

Curriculum Vitae

Sachin M. Shinde

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Profile

I am an experienced researcher looking for a role using and developing my technical and research management skills. I enjoy working in a challenging commercial environment, and welcome opportunities for new roles and responsibilities. I am flexible, motivated and enjoy working as part of a team or independently upon my own initiative.

Work Experience

Period : September 2010 – till date
Position : *Senior Research Fellow (SRF)*
Institution : N.S.N. Research Centre for Nanotechnology
and Bio-nanotechnology, Ambernath, Maharashtra, India
Project : Development of 500 W Alkaline Fuel Cell
funded by Ministry of New and Renewable Energy (MNRE)
Government of India

Under this project my main duties are (those highlighted have been completed)

- **Hunting for new kind of electrode material for fuel cell**
- **Selection and Preparation of appropriate electro-catalyst**
- **Coating of catalyst onto electrode material by different methods**
- **Enhancing the conductivity of working electrode by deposition of CNT's using CVD technique**
- **Developing one single unit cell**
- Working to improve its current capacity

From : April 2008- August 2010
Position : *Project Scientist*
Institution : Centre for Environmental Science and Eng.(CESE)
I.I.T, Bombay, Maharashtra, India
Topic : Environmental Management Plan of Jawaharlal Nehru
Port Trust

Under this project my main duties were:

- Designing of environmental management plan of the JNP trust
- Involved in field work and lab work along with data processing
- Sampling of marine water and sediments for extension of port near by the selected area.
- Analysis of environmental parameters like pH, Salinity, Phenol, COD, BOD, Oil and Grease, Ammonia etc. by wet chemistry and analytical instrument methods. This also involved sediment analysis for Inorganic Phosphate and Organic carbon contents, Microbiological parameters like coliform count and special plate count were also done
- Was also involved in noise monitoring operation in the port
- During the entire period I have used several other sophisticated instruments like ICP-MS for elemental detection, GC and HPLC
- Also handled the administrative matters of the project as well as coordinate all the field work and office work activities.

From : June 2007 – July 2007 (Project for Master Degree)
Position : *M.Sc Chemistry student (As a Trainee)*
Institution : Gharda Chemical Pvt. Ltd. Mumbai, Maharashtra, India
Topic : Quality Assurance of pesticides, fungicides and herbicides.
especially “Cypermethrin” using Instrumentation Like GC and HP

To determine the quality of pesticides, fungicides and herbicides using analytical instruments like GC, HPLC and Karl Fisher moisture content titrator.

Teaching Experience

Tutor at Degree College for Chemistry in academic year 2010-2011 at SICES Degree college for Arts, Science and Commerce, Ambarnath, Maharashtra, India

Education and Qualifications

<i>DEGREE</i>	<i>SUBJECT</i>	<i>UNIVERSITY</i>	<i>CLASS</i>	<i>YEAR</i>
M.Sc	Inorganic Chemistry	Mumbai University	II	2008
B.Sc	Chemistry	Mumbai University	I	2006

Key Skills and Knowledge

Research

- Managing research projects, e.g. planning, costing, implementation, monitoring progress, to produce required data & measurements to time, quality and cost constraints
- Experience of experimental research from bench scale investigations to commercial - scale tests
- Interpreting theoretical concepts, and relating to practical experimental measurements.
- Locating and assimilating relevant information from diverse range of sources, e.g. colleagues, research publications, books, academic experts, companies and the internet.
- Capacity to exploit intuition to understand and analyse complex experimental data.
- Guiding Master of Science students for their dissertation of Projects
- Learning other subjects and its activities like physics, biotechnology, microbiology etc.

Technical

- Synthesis of different types of Nano-materials including carbon nanotubes (CNT's) and other metal nanoparticles including transition metal atoms, Gold and silver etc
- Operating instruments like UV-Spectrophotometer, Chemical Vapour deposition furnace, Potentiostat, spin coater, flash evaporation unit etc.
- I have learnt to electroplate conducting metal on the surface of any type of insulating materials like wood, plastic glass etc. to make the surface conductor.

General

- Problem solving using analytical thinking, creativity, experience and intuition, with the ability to reassess decisions and change direction when necessary.
- Able to hold formal and informal technical discussion with people from a variety of backgrounds, such as industrial collaborators, international experts, students.
- Efficiently operating within tight time and resource constraints.
- Self-motivated and a motivator of others, setting high standards for myself and expecting the same in others team members.
- The ability to build lasting and positive working relationships with colleagues, based on mutual understanding and respect, and the ability to motivate and support others within the team.
- A highly developed sense of humour and the ability to keep calm under pressure.

Publications

- Paper entitled '***Carbon-felt as an Electrode for Alkaline Fuel Cell***' submitted to '***Journal of applied electrochemistry***'
- Paper entitled '***Development of alkaline fuel cell using carbon felt***' is under preparation
- Abstract submitted to '***14th Annual Hybrid SMALL FUEL CELLS 2012***
Hybrid Fuel Cell/Battery Systems for Commercial & Military Applications
July 18th, 2012 - Boston, MA USA

Interests and Activities

- Like to read about great scientists and their discoveries particularly autobiographies
- Playing cricket ,Table –Tennis and football
- Watching movies and specially documentaries on science
- Listening instrumental music
- Teaching students and guiding them in their carrier ahead
- Outdooring generally natural places like rivers, jungles and hills
- Attending all types of conferences and workshops
- Driving

Academic Conferences and Workshops

- Attended '***International conference on Electrochemistry***' held at Indian Institute of Technology, Bombay in May 2011
- Volunteer for "***Joint-IIT Environmental, Energy and Climate Change Education & Research Meet***" on IIT Bombay Campus on March 12-13, 2010(Faculty members from seven IITs & guests from MOEF, NEERI, NITIE and State government were invited for the Meet. *Honourable Minister of Environment & Forest, Shri. Jai ram Ramesh*)
- Worked as a member of the Science Exhibition for "***Einstein Era***" function, K.J. Somaiya College (2006), Mumbai, Maharashtra, India.
- Conducting "***Courses on Nanotechnology***" including CNT & Nano metal synthesis and its application at N. Shankaran Nair Research Center for Nanotechnology and Bio-nanotechnology (NSNRC) Ambernath, Maharashtra, India
- Volunteer for "***XXIX Refresher Course in Experimental Physics***" Sponsored by Indian Academy of Sciences, Bangalore and Indian National Science in June 2011 at N. Shankaran Nair Research center for nanotechnology and Nano-biotechnology (NSNRC) Ambernath, Maharashtra, India.

Details of the work being carried under the project 'Development of 500 watt alkaline cell' during Sept 2010 till date

Referees

Prof. Maheshwar Sharon
Research Director
Retd. Professor IIT Bombay
Professor Emeritus (CSIR, UGC)
Adjunct Professor (Mumbai University,
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