, development of new knowledge, and to enhance high quality research acumen in the area of Building Science and Technology
- MoU was signed between CSIR-IITR and FSSAI, New Delhi on 18th for the purpose of implementation of the scheme for up gradation of food testing system in Referral Food Labs

Skill Development & Workshops

- Advanced course on "Power Transmission and Communication Structures" was conducted by CSIR-SERC
- CSIR-NEERI conducted Skill Development Program in Environment for PGDFM batch of Indian Institute of Forest Management (MoEFCC, Govt. of India) from December 09-13, 2019.
- National Training Programme Computational Analysis of Protein Structures–CAPS was conducted at CSIR-IMTECH
- An comprehensive five-day workshop on 'Luminescence Dating: Methodology and Applications' was held at CSIR-NGRI during 7–11 December 2019
- CSIR CDRI Lucknow organized a National Workshop on "Small Molecule Analysis by NMR Spectroscopy & Mass Spectrometry"
- CSIR-CSIO conducted a Five Days Skill Development Program on Basic and Advanced Skill for Water Testing and Analysis
- CSIR-IMTECH recently conducted a five day National Training Programme on Computational Analysis of Protein Structures.
- Emerging Technology on Characterization, Beneficiation and Pelletization of Iron Ore, jointly organized by CSIR-IMMT, Bhubaneswar and IIME, Bhubaneswar Chapter

Jigyasa and Outreach Programs



- CSIR-NBRI, Lucknow celebrated 'World Soil Day' and students & teachers from KV, Gomti Nagar, Lucknow visited the institute and were given the opportunity to perform various hands on experiments in the Soil Laboratory.
- CSIR-CBRI scientists visited Government Upper Primary School, Khanjarpur, Roorkee on December 05, 2019 on the occasion of World Soil Day 2019, under Jigyasa.
- CSIR-CBRI scientists visited Government Primary School, Khanjarpur, Roorkee on December 06, 2019, under Jigyasa.
- CSIR-IITR organized a one-day visit for school students of 11th standard. 75 students and 4 teachers from to Kendriya Vidyalaya Sangathan, Fatehgarh attended the event at CSIR-IITR
- 50 Students & 4 faculties of KV No.2, O.C.F, Shahjahanpur (U.P.), visited CSIR-CDRI
- Scientist and research scholars of IICT inculcating 'Jigyasa' in school and junior college students at Ekalavya Model Residential school, at Balanagar, Mahabubnagar dist.
- A group of 40 students from Govt. Sr. Sec. School Ghallour Distt. Kangra (H.P.) accompanied by 03 teachers, visited CSIR-IHBT Palampur (H.P.)
- 39 students from Govt. Sr. Sec. School Aund, Kangra (H.P.), accompanied their 03 teachers, visited CSIR-IHBT, Palampur.
- A team of CSIR-CIMFR Scientists visited KV, Binod Nagar Dhanbad where the hands on demonstration of simple instruments and chemistry experiments were shown to the students.
- CSIR-CBRI scientists visited KV No.2, Roorkee, to motivate PGTs during inauguration of Ten-Day In-Service Course for Chemistry PGTs from 8 KVS Regions.
- CSIR-CBRI organized a PGT Workshop for Chemistry PGTs of 8 Regions of Kendriya Vidyalaya Sangathan on December 26, 2019, under the Jigyasa Programme.
- Young Innovators Program conducted at CSIR-CCMB where in students selected will interact with scientists for 2 weeks
- A Scientist-Student Interaction Programme was organized by CSIR-NBRI, Lucknow at Kendriya Vidyalaya, Barabanki on December 13, 2019.

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 (us 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

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

Scientific and Industrial Research Organization (SIROs)

Recognition/ Registration and Renewal of SIROs

- 09 SIROs were granted recognition as well as registration certificates.

Public Funded Research Institution (PFRIs)

Registration and Renewal of PFRIs

- 02 PFRIs were granted registration certificates.
- 07 PFRIs were granted renewal of registration certificates.

Fiscal Incentives for R&D by Industry

- 38 reports in form 3CL submitted to CCIT under Section 35(2AB) of IT Act for weighted tax deduction on R&D by Industry involving a total amount of Rs. 100762.50 Lakhs incurred on R&D by Industry.

PUBLIC SECTOR ENTERPRISES

1. 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.1311.07 Lakhs during December, 2019.
- Sale of items worth Rs.1848.27 Lakhs was realized during December, 2019.
- Major Achievement reported during December 2019 is the second order received for 5 Nos. Sintered Radome from BEL, Bangalore

2. 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 five (5) technologies by National Institute of Ocean Technology (NIOT), Tamil Nadu.

