



# CECRI NEWS

(A monthly newsletter of CSIR-CECRI)  
compilation of significant happenings

## Vigilance Awareness Campaign at CSIR-CECRI

Every year, during the month of October (coinciding with the Birthday of Shri. Sardar Vallabhbhai Patel on 31<sup>st</sup> October), the **Central Vigilance Commission**, the Apex Integrity Organization of India, adopts different initiatives to strive towards ensuring integrity in public administration. **Vigilance Awareness Week** is one of the tools of the Commission in increasing public awareness about the perils of the Corruption. The CVC has decided that this year's **Theme** for the Campaign would be: **भ्रष्टाचार का विरोध करें; राष्ट्र के प्रति समर्पित रहें / "Say no to corruption; commit to the Nation"**. In a move towards inculcating the true spirit of participative vigilance, the Commission had issued instructions detailing a three-month campaign period (16<sup>th</sup> August 2023 till 15<sup>th</sup> November 2023) in which following preventive vigilance measures were to be taken up as focus areas by all the Ministries/Departments and Organizations:



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**भ्रष्टाचार का विरोध करें;  
राष्ट्र के प्रति समर्पित रहें  
"Say no to corruption;  
commit to the Nation**

**CVC's Theme for Vigilance  
Awareness Campaign 2023**



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- Fit India Freedom Run 4.0



- a) Awareness Building about Public Interest Disclosure and Protection of Informers (PIDPI) Resolution
- b) Capacity Building Programmes
- c) Identification and Implementation of Systemic Improvement Measures
- d) Leveraging of IT for Complaint Disposal
- e) Updation of Circulars/Guidelines/Manuals and
- f) Disposal of Complaints received before 30/06/2023.

Workshops were conducted on Sep 17 (A/N) for CECRI Colony Residents and on Sep 18 (F/N) for CECRI Staff Members to sensitize about the crucial aspects of the PIDPI Resolution. **Mr. P.G. Madusoodanan**, Senior Administrative Officer from Indian Institute of Management Kozhikode, conducted the Workshop. Family Members, Pensioners and Staff Members participated in large numbers and got immensely benefited.

As per the instructions of the Central Vigilance Commission (CVC) and the directions of the CSIR HQ, the **Vigilance Awareness Campaign** was conducted at CSIR-Central Electrochemical Research Institute, Karaikudi from 16<sup>th</sup> August 2023 to 15<sup>th</sup> November 2023. During this period, a multitude of programs and activities were meticulously organized for the Staff and their Family Members, Research Scholars and School Students enhancing their understanding and engagement in the cause of vigilance. The following is a chronological account of the programs and activities that took place:

**Quiz Competition:** Quiz competitions were organized separately for CECRI Staff Members and Kendriya Vidyalaya, Karaikudi School Students on 21.09.2023 and 13.10.2023, respectively. From CECRI, 21 registered teams participated in the preliminary round and 7 teams took part in the Final round. At KV, Karaikudi, an exclusive quiz competition was conducted in which 56 students took part actively.

**Awareness Building about Public Interest Disclosure & Protection of Informers (PIDPI) Resolution, 2004:** Posters promoting PIDPI Resolution in English, Hindi & Tamil were prominently displayed at various locations of the Institute at Karaikudi and regional units.

**Nukkad Nattak Competition:** CSIR-CECRI in association with Kendriya Vidyalaya, Karaikudi, and Government Higher Secondary School, Ariyakudi staged an impactful Nukkad Nattak, enlightening the students on the detrimental effects of corruption and creating awareness about the PIDPI. The students showcased their theatrical skills to convey these vital messages.

**PIDPI Awareness Workshop - i) For CECRI Colony Residents and ii) For CECRI Staff:** Awareness

**Drawing & Essay Writing Competition:** Essay and Drawing Competitions were conducted for the wards of CECRI Staff members on Sep 17. Wards in large numbers actively took part in these events.



**Slogan Writing Competition:** Slogan writing competition was conducted for the staff members and the participants were asked to write slogans any of the three languages Tamil/Hindi/English. Many staff members participated enthusiastically in this event.

**Integrity Pledge:** The observance of **Vigilance Awareness Week** commenced on 30<sup>th</sup> October 2023 with all staff members taking the integrity pledge. Dr. K. Ramesha, Director, CSIR-CECRI, administered the pledge and urged the staff to be committed, accountable and expedite the disposal of requests on their desks. He also encouraged them to visit the CVC website to take the e-pledge as well.

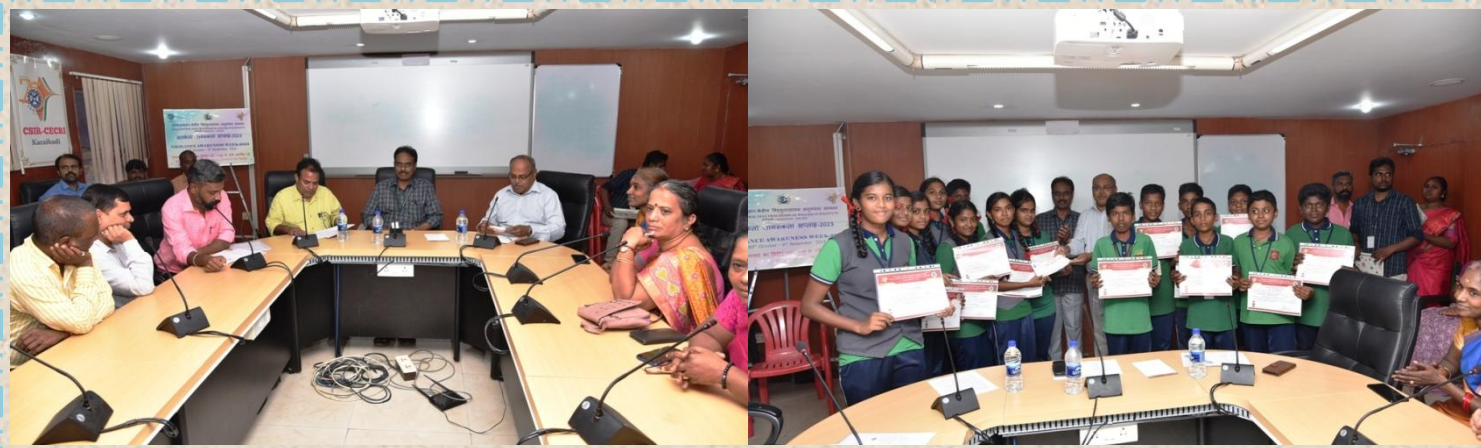
**Training Programme on Roster & Reservation Management:** A comprehensive Training Programme on Roster and Reservation Management was conducted by **Dr. A. Muthukrishnan**, former Senior Controller of Administration, CSIR on 3<sup>rd</sup> November 2023, which was attended by staff members from administration, technical staff and liaison officers [SC/ST, OBC & EWS].

**Capacity Building Programmes:** A series of Capacity Building Programmes [Online] was organized on Vigilance awareness which saw the active participation of a large number of staff members - (i) CCS (Conduct) Rules, 1964 [Sep 8, Oct 5], (ii) RTI, Transparency and

Mandatory Disclosures [Sep 11, Oct 3], (iii) Ethics and Governance in Science [Sep 27, Nov 16], (iv) Public Procurement: Vigilance Perspective [Sep 14, Oct 10, Nov 8], (v) Ethics in Research and in Governance [Oct 19, 20], (vi) Cyber Hygiene and Security [Sep 15, Oct 18], (viii) Roles & Responsibilities of Inquiring Officer (IO) and Presenting Officer (PO) in Disciplinary Proceedings [Sep 21, 22], (viii) Gender Sensitization and Sexual Harassment of Women at Workplace: Prevention, Prohibition and Redressal [Sep 25, 26].

**Valedictory Event:** In the valedictory event on Nov 3, **Dr. A. Sivashanmugam**, Chief Scientist, CSIR-CECRI delivered the Presidential Address. **Mr. P. Shyam Sundar**, Administrative Officer, briefed on the vigilance awareness activities undertaken by CSIR-CECRI during the 3 month campaign period.

**Dr. A. Muthukrishnan**, former Senior Controller of Administration, CSIR-CLRI, delivered a lecture on Vigilance Awareness in which he recalled the efforts of Shri. Sardar Vallabhbhai Patel to unite our nation and sensitized the gathering on various vigilance measures. He also distributed prizes to the winners of various competitions held in connection with Vigilance Awareness Campaign 2023. **Mr. K. Sivaraman**, Section Officer offered felicitations and **Mr. Y. Nagoor Gani**, Assistant Section Officer proposed the Vote of Thanks.



## Recent Research Publications

- ❖ Potential oscillations during Cobalt–Nickel electrodeposition in the presence of Butynediol  
M. Kiruba and C. Jeyabharathi  
The Journal of Physical Chemistry C, 127 (2023) 19927; <https://doi.org/10.1021/acs.jpcc.3c02602>
- ❖ Advancing electrocatalysts for a sustainable world  
Subrata Kundu  
Journal of Materials Chemistry A [Editorial], 11 (2023) 22018; <https://doi.org/10.1039/d3ta90188b>
- ❖ Deciphering the amplification of dual catalytic active sites of Se-doped NiV LDH in water electrolysis: a hidden gem exposure of anion doping at the core-lattice LDH framework  
Aditi De, M. Ragnath, Krishnendu Bera, H.N. Dhandapani, N. Sreenivasan, Suprobhat Singha Roy and Subrata Kundu  
Journal of Materials Chemistry A, 11 (2023) 25055; <https://doi.org/10.1039/D3TA05646E>

## Business Development Leads

- ❖ Kick off Meeting of the Sponsored Project - *Health Assessment Survey of ICCP System provided to Repair and Building Docks of Cochin Shipyard Ltd.* (SSP16/23) [Oct 3]
- ❖ Discussion with NALCO [Oct 4]
- ❖ Meeting with Chemprocess Systems Pvt. Ltd., Ahmedabad [Oct 5]
- ❖ Review Meeting on *Preparation of Hexagonal Boron Nitride through Molten Salt Technique* [Oct 6]
- ❖ Meeting on TMAOH from TMACL with a startup [Oct 6]
- ❖ Meeting on Alkaline Electrolyser with BHEL [Oct 9]
- ❖ Meeting on Green H<sub>2</sub> with BGR Tech, Chennai [Oct 9]
- ❖ Meeting on Green Hydrogen with BHEL [Oct 10, 26]
- ❖ Meeting with NLC India Limited [Oct 13]
- ❖ Meeting with BHEL [Oct 13]
- ❖ Meeting with EIL, Delhi [Oct 16]
- ❖ Meeting with Cortech Engineers, Coimbatore and Faculty of Kumaraguru College of Technology [Oct 19]
- ❖ Meeting with MOIL [Oct 20]
- ❖ Meeting with GAIL (India) Ltd., New Delhi [Oct 27]
- ❖ Technology Evaluation Committee Meeting [Oct 30]
- ❖ Technology Price Fixing Committee Meeting [Oct 31]

## Knowhow Transferred

- ❖ *Mixed Metal Oxides Coating Technology for Anode of Electrochemical Cell for the Production of Hypochlorite from Brine and Sea Water* to M/s. IEC Fabchem Limited, Chennai for Rs. 6.6 lakhs for 5 years wef 18/10/2023.

## Official Events

- ❖ Dissertation-Project Works Committee Meeting [Oct 4]
- ❖ Meeting with Hindi Class Trainees [Oct 6]
- ❖ FTT-FTC Project Proposals Presentation [Oct 16]
- ❖ Hindi Month Valedictory and Prize Distribution Celebrations [Oct 16]
- ❖ Meeting with CSIR Headquarters on Air Pollution Mitigation [Oct 18]
- ❖ Postal Life Insurance Scheme Campaign organized by CSIR-CECRI Club [Oct 18]
- ❖ Meeting of the Patent Evaluation Committee [Oct 19]
- ❖ US-India Energy Storage Expert Webinar Series - *Innovative Battery Technologies* [Oct 19]
- ❖ Discussion on Internal Audit [Oct 20]

## Skill Development Activities

### Skill Development Training Programmes:

- ❖ A Skill Development Training Programme on *Corrosion Protection Technologies for Construction of Buildings and Structures* was organized by CSIR-CECRI during Oct 9-13, 2023. A total of 25 participants took part in this event.
- ❖ A Skill Development Training Programme on *Foundation Course on Solar Energy Materials - Fundamentals to Device Fabrication* was organized by CSIR-CECRI during Oct 9-13, 2023. A total of 21 participants took part in this event.
- ❖ A Skill Development Training Programme on *Surface Analytical Techniques* was organized by CSIR-CECRI during Oct 16-20, 2023. A total of 51 participants took part in this event.
- ❖ Meeting on Training to ONGC Officials [Oct 19]

### JIGYASA

- ❖ **Energy Literacy Training** was organized by Jigyasa Group, CSIR-CECRI for:
  - (i) Project Staff [Oct 11]
  - (ii) Contractual Staff [Oct 11]
  - (iii) Administrative Staff [Oct 12]
  - (iv) Scientific Staff [Oct 12] and
  - (v) Technical Group II & III Staff [Oct 13]
- ❖ Meeting with CSIR HQ on Energy Literacy Training [Oct 16]
- ❖ Meeting with District Collector for the visit of school students under **Naan Mudhalvan Scheme** [Oct 31]
- ❖ Training on Assembly of **World Climate Clock** to School Students [Oct 31]

## CFE and AcSIR Highlights

- ❖ Placement Interview for B.Tech. Students [Oct 11]
- ❖ Ph.D Viva Voce Examination for Mr. Vishnu Prataap, University Scholar (Guide: Dr. A. Palaniappan) [Oct 3]
- ❖ AcSIR Interview for Deakin University PhD Admission [Oct 18]
- ❖ Presentation - AcSIR and IDDP Aug 2023 Batch [Oct 18]
- ❖ Counselling/Interview for PhD Admission - January 2024 Session [Oct 27]
- ❖ Synopsis Submission of Ms. A. Soundarya Mary, AcSIR Scholar (Guide: Dr. A. Pandikumar) [Oct 30]

## World's Top 2% Scientists-2023

The following Scientists of CSIR-CECRI have been recognized as **WORLD'S TOP 2% SCIENTISTS-2023** in various subject categories in a database released by Stanford University, USA on October 4, 2023:



Dr. Subrata Kundu  
(Chemistry)



Dr. A. Manuel Stephen  
(Energy)



Dr. S. Vasudevan  
(Chemical Engineering)



Dr. B. Subramanian  
(Materials Science)



Dr. M. Sathish  
(Energy)



Dr. A. Pandikumar  
(Materials Science)



Dr. Sheela Berchmans  
(Energy)

## ECS - CSIR-CECRI Student Chapter

The Electrochemical Society, USA has approved the **ECS-CECRI Student Chapter** comprising of:

**Chair:** Mr. Sai Sitharth, CFE

**Vice-Chair:** Mr. Pardhasaradhi Nandigana, AcSIR, EMFD

**Secretary:** Ms. C. Jesica Anjeline, AcSIR, EMED

**Treasurer:** Mr. K. B. Ajay Preetham, CFE

**Faculty Advisors:**

Dr. S. Vasudevan

Dr. N. Lakshminarasimhan

Dr. M. Sathish

## Urology Medical Camp

CSIR-CECRI conducted an exclusive Medical Camp on Urology in association with Apollo Hospitals, Managiri on October 18, 2023. **Dr. Narayanan**, MS, MCH, Consultant Urologist was the expert from Apollo Hospital, Managiri. Many Staff Members, Family Members, Pensioners and Scholars took consultation from the Expert.

## Rashtriya Ekta Diwas

Birth Anniversary of Shri. Sardar Vallabhbhai Patel is observed as **Rashtriya Ekta Diwas (National Unity Day)** on 31<sup>st</sup> October every year. Rashtriya Ekta Diwas pledge was administered by the Heads of Divisions to all the staff members in their respective divisions/sections on that day.

## 154<sup>th</sup> Birth Anniversary of Mahatma Gandhi

CSIR-CECRI paid homage to **Mahatma Gandhi ji** on his **154<sup>th</sup> Birth Anniversary** on October 2, 2023 with patriotic fervour. Every year his valiant struggles are fondly recalled through a voluntary **Shramdhan** by members of CSIR-CECRI Family.

On October 2, 2023, **Dr. K. Ramesha**, Director, CSIR-CECRI initiated the proceedings by garlanding the photo of Mahatma Gandhi ji. In his address to the participants,

he listed the various activities undertaken under the banner of **Swachh Bharat Mission** of Govt. of India. A large number of volunteers including staff and their family members, pensioners, research scholars, B.Tech. students, project staff and apprentices took part enthusiastically in this voluntary service as a part of **Swachhata Hi Seva** campaign and cleaned the area neighbouring main gate, children's park and western colony.



## Hindi Month Celebrations

As in previous years, **Hindi Month** was observed in **CSIR-CECRI** from **September 01 to September 30, 2023**. During **Hindi Month 2023** Celebrations, multitude events were organized and the Valedictory Function was conducted on October 16, 2023. **Prof. Dr. S.V.S.S. Narayana Raju**, Chairman of the Department of Hindi, Central University of Tamil Nadu, Thiruvavur graced the occasion as the Chief Guest and **Dr. K. Ramesha**, Director, CSIR-CECRI & Chairman, Official Language Implementation Committee (OLIC), CSIR-CECRI presided over.

**Shri. P. Shyam Sundar**, Administrative Officer, CSIR-CECRI delivered the welcome address and **Dr. Poonam Singh**, Principal Scientist & Dy. Chairman, OLIC, CSIR-CECRI introduced the Chief Guest. Dr. Ramesha said that it is our duty to promote the use of Hindi in our day-to-day official work. Sharing some of his own experiences, he underlined the enhanced usage and usefulness of Hindi language due to its popularity in India and abroad.

**Prof. Narayana Raju** highlighted on the nature of Indian languages and its relation with Indian culture. Stressing upon the importance of Hindi language and its widespread propagation, he emphasized on the need for Hindi in its official use and correspondence as an official language.

**Mrs. Kalaivaani**, Senior Hindi Translator, presented a detailed report of the work carried out with respect to the implementation of official language in CSIR-CECRI during 2022-23 and the programmes organized during Hindi Month 2023. Thereafter, Prizes were distributed by the Chief Guest, Director, CECRI and Administrative Officer to the Winners in the various competitions held. Establishment Section, CSIR-CECRI was awarded for doing maximum work in Hindi during 2022-23. **Shri. KR. Kumaresh Babu**, Senior Hindi Officer, CSIR-CECRI, in his vote of thanks, while congratulating the award winners, expressed hope that the same zeal and enthusiasm towards Hindi will continue among the employees in the coming years as well.



## Azadi Ka Amrit Mahotsav - Fit India Freedom Run 4.0

In commemoration of **Azadi Ka Amrit Mahotsav**, **Fit India Freedom Run 4.0** was organized at CSIR-CECRI, Karaikudi on October 31, 2023. More than 200 enthusiastic participants comprising of Staff, Scholars, B.Tech. Students, Wards etc. took part enthusiastically & completed the run energetically. The Run was flagged off by **Dr. K. Ramesha**, Director, CSIR-CECRI. Indian

Bank, Karaikudi sponsored compliments for all the participants which were distributed by its Regional Manager at the end of the Run. As directed, details of the Event were uploaded in <https://fitindia.gov.in/> and all the participants of this Run were awarded with Certificates generated through the above portal after registration.



# Snapshots



Knowhow Transfer to M/s. IEC Fabchem Limited, Chennai



Training Programme on Roster and Reservation Management



Skill Development Training Programmes organized by CSIR-CECRI



Training on Assembly of World Climate Clock and Handing over of 2 WCC units to KV, Karaikudi and GHSS, Ariyakudi



Urology Medical Camp



Fit India Freedom Run 4.0

- ❖ Indigenous Li-ion battery
- ❖ Indigenous Sodium Ion Battery
- ❖ Performance Improved Lead Acid Battery
- ❖ CO<sub>2</sub> capture under flue gas conditions
- ❖ Integrated Corrosion Monitoring Sensor Gadget accessible through a Mobile App
- ❖ Thermal Barrier Coatings for Strategic Applications
- ❖ Electrochemical Production of Sodium Hypochlorite as a Disinfectant (against COVID-19)
- ❖ Tri-layered reusable face mask with antibacterial coating
- ❖ Polymer Electrolyte Membrane (PEM) fuel cell
- ❖ Triboluminescent Coating and Smart Camera for Crack Detection in Structural Components
- ❖ Electrochemical Defluoridation of Drinking Water
- ❖ Solar Powered Proton Exchange Membrane (PEM) Based Water Electrolyser for Hydrogen Generation
- ❖ Cement-Polymer Composite Coating System for Corrosion Protection of Reinforcing and Prestressing Steels
- ❖ Solid Lubricant Coatings for Brahmos Missile Application
- ❖ Li Spheres for Torpedo Applications
- ❖ Electrowinning and Recovery of Tin from Primary Ore and Secondary Sources
- ❖ Electroplating of Gold, Copper and Nickel, Chromium, Zinc-Nickel Alloy; Anodizing of Aluminium; Electropolishing of Stainless Steel
- ❖ Electro-catalytic Conversion of CO<sub>2</sub> and butadiene to Adipic Acid; CO<sub>2</sub> to Formic Acid; CO<sub>2</sub> to Oxalic Acid.
- ❖ Farmer Friendly Soil Health (predictive) Analyzer
- ❖ Three Coat System for Steel Structures
- ❖ Inhibitor Cement Slurry Coating for Rebars
- ❖ Electrochemical Preparation of DL-Homocysteine Thiolactone Hydrochloride from DL- Homocystine
- ❖ Electrochemical Perfluorination of Sulfolane to Perfluro Butane Sulfonyl Fluoride
- ❖ Electrochemical Preparation of Calcium Lactobionate and Calcium Gluconate
- ❖ Electrochemical Production of KIO<sub>3</sub>
- ❖ Degradable Amorphous Alloy Coatings by Sputtering for Bioimplants
- ❖ Multicoat Protective Schemes for Concrete Structures and Bridges
- ❖ Moisture Compatible Coating for Cooling Towers
- ❖ Temporary Protective Coating for Maraging Steel & 15CDV6
- ❖ Corrosion Resistant Thermal Coating for Hydroclaves
- ❖ Al-Zn-In Galvanic Alloy Anode for Cathodic Protection
- ❖ Formulation of Neutral Paint Removing Jelly
- ❖ Corrosion Resistant Inhibitive Admixtures for Portland Pozzolana Cement
- ❖ Inhibitor Admixture for Concrete
- ❖ Cost Effective Metallic Coatings to Rebars Embedded in Concrete Structures
- ❖ Redox Active Polymer Encapsulated Lamellar (REL) Compound based Anticorrosive Coating for Reinforcement Bars
- ❖ Extraction of Calcium, Magnesium by Molten Salt Electrolysis
- ❖ Extraction of Zinc oxide and Metallic Zinc from Galvanizer Ash
- ❖ Extraction of Rare Earths and Alloys by Molten Salt Electrolysis

[www.cecni.res.in](http://www.cecni.res.in)

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