No. DSIR/MS/2021/08

Government of India Ministry of Science & Technology Department of Scientific & Industrial Research MONTHLY SUMMARY FOR THE CABINET (For the month of **August, 2021**) (Part-I Unclassified)

Major achievements during the month of August, 2021:

Council of Scientific & Industrial Research (CSIR)

New Technologies/Processes Developed/Transferred

- CSIR-CEERI developed machine vision system for sorting and Grading of leather based on colour and surface defects.
- CSIR-IICT developed catalytic process for the preparation of 5-chloro indanone from 3-chloro-1-(4-chlorophenyl)-1-propanone for ADAMA India Private Limited, Hyderabad
- CSIR-IIP developed Xylitol production from biomass using whole cell biocatalyst
- CSIR-IHBT transferred the lab scale technology for ready to reconstitute oral formulations utilizing microalgae to M/s Algareal Nutraceuticals, Bangalore on 11th August, 2021.

Conferences, Seminars/Webinars organized

- CSIR-National Geophysical Research Institute Hyderabad hosted the Joint Scientific Assembly of IAGA-IASPEI 2021 during August 21-27, 2021. Dr. Jitendra Singh, Honourable Minister of State for Science & Technology and Earth Sciences & (Independent Charge) presided over the function.
- CSIR-CDRI organized a Webinar on Artificial Intelligence in Drug Discovery Research on 13.08.2021.
- MSME-DI, Dimapur in association with CSIR-CMERI, Durgapur organized a Webinar on 'Technology Transfers for MSMEs' on 5th August 2021.
- CSIR-IIP organized the 5th National Symposium on Shaping the Energy Future: Challenges and Opportunities 2021 (SEFCO-2021) on 27th August 2021, focusing upon "Zero-Emission Energy Alternatives".

Collaborations/Agreements/MoUs Signed (National)

 CSIR-CBRI signed an MoU with Thapar Institute of Engineering and Technology, Patiala to promote cooperative research, to facilitate the exchange of ideas, development of new knowledge, and to enhance high quality research acumen in the areas of Building Science & technology.

- CSIR-CCMB Agreements and Collaborations:
 - Agreement with SBI Foundation, Mumbai for a CSR grant from SBI Foundation to CSIR-CCMB to establish the SBI Foundation Centre of Excellence (CoE) for Genomics Guided Pandemic Prevention,
 - Collaboration with OSMANIA MEDICAL COLLEGE & HOSPITAL, Hyderabad for undertaking the research project on "Medical Genetic Research and Diagnostics with initial focus on COVID-19".
 - Collaboration with ESIC HOPSITAL, Hyderabad for undertaking the research project on "Medical Genetic Research and Diagnostics with initial focus on COVID-19".
 - TATA Institute for Genetics & Society (TIGS):TIGS will establish a virtual research centre at CCMB, which will focus on Modern Genetics & Genomics for beneficial and ethical societal impact in the fields of health and agriculture
 - Extension of the tenure of MoU with TATA CONSULTANCY SERVICES LIMITED (TCS) for the collaboration on Understanding the role of respiratory microbiome in Covid-19 disease susceptibility & progression and translational applications thereof
- CSIR-CDRI MoU and Agreements:
 - MoU executed with NIPER, Guwahati to promote institutional linkage between CSIR-CDRI and NIPER, Guwahati to explore for possible collaborative research programs in specific fields of interest on 03-08-2021.
 - A Secrecy Agreement was executed with M/s Airth Research Pvt. Ltd., to share the information on various microorganism to test the efficacy of antimicrobial air purifier on 06-08-2021.
 - A MoU was executed between International Centre for Genetic Engineering and Biotechnology, New Delhi and CSIR-CDRI, Lucknow on 6-08-2021 for "Collaborative Research & Development activities in the area of mutual interest"
 - A Secrecy Agreement was executed between M/s Mylan Laboratories Limited, Hyderabad and CSIR-CDRI, Lucknow on 27-08-2021 for "Novel Anti-osteoporosis Drug Candidate CDRI-99/373"
- CSIR-CECRI: Non Disclosure Agreement : Central Manufacturing Technology Institute (CMTI) , Bengaluru for 'Lithium Ion Battery Manufacturing Equipment'.
- CSIR-CEERI:
 - NDA Signed with 'M/s Herdum Systems Pvt Ltd, New Delhi' on 11-08-2021 for 'Development of Intelligent Responsive Application' to ensure Women Safety.
 - NDA Signed with M/s Madhuraj Docutech LLP, Bangalore' on 18-08-2021 for 'Development & Production of UV Lamps, Plasma and Microwave Products'.
 - NDA Signed with 'M/s. Wrig Nanosystems Private Limited, Solan' on 19-08-2021 for 'FET based pH Sensor Development'.
 - NDA Signed with 'M/s Pilani Electron Tubes and Devices Pvt Ltd, Sangrur' on 31-08-2021 for 'Development of GMI-32B-1 (P19 Modular Valve)'.

- CSIR-CFTRI:
 - Createcomm Tech Private Limited, Gurugram, Haryana on 17th August 2021 for collaborative project on development of thermostable container for perishable food items.
 - Prakhoj Private Limited, Bengaluru on 24th August 2021 to assess the commercial feasibility of the technology to extract soluble and insoluble arabinoxylan-rich product from wheat bran.
- CSIR-CMERI:
 - MoU signed with Thapar Institute of Engineering & Technology (TIET), Thapar Technology Campus, Patiala-147004, Punjab on Intellectual Cooperation, Scholarly Exchange and Development of National Partnership
 - MoU signed with Punjab Mandi Board (PMB) Mohali, Punjab on Project : Sustainable Fruit & Vegetable Waste Management in APMC Mandis
 - MoU signed with Sardar Swaran Singh National Institute of Bio-Energy (SSS-NIBE), Kapurthala, Punjab to establish a strategic association on project to project basis (joint research in the field of bio energy) in the specific field of new and renewable energy system
- CSIR-CRRI: An agreement signed between CSIR-CRRI and Rashtriya Ispat Nigam Limited (RINL), Vishakhapatnam, Andhra Pradesh on 5th August, 2021.
- CSIR-CSIO: Engineers MoU with India Ltd. (EIL) MoU with Fragrance and Flavour Development Centre. Kannauj MoU with Monell Chemical Center, USA.
- CSIR-IHBT: Agreements signed by CSIR-IHBT
 - Agreement signed with M/s Agri Natural India, Ludhiana (Pb.) to formulate stevia liquid drops at CSIR-IHBT on 5th August, 2021.
 - Agreement signed with M/s Relsus India Pvt. Ltd., Gurugram (Haryana) to formulate stevia liquid drops and stevia powder production for its commercial sale by using processing facility at CSIR-IHBT, Palampur (H.P.) on 27th August, 2021.
 - Tripartite MoU was signed with Rise up Foundation, Mandi and Rotary Club, Mandi (H.P.) to facilitate and support activity through collaborative projects on 13th August, 2021.
- CSIR-IICT:
 - Providing NMR services for Comparative profiling of RLD Vs finished product (DP) of ICATIBANT for four samples [Daicel Chiral Technologies Pvt Ltd];
 - Process knowhow for the synthesis of 2-Deoxy-D-Glucose [PI Industries Ltd, Udaipur];
 - Develop a process for making CD3NH2 (Deuterated methylamine) ("Product") using deuterated water(D2O) [Cipla Limited, Mumbai];
 - Continuous flow-hydrogenation of substituted pyridine [Suven Pharmaceuticals, Hyderabad]
- CSIR-IIP: Agreement on Medical Grade Oxygen signed with Bharat Forge Limited, Pune on August 02, 2021

- Memorandum of Understanding signed with Mangalore Refinery and Petrochemicals Limited, Mangalore for Setting up of the Bio-jet Fuel Production Plant on August 13, 2021
- Academic Amendment MoU with Indian Institute of Technology, Delhi on August 16, 2021
- CSIR-IMTECH: MoU signed with Vikram Sarabhai Space Centre(VSSC) ISRO, Trivandrum for Optimization of Microbial Resource/Consortia and process development for biodegradation of Ammonium Perchlorate(AP)- Part I & Scale-up studies on biodegradation of Ammonium Perchlorate (AP)- Part II
- CSIR-NAL:
 - Collaboration agreement signed with Lab To Market Innovation Pvt Ltd, Bengaluru for Studies on Packaged FBG sensor and mounting mechanism for axle counting for Indian railway application on 06th August, 2021.
 - Non-Disclosure Agreement signed with Automotive Research Association of India, Pune for sharing of confidential information related to CSIR-NAL's developed oxygen and NOx sensors for sample testing by ARAI and qualification of sensor for automotive applications on 26th August, 2021.
- CSIR-NIO: MoA with M/s Praj Industries Limited, Pune To evaluate collection of halomonas strains for production of Poly Hydroxy Alkanoates (PHAs). [18th August]

Collaborations/Agreements/MoUs Signed (International)

- CSIR-CECRI: Non-Disclosure Agreement signed with Johnson and Johnson, USA on Printing, Testing and manufacturing sensors and signatory's capability to print electrochemical sensors
- CSIR-NAL: Non-Disclosure Agreement signed with M/s. Hexigone Inhibitors Ltd, UK for obtaining 1 kg of Novel Corrosion Inhibitor with primer / coating systems for testing and evaluation at CSIR-NAL in order to explore the suitability in SARAS Mk-II Project on 26th August., 2021
- CSIR-NGRI: MoU between CSIR-NGRI, Department of Geoscience, Faculty of Natural Science, Aarhus University and Geological Survey of Denmark and Greenland (GEUS) signed on 03.08.2021.
- CSIR-NIO: MoU signed with A.V. Zhirmunsky National Scientific Center of Marine Biology, Far Eastern Branch, Russian Academy of Sciences, Russia in the field of marine biology, marine ecology and blue economy, in the Indian Ocean region (beyond the EEZ of India), Pacific and Polar (Arctic) regions. [26th August]

Patents Update:

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad*	India	Abroad*	Indian	Foreign
05	18	15	22	31	35

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

High impact S&T services offered

- CSIR-CCMB tested 284 samples for Molecular Diagnostics Services. Under Genome Surveillance ~600 samples genomes were sequenced
- CSIR-CMERI: Technical Services rendered:
 - RLA Study of Boiler Auxiliary for MTPS, DVC, Bankura
 - Testing of Water Technologies for safe & secure drinking water for Unicare Technologies (P) Ltd.,
 - Structural Assessment of RCC foundation and steel structure for Indian Metal & Ferro Alloys Ltd., Odisha
- CSIR-IIP: Testing services offered under various ongoing projects of the institute, which includes testing of gaseous fuels (ASTM D7833, D5504), liquids fuels (D6730, UOP744, D5623, D4815, D6584 and IP 391), engine oils(ASTM D3524, D3525), lubricating oils(ASTM D7419), waxes (ASTM D5442), GC-MS and HRMS of petroleum fuels and general chemicals.
- CSIR-IITR has tested more than 3,83,000 samples for COVID-19 using Real-Time-PCR based quantitative assay. CSIR-IITR is ICMR and State approved COVID-19 Testing Facility since May 2020.
- CSIR-IMTECH:
 - Testing of Anti-Viral efficacy of compounds/ devices/ appliances/ disinfectants/sample material for Industries against live SARS-COV-2 Strain.
 - IMTECH continues to be a COVID-19 testing center for samples provided by various state governments using RT/PCR based molecular detection technique.
 - IMTECH has also initiated R&D activities geared towards identifying possible presence of COVID-19/ other corona viruses in sewage samples as well as analyzing air samples in areas housing COVID-19 affected patients.
- CSIR-NAL:
 - Design and Fabrication of Scaled Model of Agnibaan Launch Vehicle for Force & Moment Measurements in 0.6m Wind Tunnel for M/S. Agnikul Cosmos Pvt. Ltd.
 - Developmental Studies On 50n Thrust Class Liquid Fuelled Valveless Pulsejet Engine for AR&DB
 - Fabrication and Supply of Prepreg Based High Temperature RAS and GFRP Laminates to DMSRDE, Kanpur
 - Development of Test Box and Air Intake Duct Assembly for ADA, Bangalore
 - CSIR-NEERI:
 - Development of an Innovative Approach for Improved Plastic Waste Management in India
 - Environmental Impact Assessment Study for the Thankurani Iron Ore Mines of Arcelor Mittal India Pvt. Ltd., at Thakurani, Keonjhar, Odisha.
 - Technical Due Diligence Audit of Common Hazardous Waste Treatment Storage and Disposal Facilities (TSDF) of M/s SMS Enviro infrastructure Limited.

- Implementation, Monitoring and Assessment of High Rate Transpiration System for Land Treatment and Disposal of Effluent from M/s Dana Anand India Pvt. Ltd.,
- Technical Support for Strengthening Technical and managerial Capacity of Laboratory Personnel working in RWSS, Odisha
- CSIR-NGRI: High-resolution satellite gravity field over geologically and geodynamically complex Southern Granulite Terrane (SGT) of the Southern Indian Shield has been analysed, with a view to demarcate its underlying crustal and lithospheric mantle structure.

Outreach Activities (Jigyasa, Skill Development, and others)

- CSIR-CBRI Webinar Series 14.0 on 'Indoor Air Quality & Ventilation concerning Covid-19 Pandemic' was conducted during August 26-27, 2021 under the aegis of CSIR Integrated Skill Initiative.
- CSIR-CDRI:
 - Atal Innovation Mission -interaction with Principals and Coordinators of Atal Tinkering Lab on 26.08.2021
 - Skill Development Program for Postgraduate students [a) Computational approaches to drug design and development b) Pathological tools and techniques for biomedical applications)]
 - Jigyasa, Vigyan Jyoti, Atal Tinkering Lab Webinar on Animals in biomedical Research
- A CSIR-CECRI one week skill development training program was held during 09-13 Aug, 21 on Li-ion Battery Science and Technology, Surface and Structural Analysis - 75 participants and Paints and Coatings for Corrosion Protection
- CSIR-CECRI JIGYASA Connect with Scientists Webinar Series Talks:
 - \circ "Nanomaterials for Corrosion Mitigation" held on 12.08.2021
 - "Energy Harvesting from Unconventional Sources: Novel and Peculiar Scientific Concepts" held on 19.08.2021
 - "Industrial Wastewater Treatment using Electrochemical Methods" by held on 26.08.2021
- CSIR-CEERI:
 - Concluded Atal Innovation Mission's 'Tinkerpreneur BootCamp' for school students on 01-08-2021. 15 Students Trained for Digital Skills and evaluated the submissions for additional assignments.
 - Internship program for 32 BITS PS-1 students has been conducted at CEERI Chennai Centre and that with 71 number of BITS PS-1 students has been conducted at CEERI-Pilani on-line.
- CSIR-CFTRI: Webinar on Food Processing Machineries & Unit Operations, August 17-18, 2021 under CSIR Integrated Skill Initiative in which a total of 191 participants attended.
- CSIR-CGCRI organized a Talk titled "Nature the ultimate Innovator" by Dr. Kanchan Kumar Chowdhury, Curator-F, National Council of Science Museums.

- CSIR-CMERI:
 - Technology Awareness Webinars for students of various Kendriya Vidyalayas across the nation, under the aegis of Jigyasa.
 - A Training Programme on CAD Packages & Analysis Tools conducted by DSIR-Common Research & Technology Development Hub (CRTDH) of CSIR_CMERI for MSMEs, Small Scale Industries & Start-ups during the period 2nd August to 5th August 2021.
- CSIR-CRRI:
 - Organized a talk on "Road Safety", followed by quiz competition on August 01, 2021 to foster curiosity and innovation in young minds under Atal Tinkering Lab (ATL) program run by Atal Innovation Mission (AIM) initiative under NITI Aayog, Govt. of India. The program was well received by more than 800 young students from various parts of India.
 - Organized a talk on "3Rs-Reduce, Reuse and Recycle in Road Construction", followed by quiz competition on August 29, 2021 under Atal Tinkering Lab (ATL) program run by Atal Innovation Mission (AIM) initiative under NITI Aayog, Govt. of India.
- CSIR-CSIO organized the following Workshops conducted under CSIR Integrated Skill Initiative Programme(CSIR-ISI)
 - One Day online Workshop was organised on "Additive Manufacturing" on 4th August 2021.
 - One Day online Workshop was organised on "Fundamental of EDM & Wire EDM Machines" on 11th August, 2021.
- One Day online Workshop was organised on "Fundamental of Robotics & Its Applications" on 27th August, 2021.
- CSIR-CSMCRI: Under CSIR-Jigyasa -Vigyan Jyoti- organized an Interaction with Role Model (online): Fundamentals of Microbiology: Learn about the Microorganisms
- CSIR-IHBT: 7 awareness cum training programmes were conducted under Aroma and Floriculture Mission
 - One-day awareness cum training program was conducted in association with (Society for Technology and Development, Mandi) on the cultivation and processing of aromatic crops for the farmers of village Parwai, District-Chamba, H.P. on 4th August, 2021.
 - One-day awareness cum training program on agro and post-harvest management technology of aromatic and floriculture crops was conducted for the farmers of Leh and Nubra valley in association with Ladakh Organic Farmers Foundation Society, on 7th August, 2021.
 - One-day exposure cum training program on cultivation and processing of aromatic crops was conducted for the Industry and Commerce Department officials and farmers of Leh and Nubra valley in association with Ladakh on 24th August, 2021.
 - One-day exposure cum training program on cultivation and processing of aromatic crops was conducted for the farmers and panchayat representatives of Branta, Panchayat, tehsil Thural, District Kangra, H.P. on 31st, 2021.
 - Under CSIR-Floriculture Mission along with Ladakh organic farmer society, one-day training program was organised on Agrotechnology of suitable Page 7 of 12

crops for Ladakh region on 07th August,2021 at Tsenam hall, Leh, Ladakh. More than 54 farmers participated in the program.

- Under CSIR-Floriculture Mission, one-day awareness cum training program was organised on post-harvest management of lilium on 08th August, 2021 at Shanker village, Leh, Ladakh. More than 20 farmers participated in the training program.
- Under CSIR-Floriculture Mission and Jigyasa program, visits and survey of sites to establish gardens at JNV Paprola, NIT Hamirpur, DPS Palampur and Subash Chand Nursing college Palampur.
- CSIR-IIP organized Online Scientific lecture under Jigyasa, Popular lecture Series titled Ancient Indian Science & Technology
- CSIR-IITR organized the Empowering Pupil Innovation and Creativity (EPIC-2021) under CSIR-JIGYASA Programme. Twenty five selected students from various schools such as Jawahar Navodaya Vidyalaya, Amity International School, Seth Anandram Jaipuria School, Kendriya Vidyalaya, Delhi Public School underwent the programme.
- CSIR-IMTECH organized following activities under Skill Development Program in August 2021
 - CSIR-IMTECH-Merck High End Skill Development Centre organized following activities during August 2021: Webinars: Two webinars were organized on the topic: 1. "Cell Culture Equipments" on 16th August 2021
 150 participants ; 2. Centrifugation Techniques on 30th August 2021 -170 participants Hands on Workshop on Recombinant DNA Technology from 9-20 August 2021 - 11 participants
- CSIR-NML: Training on Multidisciplinary Materials Technology organized by CSIR-National Metallurgical Laboratory, Jamshedpur to promote multidisciplinary R&D activities like software, sensors, tools, devices, IOT, Machine Learning, AR & VR and other system development.
 - PTP Metallurgy For Engineers (M4E): CSIR-NML organized an online Professional Training Programme (PTP) during 24-27th August 2021.

Events held to mark India@75 or Azadi Ki Amrit Mahotsav / 75 Years of Indian Independence

- As a part of the FIT INDIA Movement launched on 29th August, 2019 by Hon'ble Prime Minister, several CSIR institutes including CSIR-CBRI, CSIR-CRRI, CSIR-CSMCRI, CSIR-IHBT, CSIR-IICT, CSIR-IITRand CSIR-IIP organised Fit India Freedom Run 2.0 / Walk as a part of the Azadi Ka Amrit Mahotsav celebrations:
- On the occasion of Azadi Ka Amrit Mahotsav under the aegis of National Mission on Himalayan Studies an awareness programme was conducted by CSIR-IHBT on 04th August, 2021 in collaboration with Nagar-Panchayat Baijnath-Paprola. The awareness programme was conducted to popularize the organic waste management at the source so that it doesn't reach the dumping site of Nagar Panchayat. The occasion was graced by the President, Vice-President, all the councillors, and Secretary-Nagar Panchayat Baijnath Paprola.

- CSIR-IIIM: Director CSIR-IIIM, Dr Srivinasa Reddy launched two months Online CSIR-IIIM Research & Training Programme (R&TP) 2021 virtually on 23rd August 2021 under "Azadi ka Amrit Mahotsav" to commemorate the monumental occasion of 75th Anniversary of Indian Independence
- CSIR-IITR: BioNEST of CSIR-IITR in association with #SIIC_IITKanpur, #TIDES_IITRoorkee along with #BIRAC, is co-organizing a 3-days event to celebrate and acknowledge the contribution of Biotechnology to India's economy specially highlighting the role of Bio-entrepreneurs
- CSIR-NIScPR organized a Azadi Ka Amrit Mahotsav National Conference on "Science and Technology in India: An Historical Introspection with a Contemporary Perspective" 16-18 August 2021
- CSIR-NIScPR brought out a Special Issue of *Science Reporter* focussing on 75 Years of Science and Technology in India
- In addition to the above, the CSIR-Science Communication and Dissemination Directorate organized the following Azadi Ka Amrit Mahotsav programmes:
 - Webinar on "Weapon Aiming Avionics for Fighter Aircrafts: An aid to Pilot's target through advanced instrumentation" on 31 August 2021
 - Webinar on "Ayurgenomics: Bringing age-old wisdom to healthcare of the future" on 25 August 2021
 - A Special Webinar on CSIR Aroma Mission: Transforming Lives Through S&T" Webinar, was held on the eve of 75th Independence Day. Dr. Jitendra Singh, Hon'ble Minister of Science & Technology and Earth Sciences (Independent Charge) was the Chief Guest.
 - Webinar on "Hydrazine Hydrate: An Indigenous Technology for 10000TPA commercial plant by CSIR-IICT and GACL" on 06 August 2021

Visit of high level dignitaries to the Institute/Laboratory

- Dr. Subhas Sarkar, Hon'ble Union Minister of State for Ministry of Education, Government of India visitedCSIR-CMERI and inaugurated the Water Testing Facility at CSIR-CMERI
- Dr. (Smt.) Tamilisai Soundararajan, Hon'ble Governor of Telangana & Hon'ble Lt. Governor of Puducherry was the Chief Guest for 78th CSIR IICT foundation day on 5th August2021.
- Dr. Jitendra Singh, Hon'ble Minister of State for S&T, Earth Sciences (Independent Charge), was Chief Guest of an interaction program with aromatic crop-growing farmers conducted under CSIR-Aroma Mission Phase-II at CSIR-Indian Institute of Integrative Medicine, Jammu. The Minister flagged off the quality planting material of Lemongrass provided by CSIR-IIIM for farmers of Kathua and Udhampur districts through the Agriculture Department.

Other items of significance

- CSIR-CDRI: Dr. Saman Habib, Chief Scientist, Biochemistry and Structural Biology received the prestigious JC Bose National Fellowship 2021
- With the scientific intervention and support of CSIR-IHBT, Palampur under Aroma mission Phase II the farmers of Neel Kanth Society, District Kangra,

H.P. produced 500 kg essential oil of lemongrass from rainfed and animal menace affected area.

- CSIR-NGRI: Dr. Prasanta K. Patro has been elected as the Member in the Early Career Scientists Award Committee of the International Union of Geodesy and Geophysics (IUGG) for the period 2022-2023.
- CSIR-NIO: Offshore Industrial Surveying Long Hydrography (Long H) Specialization Course 2021 for the Naval Officers sponsored by National Institute of Hydrography, Vasco-da-Gama, Goa was resourced and conducted by CSIR-NIO during 02nd to 14th August, 2021.

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

• 65 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

• 85 SIROs were granted renewal of recognition and 45 were granted renewal of registration certificates.

Public Funded Research Institution (PFRIs) Registration and Renewal of PFRIs

- 06 PFRIs were granted registration certificates.
- 41 PFRIs were granted renewal of registration certificates

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

Successfully completed the following two projects

I. Design and Fabrication of cost-effective improved biomass cook stove for domestic utility" submitted by Shri Narayan (Shambhu) Pandit, Karnataka (TOCIC at SPMVV, Tirupati).

II. GAIT Analysis Based Patient Specific Prosthetic Polycentric Knee Joint and Socket for Transfemoral Amputees to Improve Their Walking Pattern" by Dr. S. Kanagaraj, Guwahati (TOCIC: IIT, Guwahati).

Asian and Pacific Centre for Transfer of Technology (APCTT)

Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India being the national focal point of Asian and Pacific Centre for Transfer of Technology (APCTT) of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), organized a 'Technology Facilitation Consultative Meeting among select COVID-19 affected member States to address the Challenges of Pandemic COVID-19' on 23 August 2021 in virtual mode.

The objective of the meeting was to understand the needs and availability of reliable and cost-effective healthcare technologies for responding to the pandemic. About 55 participants from 8 Member States of UNESCAP, namely Bangladesh, Indonesia, Malaysia, Nepal, Philippines, Sri Lanka, Thailand and from India CSIR participated in the meeting. The participants included APCTT's national focal points, representatives from government agencies, Research and Development institutions, experts from medical associations and other key stakeholders nominated by the participating member States.

Participant Member States have shared the need and existing technologies and innovations on reliable and affordable healthcare for addressing the COVID-19 challenges and work to join hands together to strengthen regional technology cooperation to combat the COVID 19 challenges.

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 1312.40 Lakhs during August, 2021.
- Sale of items worth Rs.1449.70 Lakhs was realized during August, 2021.

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 licensed 15 technologies to industries for commercial exploitation. The technology to manufacture Ayush-64 (an ayurvedic drug which has been repurposed for use against mild to moderate cases of covid-19) licensed to five companies. NRDC has been assigned technology on 'Mobile Cold Mixer cum Paver' by CSIR-CRRI during August, 2021
- NRDC has collected premia of Rs.69.40 Lakh and royalty of Rs.172.53 Lakhs from respective technologies during August, 2021.
