

RESUME

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Personal Details:

DATE OF BIRTH: 15th September, 1979
MARITAL STATUS: Married
FATHER'S NAME: Manharlal L. Patel

Educational Qualifications/ Affiliations:

- **Ph. D.** (Chemical Engineering), **SVNIT-Surat**
- **M. Tech.** (Process Engineering & Design), **IIT, Delhi**
- **B.E.** (Chemical Engineering), **SVNIT-Surat (Formerly R.E.C., Surat)**

Computer Skills

- MS Office, Basics of C/ C ++, Aspen plus, Fluent, MATLAB.
- Statistical software MINITAB, ORIGIN, STATISTICA
- Soft-computing tools Artificial neural network, Genetic algorithm.
- X-ray line broadening analysis: XFIT, WINFIT, BREADTH.

Professional Experience:

- **ORGANIZATION:** S.V. National Institute of Technology, Surat
- Working as a Lecturer in the Department of Chemical Engineering since 1st April 2004
- Appointed Visiting Faculty for **M. Sc. (Industrial Chemistry)** in the **Department of Chemistry, South Gujarat University, Surat.**

Research areas of interest

- Nanoparticles production by nanomilling/wet media milling in stirred media mills. (Paints, pigments, inks, pesticides, ceramic materials, pharmaceutical drugs, biomaterials, nanofluids)
- Stability and rheological characterization of nanosuspension.
- Nanomaterials preparation and processing by bead milling, ultrasonication and sonochemistry. (Liquid phase exfoliation to few layers graphene, boron nitride, MS₂)
- Preparation of nanostructured materials for lithium ion batteries and supercapacitors. (Lithium manganese oxide, lithium cobalt oxide, manganese dioxide, Carbon nanotubes, Graphene)
- Modeling & Simulation of Particulate process. (Statistical design of experiments, Population balance modeling, Discrete element method (DEM))
- Characterization and analysis of particulate/powder/bulk solids. (Particles properties and powder flowability)
- Optimization of chemical processes by soft computing techniques. (Use of Artificial neural network, Genetic algorithm, swarm intelligence, Multivariate data analysis)

Research Publications In International Journals

1. Chetan M. Patel, Z.V.P. Murthy, and Mousumi Chakraborty, Effects of operating parameters on the production of barium sulfate nanoparticles in stirred media mill, **Journal of Industrial and Engineering Chemistry**, Vol.18(No.4) (2012) 1450-1457. DOI: 10.1016/j.jiec.2012.02.005. (Elsevier Scientific Publication, USA)
2. Chetan M. Patel, Mousumi Chakraborty, and Z.V.P. Murthy, Study on the stability and microstructural properties of barium sulfate nanoparticles produced by nanomilling, **Advanced Powder Technology**, Vol. 25(No.1) (2014) 226-235. DOI: 10.1016/j.appt.2013.04.003. (Elsevier Scientific Publication, The Netherlands)
3. Chetan M. Patel, Mousumi Chakraborty, and Z.V.P. Murthy, Preparation of fenofibrate nanoparticles by combined stirred media milling and ultrasonication method, **Ultrasonics Sonochemistry**, Vol.21(No.3) (2014) 1100-1107. DOI: [10.1016/j.ultsonch.2013.12.001](https://doi.org/10.1016/j.ultsonch.2013.12.001). (Elsevier Scientific Publication, The Netherlands)
4. Chetan M. Patel, Mousumi Chakraborty, and Z.V.P. Murthy, Enhancement of stirred media mill performance by a new mixed media grinding strategy, **Journal of Industrial and Engineering Chemistry**, Vol. 20(No.4) (2014) 2111-2118. DOI: 10.1016/j.jiec.2013.09.040 (Elsevier Scientific Publication, USA)

Paper/ Poster Presentation In National/International Conferences

1. Paper presented on "EFFECT OF BED POROSITY ON SHAPE OF PARTICLES", at Fourth Asian Particle Technology Symposium during September 14-16 New Delhi
2. POSTER PRESENTED ON " Effect of operating variables on Nanoparticles production" at IITDELHI, I²TECH
3. Chetan M. Patel, Mousumi Chakraborty, and Z.V.P. Murthy, Influence of pH on the stability of alumina and silica nanosuspensions produced by stirred media milling, Accepted for Presentation at "International Conference on Powder, Granule and Bulk Solids: Innovations and Applications" to be held at Thapar University, Patiala, India, during 28-30 November 2013).

Research Project:

1. Fabrication of cathode nanocomposites for applications in supercapacitor and lithium-ion battery by nanogrinding Granted (March-2014) under Research grant to Assistant Professor by SVNIT-Surat (Priority list –I). The Research grant of Rs. 10,00,000 was sanctioned.

SEMINAR/ WORKSHOP/SHORT TERM TRAINING PROGRAMME:

- “ Introductory Fluent & GAMBIT Training ”, Fluent India Pvt. Ltd., Pune, 12th to 15th Dec, 2005
- “Gasification of Carbonaceous Feed stocks & SYNGAS Generation”, IIP Dehradun, 19-20 Dec, 2005 at Delhi.
- “ Energy Conservation in Various Industry ”, SCET, Surat, 26th to 30th Dec, 2005
- “ Modeling & Optimization of Bio & Environmental Processes ”, IIT Bombay, 10th to 11th Feb, 2006
- “ Introduction to Computational Fluid Dynamics ”, MED, SVNIT, Surat, 10th to 12th May, 2006
- “ Faculty Development Programme ”, VNIT, Nagpur, 19th to 30th June, 2006.
- “ Treatment and Disposal of Wastewaters”, SVNIT, Surat, 05th -09th October, 2009.
- “Soft Computing Techniques for Optimization”, ABV-IITM, March 04 -09, 2013.

RESPONSIBILITIES/ ACTIVITIES:

- Actively involved in different Department & Institute level committee
- Appointed Departmental TEQIP(Phase –I) Coordinator.
- Worked as CAD Lab in charge
- Member of Institute Information Management Committee
- Served as member of Institute Gymkhana committee
- Member of Departmental Board of Under Graduate studies (**DBUGS**)
- Served as Factotum in the final examination, invigilator In different national level competitive exam

REFERENCES:

Dr. Z. V. P. Murthy
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