



CSIR - CENTRAL ELECTROCHEMICAL RESEARCH INSTITUTE

(Council of Scientific & Industrial Research)

Centre For Education, Certified Institution Affiliated to Anna University, Chennai.

KARAIKUDI 630006, TAMIL NADU, INDIA.

Vijaya Simha.T.V.S

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AREAS OF INTEREST

- Corrosion and Electrochemical Engineering Studies.
- Water Splitting (Hydrogen as Future Fuel).
- Electroplating and Electrometallurgy.
- Material Science.
- Petroleum and Electro-Metallurgical Operations
- QA on Paints and Electrochemical coatings.
- Electrochemistry, Pollution Control.

Experience:

- **2 years experience as a contract engineer (C.E) in Electroplating and painting section, Surface Engineering, Directorate of engineering in Defence research development laboratory, DRDO, Hyderabad.**

PROJECT DETAILS:

- **DRDO Fast-Track project on Hot Thermal Coatings for the application on surface missiles technology.**
- **Life time estimation analysis of polymer and composites in DRDL-DRDO.**
- **Galvanic compatibility test & Hydrogen permeation tests for different materials in DRDL-DRDO.**
- **Underwent Electrocatalytic water splitting under Subrata Kundu, scientist at CSIR-CECRI.**
- **DSSC Quantum Dot's preparation in Various Methods and it's applications at CSIR-CECRI.**

PAPERS PUBLISHED

- Enhancing electrocatalytic total water splitting at few layer Pt-NiFe layered double hydroxide interfaces at **Nano Energy journal** (Impact factor of 12.34) (<http://www.sciencedirect.com/science/article/pii/S2211285517303816>)
- High-Performance Oxygen Evolution Anode from Stainless Steel via Controlled Surface Oxidation and Cr Removal at **ACS Sustainable Chemistry & Engineering** (Impact Factor 5.9) (<http://pubs.acs.org/doi/10.1021/acssuschemeng.7b02090>)
- Acknowledged on Microwave-Initiated Facile Formation of Ni₃Se₄ Nanoassemblies for Enhanced and Stable Water Splitting in Neutral and Alkaline Media at ACS Applied Materials Journal. (<http://pubs.acs.org/doi/abs/10.1021/acsami.6b15980>)

ACADEMIC RECORD

Course	Institution	Year of completion	GPA/ Percentage
B.Tech (Chemical And Electrochemical Engineering)	CSIR-Central Electrochemical Research Institute – Karaikudi, Sivaganga Dt, Tamil Nadu	2017	7.0 CGPA
APBIE (12th)	Sasi Junior College Velivenu, Tanuku, (D.t). Andhra Pradesh.	2013	82.7 %
AP-SSC (10th)	St.Jhon's English Medium High school, Kasimkota, Visakhapatnam, Andhra Pradesh.	2011	81.66 %

- ✓ At present pursuing Energy and Environment management course in A.P Productive Council, Govt of A.P, in distance mode as Post graduation Diploma PGDEEM. 2019-2020

INSTRUMENTATION SKILLS

Have adequate knowledge to operate advanced instruments like

- Galvanostat/Potentiostat Instrument Polarization, Galavanic compatibility
- X-Ray Fluorescence (**XRF**)
- RF DC Sputtering
- R&D coating formulation on various missile hardware
- Pin on Disc, Scratch Test, Salt Fog Test, Environmental Test Chamber
- Anti- Corrosion coating equipment with vacuum assisted with flow tubes

Passivation/Spinneling

(Besides hands on experience in various R&D and testing equipments in the field of Electrochemistry)

PAPERS PRESENTED

- Presented a paper on “**Converting Trash into Electricity at PECONOVA-14**” Tamilnadu Bharatidhasan University, Tiruchurapalli, India.
- “**Hydrogen Future Energy**” presented Paper at CeNSE at Indian Institute of Sience. Banglore
- **Photoelectrochemical water splitting** at Indian Institute of space science, Thirvunanathapuram.
- **Thermal Analysis of Optical Combustion chamber** for Jet Propulsion presented at Institute of Aeronautics Astronautics & Aviation- 2020, Tamil Nadu Aeronautical Society, Chennai.

WORKSHOPS ATTENDED

- Attended Forensic Science , Chemical Analysis and Simulation methods Modelling at IIT Madras.
- Green Energy Workshop at CSIR-CECRI.
- Rocket Propulsion and High energy materials Science Conference HEMSC-19 at IIT Madras.

SOFT SKILLS

- **Operating Systems:** Windows XP to Widows 10 (all versions), LINUX
- **Programming Skills:** C, C++, AutoCAD trained at Anna University, CEG campus, Chennai.
- MS-office and its applications.
- Good Communication Skills.

ACHIEVEMENTS

- Won **2nd Prize** at **IIT Madras** on **Project X**.
- Won **1st Prize** twice in Quiz conducted by SELECT-X5,X4 .
- Won **3rd Prize** In Working Model Presentation ‘Cooling Tower’ Conducted By CSIR On it’s Foundation Day.
- Participated and Won **3rd position** in paper presentation at **PECONOVA-14**” Tamil Nadu Bharatidhasan University, Tiruchurapalli, India.
- Finalist of **Make in India** project conducted by Space Kidz India on field of energy sector. Presented on Photoelectrochemical Water Splitting.
- Won **1st prize in Quiz and 3rd in Essay** Competition Conducted on **National Science Day** by **CECRI**.

SYNERGISTIC ACTIVITIES

- Active member of **Electrochemical Technologists Association (ETA)**
- Active member of **Seminar on Electrochemical and Chemical Technologies (SELECT)** appointed as **Convenor**.
- Student member of **Indian Society of Technical Education (ISTE)** in **(CFE) Centre For Education**.
- Actively Involved in the activities of An Inter-college Cultural “INTERFACE”
- A National Level Technical Symposium “SELECT”
- Zonal football player representing CSIR CECRI football team
- Active member in Placement Committee and **Library representative** in **Centre for Education (CFE)** of the Institute.

INDUSTRIAL EXPERIENCE

Summer Internship:

- Organization: Vizag Steel Plant, Rastriya Ishpat Nigam Limited. (RINL)
- Year: 2015
- Duration: 08-06-2015 to 20-06-2015
- Working zone: COKE OVEN and COAL Chemical Plant.
- Description: Explored various divisions right from raw materials to finished products.
Learnt about coke oven plant, By products from coke, Air separation plant, Blast furnace.

SOCIAL ACTIVITIES

- Participated in the various programs organized under “**NATIONAL SERVICE SCHEME**” (**NSS**) and attended a Camp during 2014 – 15 (4th Semester) in Kundrakudi, Sivaganga Dt, Tamil Nadu.
- An active **Member in Vetrivelu Foundation For Education to All.**
- Serves as a volunteer for Homeo Healthcare service to people at yellamanchilli, Andhra Pradesh.

PERSONAL DETAILS

DATE OF BIRTH : 09-08-1996
AGE : 22
GENDER : Male
FATHER’S NAME : Mr. T.Venkata Ramana.
MOTHER’S NAME : Mrs. T. Amelya Ratnam.
MOTHER TONGUE : Telugu
LANGUAGES KNOWN : Speak, Read & Write – English Telugu and Hindi.
only speaks Tamil.

HOBBIES : Playing Football, Reading books, Watches Rocket launches, Googling, Dancing, Current Affairs, Writing Articles, Motivating Others.

REFERENCES

Dr. Subrata Kundu,
Senior Scientist,
Electrochemical Material Science Division, ECMS
CSIR-Central Electrochemical Research Institute
Karaikudi, Tamil Nadu- 630006
E-mail: skundu@cecri.res.in

B.V.Subba Rao,
Scientist ‘E’
Electroplating & Painting Section (EPPS)
DRDL-DRDO,
Hyderabad- 500058.
E-mail: subbaraodrdl@gmail.com

DECLARATION

I, Vijaya Simha., hereby declare that all the above information is true to the best of my knowledge and conscience.

Dated: 21-08-2020

(T.V.S.VIJAYA SIMHA)