

No. DSIR/MS/2022/08
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **August, 2022**)
(Part-I Unclassified)

Major achievements during the month of August, 2022:

Council of Scientific & Industrial Research (CSIR)

New Technologies/Process Development/Transferred

• **CSIR-AMPRI**

- Gold foam samples for jewellery in collaboration with jewellery industries
- Developed 'X-ray Radiation Shielding Tiles' technology and transferred to M/s Prism Johnson Limited.

• **CSIR-CBRI**

- A technology on “Epoxy-Phenolic IPN coating based on CNSL for the protection of concrete and Steel reinforcement in concrete” has transferred to Berger Paints India Limited, Kolkata.
- A technology on “Design of High Draft Brick Kilns with Zigzag Setting” has transferred to Team Energy System, Panchkula, Haryana.

• **CSIR-CDRI**

- Developed Beta carboline analogues as selective and biased kappa opioid receptors agonists for treating various associated pathophysiological conditions

• **CSIR-CEERI**

- First prototype of blue LED string (45 LED blue chips in series) has been developed and demonstrated for decorative applications. Specifications; Input (AC): 220-230V, DC output: ~154 V, Output current (DC): 30 mA.
- GaN HEMT devices have been tested for R.F operation and found satisfactory performance within frequency range of 300 MHz to 1.5 GHz.
- Process optimization of gold deposition on Flexible Substrates (PDMS and PET) has been made using thermal evaporation system.

- Developed 2 nos. of 2.6 MW S-band tuneable pulse magnetron. One is on hot RF test bench and other one on UHV processing station
- **CSIR-CFTRI**
 - Rural based biotechnological production of spirulina - Senior Scientist & Head, Krish Vigyan Kendra, Sundargarh; M/s Adhvanika Agrotech Pvt. Ltd, Navi Mumbai, Thane, Maharashtra;
 - Energy Food: New formulation - M/s Aasray Foods Pvt. Ltd., PO-Changsari, Dist-Kamrup (R).
- **CSIR-CMERI**
 - Retractable Roof Polyhouse Technology (CoEFM, Ldh) was transferred to M/s Blue Stallion Equipments (P) Ltd., Ludhiana, Punjab (Micro & Small Enterprise) on 05/08/2022 in non-exclusive basis.
 - AC powered, intelligent, remote controlled UVC-LED Sterilizer Unit was transferred to M/s A.R.INFOTECH Madhyamgram, North 24PGN-700129, WB (Micro & Small Enterprise) on 10/08/2022 in non-exclusive basis.
- **CSIR-CRRI** Transferred technology "PatchFILL: The Pothole Repair Machine" to Messers Avrakt Innovations, New Delhi on 05.08.2022.
- **CSIR-CISO** Transferred technology of Hand-held Electrostatic Disinfection to M/s Rite Water Solutions (I) Pvt. Ltd., Nagpur
- **CSIR-IIP** Desulfurization of light cycle gas oil, kight gas oil, heavy gas oil and crude oil of API-26 was carried out. The product of desulfurization process used in upgradation of lowest grade bitumen. Catalytic conversion of bioethanol to ethylene was carried out using different transition metal ions modified zeolite catalyst.

Collaborations/Agreements/MoUs Signed (National)

- **CSIR-AMPRI**
 - Signed MoU with JNARDDC as part of collaborative project scheduled to be signed on 2nd September, 2022 at JNARDDC Nagpur.
- **CSIR-CBRI**
 - Signed a MOU with Oil and Natural Gas Corporation Ltd (ONGC), New Delhi to render services, expert advice/consultancy etc. in the area of its expertise in:
 - (i) Structural Audit/Condition Assessment of the Existing Buildings
 - (ii) Geotechnical Investigation/Soil Testing

- (iii) Fire Safety Audit Design Fire Protection System.
- **CSIR-CDRI**
 - MoU on "Collaborative Research & Development activities in the area of mutual interest" was executed with:
 - Institute of Liver and Biliary Sciences, New Delhi on 13-08-2022.
 - Chhatrapati Shahu Ji Maharaj University, Kanpur on 6-08-2022.
- **CSIR-CGCRI**
 - MoU signed with M/s Allengers Global healthcare (P) Ltd., Chandigarh, on 10th August, 2022, on research and development of continuous and Modulated Thulium Fiber Laser at 1.94 micron for medical use.
- **CSIR-CRRI**
 - Signed agreement with M/s Shell India Markets Private Limited to explore opportunities of mutual interest to meet both parties corporate aspirations to develop and implement solutions for decarbonisation, waste/circularity for the Indian road construction industry.
 - Signed MoU on 25.08.2022 with C-DAC, Trivandrum to prepare a DPR for Delhi Traffic Police to execute most prestigious and highly ambitious project on "Intelligent Traffic Management System (ITYMS).
- **CSIR-CSIO**
 - Signed MoA with PGIMER, Chandigarh for " Development of Next Generation Molecular Tools for Diagnosis and Treatment of Cancer"
- **CSIR-IHBT**
 - MoU for collaborative and joint research work in the areas of mutual interests with Central University of Himachal Pradesh, Dharamshala, District Kangra H.P. on 05.08.2022.
- **CSIR-IICT**
 - Process know-how for L-Glufosinate, NACL Industries, Hyderabad
 - Feasibility study for the separation and purification of Acrylyl Chloride ($\geq 98\%$) employing Spinning Band Distillation Column (SBDC) along with GC analysis for Dr Reddy's Labs, Hyderabad
- **CSIR-NAL**
 - Collaboration agreement signed with M/s. Electrohms Pvt Ltd., Bengaluru on 03rd August 2022 for modified version of GMR based spin valve current sensor

- **CSIR-NIIST**

- Setting up of a plant for processing of matured coconut water at M/s Sahakari integrated coconut processing Plant
- To develop biomaterials from microbial sources and development of biopolymeric products for M/s. Bharga Biotech and Re-Energy Solutions Pvt. Ltd, Palakkad
- Fermentative production of a recombinant protein expressed in a yeast system for M/s. TeOra Lifesciences Pte Ltd, Bangalore

- **CSIR-NML**

- Collaboration for R&D in the areas of recycling with Vardhman Auto Recycling, New Delhi

Patents Update

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad*	India	Abroad*	India	Abroad*
18	10	16	12	21	119

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

High impact S&T services offered

- **CSIR-AMPRI**

- UHMWPE/KEVLAR 29 laminated composite plates for ballistic application developed and tested
- Gold foam ring with 85% porosity developed

- **CSIR-CBRI**

- Safe Demolition of Twin Towers in Noida: Role of CSIR (CBRI & CIMFR)

Honourable Supreme Court passed an order on dated: 31.8.2021 to carry out the demolition of Supertech Twin Tower, NOIDA Buildings (Tower 16: Ceyane, 97 m in height) and Tower 17: Apex, 103 m in height). The Honourable court also asked Noida authority to engage CSIR-CBRI to carry out the demolition work to ensure the overall safety of adjacent structures. A team of seven scientists from two CSIR labs (CBRI & CIMFR) were involved in various aspects of the project. CBRI in consultation with NOIDA engaged M/s Edifice, India for the demolition of the twin towers. M/s Edifice collaborated with M/s Jet Demolition of South Africa as implementation agency. The CSIR Team

was involved in the whole execution process of the demolition. The team consisting of both the laboratory involved in blast design and quality review, numerical modelling of progressive collapse of building, review of strategy to reduce the flying debris and air over pressure through wire mesh and geo-textile fibre wrapping, prediction of ground vibration and safety of adjacent structures, review of pre- and post-demolition structural audit and analysis, pre-demolition strengthening measures of adjacent structures (permanent and temporary), vibration reduction measures for ground and GAIL gas pipe line. Around 9640 holes (approximately 19 km length) are drilled and 3700 kgs of explosive are used for the demolition.

- **CSIR-CDRI**

- Catalytic Friedel - Crafts Alkylative Desymmetrization of Cyclohexa-2,5-dienones: Access to Linear and Bridged Polycyclic Pyrroles and 3 Arylpyrroles

- **CSIR-CRRI**

- Initiated activities for MLP Project titled "Sustainable Geocomposite Drainage-Root Barrier" with nodal lab CSIR-NIIST.
- Design of recycled asphalt mix for reconstruction and rehabilitation of Deoli-Kota section of NH-12 (Design km 167.624 km to km 205.724) in the state of Rajasthan for National Highway Authority of India (NHAI)
- Design and Technical guidance for RCC Box pushing at Rly km 1377/4-6 near farah Railway Station on Mathura-Dholpur section for Rail Vikas Nigam Ltd, Agra
- Assessment and Evaluation of COP-35 of HSRP for M/s FTA for FTA HSRP Solutions Pvt. Ltd., Gujarat
- Assessment and Evaluation of COP-9 of HSRP for M/s Agros Impex India Pvt. Ltd. for Agros Impex(I) Pvt Ltd, Gujarat
- Identification of the most critical locations having the highest impact on traffic in case of vehicular breakdown for Petroleum Conservation Research Association (PCRA) New Delhi.

- **CSIR-CSMCRI**

- Production of Liquid seaweed plant biostimulants from *Sargassum* spp. IN 201811029622 * : Technology know how transferred to Linga Chemical, Madurai

- **CSIR-IHBT**

- Flow cytometry and cytotoxicity analysis of eight samples.
- Plant based reference standards from Himalayan medicinal plants.
- Development and validation of analytical methods for traditionally used medicinal plants.

- **CSIR-IIP**
 - Polymeric materials area along with upstream and wax rheology division received a sponsored project from OIL limited for the phase of the project. The project focused to develop polymeric flow improvers and scale up of the same.
- **CSIR-NAL**
 - Development of GMR Based Spin Valve Current Sensor for Electrohms Private Limited, Bengaluru
 - Validation Test of EW Suite on MIV5 HELI - BEL, Bengaluru
- **CSIR-NGRI**
 - High Resolution Aquifer Mapping & Management in Arid Regions of North Western India. Submitted all the project reports of eight survey blocks to CGWB.

Currently engaged in preparing atlas of the survey result and also reviewing and improving the reports
 - MT field studies started in Puga and Chumathang geothermal areas of Ladakh Union Territory under CSIR Initiatives in Ladakh as a part of CSIR-NGRI Ladakh initiative.
- **CSIR-NML**
 - Developed technology for process improvement in degreasing, brightening & passivation process of cartridge case of 7.62mm(m-80), 7.62mm(a-7), 5.56mm & 12.7mm SA ammunition and process improvement in cleaning and polishing operation of 5.56mm bullet manufacturing. CSIR-NML has developed chemical composition of degreasing, brightening and passivation chemicals that can be used during the brass cartridge case production process for Ordnance Factory.

Outreach Activities (Jigyasa, Skill Development, and others)

- **CSIR-CBRI**
 - Conducted a series of training programme under the aegis of CSIR Integrated Skill Initiative
 - Six days advanced skill development training programme on 'Structural Pest Management' for the Pest Management Professionals of the country during August 01-06, 2022. This programme aimed to upgrade the latest knowledge & skills of the working professionals using different tools & techniques in the area of structural pest management covering Bio-ecology and Management of Cockroaches, Termites, Bed Bugs, Mosquitos, House Flies, Lizards, Rodents and Microscopic Pests like

Corona virus etc. This programme was attended by 32 participants covering different parts of country.

- Two days residential Capacity Building Programme on "Good Construction Practices" for Engineers/Technologists of JK Cement Ltd during August 08-09, 2022. This programme designed to familiarize the participants on the latest trends in Building Materials and Construction, Advances in Concrete Technologies, Quality Assurance and Quality Control, Design & Construction of Green Buildings, Confined Brick Masonry Construction etc. In addition, participants visited the R&D facilities and technologies showcased in the institute for better understanding of the new construction technologies.
- Five days' Skill development training programme on "Rural Housing - Appropriate Construction Techniques" during August 22-26, 2022, 15 participants from Odisha, Haryana & Himachal Pradesh attended the programme.

- **CSIR-CDRI**

- Student-Scientist Connect Program organized on 03-08-2022 for Pharmacy students of Integral University
- A health awareness program for women health was also conducted by the team of scientists and research scholars at Jawahar Navodaya Vidyalaya on 26-08-2022

- **CSIR-CECRI**

- A one-week Skill Development Training Program conducted on "Surface Analytical Techniques" between 01.08.2022 - 05.08.2022. There are 37 participants participated in this Programme.
- A two-week International Special Refresher Training Programme conducted for the staff of PRODA, Nigeria on "International Special Practical Hands-on Training on Lithium- ion battery Manufacturing: R & D Perspective" between 25.07.2022 - 03.08.2022 at CSIR-CECRI, Karaikudi. Further the demo experimentation and hands on training provided at CSIR-CECRI, Chennai unit, CSIR complex, Tharamani, Chennai w.e.f. 04.08.2022 and 05.08.2022. There was also arranged laboratory visits to CSIR-SERC and CSIR-CLR on 06.08.2022 and 08.08.2022 respectively. There were 9 participants participated this Programme hails from PRODA, Enugu, Nigeria.

- **CSIR-CEERI**

- 10-Days Skill Development Program was organized on 'IoT System Development on Embedded Platforms' from 31-08-2022.

- **CSIR-CGCRI**
 - Student-Scientist Connect programme for the students of Jadavpur University on 23-8-2022 under Jigyasa Programme.
- **CSIR-CIMFR**
 - Computer Training Program for school students from 19.07.2022 to 08.08.2022 under JIGYASA Programme.
 - Computer Skill Development program on “Data communication and networking” for one-month duration from 10th August 2022 of SC/ST students Govt. polytechnic, Nirsa, Dhanbad under JIGYASA Programme.
- **CSIR-CMERI**
 - Organised series of Skill Development Programme (SDP)
 - Farm Machinery Design for B. Tech. students: Aug-Sep 2022;
 - Analytical Techniques and Instrumentation for Water Quality Assessment; Aug 03-05, 2022;
 - Hands on Training on Python Programming with Applications on Robotics; Aug 03-07, 2022;
 - for B. Tech. Agricultural Engineering students of JNKV, Jabalpur; 08Aug -02 Sep, 2022;
 - End-to-End Internet of Things; Aug 17-Sept 02, 2022;
 - Jigyasa Programme
 - on Mining Robot; 19-08-2022;
 - on Solar Energy based Systems; 19-08-2022
- **CSIR-CRRI**
 - conducted five days regular training program on “Design, Construction and Quality Control in Flexible Pavements”, from August 22-26, 2022. Programme was participated by 30 participants from various parts of India.
- **CSIR-CSIO**
 - JIGYASA conducted a boot camp session on JIGYASA Virtual Lab. on 18.08.2022, Dr. Neerja Garg, Principal Scientist, CSIO Chandigarh delivered the lecture at Government Model High School, Sector 49 D Chandigarh.
 - "Vigyan Pe Charcha: A Bimonthly Series", in collaboration with VIBHA, NASI, and INYAS Chandigarh Chapter under Aazadi ka Amrit Mahotsav & International Year of Basic Science and Sustainable

Development, a joint lecture cum interaction session was conducted on 18.08.2022.

- **CSIR-CSMCRI**

- organized seven days residential high end workshop on “Hands on specialized techniques in seaweed biotechnology: Multipronged approach” sponsored by DST, New Delhi under accelerate Vigyan scheme during 1-8th August, 2022.
- Dr Arup Ghosh, CSIR-CSMCRI, Bhavnagar visited Leh, Ladakh and exhibited seaweed-based biostimulants to the farmers and technopreneurs in Agritech Mela held from 10th-11th August 2022.
- organized three days hands on training program on “Microalgal Diversity and Their Biotechnological Potentials” from 10-12 August 2022 under the CSIR Integrated Skill Develop Training Program
- Dr. Sukalyan Bhadra, Dr. Saravanan and Dr.P.S.Subramanian has visited Sahajananda Industries Rajkot related to Mefrosol Tech transfer.
- Dr. Joyee Mitra Senior Scientists from IMCD has visited Dhruv Chemicals (Ankleshwar) executives to explore viability for a chemical process of polyaluminium Chloride manufacturing.
- Training workshop on “Academic Writing” was organized from 22 Aug. 2022 to 26 Aug. 2022 under the Scheme “CSIR-Integrated Skill Initiative Program”.
- Invited talk by Dr Kamalash Prasad on “Importance of seaweed downstream processing” at “Hands on specialized techniques in seaweed biotechnology: Multipronged approach” sponsored by DST, New Delhi under accelerate Vigyan scheme during 1-8th August, 2022.
- Bipin G. Vyas, Scientist, CSIR-CSMCRI delivered an expert talk on “The world of salt and its industrial application” on 25th August 2022, to Vigyan Jyoti Students of JNV Parbhani, Maharashtra under CSIR-Jigyasha Programme.

- **CSIR-HRDG**

- CSIR-IHBT organised Jigyasa programme on 1.08.2022: 74 students and 6 teachers participated
- School students (Dev Samaj School) of XII standard visited CSIR-IGIB Mathura Road campus on 04.08.2022 under Jigyasa program.
- CSIR-CSMCRI Organized Webinar on “Freedom Struggle of India and Science” delivered by Dr. Arvind C. Ranade, Executive Director, INSA, New Delhi, to celebrate the birthday of Acharya Prafulla Chandra Ray on 02.08.2022 under CSIR-Jigyasa program.

- CSIR-CMERI organised jigyasa programme on Mining Robot on 04.08.2022. 32 nos. of students and two teachers from KV (CMERI) Durgapur attended the programme.
- CSIR-IMMT organized a unique lab-visit program for DEAF students from BBC Govt. High School for the Deaf on 10.08.2022. 60 students and 10 teachers benefited.
- CSIR-IMTECH organised visit of Govt school and EJM college students at STI Hub in Ladakh on 10.08.2022. Around 400 students visited the STI Hub Ladakh.
- CSIR-CSIO JIGYASA organised boot camp session and a joint lecture cum interaction session on 18th August 2022. The lecture was delivered by Dr. Neerja Garg, Principal Scientist, CSIO Chandigarh and Dr. Pooja Devi, Principal Scientist, CSIO Chandigarh at Government Model High School, Sector 49 D Chandigarh.
- CSIR-NEIST on the occasion of Independence day visited two ATL school in Sivasagar district and had Science Talk, face to face with scientists and demonstration of science experiments
- Outreach programs under Jigyasa in two different schools in Golaghat district of Assam was organised by CSIR-NEIST on 13.08.2022
- Webinar 5 publicity on CSIR Website: SCIENCE 101 series, CSIR-NIScPR. Dr. Ashish Agarwal from NPL is delivering his talk on "International System of Units and Indian Standard Time".
- CSIR-NEIST organised Students Scientists Connect Program under Jigyasa at Sankardev Vidya Niketan, Jorhat on 17.08.2022
- Nearly 40 students and 4 teachers from SSVM Chandil, Jharkhand are visiting CSIR-NML under Jigyasa program on 18.08.2022
- CSIR-CECRI organised orientation program on 18.08.2022 for Principal and HM of adopted 75 schools to commemorate 75th Foundation year.
- CSIR-CMERI under Jigyasa programme organised demonstration on Solar energy based system on 19.08.2022 for 25 students of KV(CMERI)
- CSIR-CGCRI on 23.08.2022 organised student- scientist connect programme
- CSIR-NML, Jamshedpur organized an online popular lecture series on 'Decontamination of drinking water: a technological and social challenge' on 25th August, 2022 from 4 pm to 5 pm for school students and teachers.
- CSIR and Chief Development Officer, Bulandshahr signed MoA in the August presence of Hon'ble Chief Minister of Uttar Pradesh Shri. Yogi Adityanath on 27.08.2022 to inculcate scientific temper among school

children and teachers of Bulandshehr through the CSIR's outreach programme "Jigyasa"

- **CSIR-IHBT**

- संस्थानमें उद्यान विभाग, चंबा, हिमाचल प्रदेश के सौजन्यसे "पुष्पीय, औषधीय एवं संगंधित फसलों की खेती" विषय पर पाँच दिवसीय प्रशिक्षण एवं अभिविन्यास कार्यशाला का आयोजन दिनांक 8-12 अगस्त 2022 को किया गया। किसानों को फ्लॉरिकल्चर मिशन के अंतर्गत व्यावसायिक फूल जैसे लिलियम, कैलालिली, गेंदा, गुलदाऊदी, टुयलिप, कार्नेशन, एल्स्ट्रोमेरिया, एवं ग्लैडियोलस की खेती की तकनीकों को प्रशिक्षण एवं प्रदर्शन के माध्यम से बताया गया। इस के अतिरिक्त, अरोमा मिशन के माध्यम से जंगली गेंदा, लैवेंडर, दमस्क गुलाब और लेमन घास जैसे फसलों की कृषि तकनीकों के बारे में बताया गया।
- CSIR-IHBT participated in a Tribal Fair held at Keylong, Lahaul-Spiti during 14.8.2022 to 16.8.2022. A stall was installed to display institute activities, products and technologies. It was visited by the Chief Guest, Dr. Ramlal Markanda, Minister for Information Technology & Tribal Development, Govt. of HP, and district administrations personnels of Lahaul & Spiti, HP.

- **CSIR-IICT**

- A Skill Development Training on Water purification & Analysis was commenced from 1st August 2022 around one month to Chemical Engineering Students at CSIR - IICT Under CSIR Integrated Skill Initiative.
- A One day Entrepreneur Development Programme on "Accelerated Anaerobic Composting Technology: Concept to Commissioning & Marketing", was conducted on 23rd August 2022 to Telangana State Government's officers at CSIR-IICT under CSIR - Integrated Skill Initiative. Around 35 state Government officers were participated and benefitted from this programme.

- **CSIR-IIIM**

- Under JIGYASA Programme 27 student participants and faculty members from Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J) visited Plant Sciences, Fermentation and Microbial Biotechnology and Quality Management and Instrumentation Divisions of CSIR-IIIM as exposure visit under a National training program on "Recent Advances in Microbial Diagnostics" on 24th August 2022.
- Skill Development:

- Hands on Training Workshop on RNA-Sequencing & Metagenome data analysis from 22 August 2022 to 25 August 2022 by CSIR-IIIM Jammu organized under CSIR-Integrated Skill Initiatives CSIR-IIIM Jammu organised a Hands on Training Workshop on RNA-Sequencing & Metagenome data analysis from 22 August 2022 to 25 August 2022 at CSIR-IIIM Jammu organized by CSIR-Integrated Skill Initiatives in which 20 participants were trained for four days.
 - Five Day Workshop on “Molecular Cloning and Protein Purification” funded under CSIR -integrated Skill Initiatives was conducted from 1-5 August 2022. There were 18 participants from different Institutes of country participated in this workshop.
- **CSIR-IIP**
 - An online lecture on "Petroleum Chemistry" was organized on 16 August 2022 under "Jigyasa" mission for 5 no. of Government Schools of Champawat district under the initiative to adopt 10 remote districts of Uttarakhand. The lecture was attended by nearly 100 nos. of members including students and faculty members. One program on 'Current trends in Library and Information Science' was conducted during the period. A team of two Faculty Members and 22 Cadets of RIMC College, Dehradun visited our esteemed Institute on 02 August 2022
- **CSIR-NAL**
 - Outreach programme for Tenth standard students under JIGYASA programme on 17th August 2022
- **CSIR-NGRI**
 - Training offered to Adani group officials on “MASW studies and seismic data processing and interpretation for Mineral Exploration” under training program of Geophysical Techniques for Coal and Mineral Exploration during the 1st to 5th of August, 2022.
- **CSIR-NIIST**
 - National Seminar in connection with the commencement of IPR & Patent course
- **CSIR-NIO**
 - Pramod Kumar Maurya gave lecture on AUV and ROV for "The Long Hydrography (Long 'H') Specialization Course 2022 for the Naval Officers. The programme was conducted at CSIR-NIO (offline mode) during 10th to 25th August 2022". The lecture was attended by the Naval officer from India and other foreign countries such as Australia, Maldives, Ghana, Nigeria, Vietnam, Tanzania, Sri Lanka, Indonesia and Bangladesh.

- **CSIR-NML**
 - A lecture on decontamination of drinking water was organized on 25th August 2022 Inauguration of Technology Park for Women and Innovation Cell at NIAMT, Ranchi: Central Education Minister Hon'ble Madam Annapurna Devi was the chief guest. The centres have been opened jointly by CSIR-NML and NIAMT under the DST project on Women Technology Park.
- **CSIR-SERC**
 - Advance Courses (through online mode) was conducted on "Recent Advances in Concrete Technology & Durability of Concrete Structures (RACT&DCS-2022)" held during 24-26 August 2022. Total 34 participants attended the course.

Major Conferences, Seminar/Webinars, Workshops organized

- **CSIR-CDRI**
 - Two Days Training/Awareness Programme for PME Scientists/Financial Officials of CSIR labs on 24 & 25 August 2022
 - In association with Beckman Coulter India Pvt Ltd, organized a two-days Basic Flow Cytometry workshop cum hands on training program from 23rd-24th August, 2022.
- **CSIR-CECRI**
 - In association with The Society for Advancement of Electrochemical Science and Technology (SAEST) and PSG College of Technology, Coimbatore organized a two-day National Convention of Electrochemists (NCE-22) during August 26-27, 2022 at PSGCT, Coimbatore. Around 600 delegates participated in the conference.
- **CSIR-CFTRI**
 - Stakeholders Workshop on Grain Storage and Pest Management was held on 17th August 2022.
- **CSIR-CGCRI**
 - International Conference on Advances in Glass & Glass-Ceramics, held on hybrid mode during 23-25 August, 2022 at CSIR-CGCRI, Kolkata.
- **CSIR-CSMCRI**
 - Organized the two days expert lecture on Laboratory Safety Management: Practical Aspects" & "Best Practices: Research & Development" in hybrid mode. The lecture was delivered by Mr. Vinayak R. Marathe, Former Sr. Vice President, Reliance Industries Ltd, Mumbai.

- **CSIR-HRDC**
 - Training/Awareness Programme for PME Scientists/Financial Officials of CSIR Labs from 25/08/2022 to 26/08/2022
- **CSIR-IHBT**
 - Under the CSIR Aroma mission the Institute conducted three training cum awareness programs at Namchi and Soreng districts of Sikkim, and distributed two lakhs rooted slips of lemongrass to the farmers of Glen Leu Women Service Cooperative Society, Sumbuk, district, Namchi, Sikkim on August 24-25, 2022. More than 100 farmers and unemployed youths participated in these programs.
 - Organized three days workshop cum training programme on Food Processing & Value Addition of Agri-horti produces for the 22 entrepreneurs from UT of Ladakh from 25-27 during August 2022 at CSIR-IHBT, Palampur.
- **CSIR-IIP**
 - 6th National Symposium Shaping the Energy Future: Challenges & Opportunities (SEFCO-2022) Theme: Innovative Steps Towards Clean Energy for Net-Zero India by 2070 during 26-27 August, 2022
- **CSIR-ITD**
 - Cabinet Secretary Meeting through Video Conferencing organised on 17 August in CSIR Science Centre.
- **CSIR-NAL**
 - Conducted Training programme for Naval Officers on "Engineering Failure Analysis" during 1-5 August 2022
- **CSIR-NGRI**
 - Industry Connect Meet organized in hybrid mode on 02.8.2022.
 - Inauguration of e-Pronnati Workshop on 17.8.2022.
 - Celebrate Sadbhavana Diwas-Pledge
 - Coordination Parliamentary Committee meeting on Official Language inspection on 24.8.2022
- **CSIR-NIO**
 - i-Connect event organized by CSIR-National Institute of Oceanography, Goa "Marine-derived products having potential industrial applications" i-CEN 69B (Virtual Mode). I-cen 67 was organised on 3rd August 2022 to showcase some of the technologies developed by CSIR NIO, NIOT and CMERI. The theme of the conference was on "Ecology, Environment, Earth & Ocean Science and Water (E3OW)" under the Title " Ocean

Technology-Underwater Technology, Instruments and Sensors. The conference was conducted in off-line and on-line mode.

- **CSIR-NML**

- Organized 2 days lecture from 29th to 30th August, 2022 on "CCS Conduct Rules, Sexual Harassment of Women at Workplace and RTI" at CSIR-NML
- Professor P. Ramachandra Rao Memorial Lecture – 2022: Prof. N.P. Gandhi Memorial Metallurgy Trust, Department of Metallurgical Engineering, IIT (BHU), Varanasi and Department of Materials Engineering, IISc & CSIR-National Metallurgical Laboratory, Jamshedpur jointly organized the lecture on "Transitions between the liquid, glassy and crystalline states in metallic alloys" by Professor Alan Lindsay GREER Department of Materials Science & Metallurgy, University of Cambridge on 5th August 2022. The session was chaired by Prof. N.K. Mukhopadhyay, IIT (BHU), Varanasi.
- 10th Prof. S. N. Sinha Memorial Materials and Metallurgy Quiz (SNSM3Q-2022): The Indian Institute of Metals (IIM), Jamshedpur Chapter along with CSIR-NML organized the event titled "Professor S.N. Sinha Memorial Materials and Metallurgy Quiz (SNSM3Q-2022)". The primary purpose of this event was to create awareness about the role of materials science and metallurgy in industrial and technological developments amongst Standard XI and XII students. This year, the quiz was organized Tuesday, 23rd August, 2022 at CSIR-NML.

- **CSIR-RAB**

- Organised Workshop for CSIR Scientists Assessment Portal - e-Pronnati at NGRI, Hyderabad during August 17-18, 2022 for Admin Staff of all 37 CSIR Laboratories/ Institutes along with admin staff of CSIR Headquarters and CSIR Units at CSIR-NGRI, Hyderabad.

Visit of high level dignitaries to the Institute/Laboratory

- **CSIR-CDRI**

- Prof. Shantanu Mukherjee and Professor, Organic Chemistry, IISc Bengaluru visited on 29-08-2022

- **CSIR-CEERI**

- Participation of one scientist (Dr R Mukhiya) in a project review meeting at SSPL-DRDO, Delhi on 9th Aug. 2022.

- **CSIR-CGCRI**

- Prof.V.Ramgopal Rao Pillay Chair Professor in Electrical Engineering & Former Director Indian Institute of Technology Delhi graced the occasion of 72nd CSIR Foundation Day as the Chief Guest and delivered the

19th AtmaRam Memorial Lecture at CSIR-CGCRI on 26th August, 2022.

- **CSIR-IHBT**

- Dr. Srivari Chandrasekhar, Secretary, Department of Science & Technology, New Delhi through online presence laid Foundation stone of the "Food Processing Block" under a project sponsored by Department of Science & Technology under Science and Heritage Research Initiative (SHRI) on August 12, 2022. The main aim of the upcoming food processing block is to develop and standardize food processing technologies focusing on traditional foods of Himalayas.

- **CSIR-IICT**

- Dr. Krishna M. Ella, Chairman & Managing Director, Bharat Biotech Hyderabad visited IICT as the Chief Guest & delivered "A V Rama Rao Technology Day Award Lecture" held on 1st August 2022.
- Dr. G. Satheesh Reddy, Secretary, Department of Defence Research & Development and Chairman, Defence Research and Development Organization visited IICT as the Chief Guest for 79th Foundation Day of our institute on August 5, 2022 and delivered the Foundation Day lecture on "Atmanirbhar Bharat".

- **CSIR-IIP**

- Mr. Prabh Das, Managing Director & Chief Executive Officer, HPCL Mittal Energy Limited, visited during 26-27 August, 2022
- Ms. Sukla Mistry, Director (Refineries), Indian Oil Corporation Limited, 26-27 August, 2022 Narsimhan-C, CMD-Raasi Group of Industries and ex-MP visited CSIR-IIP on 18th August 2022

- **CSIR-URDIP**

- Dr. Jitendra Singh, Union Minister of State (Independent Charge) for Science & Technology and Earth Sciences, Union Minister of State for Prime Minister's Office, Ministry of Personnel, Public Grievances and Pensions, Department of Atomic Energy and Department of Space, Government of India, New Delhi visited CSIR-URDIP, Pune for the inauguration of the new institutional building of CSIR-URDIP on 20th August 2022.

COVID related developments/research

- **CSIR-CFTRI**

- COVID-19 booster dose vaccination camp was held for staff and family members, students and pensioners of the Institute on 20th August 2022.

- **CSIR-IHBT**

- COVID-19 samples testing for Kangra district of Himachal Pradesh continued.
- **CSIR-IIP**
 - 1084 samples of were received for testing of COVID-19. 63 samples were positive and 1021 were negative.
- **CSIR-NGRI**
 - Covid Vaccination commorating Azadi Ka Amrit Mahotsav – CSIR-NGRI organised a Camp in the Institute Premises for Free Precaution Dose to all Central Govt., Employees, Pensioners and Family members as a Preventive measure to contain the spread of Novel Coronavirus. In this program several CSIR-NGRI Staff members, pensioners and their family members have vaccinated.
- **CSIR-NML**
 - Covid Vaccination Camp for Booster Dose were organized on 1st and 31st of August 2022 for NML staff and their families.

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

- **CSIR-4PI**
 - Celebration of 76th Independence Day at CSIR-4PI and flag hoisting
- **CSIR-AMPRI**
 - i-connect meeting " alloys, composites and specialty fibre for strategic sectors" 2. "Advance ceramics for defence sectors" on 22nd and 23rd July, 2022.
 - Other Various competitions/activities were organised by the Institute as part of Azadi ka Amrit Mahotsav.
- **CSIR-CDRI**
 - organized an outreach program in Junior High School in Bargadhi Village near Lucknow for celebration of Har Ghar Tiranga under the aegis of Azadi Ka Amrit Mahotsav among school children.
- **CSIR-CECRI**
 - In commemorating our nation's 75th Independence, Azadi Ka Amrit Mahotsav and CSIR-CECRI@75, CSIR-Central Electrochemical Research Institute in association with SAEST is organizing a monthly Lecture Series on 'Electrochemical Science and Technologies: A Path Forward to Sustainable Society'.
 - Organised followingCECRI@75 Lecture Series:

- Dr. Debashish Bhattacharjee, Vice President, Technology & New Materials Business, Tata Steel visited CSIR-CECRI and delivered a lecture on “A Steel Company Building Future Sustainability” on August 04, 2022 in Abdul Kalam Auditorium, CSIR-CECRI.
 - Dr. S.A. Ilangoan, Vikram Sarabhai Space Centre, Department of Space, Thiruvananthapuram, Kerala visited CSIR-CECRI and delivered a lecture on “From Particles to Plug-in Vehicles” on August 05, 2022 in Abdul Kalam Auditorium, CSIR-CECRI.
 - Mr. R. Saravanabhavan, Deputy Adviser (Minerals), Minerals Division, NITI Aayog visited CSIR-CECRI and delivered a lecture on “Challenges in achieving self sufficiency in non ferrous metals and the role of CSIR Institutes in making India Atmanirbhar (a special focus on Magnesium demand supply in India)” on August 22, 2022 in Abdul Kalam Auditorium, CSIR-CECRI.
 - Prof. S. Sampath, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore visited CSIR-CECRI and delivered a lecture on “Interfaces in Electrochemistry” on August 23, 2022 in Abdul Kalam Auditorium, CSIR-CECRI.
- **CSIR-CFTRI**
 - Prof. Narendra Mohan, Director, National Sugar Institute, Kanpur delivered a Technical talk on Indian Sugar Industry: Sugar and Beyond on 12th August 2022.
 - **CSIR-CSMCRI**
 - organizing 75 i-Connect (Industry Connect) events from 12th May 2022 to 12th August 2022 to celebrate Azadi Ka Amrit Mahotsav and forge partnership(s) with various Industries. In this regards, “Membrane Electrolytes for Fuel Cells and other Energy Devices” is jointly organized by CSIR-CSMCRI and CSIR-CECRI on 10th August 2022 under I-Connect Program on Theme Energy (Conventional and Nonconventional) & Energy Devices.
 - organized the webinar on “Freedom Struggle of India and Science” delivered by Dr. Arvind C. Ranade, Executive Director, INSA, New Delhi, to celebrate the birthday of Acharya Sir Prafulla Chandra Ray, under the theme of AzadiKaAmritMahotsav on 02.08.2022 under CSIR-Jigyasa program
 - celebrated the 75th Independence Day at Avania Village on 15th Aug 2022.
 - organized half a day INDUSTRY MEET ON SILICON PRODUCTS (IMSP 2022) on last 27th July 2022 under the I connect program. Various Chemical Industries and Academicians including CSIR laboratories participated on this on line meet.

- **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**
 - Celebrated "Har Ghar Tiranga" (13-15, August 2022).
 - Celebrated 75 years of Indian Independence by planting 75 trees, 25 each of Gulmohar (*Delonix regia* (Hook.) Raf.), Champa (*Plumeria alba* L.) and Kapoor (*Cinnamomum camphora* L.) to represent Tiranga.
- **CSIR-IICT**
 - Organized "A V Rama Rao Technology Day Award Lecture" held on 1st August 2022, Dr. Krishna M. Ella, Chairman & Managing Director, Bharat Biotech Hyderabad delivered the lecture.
 - Organized 79th Foundation Day of our institute on August 5, 2022. The event was graced by Dr. G. Satheesh Reddy, Secretary, Department of Defence Research & Development and Chairman, Defence Research and Development Organization as the Chief Guest. He delivered the Foundation Day lecture on "Atmanirbhar Bharat". As a part of celebrations, foundation day awards were presented to best performing Staff and Students under different categories.
- **CSIR-IIIM**
 - Organized a Poetry writing competition on 'Our National Flag: The Tiranga' as part of 'Har Ghar Tiranga' campaign under CSIR-Jigyasa program. About 67 students from various schools of UT of J&K and UT of Ladakh participated in the competition.
- **CSIR-IIP**
 - Celebration of 76th Independence Day at CSIR-IIP.
 - Industry meet on Petroleum (CSIR-IIP event) August 8th 2022.
 - Organized I-connect-72 under Azadi ka amrit mahotsava series.
- **CSIR-NAL**
 - Independence day celebration at CSIR-NAL on 15th August 2022
- **CSIR-NGRI**
 - Har Ghar Tiranga -Tricolour Indian Flag Distributed to all staff members.
 - Essay writing, Elocution competitions are conducted to staff members, and their children

- Celebrations commmerating Azadi Ka Amrit Mahatsav: Flag hoisting held with a get together of staff and their families on 15th August. All the buildings of the Institute are decorated with tricolor lighting during 13-15th August.
- **CSIR-NIIST**
 - Celebrated National Independence Day
- **CSIR-NIO**
 - During the month the institute conducted regular talks every Thursday on the occasion of Azadi ki Amrit Mahotsav
- **CSIR-NML**
 - Marathan Race and Football Match for NML staff and Staff Family were organized on 14th and 15th August
- **CSIR-SCRC**
 - To inculcate scientific temper in children, science competitions for the wards of employees of CSIR-SERC and CSIR-CMC was held on 21st August 2022 as a part of 81st Foundation Day of CSIR. Dr. (Mrs.) P. Kamatchi, Senior Principal Scientist was the Chairman for the Competitions Committee.
- **CSIR-URDIP**
 - 76th Independence Day was celebrated with hoisting of National Flag by Head, CSIR-URDIP followed by singing of National Anthem by all staff.
- **CSIR-NIScPR Success story webinar** on “Communicating Scientifically Validated Society Traditional Knowledge (SVASTIK) to the Society” was organized on 22nd August, 2022 (Monday) under Azadi Ka Amrit Mahotsav and CSIR@80.

DEPARTMENTAL ACTIVITIES

DSIR's mandate is to promote Industrial Research and Development besides technology promotion, development and utilization. In order to promote and nurture Research and Development in the country, Industrial R&D Promotion Programme of the department gives recognition and registration to in-house R&D units of industries, not for profit Scientific and Industrial Research Organizations (SIROs), Public Funded Research Institutions (PFRI) and periodically renews these recognition / registration under the respective Government Notifications (as amended from time to time), by virtue of which these organizations are able to obtain Customs duty exemptions, Goods & Service Tax (GST) concessions and Weighted tax deductions on R&D by Industry (under section 35(2AB) of IT Act). This scheme helps in encouraging industrial R&D in the country.

Industrial R&D Promotion Programme

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

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

Scientific and Industrial Research Organisation (SIROs)

Recognition/ Registration and renewal of SIROs

- 06 SIROs were granted recognition as well as registration certificates

DSIR Central Sector scheme 'Industrial Research and Development (IRD)' comprise of the four sub-schemes i.e (i) Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM), wherein financial assistance is extended to independent innovators for converting innovative ideas into demonstrable working models / prototypes / processes that may take the form of new or improved products, processes, or services; and assist them to become incubatees / techno-entrepreneurs, (ii) Patent Acquisition and Collaborative Research and Technology Development (PACE), wherein support shall be provided to industries and institutions for development and demonstration of innovative technologies,(iii)Building Industrial R&D and Common Research Facilities (BIRD), wherein support shall be provided for creation of Common Research and Technology Development Hubs for use by entrepreneurs and industries and (iv) Access to Knowledge for Technology Development and Dissemination (A2K+) wherein studies and conferences in up-coming areas of industrial research shall be taken up besides undertaking a Technology Development and Utilization Programme for Women (TDUPW).

- **A2K+ Technology Development and Utilization Programme for Women (TDUPW):** 459 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.1907.53 Lakhs during August, 2022.
- Sale of items worth Rs.1084.50 Lakhs was realized during August, 2022.

National Research Development Corporation (NRDC)

NRDC continues to lay emphasis on broadening and strengthening the technology resource base by nurturing long term relationships with R&D institutions as well as universities, technical organizations, industries and also individual inventors.

- NRDC has licensed technology on 'Bioremediation of hydrocarbon by Marine hydrocarbonoclastic bacteria (Marine oil spill bioremediation) ' to M/s OIL SPILL COMBAT TEAM LLP during August, 2022.
- NRDC has collected premia of Rs.2.20 Lakhs and Royalty of Rs.156.49 Lakhs from respective technologies during August, 2022.
