

Academy of Scientific & Innovative Research

CSIR – Central Electrochemical Research Institute Karaikudi & Chennai Unit

About AcSIR:

Established in 2011 as an **Institution of National Importance**, the Academy of Scientific and Innovative Research (AcSIR) has adopted the mandate to create and train some of the best of tomorrow's Science & Technology leaders through a combination of innovative and novel curricula, pedagogy and evaluation. AcSIR's focus will be on imparting instruction and providing research opportunities in such areas that are not routinely taught in regular academic universities in India.

AcSIR has been set-up based on a 'hub and Spoke' model where the hub (AcSIR-HQ Ghaziabad) is responsible for centralized administrative functions. The spoke are located in the 80 AcSIR affiliated Research Institutes spread along the length and breadth of India, which act as the academic campuses of AcSIR. In addition, AcSIR has collaborative academic programs with other national and international educational institutions.

At present, the Academy has 2748 faculty members from CSIR Laboratories, around ~6500 students enrolled in various programmes. AcSIR is listed in Ministry of Education, Government of India's website under **Institutions of National Importance** at Serial Number 148 (<https://www.education.gov.in/en/institutions-national-importance>). AcSIR is ranked 11th by "Scimago Institutions Rankings", 12th by "Nature Index" and 9th by "NIRF" in the Research Category, among the academic institutions in India.

About CSIR-CECRI:

On July 25, 1948, Karaikudi, a hitherto bleak and desolate village in Tamil Nadu, wore a festive look. A mammoth crowd of more than a lakh people gathered to witness the ushering in of a new era in Indian science. It was the day the CSIR-Central Electrochemical Research Institute (CSIR-CECRI) was founded at Karaikudi. The 12th national laboratory under the Council of Scientific and Industrial Research (CSIR), to the nation.

Headquartered at Karaikudi, CSIR-CECRI has extension centres in Chennai and Mandapam. Focusing on fuel cells, marine corrosion and off-shore corrosion testing. The institute works on a gamut of problems covering all facets of Electrochemical Science and Technology: Corrosion Science and Engineering, Electrochemical Materials Science, Electrochemical Power Sources, Electrochemical Pollution Control, Fundamental Electro Chemistry, Electro metallurgy, Industrial Metal Finishing, and Nanoscale Electrochemistry.

Courses Offered:

- PhD (Sciences)
- PhD (Engineering)
- IDDP (M.Tech. + Ph.D. in Engineering)
- M.Tech. (Corrosion Science & Technology)
- PG Diploma in Electrochemical Energy Storage Devices
- PG Diploma in Electroplating and Advanced Coatings

Core Research Themes:

- Corrosion and Materials Protection
- Electrochemical Power Sources
- Electrochemical Process Engineering
- Electrodics and Electrocatalysis
- Electro-organic & Materials Electrochemistry
- Electroplating & Metal Finishing

PhD (Sciences)

Eligibility Criteria for Fellowship holders:

Master's degree in Science or equivalent with minimum 55% marks for General, EWS & minimum 50% marks for OBC/SC/ST/PWD, with valid National Level Fellowship viz., CSIR/UGC-JRF, DST-INSPIRE, DBT-BET, NFSC, ICMR, etc.

PhD (Engineering)

Eligibility Criteria Fellowship holders

Master's degree in Engineering/Technology or equivalent with minimum 55% marks for General, EWS & minimum 50% marks for OBC/SC/ST/PWD with valid National Level Fellowship viz., CSIR/UGC JRF, DST-INSPIRE, DBT-BET, NFSC, ICMR etc.

or

4 year/8 semester Bachelor's degree in Engineering/Technology with a minimum of 75% marks in aggregate or its equivalent grade on a point-scale with valid CSIR - GATE (This fellowship is offered by CSIR – HRDG).

Eligibility Criteria for Group IV & III Staff to admission in PhD

1. NOC Request for seeking Director's approval for applying AcSIR PhD should be routed through Guide, applicant's HOD, Coordinator, SAC Chairman and Establishment Section.
2. Candidates should complete minimum residential period which is required for

one assessment at CSIR-CECRI.

3. Selection Committee should evaluate the knowledge of Staff through their Presentation about the proposed research work (through suitable test/interview/Presentation).
4. Interdisciplinary Thesis topic should be decided & informed before admission.
5. External Co-Supervisor from the reputed Institutes like IIT & NIT etc.
6. Upper age limit for admission: Employees would be having at least six years of service remaining at the Institute.
7. Thesis submission: Thesis should be submitted before superannuation.

Eligibility Criteria for Project Assistants to admission in PhD

In addition to basic academic qualification as similar to fellowship holders, following criteria must be fulfilled;

- a) One year experience in the same Institute. It will be determined as on the last date of submitting the application on the AcSIR admission Portal.
- b) Prior permission of the PI of the Project, Coordinator, SAC Chairman should be submitted to the Director for obtaining his approval.
- c) Publication in a SCI Journal with substantial research contribution as a first or second author of the publication at the time of application.
- d) PhD qualifying National level examinations (CSIR-UGC-NET-LS, GATE, BET, JEST etc.) even without eligible Fellowship will be exempted from the eligibility criteria of having one publication.
- e) The financial assistance from the project to the applicant should be valid at least till the date of commencement of the academic session.

Eligibility Criteria for Industry Sponsored Candidates to admission in PhD

1. Endorsement (NOC) from the current employer is mandatory; Only PSU and Govt. sector employees were considered so far. Private company employees should have at least 3 years of experience. They should submit Form-16 for minimum 3 years & External Research PhD Sponsorship Certificate. (Format is available with AcSIR office at CECRI).
2. Candidate should receive prior approval from the Lab/Institute where s/he seeks PhD admission before applying online.
3. a. Commitment from a faculty of the concerned Lab agreeing to act as a Guide/Supervisor.

- 3.b. Co-Supervisor should be from the Parent Organization where s/he is working; Co-Supervisor should be a PhD holder. He must have at least 5 years of remaining regular service; He should attend the Comprehensive Examination, DAC Meetings or any other evaluation meeting set by the Institute; Employee's Organization should ensure to provide alternative Co-Supervisor if the current Co-Supervisor left the service.
4. Employing Organization of the candidate have to support the student with funds during his tenure as a student at AcSIR and have to permit the candidate to remain as a residential student, at least six months, for completing course work.
5. Candidate should submit the following documents also before applying online:
- i) NDC from the Organization; ii) Form-16 for the last 3 years; iii) Details and signature of the proposed Co-Supervisor from the Organization; iv) Details and signature of the proposed Supervisor from CSIR-CECRI; v) External Research PhD Sponsorship Certificate; vi) Brief outline of the proposed research work; vii) Resume of the Proposed Co-Supervisor; viii) Recent profile of organization; ix) Photocopies of educational certificates & experience certificate; x) Any other document.

Admission Session for PhD: August & January of every year

Admission Notification: i) January Session: September-October of every year

ii) August Session: March-April of every year

Duration: 3 - 6 Years

Integrated Dual Degree Program (IDDP)

- M.Tech in Chemical & Electrochemical Engineering
- PhD (Engineering)

Eligibility Criteria:

B.E/B.Tech. in Chemical/Chemical & Electrochemical/ Metallurgy/ Petrochemical/ Nanotechnology/ Materials Science/Biotechnology/Industrial Biotechnology/ Industrial Environmental Engineering/ Surface Engineering/ Polymer Engineering/ Chemical Technology/ Chemical Plant Engineering/ Applied Chemical & Polymer Technology/ Polymer Science & Chemical Technology/ Chemical Science & Technology or equivalent with minimum 55% marks for General & EWS and 50% marks for OBC/SC/ST/PWD.

AND

Valid CSIR – GATE Fellowship, offered by CSIR-HRDG. GATE qualified candidates should have applied online through AcSIR admission portal for IDDP.

Number of Seats: 5 (five)

Duration: 5-8 years

Admission Session: August of every year

Admission Notification: March-April of every year

M.Tech. in Corrosion Science & Engineering (CSE)

Eligibility Criteria for Self-Sponsored & Industry Sponsored:

B.E./B.Tech. in Material Science & Engineering/ Metallurgy/Chemical or Electrochemical Engineering/Petrochemical Engineering/ Mechanical Engineering/Civil/Biotechnology or equivalent with minimum 55% marks for General & EWS and 50% marks for OBC/SC/ST/PWD.

or

M.Sc. in Chemical Science/Physical Science/Materials Science or equivalent with minimum 55% marks for General and 50% marks for OBC/SC/ST/PWD.

Additional requirements – Industry Sponsored

- a) Same basic academic eligibility as self-sponsored candidate.
- b) Requires an official NOC and Sponsorship letter from the employer.
- c) Mandatory at least 3 years of full-time work experience with active employment status.

Number of Seats: 10 (Ten)

Duration: Two years

Admission Session: August of every year

Admission Notification: March-April of every year

Post Graduate Diploma in Electrochemical Energy Storage Devices

Eligibility Criteria for Self-Sponsored & Industry Sponsored:

B.E./B.Tech. in ECE/ EEE/ Chemical/ Chemical & Electrochemical Engineering or equivalent with at least 55% marks in aggregate or its equivalent grade in a point-scale.

or

M.Sc. in Physics/ Chemistry/ Materials Science or equivalent with at least 55% marks in aggregate or its equivalent grade in a point-scale.

Additional requirements – Industry Sponsored :

- a) Same basic academic eligibility as self-sponsored candidate.
- b) Requires an official NOC and Sponsorship letter from the employer.
- c) Mandatory at least 3 years of full-time work experience with active employment status.

Course Structure:

Lead-acid Batteries – Lithium-ion Batteries-Modelling and Simulations of Energy Storage Devices – Supercapacitors & Flow Batteries – Laboratory for Li-ion Battery – Simulations Laboratory – Beyond Li-ion Battery – Batteries: Performance, Safety, and Circular Economy – Battery Pack Design and Development – Laboratory for Battery Pack Design and Development – Dedicated Project work

Number of Seats: 10

Duration: 1 year

Admission Session: August of every year

Admission Notification: March-April of every year

Accommodation: Limited Hostel facility is available

Post Graduate Diploma in Electroplating and Advanced Coatings

Eligibility Criteria for Self-Sponsored & Industry Sponsored:

B.E./B.Tech. in Mechanical/ Metallurgy/ Materials Science and Engineering/ Chemical/ Chemical & Electrochemical Engineering or equivalent with at least 55% marks in aggregate or its equivalent grade in a point-scale.

or

M.Sc. in Physics/Chemistry/Materials Science/Nanotechnology or equivalent with at least 55% marks in aggregate or its equivalent grade in a point-scale.

Additional requirements – Industry Sponsored

- a) Same basic academic eligibility as self-sponsored candidate.
- b) Requires an official NOC and Sponsorship letter from the employer.
- c) Mandatory at least 3 years of full-time work experience with active employment status.

Course Structure:

Fundamentals of Surface Engineering and Coating Science-Electroplating and Metal Finishing – Vacuum and Thin Film Coating Technologies – Advanced Materials Characterization Techniques – High Temperature Oxidation, Hot Corrosion and Thermal Spray Coatings – Functional and Advanced Coatings – Protective Coatings – Laboratory for Electrochemical Coatings, Thin Films and Coating Characterization, Coating Performance evaluation.

Number of Seats: 12

Duration: one year

Admission Session: August of every year

Admission Notification: March-April of every year.

Accommodation: Hostel facility is available.

Fellowship Opportunities Post-Admission for PhD:

- India AI – Rs.70,000/- per month (consolidated payment)
- Prime Ministers Research Fellowship
- TCS Research Scholars Fellowship – Rs.90,000/- per month

AcSIR International Joint PhD Program opportunities :

AcSIR offers an international Joint PhD Degree Program in the *cotutelle* mode for eligible AcSIR PhD students. This unique program is designed to leverage the combined expertise, mentorship, and research infrastructure of both AcSIR and its partnering international institutions, which serve as host institutes for selected students.

AcSIR offers Joint PhD programs in collaboration with the following international Universities:

- University of Melbourne, Australia
 - University of Western Australia
 - RMIT University, Australia
 - Deakin University, Melbourne
 - University of Agder, Norway
 - Queensland University of Technology, Brisbane, Australia
 - Macquarie University, Sydney (Australia)
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AcSIR Science Club

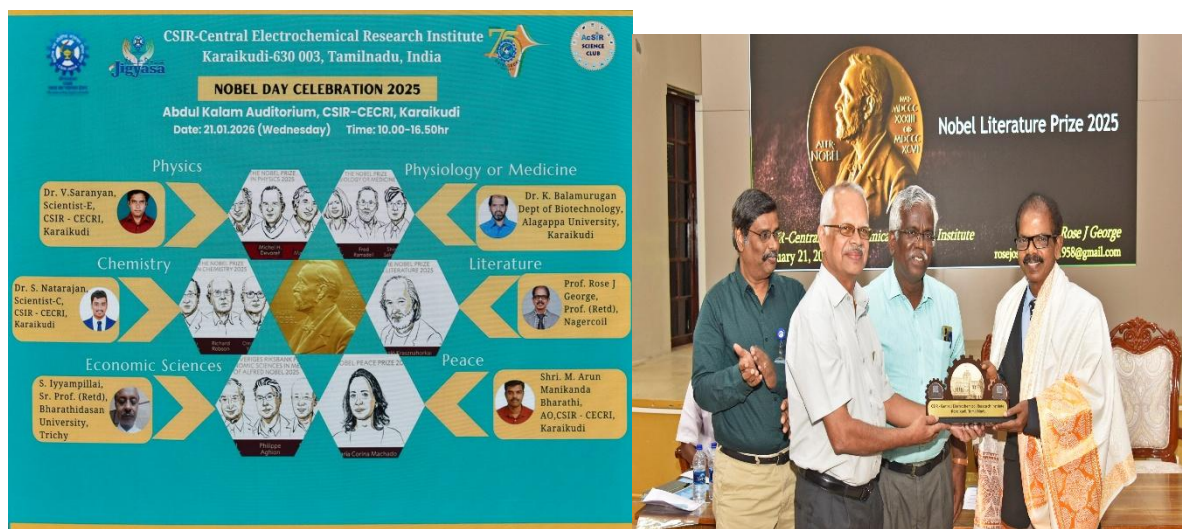
The AcSIR Science Club provides a vibrant platform for students to explore and discuss science — its history, future directions, and societal impact. Designed to promote transdisciplinary thinking, the club welcomes participation from students across all academic fields, encouraging collaborative and holistic approaches to problem-solving.

These include debates and discussions, student seminars, literary and cultural activities, media engagement, and science festivals. In addition to these, the club regularly hosts many other activities such as workshops, guest lectures, outreach programs, and interactive sessions, providing students with numerous opportunities to expand their knowledge, enhance their skills, and engage with the broader scientific community.

AcSIR Science Club conducted various programs viz., Pongal celebration, AcSIR Foundation Day Celebration, Nobel Day, Workshop on the Language of Science and Spectroelectrochemistry, Teacher's Day celebration, Sports Meet etc.,

Below Some pictures shown our AcSIR Science Club activities during the year 2026:

Nobel Day 2025 Celebration:



Workshop on the Language of Science Workshop on Spectroelectrochemistry



Notable Alumni:



Dr. Sankararao Mutyala
Co-Founder & CTO, Nanosol Energy Pvt Ltd.,
Hyderabad



Dr. Karthikeyan Jayakumar
Assistant Professor, Dept. of Physics,
NIT Durgapur, West Bengal



Dr. Anantharaj S
Assistant Professor,
Dept. of Chemistry, IIT Kanpur, UP



Dr. Jayashree S
Scientist, CSIR-NCL
Pune



Dr. Santhosh S
Assistant Professor
Govt. College of Engineering Bargur
Krishnagiri District



Dr. Arun Karmakar
Prestigious JSPS Fellow
Waseda University, Japan



Dr. Sreenivasan N
Prestigious JSPS Fellow
Waseda University, Japan

Apply online at <https://acsir.emli.in/ACSIRAdmissionPortal>

Visit www.acsir.res.in & www.cecri.res.in

For updates, Please follow the official Social Media given below:

- Instagram: acsir_india
- Facebook: AcSIR.India
- X (Twitter): AcSIR_India
- LinkedIn: acsir-india
- YouTube: AcSIR_India
- WhatsApp Channel: AcSIR_India
- AcSIR Alma connect: <http://acsir.almaconnect.com/>

Contact details:

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