

RESUME

Name: Dr. Bharat Modhera

Contacts: E-mail ID: *bharatkumar_modhera@yahoo.com*
Mobile: 91-7869494554

Date of Birth: 12th March, 1980



Educational Qualifications:

Ph. D. **Chemical Engineering**, S. V. National Institute of Technology, Surat, India. Specialization in **Catalysis and Chemical Reaction Engineering**, 2010.

Ph. D. Thesis titled “*Syntheses, Characterization and Applications of Nano-Crystalline Zeolite Beta in Hydroisomerization reactions*”.

M. E. **Polymer Technology (Chemical Engineering)**, M. S. University of Baroda, Vadodara, India, 2004, 60.83%.

B. E. **Chemical Engineering**, Gujarat University, Ahmedabad, India, 2001, 63.39%.

PGDHRM Post Graduate Diploma **Human Resource Management**, IGNOU, 2010, 61%

GATE 83.23 Percentile – 2003

7. Experience:

- 31-05-2010 to till continues..... at Maulana Azad National Institute of Technology, Bhopal (Madhya Pradesh), India. As a post of **Assistant Professor** in Chemical Engineering Department.
- 01-01-2005 to 30-06-2005 at S.V. National Institute of Technology, Surat 395 007. As a **Teaching Assistant** taught Computer Aided Design in Chemical Engg., Petroleum Refining and Petrochemicals, Chemical System Modeling at the under-graduate level.
- Handling of BTRS Micro-reactor (Autoclave Engineers Maked, USA), Fixed Bed Catalytic Reactor (Chemito Maked, India), Batch reactors (Parr Instruments, Autoclave Engineers Maked). Can operate GC-Mass (GCMS- QP- 2010) (Shimadzu Maked, Japan), Gas Chromatography.

- **Administrative work:** Hostel Warden (2012-13, 2013-14, 2014-15), Committee Member of B. Tech. Admission Council (2014-15), Departmental PG Coordinator (2012-13, 2013-14, 2014-15), Rajbhasha Hindi Committee Member (2012-13), Departmental TEQIP Coordinator (2011-.....), Departmental Faculty Training and Placement Officer (2010-), Departmental Exam Coordinator (2011-12), Anti-ragging committee member (2010 – 11, 2011-12), In-charge of Departmental Purchase officer (2010 -), DPRC coordinator (2011-12).

Papers Published in Journals:

- (1) Rupali Jha, Rajnish Singh, **Bharat Modhera**, "Synthesis and Characterization of SAPOs Nanomaterial from Aqueous and Non-aqueous Media", **International Journal of Scientific & Engineering Research**, 6 (12) (2015) 53 – 56.
- (2) Shikha Gangil, Chanchal Mewar, Ramesh Kumar Singh, **Bharat Modhera**, "Influence of Acid Catalyst on Two Step Transesterification of Karanja Oil with High Free Fatty Acids", **Biofuels**, 6 (5-6), (2015) 377-381. (**Taylor & Francis Publisher**)
- (3) Jitendra Kumar, Shikha Gangil, Rupali Jha, Lekhraj Malviya, **Bharat Modhera**, "Toxic Effects of Nanomaterials on Human Health", chapter published in **Annual Technical Volume of Chemical Engineering Division Board, Vol.-1**, (2015), 60-64 (**The Institution of Engineers (India), Kolkata, India Publisher**).
- (4) Monika Vyas, **Bharat Modhera**, Anil Sharma, "BOD Approximation for Common Effluent Treatment Plant Using ANN", **Asian Journal of Water, Environment and Pollution**, 12 (1) (2015) 81-89. (**IOS Press, Capital Publishing Company**).
- (5) Jitendra Kumar, K. R. Gota, **Bharat Modhera**, "Influence of Pyrrole Concentration on Cracking Activity of n-Hexane in a Performance FCC Catalyst and Additives", **APCBEE Procedia**, 9 (2014) 159-164. (**Elsevier Publisher**).
- (6) Jitendra Kumar, Chanchal Mewar, Lekhraj Malviya, Rupali Jha, **Bharat Modhera**, "Behavior of Sulfur and Nitrogen Compounds in Different Process of Petroleum Refinery", **International Journal of Applied Engineering Research**, 9 (4-special) (2014) 397-404.
- (7) Jitendra Kumar, Shikha Gangil, Chanchal Mewar, **Bharat Modhera**, "Need of Sustainable Development and Related Issues Pertaining to Process Industry", **International Journal of Research in Engineering and Technology**, 3 (3-special) (2014) 746-748.
- (8) Jitendra Kumar, Rupali Jha, **Bharat Modhera**, "Applications of Zeolite with Additives in Petroleum Refinery", **International Journal of Chemistry and Chemical Engineering**, 3 (2-special) (2013) 75-80.

- (9) Monika Vyas, **Bharat Modhera**, A. K. Sharma, “Neural Networks Approaches for Predicting COD Concentration during Effluent Treatment Process”, **International Journal of Management, IT and Engineering**, 2 (11) (2012) 1-10.
- (10) Ranajyoti Das, **Bharat Modhera**, “Synthesis of MCM-41 via different routes”, **International Journal of Marketing and Technology**, 1 (7) (2011) 150-171.
- (11) **Bharat Modhera**, Mousumi Chakraborty, Hari C. Bajaj, P. A. Parikh, “Influences of Mesoporosity Generation in ZSM-5 and Zeolite Beta on Catalytic Performance during *n*-Hexane Isomerization”, **Catalysis Letters**, 141 (2011) 1182-1190.
- (12) Monika Vyas, **Bharat Modhera**, A. K. Sharma, “Artificial Neural Network Based Model in Effluent Treatment Process”, **International Journal of Advanced Engineering Technology**, 2 (2) (2011) 271-275.
- (13) Monika Vyas, **Bharat Modhera**, Vivek Vyas, A. K. Sharma, “Performance Forecasting of Common Effluent Treatment Plant Parameters by Artificial Neural Network”, **ARPJ Journal of Engineering and Applied Sciences**, 6 (1) (2011) 38-42.
- (14) **Bharat Modhera**, Mousumi Chakraborty, Hari C. Bajaj, P. A. Parikh, “Simultaneous *n*-Hexane Isomerization and Benzene Saturation over Pt/Nano-crystalline Zeolite Beta”, **Reaction Kinetics, Mechanisms and Catalysis**, 99 (2010) 421-429.
- (15) **Bharat Modhera**, Mousumi Chakraborty, Hari C. Bajaj, P. A. Parikh, “1-Hexene isomerization over Nano-crystalline Zeolite Beta: Effects of Metal and Carrier Gases on Catalytic Performance”, **Catalysis Letters**, 132 (2009) 168-173.
- (16) **Bharat Modhera**, Mousumi Chakraborty, P. A. Parikh, R. V. Jasra, “*n*-Hexane Hydro-isomerization over Nano-crystalline Zeolite Beta”, **Petroleum Science and Technology**, 27 (2009) 1196-1208.
- (17) **Bharat Modhera**, Mousumi Chakraborty, P. A. Parikh, R. V. Jasra, “Synthesis of Nano-crystalline Zeolite Beta: Effects of Crystallization Parameters”, **Crystal Research and Technology**, 44 (2009) 379-385.

Papers Presented:

- (1) Shikha Gangil, Divya Bhagat, Priyanka Bhavate, Ranjana Singh, Supriya Agrawal, **Bharat Modhera**, “Study on Physiochemical Properties of Biodiesel”, paper presented at 68th Annual Session of Indian Institute of Chemical Engineers **CHEMCON – 2015**, on 27 – 30th December, 2015 at Chemical Engineering Department, Indian Institute of Technology, Guwahati, India.

- (2) Shikha Gangil, Yashwant Parihar, Divya Bhagat, Priyanka Bhawate, Virendra Dhakar, **Bharat Modhera**, “Modification of Zeolite Catalysts and their Application in Biodiesel Production”, paper presented at 6th Annual Research Symposium in Chemical Engineering “Chemference- 2015”, on 05-06th December, 2015, organized by Indian Institute of Technology, Hyderabad, India.
- (3) Shikha Gangil, Yashwant Parihar, Virendra Dhakar, **Bharat Modhera**, “A Review on Effects of Catalysts in Biodiesel Production”, paper presented at National Seminar on “Recent Innovations in Advanced Materials (RIAM-2015)”, on 29th December, 2015, organized by CSIR-Advanced Materials and Processes Research (AMPRI) with Materials Research Society of India (MRSI), Bhopal Chapter and MP Council of Science and Technology (MPCOST), Bhopal.
- (4) **Bharat Modhera**, “Synthesis and Characterizations of SAPO-11 Material from Non-aqueous Media”, paper presented at National Seminar on “Recent Innovations in Advanced Materials (RIAM-2015)”, on 29th December, 2015, organized by CSIR-Advanced Materials and Processes Research (AMPRI) with Materials Research Society of India (MRSI), Bhopal Chapter and MP Council of Science and Technology (MPCOST), Bhopal.
- (5) Priti Yadav, Titiksha Joshi, **Bharat Modhera**, “Comparative Study of Catalytic and Non-catalytic Tyre Pyrolysis Oil in Diesel Engine Application: An overview”, paper presented at 4th **National Convention of Hydrogen Energy and Advanced Materials (NCHEAM-2015)**, on 28-29th Nov., 2015, organized by Energy Centre, Maulana Azad National Institute of Technology, Bhopal, India with Chemistry Department, University of Kerala and Indian Association of Hydrogen Energy & Advanced Materials, India.
- (6) Rupali Jha, Vivek Jha, Nagesh Chalkhor, **Bharat Modhera**, “Organic Solar Cell: a Pioneering Technique to Enhance the Energy Production from Renewable Energy Sources”, paper presented at 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**”, on 17-18th Oct., 2015, organized by The Institution of Engineers (India), MP State Centre, Bhopal and Maulana Azad National Institute of Technology, Bhopal, India.
- (7) Suraj Chauhan, Akshay Rajpoot, Vikram Yadav, Nagesh Chalkhor, **Bharat Modhera**, “Fuel Cell using Proton Preferential Membrane with Acid Doping”, paper presented at 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**”, on 17-18th Oct., 2015, organized by The Institution of Engineers (India), MP State Centre, Bhopal and Maulana Azad National Institute of Technology, Bhopal, India.

- (8) Titiksha Joshi, Priti Yadav, **Bharat Modhera**, “A Review on Cleaner Alternative Liquid Fuels from Waste Tyre Pyrolysis as a Green Technology”, paper presented at 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**”, on 17-18th Oct., 2015, organized by The Institution of Engineers (India), MP State Centre, Bhopal and Maulana Azad National Institute of Technology, Bhopal, India.
- (9) Shikha Gangil, Yashwant Parihar, Virendra Dhakar, Ranjana Singh, **Bharat Modhera**, “Recent Trends and Future Prospects of Biodiesel”, paper presented at 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**”, on 17-18th Oct., 2015, organized by The Institution of Engineers (India), MP State Centre, Bhopal and Maulana Azad National Institute of Technology, Bhopal, India.
- (10) Shikha Gangil, Ranjana Singh, Priyanka Bhavate, Divya Bhagat, Supriya Agarwal, **Bharat Modhera**, “Comparative Study of Properties of Biodiesel Produced from Different Sources”, paper presented at 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**”, on 17-18th Oct., 2015, organized by The Institution of Engineers (India), MP State Centre, Bhopal and Maulana Azad National Institute of Technology, Bhopal, India.
- (11) Kalpana Patidar, Shikha Gangil, **Bharat Modhera**, “Optimization of Biodiesel Production using Aspen Plus: A Review”, paper presented at 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**”, on 17-18th Oct., 2015, organized by The Institution of Engineers (India), MP State Centre, Bhopal and Maulana Azad National Institute of Technology, Bhopal, India.
- (12) Rupali Jha, Jitendra Kumar, Shikha Gangil, Chanchal Mewar, Lekhraj Malviya, **Bharat Modhera**, “A Review on Research Development and Future Approach of Organic Solar Cell”, paper presented at 67th Annual Session of Indian Institute of Chemical Engineers **CHEMCON – 2014**, on 27 – 30th December, 2014 at Dr. S. S. B. University Institute of Chemical Engineering & Technology, Punjab University, Chandigarh, India
- (13) Rupali Jha, Chanchal Mewar, Jitendra Kumar, Lekhraj Malviya, Shikha Gangil, **Bharat Modhera**, “Effectiveness of Rice Husk and Waste Tea Granules for Removal of Phenol from Aqueous Solution”, paper presented at **International Conference on Environment and Energy (ICEE-2014)**, 15-17th December, 2014, at Jawaharlal Nehru Technological University, Hyderabad, T. S., India.

- (14) Chanchal Mewar, Rupali Jha, Jitendra Kumar, Lekhraj Malviya, Shikha Gangil, **Bharat Modhera**, “Evaluation of Heat Transfer Efficiency by Coiled Flow Inverted Heat Exchanger”, paper presented at **International Conference on Environment and Energy (ICEE-2014)**, 15-17th December, 2014, at Jawaharlal Nehru Technological University, Hyderabad, T. S., India.
- (15) Shikha Gangil, Chanchal Mewar, Ramesh Singh, Vinayak Shankar, Devashesh Sagar, **Bharat Modhera**, “Study of Different Zeolites as a Catalyst in the Transesterification of Neem and Karanja Oil based Biodiesel Production”, paper presented at **International Conference on Environment and Energy (ICEE-2014)**, 15-17th December, 2014, at Jawaharlal Nehru Technological University, Hyderabad, T. S., India.
- (16) Jitendra Kumar, Lekhraj Malviya, Rupali Jha, Chanchal Mewar, **Bharat Modhera**, “Influence of Catalyst Composition and Catalytic Activity of Nitrogen Compounds: Fluid Catalytic Cracking Process”, paper presented at **International Conference on Environment and Energy (ICEE-2014)**, 15-17th December, 2014, at Jawaharlal Nehru Technological University, Hyderabad, T. S., India.
- (17) Monika Vyas, **Bharat Modhera**, “A framework to Predict Process Variables from CETP using ANN”, paper presented at **International Conference on Environment and Energy (ICEE-2014)**, 15-17th December, 2014, at Jawaharlal Nehru Technological University, Hyderabad, T. S., India.
- (18) Rupali Jha, Ankit Khandelwal, Anekant Jain, Ankit Kadam, **Bharat Modhera**, “Performance of Bi-functional Catalysts in Hydroisomerization of Higher Carbon Atoms in Petroleum”, paper presented at **SCHEMCON – 2014**, on 26 – 27th April, 2014 at Department of Chemical Engineering, Haldia, West Bengal, India.
- (19) Rupali Jha, Vivek Jha, Jitendra Kumar, Chanchal Mewar, Lekhraj Malviya, **Bharat Modhera**, “Advances of Nanotechnology in Medical Science”, paper presented at **IXth National Conference on Current Trends and Future Challenges in Environmental Sciences, Biotechnology, Aysush & Human Welfare and Sustainable Development**, on 26 – 27th April, 2014 at Department of Botany and Biotechnology, Government New Science College, Rewa (M. P.), India.
- (20) Jitendra Kumar, K. R. Gota, **Bharat Modhera**, “Influence of Pyrrole Concentration on Cracking Activity of n-Hexane in a Performance FCC Catalyst and Additives”, paper presented at **5th International Conference on Chemical, Biological and Environmental Engineering (ICBEE - 2013)**, 16-18 October, 2013, at New Delhi, India.

- (21) Jitendra Kumar, Chanchal Mewar, Lekhraj Malviya, Rupali Jha, **Bharat Modhera**, “Behavior of Sulfur and Nitrogen Compounds in Different Process of Petroleum Refinery”, Paper presented at **International Journal of Applied Engineering Research**, 9 (4-special) (2014) 397-404.
- (22) Jitendra Kumar, Shikha Gangil, Chanchal Mewar, **Bharat Modhera**, “Need of Sustainable Development and Related Issues Pertaining to Process Industry”, Paper presented at **National Conference on “Recent Innovations in Engineering and Technology” (NCRIET - 2014)**, 03 – 04th May, 2014, at B. K. Institute of Technology, Karnataka, India.
- (23) Jitendra Kumar, Chanchal Mewar, Lekhraj Malviya, **Bharat Modhera**, “Performance of Nano-Crystalline H-ZSM-5 as Additive in FCC Catalyst: A Review”, Paper presented at **National Conference on “Recent Innovations in Engineering and Technology” (NCRIET - 2014)**, 03 – 04th May, 2014, at B. K. Institute of Technology, Karnataka, India.
- (24) Jitendra Kumar, Rupali Jha, **Bharat Modhera**, “Applications of Zeolite with Additives in Petroleum Refinery”, **International Journal of Chemistry and Chemical Engineering**, 3 (2-special) (2013) 75-80.
- (25) Jitendra Kumar, Shikha Gangil, Lekhraj Malviya, Rupali Jha, **Bharat Modhera**, “Toxic Effects of Nanomaterials on Human Health”, paper presented at All India Seminar on **“Recent Advances in Biotechnology and Human Health Care (RABHHC-2014)”**, 29-30th March, 2014, at Institution of Engineers (India), M. P. State Centre, Bhopal, India.
- (26) Rupali Jha, Jitendra Kumar, **Bharat Modhera**, “Non-Conventional Agriculture Low Cost waste as Adsorbents for Removal of Phenolic Compounds from Aqueous Solution”, paper presented at **“National level seminar on Advances in Wastewater Treatment and Reuse”**, on 27-28th September, 2013, at Department of Chemical Engineering, Samrat Ashok Technological Institute, Vidisha (M. P.), India.
- (27) Jitendra Kumar, Satyendra, **Bharat Modhera**, “Fuels from Bio-waste (A review paper)”, paper presented at **“VIIIth National Conference on Biodiversity conservation, biotechnology and environmental management research”**, on 19 -20th April, 2013 at Government New Science College, Rewa (M. P.), India.
- (28) Jitendra Kumar, **Bharat Modhera**, “Polymer Coating in Steel: Old and New Techniques (A review paper)”, paper presented at all India Seminar on **“Recent Advances in Polymer Science and Technology (PST-2013)”**, 05-06 January, 2013 at Institution of Engineers (India), M. P. State Centre, Bhopal, India.

- (29) Jitendra Kumar, K. R. Gota, **Bharat Modhera**, “Influence of Concentration of Nitrogen compound on cracking activity of n-hexane in a performance FCC catalyst and additives”, paper present at **CHEMCON-2012**, 28-30 December, 2012, at Department of Chemical Engineering, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India.
- (30) K. R. Gota, **Bharat Modhera**, “Effect of Nano-crystal Catalyst on Isomerization Reaction”, paper presented at National Seminar on Role of Chemistry for Improvement in Quality of Human Life (**ChemQHL-2012**), 17-18 March, 2012, at Department of Chemistry, Ujjain Engineering College, Ujjain (M. P.), India.
- (31) Monika Vyas, **Bharat Modhera**, A. K. Sharma, “A Model to Forecast Parameter of Effluent Treatment Plant using ANN”, paper presented at International Conference on Concurrent Techno and Enviro Search (Search and Research Youth Congress 2010) (**SARYC-10**), 4-5 December, 2010, Bhopal (M. P.), India.
- (32) Monika Vyas, **Bharat Modhera**, A. K. Sharma, “Prediction of Common Effluent Treatment Plant Parameter using Artificial Neural Networks”, poster presented at International Congress of Environmental Research (**ICER-10**), 16-18 September, 2010, University of Mauritius, Reduit, Mauritius.
- (33) **Bharat Modhera**, Mousumi Chakraborty, Hari. C. Bajaj, Parimal A. Parikh, “Effects of Platinum Metal on 1-Hexene Catalytic Isomerization over Nano-crystalline Zeolite Beta”, poster presented at 16th International Zeolite Conference joint with the 7th International Mesosstructured Materials Symposium (**IZC-IMMS-2010**), 4-9 July, 2010, Sorrento, Italy.
- (34) **Bharat Modhera**, Mousumi Chakraborty, Hari. C. Bajaj, Parimal A. Parikh, “Effect of Reaction Temperature on Simultaneous *n*-Hexane Isomerization and Benzene Saturation”, paper presented at **XXIV – Gujarat Science Congress 2010**, 21st March, 2010, Gujarat University, Ahmedabad, India.
- (35) **Bharat Modhera**, Mousumi Chakraborty, H. C. Bajaj, P. A. Parikh, “Synthesis of Nanocrystalline Zeolite Beta and Catalytic Isomerization of *n*-Hexane over Pt/H-Beta Catalyst”, paper presented at **CHEMCON-2009**, 27-30 December, 2009, Andhra University, Visakhapatnam, India.
- (36) **Bharat Modhera**, Mousumi Chakraborty, P. A. Parikh, R. V. Jasra, “Effect of crystallization temperature on the synthesis of nano-crystalline zeolite beta”, paper presented at **XXII – Gujarat Science Congress 2008**, 9th March, 2008, Bhavnagar University, Gujarat, India.

- (37) **Bharat Modhera**, Mousumi Chakraborty, P. A. Parikh, “Nano-Crystalline beta zeolite catalyzed isomerization of lower straight chain paraffins”, poster presented at 6th International Symposium on Catalysis in Multiphase Reactors (**CAMURE-6**) and 5th International Symposium on Multifunctional Reactors (**ISMR-5**), 14-17 January, 2007, NCL, Pune, India.
- (38) **Bharat Modhera**, Mousumi Chakraborty, P. A. Parikh, “Recent Developments in Catalytic isomerization of lower straight chain paraffins”, poster presented at 5th International Symposium on Fuels and Lubricants – 2006 (**ISFL-2006**), 7-10 March, 2006, New Delhi, India.

Book Chapters Published:

- (1) Priti Yadav, Titiksha Joshi, **Bharat Modhera**, “Comparative Study of Catalytic and Non-catalytic Tyre Pyrolysis Oil in Diesel Engine Application: An overview”, chapter published in Proceeding of 4th National Convention of Hydrogen Energy and Advanced Materials (NCHEAM-2015), (**ISBN: 9789352300853**), (2015), pp. 73-77.
- (2) Shikha Gangil, Ranjana Singh, Priyanka Bhavate, Divya Bhagat, Supriya Agarwal, **Bharat Modhera**, “Comparative Study of Properties of Biodiesel Produced from Different Sources”, chapter published in Proceeding of 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**” (**ISBN: 9789383635955**), (2015), pp. 237-242.
- (3) Kalpana Patidar, Shikha Gangil, **Bharat Modhera**, “Optimization of Biodiesel Production using Aspen Plus: A Review”, chapter published in Proceeding of 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**” (**ISBN: 9789383635955**), (2015), pp. 233-236.
- (4) Shikha Gangil, Yashwant Parihar, Virendra Dhakar, Ranjana Singh, **Bharat Modhera**, “Recent Trends and Future Prospects of Biodiesel”, chapter published in Proceeding of 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**” (**ISBN: 9789383635955**), (2015), pp. 226-232.
- (5) Titiksha Joshi, Priti Yadav, **Bharat Modhera**, “A Review on Cleaner Alternative Liquid Fuels from Waste Tyre Pyrolysis as a Green Technology”, chapter published in Proceeding of 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**” (**ISBN: 9789383635955**), (2015), pp. 209-216.

- (6) Suraj Chauhan, Akshay Rajpoot, Vikram Yadav, Nagesh Chalkhor, **Bharat Modhera**, “Fuel Cell using Proton Preferential Membrane with Acid Doping”, chapter published in Proceeding of 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**” (ISBN: 9789383635955), (2015), pp. 184-188.
- (7) Rupali Jha, Vivek Jha, Nagesh Chalkhor, **Bharat Modhera**, “Organic Solar Cell: a Pioneering Technique to Enhance the Energy Production from Renewable Energy Sources”, chapter published in Proceeding of 31st National Convention of Electrical Engineers & National Seminar on “**Renewable Energy and Green Technology for Sustainable Development**” (ISBN: 9789383635955), (2015), pp. 102-108.
- (8) **Bharat Modhera**, “Advances of Nanotechnology in Medical Science”, chapter published in “**Current Trends and Future Challenges in Biotechnology and Biomedicine for Human Welfare and Sustainable Development (ISBN: 9788192806365)**”, Part - II, (2014), pp. 73 - 80.
- (9) **Bharat Modhera**, “Advanced Biotechnology Processes for Waste Treatments”, chapter published in “**Current Trends and Future Challenges in Biotechnology and Biomedicine for Human Welfare and Sustainable Development (ISBN: 9788192806365)**”, Part - II, (2014), pp. 36 - 40.
- (10) Shikha Gangil, Chanchal Mewar, Rupali Jha, Jitendra Kumar, Lekhraj Malviya, **Bharat Modhera**, “Performance of 13X Zeolite for Volatile Organic Compound Adsorption by Pressure Swing Adsorption”, in **Proceedings of the International Conference on Advances in Chemical Engineering and Technology (ICACE - 2014) (ISBN - 9789351072843)**, (2014) 41- 44, **Published by Elsevier**.
- (11) Jitendra Kumar, Satyender, **Bharat Modhera**, “Preparation of Fuels from Bio and Plastic Waste: A review”, chapter published in “**Recent Advances in Environmental Management & Biotechnology (ISBN: 9788192806327)**”, Vol.-III, (2013), pp. 97-105.
- (12) **Bharat Modhera**, “Biotechnology: Future Technology of Petroleum Refinery”, chapter published in “**Recent Advances in Biotechnology (ISBN: 9788192806310)**”, Vol.-II, (2013), pp. 85-92.

Organizing STTP/Workshops/Seminars/Techfests:

- **Coordinator** of Ten Days workshop on “**English Learning Programme**”, 04 – 13th February, 2015 at SC/ST Cell, Maulana Azad National Institute of Technology, Bhopal, India (Funded by SCSP & TSP Scheme Plan Programme).
- **Coordinator** of Two Days Training Programme on “**Disaster Management Policy**”, 16-17, January, 2015 at SC/ST Cell, Maulana Azad National Institute of Technology, Bhopal, India (Funded by SCSP & TSP Scheme Plan Programme).
- **Coordinator** of All India Seminar on “**Recent Trends of Nanotechnology in Environmental and Biological Applications (RTNEBA - 2014)**”, 22 – 23 November, 2014 at The Institution of Engineers (India), M. P. State Centre, Bhopal, India.
- **Coordinator** of Short Term Training Programme on “**Synthesis, Characterization and Applications of Biomaterials**”, 25 – 29th June, 2014, at Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, India.
- **Coordinator** of All India Seminar on “**Recent Advances in Biotechnology and Human Health Care (RABHHC-2014)**”, 29 - 30 March, 2014 at The Institution of Engineers (India), M. P. State Centre, Bhopal, India.
- **Coordinator** of Short Term Training Programme on “**Advanced Tools for Material Characterizations**”, 01-05 April, 2013, at Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, India.
- **Convener** of All India Seminar on “**Recent Advances in Polymer Science and Technology (PST-2013)**”, 05-06 January, 2013 at The Institution of Engineers (India), M. P. State Centre, Bhopal, India.
- **Techfest Coordinator** entitled “**Chemicarnival-2011**”, 15-16 October, 2011 at Maulana Azad National Institute of Technology, Bhopal, India.
- **Coordinator** for Short term course entitled “**Recent Trends in Industrial Pollution and Energy Management**”, 9-13 May, 2011, at Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, India.
- **Organizing Secretary** for State-level technical paper presentation event, **PGCHEMEET-2005**, 29-30 October, 2005, at Department of Chemical Engineering, S.V. National Institute of Technology, Surat, India.

Awards:

- **First Position Award** (Certificate and Rs.25,000/-cash) in the category of Chemical/Plastic Engineering for Project presented on “Bend Tube Distillation Column” at Three Days’ National Exhibition and Symposium on “**Innovative and Futuristic Approaches in Science and Technology (iFAST - 2015)**”, 26 – 28th February, 2015 organized by M. P. Council of Science and Technology and Maulana Azad National Institute of Technology, Bhopal.
- **Senior Research Fellowship** (SRF) Award for Ph. D. fellowship in 2008 from Council of Scientific and Industrial Research (**CSIR**), New Delhi, India.
- **Ambuja’s Young Researcher’s Awards** for Doing Post-Graduate Studies in India after GATE Examination for the Year 2005 of Indian Institute of Chemical Engineers (**IChE**), India.

Details of Invite talks/Expert lecture delivered:

- (1) Invited talk delivered on “Synthesis and Characterization of SAPOs Nanomaterial from Aqueous and Non-aqueous media”, at **World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Sciences (WCM-2015)**, 09 – 11 October, 2015, organized International Unit on Macromolecular Science and Engineering (IUMSE), Mahatma Gandhi University, Kottayam, Kerala, India.
- (2) Invited talk delivered on “Flow / Vortex Induced Vibrations in Process Industries”, at All India Seminar on “**Vibration Fault Diagnosis and its Mitigation in Large Rotating Machines**”, 21 - 22 March, 2015 jointly organized by The Institution of Engineers (India), M. P. State Centre, Bhopal, India and Abilities Educare Foundation, Bhopal, India.
- (3) **Expert Lecture** on “Prevention Methods for Industrial Fire or Explosions”, at two days Training Programme on “**Disaster Management Policy**”, 16 – 17th January, 2015, organized by SC/ST Cell, Maulana Azad National Institute of Technology, Bhopal, India.
- (4) **Expert Lecture** on “*Pinch Technology – one of Green Technology*”, at Short Term Training Programme on “**Green Chemistry and Engineering: Past, Present and Future**”, 30th June – 04th July, 2014, organized by Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, India.
- (5) **Expert Lecture** on “Applications of Biomaterials in Chemical Engineering”, at Short Term Training Programme on “**Synthesis, Characterization and Applications of Biomaterials**”, 25 – 29th June, 2014, organized by Department of Chemical

Engineering, Department of MSME, Department of Biological Science and Engg., Maulana Azad National Institute of Technology, Bhopal, India.

- (6) Invited talk delivered on “*Advanced Biotechnology Processes for Waste Treatments*”, at **IXth National Conference on Current Trends and Future Challenges in Environmental Sciences, Biotechnology, Aysush & Human Welfare and Sustainable Development**, on 26 – 27th April, 2014 at Department of Botany and Biotechnology, Government New Science College, Rewa (M. P.), India.
- (7) Invited talk delivered on “Biotechnology applications for Human Health care”, at All India Seminar on “**Recent Advances in Biotechnology and Human Health Care (RABHHC-2014)**”, 29 - 30 March, 2014 at The Institution of Engineers (India), M. P. State Centre, Bhopal, India.
- (8) Expert lecture delivered on, “*Advanced Waste Water Treatment*”, at “**National level seminar on Advances in Wastewater Treatment and Reuse**”, on 27-28th September, 2013, at Department of Chemical Engineering, Samrat Ashok Technological Institute, Vidisha (M. P.), India.
- (9) Invited talk delivered on “*Biotechnology – Future Technology for Petroleum Refinery*”, at “**VIIIth National Conference on Biodiversity conservation, biotechnology and environmental management research**”, on 19 -20th April, 2013 at Government New Science College, Rewa (M. P.), India.
- (10) Expert lecture delivered on “*Characterization of Solid Catalysts*”, at Short Term Training Programme on “**Advanced Tools for Material Characterizations**”, during 01 - 05th April, 2013 at Department of Chemical Engineering, Maulana Azad National Institute of Technology, Bhopal, India.

Projects:

Sr. No.	Project Title	Funding Agency	Duration	Amount, Rs.	Status
1.	Removal of Phenol And Its Derivative Compounds From Waste Water By Using Non-Conventional Low Cost Adsorbents	The Institution of Engineers (India), Kolkata	2014 - 2015	10,000	Completed
2.	Production, analysis and evaluation of biodiesel from neem and karanja oil blends	The Institution of Engineers (India), Kolkata	2014 - 2015	40,000	Running
3.	Effect of Nitrogen Compound on FCC Catalyst	TEQIP-II	2012-2014	24,00,000	Completed

Membership of Technical Society, Association, Institution etc.:

- Life Member of Catalysis Society of India (CSI).
- Senior Member of Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES). Member No.: 100845
- Life Member of Indian Society for Technical Education (ISTE). Membership No.: 83954
- Associate Member of the Institution of Engineers (India) (IEI). Membership No.: AM1001623.
- Life Time Associate Member of the Indian Institute of Chemical Engineers (IIChE). Membership No.: LAM 31363.

Other Activities:

- **Chairperson** in Technical session on “Microscopy for Nano-IV”, at **World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Sciences (WCM-2015)**, 09 – 11 October, 2015, organized International Unit on Macromolecular Science and Engineering (IUMSE), Mahatma Gandhi University, Kottayam, Kerala, India.
- **Reviewer** of Journal entitled “Environmental Technology and Innovation”, of Scimedirect, Elsevier Publisher.
- **Reviewer** of Journal entitled “Indian Journal of Chemistry, Sec A” of Council of Scientific and Industrial Research (India), Indian National Science Academy, NISCAIR Publications.
- **Editor Board Member** of “International Journal of Chemical Engineering and Processing” of Journals Pub, New Delhi, India.
- **Editor Board Member** of “International Journal of Chemical Processing Design and Systems” of Journals Pub, New Delhi, India.
- **Editor Board Member** of “Chemical Engineering: An International Journal” of AIRCC Publishing Corporation, Tamil Nadu, India.
- **Editor Board Member** of “Journal of Catalysts & Catalysis” of STM Journals, Consortium E-Learning Network Pvt. Ltd. (CELNET), India.
- **Editor Board Member** of “Trends in Chemical Engineering” of STM Journals, Consortium E-Learning Network Pvt. Ltd. (CELNET), India.
- **Editor Board Member** of “Chemical & Materials Engineering” of Horizon Research Publishing, USA.

- **Editor Board Member and Reviewer** of “Chemical Engineering & Science” of Science & Education Publishing.
- **Reviewer** of Journal entitled “International Journal of Oil, Gas and Coal Engineering” of **Science Publishing Group**.
- **Reviewer** of Journal entitled “Science Journal of Energy Engineering” of **Science Publishing Group**.
- **Reviewer** of Journal entitled “**International Journals of Multidisciplinary Research Academy (IJMRA)**”.
- **Executive Committee Member** (Chemical Engineering) of **Institution of Engineers (India)**, M.P. State Centre, Bhopal for the sessions 2013-14 & 2014-15 and 2015-16 & 2016-17.
- **Session Chair** in “**International Conference on Global Scenario in Environment and Energy (ICGSE² - 2013)**” on 14-16th March, 2013 at Department of Chemical & Energy Engineering, Maulana Azad National Institute of Technology, Bhopal, India.
- Member of **Chairperson** of Young Scientist Award Selection Committee at “**VIIIth National Conference on Biodiversity conservation, biotechnology and environmental management research**”, on 19 -20th April, 2013 at Government New Science College, Rewa (M. P.), India.

M. Tech. Student Guided: Completed : 03
Continues : 06

Detail of M. Tech. Thesis

Sr. No.	Student Name	Dissertation Title	Status	Year
1.	Ms. Shivani Singh	Extraction of Aniline from Aqueous solutions	Completed	2014
2.	Ms. Chanchal Mewar	Biodiesel Production	Completed	2015
3.	Mr. Lekhraj Malviya	ANSYS application for Chemical Engineers	Completed	2015
4.	Ms. Titiksha Joshi	Tyre Pyrolysis Oil by catalysts	Continue...	---
5.	Mr. Nagesh Chalkhor	Gas diffusion modeling through ANSYS	Continue...	---
6.	Mr. Harsh	Heavy Metal Removal by rice husk waste	Continue...	---
7.	Ms. Kalpana Patidar	Simulation of biodiesel production process through ASPEN Plus	Continue...	---
8.	Mr. Rajnish	Development of SAPOs materials	Continue...	---
9.	Ms. Priti Yadav	Synthesis of activated carbon through tyre pyrolysis.	Continue...	---

Ph. D. Student Guided: Ph. D. Completed : 01
Ph. D. Continues : 04

Detail of Ph. D. Thesis

Sr. No.	Student Name	Thesis Title	Status	Year
1.	Ms. Monika Vyas	Parameter Prediction of CETP by ANN	Completed	2013
2.	Mr. Jitendra Kumar	Effect of Nitrogen compound on FCC catalyst	Synopsis Submitted	---
3.	Ms. Rupali Jha	SAPO-11 catalyst for hydroisomerization reaction	Continues	---
4.	Ms. Shikha Gangil	Biodiesel production improvement	Continues	---
5.	Mr. Ankit Kadam	Tyre pyrolysis oil	Continues	---