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## NATIONAL SCIENCE DAY

National Science Day was celebrated on 28th February 2023, jointly by CSIR-Structural Engineering Research Centre, CSIR Madras Complex (CMC) and CSIR-Central Leather Research Institute (CSIR-CLRI) at the Vigyan Auditorium CSIR-SERC



**CSIR MADRAS COMPLEX**  
Council of Scientific & Industrial Research  
Taramani, Chennai - 600113.



The function was presided over by Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC, Dr. K.J. Sreeram, Director, CSIR-CLRI. Dr. Soumya Swaminathan Chairperson, M.S. Swaminathan Research Foundation, Chennai & Former Chief Scientist, World Health Organisation, was the Chief Guest of the function and delivered the National Science Day lecture on “Lessons for Science from the Pandemic”.



### INTERNATIONAL WOMEN'S DAY

International Women's Day was celebrated at CSIR Madras Complex (CMC) and CSIR-Structural Engineering Research Centre (CSIR-SERC), on 8th March 2023.

The Chief Guest, Smt. S. Madhumathi, I.A.S, Managing Director, Tamil Nadu Small Industries Development Corporation (TANSIDCO) delivered the IWD lecture. Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC presided over the function. Dr. Smitha Gopinath, Principal Scientist, CSIR-SERC made a presentation on “Technology and Innovation for Gender Equality”. A cultural program on “Naari Shakti” by staff and students in the campus, added color to the event. Prizes were distributed to the various competition conducted for the women in the campus.





### NATIONAL TECHNOLOGY DAY

The National Technology Day was celebrated on 11 May 2023, by CSIR-Structural Engineering Research Centre (CSIR-SERC) and CSIR Madras Complex (CMC). Dr. V. Thiruppugazh, Chairman, Advisory Committee on Mitigation and management of Floods in Chennai Metro and Former Additional Secretary (Policy and Plan) NDMA was the Chief Guest and delivered the National Technology Day Lecture. The function was presided over by Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC.



### AMBEDKAR JAYANTHI

The 132rd Birth Anniversary of Babasaheb Dr. B.R. Ambedkar was celebrated on 18th April 2023. Hon'ble Dr. Justie S. Tamilvanan, Former Judge, Madras High Court & Former President, Tamil Nadu State Consumer Disputes Redressal Commission was the Chief Guest. Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC presided over the function.





### VISWA HINDI DIWAS (INTERNATIONAL HINDI DAY)

Viswa Hindi Diwas was celebrated in the campus on 10 Jan 2023. A day long program was inaugurated by Dr. N. Anandavalli, Director CSIR-SERC and Coordinating Director CMC, followed by Technical Seminar and poster presentation in Hindi by Scientists of CMC and SERC. A cultural program was organized in the afternoon.



### INTERNATIONAL MOTHER TONGUE DAY

International Mother tongue day was observed in the campus on 20th and 21st February 2023. The inaugural program on 20th had Dr. T.N. Vallinayagam, Hon'ble Justice, Judge Lok Adalat High Court of Madras; Chairman- National Cyber Safety and Security, New Delhi as the Chief Guest, who delivered the International Mother Language Day Special Address. Dr. N. Anandavalli, Director CSIR-ERC and Coordinating Director, CMC presided over the function. A cultural program coordinated by Dr. G.S Ayyappan, Sr. Principal Scientist was organized in the afternoon.



### INTERNATIONAL DAY OF YOGA

International Day of Yoga-2023 was observed in the campus on 21 June 2023. Yoga sessions containing asanas, pranayama, mudra and meditation was organized under the guidance of Shr. S. Ananthasubramanian, Heartfulness Trainer from Sri Ram Chandra Mission & heartfulness Institute, Chennai.





### Tech Events:



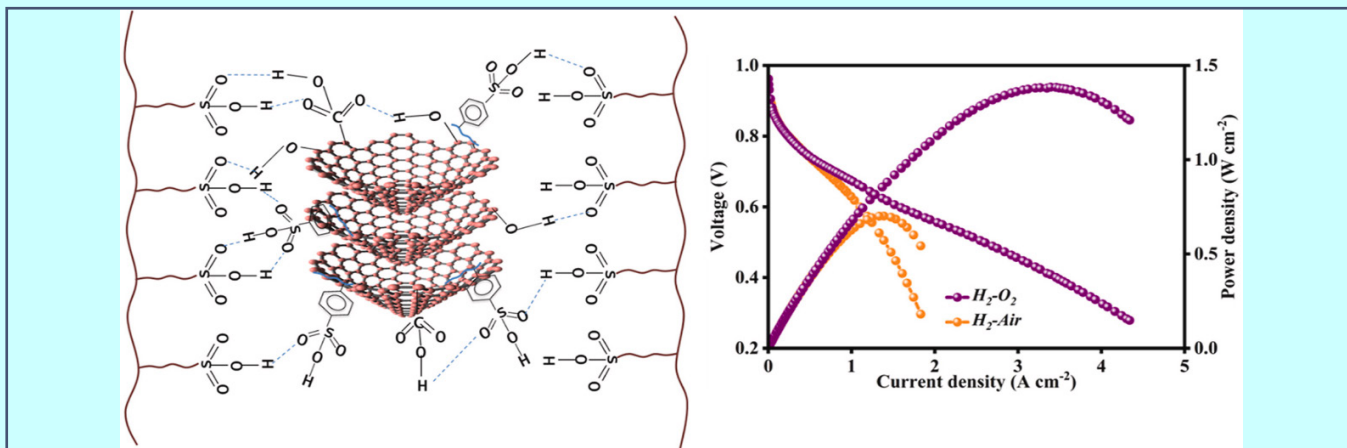
*Dr. N Kalaiselvi, Director General, CSIR, visited the exhibition booth of CSIR-CECRI during the India International Science Festival, held at MANIT, Bhopal, between 21st - 24th January 2023. She appreciated CECRI's indigenous fuel cell technology.*



*CSIR-CECRI Chennai Unit demonstrated CECRI's indigenous fuel cell stack, Li-ion batteries, and their allied components at the 108th Indian Science Congress Expo, Nagpur, Maharashtra (4th - 7th May 2023). Dr. N Kalaiselvi, Director General, CSIR, visited the exhibition booth of CSIR-CECRI during the event.*

### Research and Development Efforts

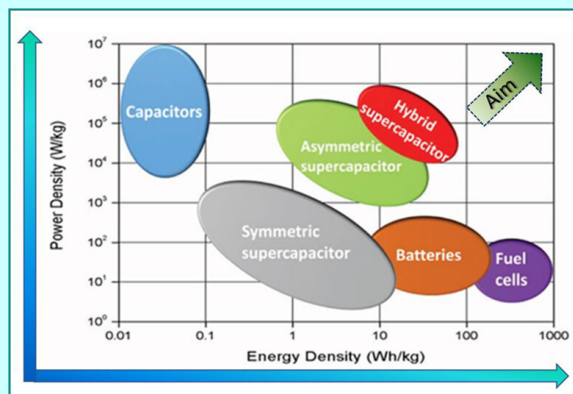
1. Surface modified stacked-cup carbon nanofiber (PSSA-g-CSNF) incorporated short side chain perfluorosulfonic acid ionomer based composite polymer electrolyte membrane offers higher proton conductivity and fuel cell performance. In a  $H_2-O_2$  fuel cell at  $60^\circ C$ , the membrane electrode assembly delivered a peak power density of  $1.4\text{ W cm}^{-2}$  with a current density of  $2.5\text{ A cm}^{-2}$  at  $0.5\text{ V}$ . Similarly, under  $H_2$ -air conditions at  $60^\circ C$ , the membrane electrode assembly delivered a peak power density of  $0.72\text{ W cm}^{-2}$  with a current density of  $1.4\text{ A cm}^{-2}$  at  $0.5\text{ V}$ .



*Structure of (PSSA-g-CSNF) incorporated perfluorosulfonic acid-based membrane and its performance in a fuel cell.*

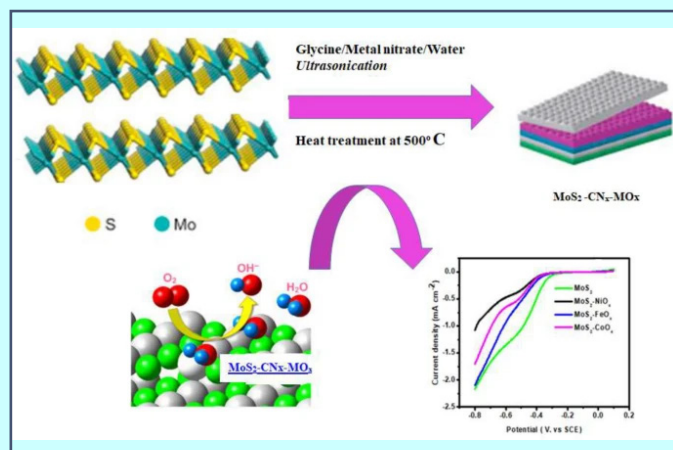
2. A comprehensive study of the various energy storage and conversion devices was presented. The electrochemical energy systems were reviewed with special emphasis on rechargeable Li-based batteries (Li-ion, Li-O<sub>2</sub>, Li-S, Na-ion, and redox flow batteries), electrocatalysts, and membrane electrolytes for fuel cells. The prime challenges for the development of sustainable energy storage systems are the intrinsically limited energy density, poor rate capability, cost, safety, and durability. While notable advancements have been made in the development of efficient energy storage and conversion devices, it is still required to go far in order to reach the energy demand, especially in the large-scale storage and e-mobility sectors.



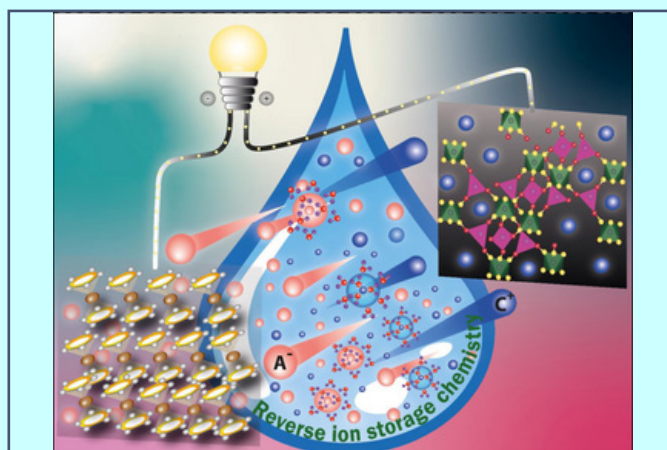


*Summary of energy density versus power density in different electrochemical devices*

3. Unique heterointerface comprising MoS<sub>2</sub>/CNx/metal oxide (Fe, Co, Ni) was developed to scrutinize the effects of metal oxide anchored within MoS<sub>2</sub> layers towards oxygen reduction reaction and catalyst durability.



*Development of MoS<sub>2</sub>/CNx/metal oxide heterointerface with significantly enhanced oxygen reduction reaction*



*Reverse Dual-Ion Battery Enabled by Reversing the Cation/Anion Storage Mechanism in an Aqueous ZnCl<sub>2</sub> Water-in-Salt Electrolyte*

### Academic visits and talks

1. Dr S Hemavathi delivered an invited talk on “Battery management system, pack-making, and charging stations”. The talk was delivered during a meeting on “Batteries for Marine Applications” organized by CSIR-CECRI Karaikudi, for Cochin Shipyard Limited, Kochi, Kerala, during April 11-13, 2023.
2. Dr A K Sahu was invited as the chief guest and he delivered a talk entitled, “Fuel Cell Technology for Automotive Applications” at Department of Science and Humanities, Dr. Rangarajan Dr. Sakunthala Engineering Autonomous College, Vel Tech High Tech, Chennai, on the event of National Science Day 2023.
3. Dr A K Sahu delivered an invited lecture on “Development of novel Electrocatalysts and Membranes for Polymer Electrolyte Fuel Cells” at the International Conference on Nanomaterials for Electro-Catalysis Technology (I-CONNECT 2023)” at the Department of Chemistry IIT Delhi during 20-22 March 2023.
4. Dr A K Sahu delivered an invited lecture on “Fuel Cell Technology for Automotive Applications” at the National Symposium on Green Hydrogen Technology: Harnessing the power of Renewables, Department of Chemistry, Hindustan Institute of Technology and Science, Padur, Chennai on 20th April, 2023.



**R&D News**

**Project:** AI-enabled Waste Plastics Sorting System using Near Infrared Spectroscopy for Resource Recovery from Polyolefins

PI: Dr. Madan Kumar Lakshmanan

Co-PI: Dr. C. Kumaravelu

CSIR-CEERI, Chennai has developed a Near Infrared (NIR) Spectroscopy-based in-line automatic sorting system useful for sorting mixed plastic waste into different value-added polymer fractions for efficient recycling. The system can be used for real-time, non-destructive, and fast sorting of mixed waste plastics into different value-added polymer fractions for efficient recycling. It can aid in the easy management of solid plastic waste for recycling.

Some of the salient features of the system are:

- Automatic, in-line identification of 6 types of mono-molecular plastics (PET, HDPE, PVC, LDPE, PP, PS) moving on a singulated conveyor (extendible to multiple-lanes)
- Identification of both hard (3D) and Flexi (2D) mono-molecular plastics (thickness above 100 microns) possible
- Provision made for sorting of 2 types (extendible to more)
- Useful for sorting mixed plastic waste into different polymer fractions
- Based on Near Infrared Spectroscopy and Chemometric techniques

Currently, the team is optimizing the mechanical subsystems for the best performance.

The system is being developed with funding from CSIR as part of Mission mode activity on depolymerization and upcycling (DEPOLUP).

**New Project**

The project entitled, Eco-Friendly Identifier: A Handheld Plastic Type Detector - An AI-enabled Portable Solution for Identifying Plastic Polymers, has been approved by the National Mission on Himalayan Studies (NMHS) under the Small Grants (SG) scheme. A budget of Rs. 47.8 lakhs have been sanctioned. The project duration is three years (till March 2026).

**Agreement signed**

NDA signed for sponsored Research project between CSIR-CEERI, Pilani and M/s.K.H.Exports India Private Limited, Sennerkuppam, Thiruvallur, Chennai-56.



**Participation in Seminars/Conferences/Workshops/Symposia etc.**

Participant's Name	Conference, Place and Date
A. Mercy Latha	CSIR-CEERI One Week One Lab (OWOL) demonstrations at CEERI, Pilani from 15.05.2023 to 19.05.2023 (to demonstrate our portable THz non-destructive evaluation system)

Name of the author(s)	Title of the Topic	Venue	Date
M. Latha, V. Gahlaut and S. K. Ghosh	Five-stage Depressed Collector for High Electronic Efficiency Space TWT	2023 24th International Vacuum Electronics Conference (IVEC), Chengdu, China	25-28, April, 2023
M. Latha and A. S. N. Devi	Automatic Threat Object Detection from THz Images using Artificial Intelligence Algorithms	2023 24th International Vacuum Electronics Conference (IVEC), Chengdu, China	25-28, April, 2023
V. Singh, V. Gahlaut, A. M. Latha and M. Kaushik	Design of Coaxial Input Cavity with Coupler for Inductive Output Tube	2023 24th International Vacuum Electronics Conference (IVEC), Chengdu, China	25-28, April, 2023

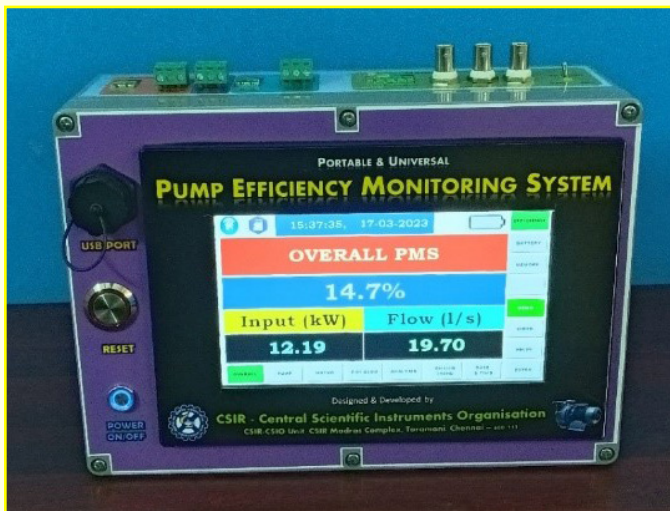
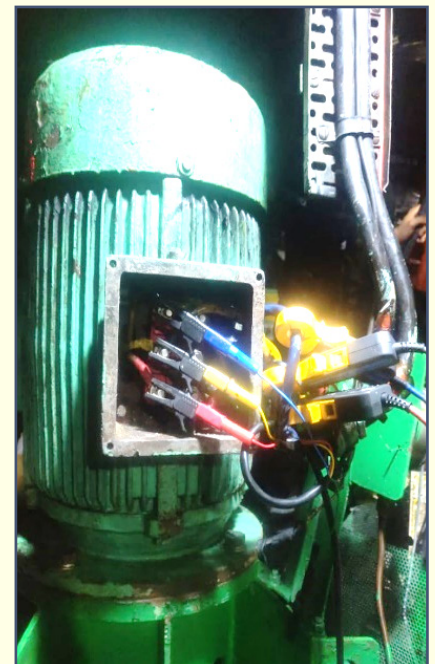
**Copyright applications have been made via the IP unit of CSIR-CEERI for the following software -**

- Madan Kumar Lakshmanan & C. Kumaravelu. AI-enabled plastic identification system using Near Infrared Spectroscopy. Application number: 015CR20232
- Madan Kumar Lakshmanan & Sanjay Singh. Smart Camera-based remote Plethysmography Techniques for Non-contact Vitals Monitoring. Application number: 003CR2023



**ONGOING PROJECTS:****DESIGN & DEVELOPMENT OF PORTABLE AND UNIVERSAL PUMP EFFICIENCY MONITORING SYSTEM (PU-PEMS)**

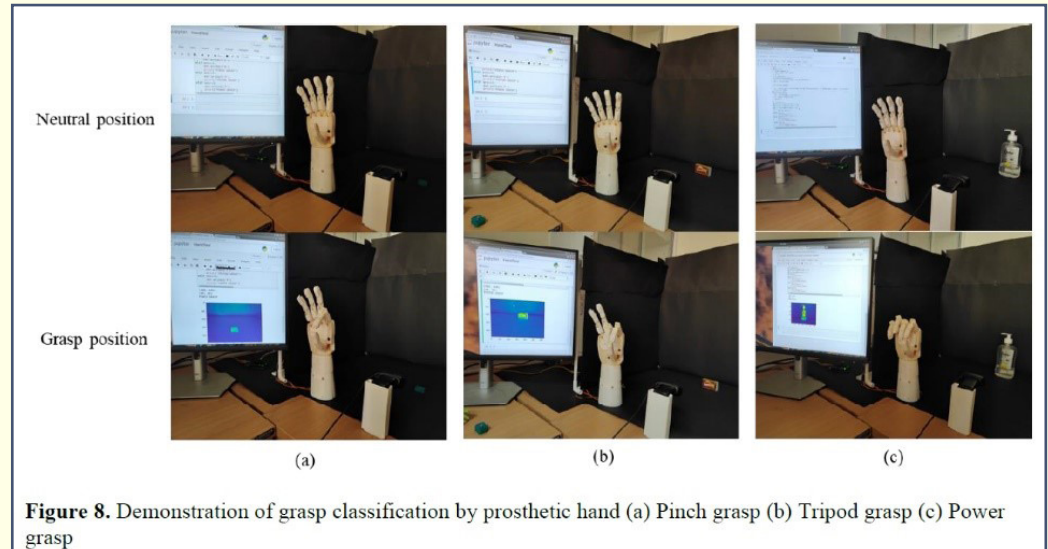
The PU-PEMS system supplied to MTU, Vizag, Indian Navy consists of the PU-PEMS Main Unit, two-sets on 24th March 2023. PU-PEMS is an electronic unit that reads the suction and discharge temperature, suction and discharge pressure, input current, voltage and speed of the motor using appropriate sensors to compute the efficiency of motor, pump and combination of pump & motor. Necessary training and demonstration were imparted to Navy Official at MTU, Vizag, during 23rd – 24th March 2023. The onboard trial was carried out in an Auxiliary Sea Water Pump located in the Shivalik ship. The working model was demonstrated to the Navy officials and performance was found satisfactory. Navy officials had hands-on training by installing another PU-PEMS system at FMU Pump Test House.

**PU-PEMS Main Unit****Sensor**

**Pressure Probes installed at Suction and Discharge Side of the pump Assembly**  
**Speed sensor mounted with a magnetic stand Power Tapping from the Pump-Motor Discharge Side of the pump Assembly**

### ARTIFICIAL INTELLIGENCE BASED VISION FOR GRASP CLASSIFICATION IN PROSTHETIC HANDS

A prototype of the designed prosthetic hand has been developed shown in Figure 1. The developed CNN architecture was tested in real-time on objects captured by the camera. An object was placed on one end of the table and a camera on the opposite end. The camera images were taken with a uniform background and then converted into grayscale images. The images were resized to the required input size i.e., 48 x 36. These images were given as input to the model. After processing, an object was classified into one of the grasp classes. The prosthetic hand performed the grasp as per the input given by the model. In this experiment, the objects used were unseen by the trained model. Figure 2 shows the demonstration of grasp classification by a prosthetic hand in three different grasp scenarios.



**Figure 8.** Demonstration of grasp classification by prosthetic hand (a) Pinch grasp (b) Tripod grasp (c) Power grasp

**Fig 1. Prosthetic hand prototype Fig 2. Demonstration of grasp classification by prosthetic hand (a) Pinch grasp (b) Tripod grasp (c) Power grasp**

### COMMON RESEARCH AND TECHNOLOGY DEVELOPMENT HUB (CRTDH) IN RENEWABLE ENERGY/ELECTRONICS

The CRTDH Lab in the Centre is actively engaging with local industries including M/s. Caliber Interconnect, Coimbatore, and M/s. Frontier Ltd., Vellore, to offer feasibility testing and support in the development of solar inverters and EV electronics.

The CRTDH lab has enhanced its testing capabilities in the process of designing specifications and initiating procurement for a cutting-edge solar simulator.

### DEVELOPMENT OF STRUCTURAL HEALTH MONITORING TECHNOLOGY FOR THE COMPOSITE STRUCTURES USING FIBER OPTIC SENSORS

A simulation model for DAS was developed to generate the Back-scattered Electric field (BEF) from the optical fibre. This model was later integrated to the RBS phase recovery simulation model developed using a coherent technique and the results are satisfactory

### GRID ANTI ISLANDING TESTS FOR SOLAR MICRO INVERTERS AS PER IEC 62116 STANDARD UNDER CRTDH

With the facility available in the CRTD laboratory of the Centre an Anti-islanding test as per IEC 62116:2014 for dual mode micro inverters with 800 W and 1600 W rated outputs for M/s. Kripya Technologies (India) Pvt. Ltd., Chennai was conducted successfully and the results were provided to them in the report form.

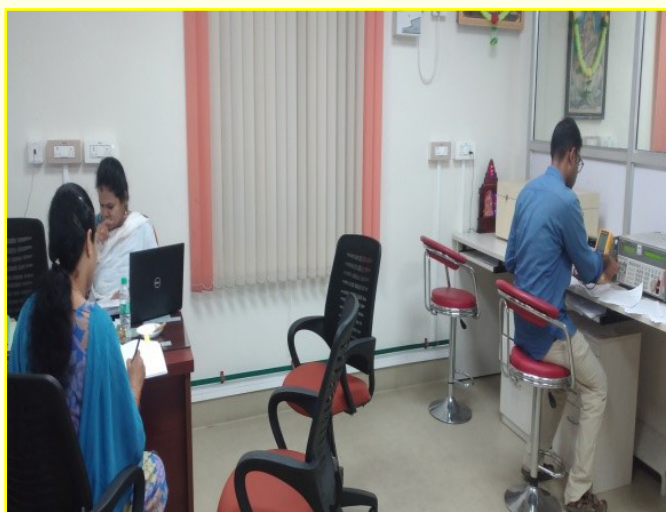


## OPTICAL BIOSENSORS BASED ON GRAPHENE OXIDE FOR THE DETECTION OF PATHOGENS

A comprehensive review of research works based on graphene-derivatives for sensing applications was performed. Graphene oxide (GO) has an essential role in the development of optical biosensors for simple and rapid detection of pathogens. The present work focuses on developing a rapid and real-time optical biosensing platform based on GO for the detection of microbes (non-pathogenic) in water and food with enhanced stability and sensitivity.

## NABL INTERNAL AUDIT

The NABL Internal audit was conducted by an Internal auditor on 23.01.23 in the calibration laboratory for physical document verification and on SOP's for Electro Technical instruments and Mechanical parameters as per NABL applied Scope.



## ONE WEEK ONE LAB PROGRAM OF CSIO, CHENNAI CENTRE

The One Week One Lab, a theme-based campaign of the Council of Scientific & Industrial Research (CSIR) is being organized to ignite the minds of young innovators, students, start-ups, academia and industry to look for opportunities through deep tech ventures. The One Week One Lab (OWOL) program for CSIR-CSIO, Chandigarh will be held during 26th - 30th June 2023. As a part of the program, CSIO, Chennai Centre will be organising a one-day event on 26th June 2023, comprising, showcasing technologies developed & product launching with a focus on addressing the industrial requirements, students-teachers-scientists meet to nurture the young minds, and technical lectures, etc. The program will be inaugurated by Cmde. P.C.M. Velan, Deputy Director General – Naval Projects, Visakhapatnam, presided by Dr. N. Anandavalli, Director, CSIR-SERC, Chennai.



### On-going R&D Activities

CSIR-NEERI Chennai is the part of the Green cracker development and testing task. At Sivakasi facility for Raw Materials Characterization and Emission (RACE) Testing facility was inaugurated at Sivakasi by the Director NEERI Dr. Atul N Vaidya in presence of collector and Investigators of the tasks on 30th March 2023



CSIR-NEERI, Chennai organized One Week One Lab Campaign from April 11- 13, 2023 in co-ordination with CSIR-NEERI, Nagpur (April 8-13, 2023) to display CSIR-NEERI's expertise and capabilities to Industry, R&D, Academic Institution and to the society.

On 11th April 2023 program started with the Inaugural address by Dr. Atul Vaidya, Director-NEERI whose speech highlighted the motive behind the One Week One Lab Campaign specially to showcase the capabilities of NEERI to different sectors and requirement of different sectors, following which he inaugurated the campaign. He also briefed about how studies should be conducted at ground level and the need to take technologies to the society.

It was a three-day long event with talks from distinguished speakers from IIT, NEERI-Nagpur, Industries, CPCB, TNPCB etc., along with lab exhibitions showcased to exhibit the infrastructure and research facilities that were available at NEERI-Chennai.





## R & D Activities

### Air pollution monitoring

CSIR-NEERI, Chennai contributed in the formulation of distance criteria for Stone Crushing Industries in the State of Tamil Nadu with reference to residential and highway areas by employing monitoring and modelling techniques.

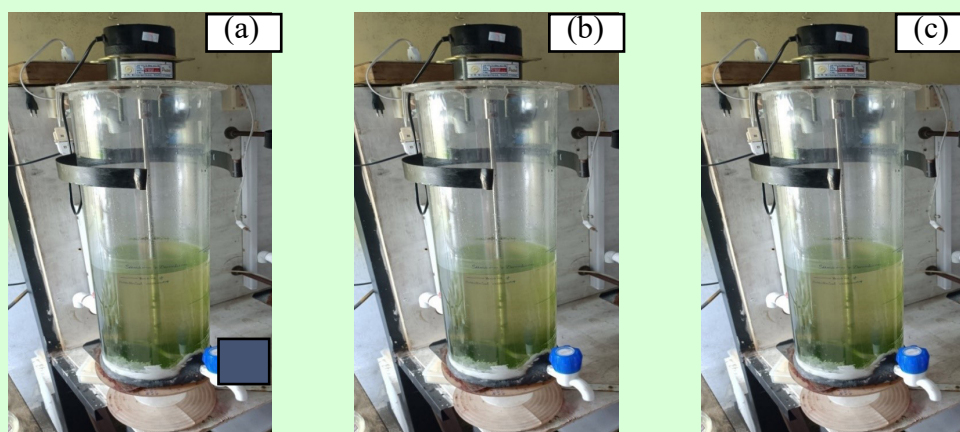
Demarcation/delineation of Safe distance (minimum distance to be maintained) for Stone Crushing Industries from habitation (residential area and state & national highways) by employing comprehensive monitoring and modelling techniques.

Assessment of fugitive dust emission from Stone Crushing Industries to estimate settleable and non-settleable fraction of dust emanating from stone crushing industries for calculation of deposition and concentration.

CSIR-NEERI, Chennai also involved in assessing Environmental Quality Status in Coastal Regulation Zone (CRZ) of Tamil Nadu to minimize the impact of developmental activities along the coast on Marine, Land, Water and Air Environment.

### Industrial Wastewater Treatment

Efforts to cultivate green micro algal strains in wastewaters (to reduce the pollutants) from Petrochemical industry in Manali, Tamil Nadu yielded reduction in the crucial parameters of petrochemical wastewater such as Electrical Conductivity, TDS, Salinity, Chlorides, BOD and COD.



**Fig. Vertical Photo Bioreactor with (a) 100% PCIWW (b) Cultured S+D Strains (c) After 15 Days Of Growth Period**

After the third batch, it was observed that the Electrical Conductivity was reduced up to 94.4% from initial 95.6 mS/cm to final value of 5.34 mS/cm. It was observed that the TDS was reduced from initial 45.6 ppt to 2.54 ppt which indicates there was 95.4% reduction at the end of 45 days. The Salinity was reduced up to 86.7% from initial value of 56.8 ppt to final value of 7.56 ppt at the end of 45 days. By the end of third batch sequence, Chlorides were reduced up to 92.35% from initial of 15817.79 mg/l to final value of 1209.63 mg/l. The Phosphates, Nitrates, Sulphates, COD, BOD and COD values were also able to degrade up to 73.74%, 86.23%, 78.9%, 77.4%, 84.22% and 48.3% respectively at the end of 45 days of batch sequencing. Next to *Desmodesmus* sps, *Chlorella vulgaris* and *Desmodesmus* sps (C+D) combination performed well with great efficiency compared to the other individual algal strains.

**One Week One Lab (OWOL) programme of NML:**

On 25th April 2023, Governor C P Radhakrishnan inaugurated the curtain raiser ceremony of the 'One Week One Lab' campaign of CSIR National Metallurgical Laboratory, Jamshedpur, at Ranchi. He said that over the next five days, CSIR-NML, a premier research organization dedicated to various facets of Minerals, Metals and Materials, would showcase its technological achievements. His inaugural speech also stated that the "Centre of CSIR-NML at Chennai is taking pivotal strides in commercial mineral enrichment endeavours."

**Industry Meet at NML Madras Centre as a part of OWOL:**

On 28th April 2023, the 4th day of the One Week One Lab campaign, NML Madras Centre successfully conducted the Industry Meet to spread awareness about the technologies that are available with NML and its capabilities and get to know the needs of the industry so that both can work synergistically to find viable and tangible solutions to various technological problems. The Industry Meet function was inaugurated by our Coordinating Director, Dr N. Anandavalli and Shri. M. Srinivasan, Executive Director-Operations, M/s The Ramco Cements Limited, Chennai, attended as the Chief Guest, and Mr Tim Sheehan, Managing Director of M/s Eriez Magnetics India Private Limited, Chennai was the Special Invitee of the programme.

**One Week One Lab Industry Meet at NML Madras Centre**





### **NML Madras Centre's Contribution to Process/technology development from R&D industry-sponsored project:**

- NML Madras Centre successfully developed a process flowsheet to recover iron from the low-grade Goan iron ore of M/s V. M. Salgaocar & Brother Pvt. Ltd, Goa. The beneficiation of low-grade iron ore feed with 48-50% Fe was enriched to 55-56% Fe grade with optimum recovery by adopting suitable beneficiation techniques meeting the required size specifications for the export.

### **New Project initiated:**

- Sustainable technology for the production of high-grade synthetic rutile  $\text{TiO}_2$  from Orissa ilmenite sponsored under Women Scientists Scheme - A of Department of Science and Technology.

### **Course attended:**

- Dr T. V. Vijaya Kumar, Dr M Ananda Rao, Ms N. Vasumathi, Dr Ajita Kumari, Dr Mousumi Gharai, Mr K Seetharaman, Mr V Vaidyanathan, and Ms T Dhanalakshmi completed the “Energy Literacy Training” of the Energy Swaraj Foundation and secured the “Certificate of Energy Literacy”.
- Dr Mousumi Gharai delivered a talk on “Introduction to Mineral Processing” in Odia language on the occasion of the International Mother Tongue Day celebration on 21.02.2023

### **Workshop conducted:**

- NML Madras Centre organized a “Workshop on Interpretations of Instrumental Methods (WIIM 2023)” in association with Sathyabama Institute of Science and Technology, Chennai, during 02-06 January 2023 (online mode) where around 120 participants from all around the country and abroad participated.

INFORMATION PERTAINING TO RECRUITMENT, PROMOTION, RETIREMENTS ETC. FOR THE PERIOD 01.01.2023 TO 30.06.2023 IN RESPECT OF COMMON SERVICES AND THE PARTICIPATING UNITS OF THIS COMPLEX IS AS BELOW : -

**अतिरिक्त प्रभार / ADDITIONAL CHARGE : -**

क्रम सं. SL. NO.	नाम एवं पदनाम Name & Designation	शामिल होने की तिथि Date of Joining	इकाई Unit
1.	Shri Lokanath Patnayak, Administrative Officer	01.03.2023(FN),	CMC
2.	Shri K.M. Sridhar, Controller of Administration	08.05.2023(FN)	CMC

**पदोन्नति/वित्तीय उन्नयन PROMOTION/FINANCIAL UPGRADATIONS : -**

क्रम सं. SL NO.	नाम एवं पदनाम Name & Designation	वेतन Pay	पदोन्नति की तारीख Date of Promotion/ MACP	इकाई Unit
1.	Shri R. Gopinath Assistant Section Officer(General) (MACP)	Pay Matrix Level – 8 Rs.62200/-	31.12.2022	CSIR-CSIO
2.	Dr. S. Prabhakaran, Principal Scientist	Pay Matrix Level–13 Rs.126800/-	18.06.2022	CSIR-CSIO
3.	Shri V. P. Anand, Sr. Scientist	Pay Matrix Level–12 Rs.83600/-	01.06.2021	CSIR-CSIO
4.	Shri C. Sethuraman, Sr. Principal Scientist	Pay Matrix Level–13A Rs.152000/-	06.03.2023	CSIR-CSIO
5.	Dr. M. U. Sreekuttan, Sr.Scientist	Pay Matrix Level–12 Rs.83600/-	16.08.2021	CSIR-CECRI
6.	Dr. Dhavale Vishal Mahesh, Sr.Scientist	Pay Matrix Level–12 Rs.83600/-	27.11.2021	CSIR-CECRI
7.	Dr. G. Saravanan, Principal Scientist	Pay Matrix Level–13 Rs.126800/-	03.06.2022	CSIR-NEERI
8.	Dr. Kuldeep Singh, Principal Scientist	Pay Matrix Level–13 Rs.123100/-	06.12.2022	CSIR-CECRI
9.	Dr. D. Kalpana, Sr. Principal Scientist	Pay Matrix Level–13A Rs.152000/-	15.02.2023	CSIR-CECRI
10.	Shri A. Balasubramanian, Sr. Scientist	Pay Matrix Level–12 Rs.78800/-	03.08.2022	CSIR-CECRI



**सेवानिवृत्त/सिवैच्छक सेवानिवृत्ति RETIREMENT/SUPERANNUATION/VRS : -**

	नाम एवं पदनाम Name & Designation	सेवानिवृत्ति की तारीख Date of Superannuation	इकाई Unit
1.	Shri D. Narendra Babu, Bearer(MACP)	30.04.2023(AN)	CMC
2.	Shri P. Subramanian, Section Officer(Gen- eral)	14.02.2023 (AN) (Voluntary Retirement)	CMC

**स्थानान्तरण TRANSFERS : -**

क्रम सं SL. NO.	नाम एवं पदनाम Name & Designation	से From	में To	शामल होने की तारीख DOJ/ Date of reliving
1.	Shri C. Shyam Sunder Controller of Administration	CSIR Madras Complex, Chennai	CSIR-NEERI Zonal Centre, Hyderabad	31.01.2023(AN)
2.	Shri Vishnu P, Technician(1)	CSIR-CECRI, Karaikudi	CSIR-CECRI Chen- nai Unit, CMC	01.05.2023(FN)
3.	Shri Md Asif, Technical Assistant	CSIR-CECRI, Karaikudi	CSIR-CECRI Chen- nai Unit, CMC	28.04.2023(FN)
4.	Shri Ajmeera Nagu, Technical Assis- tant	CSIR-CECRI, Karaikudi	CSIR-CECRI Chen- nai Unit, CMC	28.04.2023(FN)

**स्वर्गवास DEATH : -**

क्रम सं SL.NO.	नाम एवं पदनाम Name & Designation	तारीख Date	इकाई Unit
1.	Shri C. Seetharaman, Lab Attendant(2)	09.03.2023	CSIR-CECRI Chennai Unit

**REPUBLIC DAY**

Republic day was celebrated in the campus on 26 January 2023. Dr. N. Anandavalli, Director, CSIR-SERC, and Coordinating Director, CMC, hoisted the National Flag and delivered the Republic day address.



Coordinating Director, CMC hoisting the National Flag and addressing the gathering