Name
Mr. Vallabha Rao Rikka

Designation
Project Scientist (middle level)

Education

PhD, Chemical engineering (Jan 2015 to till date)
IITB-Powai, Mumbai
Research Work: *Investigation on ageing parameters of Lithium ion battery*

M.Tech, Nanotechnology (2008-2010)
Applied Physics Dept. MANIT Bhopal, M.P
Thesis work: *ZnO nanostructure thin film devices for H_2S Gas sensors*

B.E, Electrical and Electronics Engineering (2004-2008)
S.R.K.R Engineering College, Bhimavaram, A.P

Experience

Jan 2010 – June 2010	Project student Thin films and device section BARC, Mumbai
Sep 2010 – April 2013	Project Assistant MRC, IISc, Bangalore
May 2013- Sep 2017	Project junior Scientist CAEM-ARCI Chennai
OCT 2017 to till date	Project Middle Level Scientist CAEM-ARCI, Chennai

Research areas of interest

- Development of Li-Ion battery for electric vehicles.
- Lithium ion cell formation and Cycle life tests
- Insitu and Ex-situ studies on electrode and electrolyte interface of Lithium ion battery
- Metal Oxide nanostructures as an anode material for Lithium ion battery
- Battery management system
- Thin film FeRAM devices technology

List of journal publications

1) Microstructure and Mechanical Properties of Pulse Laser Welded Stainless Steel and Aluminum Alloys for Lithium-Ion Cell Casings. **Vallabha Rao Rikka**, Sumit Ranjan Sahu, Rajappa adepalli, Ravi Bathe, Thyagarajan Mohan, Raju Prakash, Gade Padmanabham and Raghavan Gopalan. *Journal of Materials Science and Engineering B 6 (9-10) (2016) 218-225*

2) Synthesis of graphene sheets from single walled carbon nanohorns: novel conversion from cone to sheet morphology. Sumit Ranjan Sahu, **Vallabha Rao Rikka**, M Jagannatham, Prathap Haridoss, Abhijit Chatterjee, Raghavan Gopalan and Raju Prakash. *Materials Research Express 4, 035008, 2017*

3) Synthesis, characterization and field emission properties of tin oxide nanowires. **Vallabha Rao Rikka**, I Sameera, Ravi Bhatia, V Prasad, *Materials Chemistry and Physics 166 (2015) 26e30.*

4) Investigation of nanowire-based gas sensors. Niranjan Ramgir, Shashwati Sen, Manmeet Kaur, Satyendra Kumar Mishra, **Vallabharao Rikka**, Rashmi Choukikar and Kunal Muthe. *AJP.Vol.19, No.2(2010)25-30*

5) ZnO Nanowires As H2S Sensor. N. S. Ramgir, **V. Rikka**, M. Kaur, S. Kailasa Ganapathi, S. K. Mishra, N. Datta,D. K. Aswal, S. K. Gupta and J. V. Yakhmi. *AIP Conf. Proc. 1313, 322 (2010)*

Conference Proceedings

1) NDT Methods to determine the integrity of ultrasonic welds for Lithium ion battery tabs. Harikrishnan Ravichandran, Debadatta Sethy, **Vallabha Rao Rikka**, Krishnan Balasubramanian, Raju Prakash, Raghavan Gopalan, G. Sundararajan. *15th Asia Pacific Conference for Non-Destructive Testing (APCNDT2017), Singapore*
2) Poster Presentation of the paper entitled "BT/ST superlattices" Sheela D, Anoop K Mathew, **Rikka vallabha Rao,** Ranjay Laha, M. Thirumavalavan, S. B. Krupanidhi and A.T. Kalghatg. *3rd International Conference on Manufacturing Science and Technology (ICMST2012).*
2) Poster presentation on "Dielectric Characterization of $La_2Ti_2O_7$ thin films grown by Pulsed Laser Deposition". Anoop K Mathew, **Rikka vallabha Rao** Ranjay Laha, M. Thirumavalavan, S. B. Krupanidhi and A.T. Kalghatg. *6th DAE-BRNS National Symposium on Pulsed Laser Deposition of Thin Films and Nanostructured Materials (PLD-2011).*

Invited Talk / Lecture

1. Guest Lecture on "Lithium Ion battery: Sustainable Energy storage system for EV and grid applications". Centre for Nanotechnology Research (CNR), VIT Vellore 12Th Nov 2017.
2. Invited talk on "Lithium ion battery technology for Electric Vehicle applications". A one-day workshop on "**Advanced Automotive Materials19th March 2016**, SMSE materials Science, Anna University, Chennai

Contact Information

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Awards and Honors

Second prize in Model Display at a national level student technical symposium, SANKLAP-2006 at SRKR Engineering College