

Dr. Amitkumar Chandubhai Brahmbhatt

M.Sc. Ph.D. – Materials Science

C-1/203, Bhavya Residency, B/h. Soham Bungalows,
Opp. Gurudwara, Chhani main Road, Chhani, Vadodara.
Mob. No. : 08460610151, 08758148688.
Email : acbrahmbhatt@rediffmail.com

Personal Details:

Date of Birth : 15th October, 1981.
Marital Status : Married
Nationality : Indian
Languages known : Gujarati, Hindi and English
Strength : Good communication and presentation skills,
capable of working in a team with good coordination.
Area of Interest : Surface chemistry, Polymer Science, Polymerization,
Functionalization of polymers, ION Exchange Resins,
Catalysis, Inorganic chemistry, New product development...

Profile:

- ✓ Ph.D. in Materials Science with **6.9 years of R & D experience** as well as **quality control and Quality Management System**.
- ✓ At present working with Ion Exchange Resin Manufacturing **MNC** as **Sr. Executive** in Process and Research Development Lab.
- ✓ **Visited Germany for Technology transfer projects.**
- ✓ Worked on Polymer Blend method for the preparation of activated carbon with enhanced surface area for adsorption of toxic liquids and gases.
- ✓ Worked on different molding techniques of polymers.
- ✓ Studied various characterization techniques which are being used for characterization of polymers.
- ✓ Worked on polymer blend method for synthesis of activated carbons using synthetic polymeric precursors during Ph.D.
- ✓ Recently done successful trouble shooting for one of the important product at plant scale.
- ✓ Experience in transferring lab scale batch to plant scale.
- ✓ Very much familiar with the sophisticated instruments for physical & chemical analysis.
- ✓ Operated instruments like Surface area analyzer, UV, DSC, TGA, TMA, Particle size analyzer, and other sophisticated instruments.
- ✓ Having research experience on Rheology of Polymers, Polymer Chemistry, Surface chemistry.
- ✓ Interested in working in the area of Research & Development.

- ✓ Having expertise in computers, especially Microsoft Excel, Microsoft Word, PowerPoint, and Internet surfing & literature survey.

Educational Qualifications:

❖ Ph. D. – Materials Science, (July-2004 to June-2008)

Topic : “Development of Activated Carbon from synthetic precursors by Polymer Blend Method for Adsorption of toxic liquids and gases”

Research Guide : Prof. (Mrs.) S. Manocha
Department of Materials Science, Sardar Patel University,
Vallabh Vidyanagar 388120, Gujarat-INDIA.

❖ M. Sc. (65.79%) - Materials Science, 2004.

Department of Materials Science, Sardar Patel University,
Vallabh Vidyanagar 388120, Gujarat-INDIA.

❖ B. Sc. (55.46%) - Chemistry, 2002.

V.P. & R. P. T. P. Science College, Sardar Patel University,
Vallabh Vidyanagar - 388120, Gujarat-INDIA.

❖ H. S. C. (50.00%) – Gujarat Secondary Education Board, 1999.

❖ S. S. C. (72.86%) – Gujarat Secondary Education Board, 1997.

Work Experience:

 **Lanxess India Pvt. Ltd., Jhagadia – Bharuch.** (Aug. 2010 – Till date)
Executive – Ion Exchange Resins laboratory

- Responsible for analyzing the process, optimize them and improve the product quality.
- Provide technical support to identify and implement improvement plans for production processes for product efficacy and process efficiency
- To produce the materials at lab scales and support transfer of process to plant scales.
- During manufacturing campaigns, troubleshoot any problems which may occur with the scale up of the process, including any required use-tests of materials
- Worked as coordinator for laboratory commissioning, procurement & installation of various instruments and other lab accessories.
- Supports production for trouble shooting by carrying out all the reaction in laboratory.
- Also looking after quality control department which includes round the clock analytical support to production for RM, IPC and FG sample analysis.

 **Navin Fluorine International Ltd., Surat.** (June 2008 – Aug 2010)
Sr. Research Associate – Research & Development Dept.

- Worked as a team leader of Vapour Phase Fluorination Lab. team,
- To study conversion efficiency and selectivity of various heterogeneous catalysts by doing vapour phase fluorination reactions.
- To study the life span of heterogeneous catalyst with & without regeneration.

- Worked on inorganic projects such as **METSPAR** (i.e. purification of ETP sludge), **Anhydrous KF**,
- Successfully completed project **Synthesis of 133a** by vapour phase fluorination reaction.
- Also worked on projects such as **Synthesis of Trifluoroacetic acid (TFA)**, **Preparation of Lithium Hexafluoro Phosphate (LiPF_6)** & **Preparation of KF solution**.
- Prepare & maintain all documents related to the R & D project.

Research Experience:

- ✚ Developed microporous activated carbons in the pellet, fiber as well as powder form with ~90% microporosity and very narrow pore size distribution in the range of 1 to 2 nm. The processing parameters for the preparation of the activated carbon from the synthetic precursors were optimized experimentally. The prepared activated carbons were analyzed for its surface and physical properties using various advanced characterization techniques and studied the effect of processing parameters on the properties of the developed activated carbons.

These activated carbon samples were also studied for the adsorption of dye Methylene blue, p-Nitrophenol and toxic gas Ammonia. The maximum adsorption capacity was found out for individual sample and correlated with the surface characteristic properties.

- ✚ Worked as **Junior Research Fellow** under **DST** (Department of Science & Technology, Govt. of India) sponsored Research Project entitled “*Development of Activated Carbons from synthetic precursors for Adsorption of toxic gases and liquids*” at Dept. Materials Science, Sardar Patel University, Vallabh Vidyanagar (**April 2005 - August 2007**).
- ✚ Worked as **Project Fellow** under University Grants Commission (UGC)’s Centre for Advanced Studies (CAS) Scheme at Dept. Materials Science, Sardar Patel University, Vallabh Vidyanagar (**August 2007 - June 2008**).
- ✚ During **M.Sc.** worked on **Research Project** entitled “Formation of SiC Coating and Carbon spherules through CVD route” (**Dec. 2003 - May 2004**).

Quality Management System Experience:

- ✚ Working as a ISO Coordinator for business unit.
- ✚ Familiar with the SPC-SQC tools and TS 16949.
- ✚ Trained as Internal Auditor, ISO/IEC 17025:2005 Laboratory Management System.

Paper / Poster published in the National/International journals/conference:

1. Development of microporous activated carbon using a polymer blend technique and its behavior towards methylene blue adsorption.

S. Manocha and Amit Brahmbhatt
Carbon Letters Vol. 12, No. 2, 85-89 (2011)

2. Activated carbon with narrow pore size distribution

S. Manocha and Amit Brahmbhatt
Poster-3, International Workshop on Nanostructured High Temperature High Performance Materials (WNHPM-07), September 10, 2007, Dept. of Materials Science, Sardar Patel University, Vallabh Vidyanagar, INDIA.

3. Methylene blue adsorption study on microporous activated carbons.

S. Manocha and Amit Brahmbhatt
pp. 92-97, conference proceedings Indo carbon 2006, November 2006, Bhopal, INDIA

Familiar with the Instruments:

- ❖ Laboratory Scale Spray Drier [LU-222-PL Mini Spray Drier]
- ❖ Surface Area Analyzer [Micromeritics Gemini 2375]
- ❖ Surface area and porosity analyzer [Micromeritics ASAP-2020]
- ❖ UV-Visible Spectrophotometer [Shimadzu UV-1601]
- ❖ Particle Size Analyzer [HORIBA]
- ❖ Limiting Oxygen Index (LOI) [Dynisco]
- ❖ Laboratory Mixing Extruder [Dynisco]
- ❖ Laboratory designed Fiber Spinning Unit
- ❖ Scanning Electron Microscope [Hitachi-S3000N]
- ❖ Gas Chromatograph [Shimadzu - 2010]
- ❖ ION Chromatograph
- ❖ Thermo gravimetric Analyzer [Mettler TG-50]
- ❖ Differential Scanning Calorimeter [Mettler DSC-20]
- ❖ Thermo mechanical Analyzer [Mettler TMA]
- ❖ Systronics Flame Photometer-128
- ❖ Izod Impact Tester & Digital Rockwell Hardness Tester
- ❖ Conventional Compression moulding machine

References:

Prof. L. M. Manocha, (F.N.A.Sc.)

Ex. - Professor & head,
Department of Materials Science,
Sardar Patel University,
Vallabh Vidyanagar – 388120.
Gujarat, INDIA.
(M) 09953203861

Prof. (Mrs.) S. Manocha

Ex. - Professor & Research Guide,
Department of Materials Science,
Sardar Patel University,
Vallabh Vidyanagar – 388120.
(M) 09953203863

Dr. M. R. Mehta

Ex. Vice President – R & D,
Navin Fluorine International Ltd.
Surat – Navsari Road, Surat – 395023.
Ph. No.(R): (022)27812113
(M): 07738838881

Dr. A. K. Singh

Head of the Department,
Performance Materials Research Centre (A Unit of Grasim Industries Ltd.),
Taloja – Navi Mumbai.
(M) 08108992223