CURRICULUM VITAE

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Centre for Automotive Energy Materials (CAEM)
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Educational Qualification

Nov. 2007 to April 2010	Bachelor of Engineering (Mechanical Engineering) Anna University, CEG Campus, Chennai
June 1990 to April 1993	Diploma in Mechanical Engineering Directorate of Technical Education, Tamilnadu,

Professional Experience:

Jan. 2021 to till date	Technical officer 'C' Centre for Automotive Energy Materials (CAEM) **ARCI-Chennai**
October 2017 to Dec. 2020	**Project Scientist -B** Centre for Automotive Energy Materials (CAEM) **ARCI-Chennai**
April 2015 to Sep. 2017	**Project Senior Technical Assistant** Centre for Automotive Energy Materials (CAEM) **ARCI – Chennai**
July 2004 to March 2015	**Project Senior Technical Assistant** Centre for Fuel cell Technology (CFCT) **ARCI – Chennai**
May 2001 to July 2002	**Technical Assistant** Spic Science Foundation, Energy Division Chennai
Nov. 1994 to April 2001	**Project Technical Assistant** Indian Institute of Technology Madras, Chennai

Field of Research Activities

Development of Li-ion Battery for Electrical Vehicle Application

- Operation and Maintenance of Li-ion cell line process machines (Slurry mixing, Electrode Coating, Electrode Calendaring and Slitting Machines.
- Operation and Maintenance of Fiber laser welding (Lid to container welding)
- Fabricated inhouse Electrolyte setup for prismatic cell Electrolyte filling
- Design and developed Li-Ion cell components for both cylindrical and Prismatic cell
- Development both cylindrical (2.5Ah) and 20 Ah Prismatic cells.
- Development of 1 kWh (48V- 20Ah) LFP module.
- Involved in Cell Testing and acquire data.
- Assembly and Integration of 48V- 20Ah battery module for E Cycle and E scooter and tested
- Involved E scooter on road testing

Development of PEM FUEL CELL (PEMFC)

- Lead a team in PEM fuel cell stack assembly (up to 10kW module), testing and integration with control system.
- Design and fabrication of various PEM fuel cell components such as reactant flow field plate, humidifier, end plate, current collector plate, etc.
- Assembly of multi kilowatt (up to 20kW) PEM fuel cell stack
- Testing of multi kilowatt (up to 20kW) PEM fuel cell stack
- Operation of Data Acquisition system
- Data analysis and interpretation
- Development of fuel cell stack humidification system for vehicular applications

Development of hydrogen Storage materials

- Operation and maintenance of Arc & Induction furnace, high vacuum pumps and ball mill
- Fabrication of hydrogen storage devices and high resistance furnaces.
- Preparation of metal alloy materials for hydrogen storage.

Software Acquaintance

Auto Cad, CAD CAM, Solid work and Windows.

Patents Granted/filed

1. Design and development of PEMFC stack.
   Ind. Patent no. 335241
   Application No: 1544/CHE/2010. (Granted)

2. An Improved gas flow field plate for use in polymer electrolyte membrane fuel cells.
   K.S.Dhathathreyan, N.Rajalakshmi, S.Pandiyan, R.Vasudevan**, L.Babu**,
   T P.Sarangan, R.Parthasarathy
   Ind.Patent Appl.No: 2339/DEL/2008. (Granted)

3. An improved gas and coolant flow field plate for use in polymer electrolyte membrane fuel cells.
   K.S.Dhathathreyan, N.Rajalakshmi, G.Velayutham , **L.Babu**, R.Vasudevan,
   T P.Sarangan, R.Parthasarathy
   Ind.Patent Appl.No: 1449/DEL/2010.

4. A Process for the incorporation of exfoliated graphite separator plates in Polymer Electrolyte Membrane (PEM) based electrolytic cell for hydrogen generation".
   K.S.Dhathathreyan, R.Balaji, K.Ramya, N.Rajalakshmi, **L.Babu**, R.Vasudevan, P.Sarangan, R.Parthasarathy.
   Ind. Patent Application filed on Oct 2013.

REFERENCES

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