

CURRICULUM VITAE

Babu L

Project Junior Scientist
Centre for Automotive Energy Materials (CAEM)
International Advanced Research Centre for
Powder Metallurgy and New Materials (ARCI)
No. 6 IIT Madras Research Park
Kanagam road, Taramani
Chennai - 600113
babu.lakshmanan@project.arci.res.in
lbabusha@yahoo.co.in
+91 9940460415

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:

October 2017 to till date	Project Junior Scientist 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 Electrode Coating, Electrode Calendaring and Slitting Machines.*
- *Design and drafting of Li-Ion cell containers and other components for both cylindrical and Prismatic*
- *Developed 12/25 Ah Prismatic cells.*
- *Involved in Cell Testing and acquire data.*
- *Assembly and Integration of 48V- 20Ah battery module to E Cycle and E scooter and tested*

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.
- Assembling 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, Windows.

Patents Granted/filed

1. 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.
2. 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, P.Sarangan,
R.Parthasarathy
Ind.Patent Appl.No: 1449/DEL/2010.
3. 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.