

YOGESH CHANDRAKANT ROTLIWALA

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EDUCATION

- **V. N. South Gujarat University** Surat, Gujarat, India
Ph. D., Chemical Engineering
Guide: Dr.P.A.Parikh, Professor, Chem. Engg.Deptt., SVNIT, Surat **March 2011**
Dissertation: "Resource recovery through Co-pyrolysis of Plastics and Biomass"
Sub-specialization: Renewable Energy & Environmental Protection.
- **M.S. University of Baroda** Baroda, Gujarat, India
M. E., Chemical Engineering (**65.48%, First Class**) **January 2000**
Dissertation: Synthesis and characterization of Polycarbazole: A semi-conducting polymer.
Concentration: Polymer Technology
- **D.D. University** Nadiad, Gujarat, India
B. E., Chemical Engineering (**69.2%, First class with distinction**) **June 1997**
Dissertation: Numerical methods for viscosity estimation of various solvent.
Concentration: Chemical Engineering
- **Government Polytechnic** Valsad, Gujarat, India
Diploma in Chemical Engineering (**72.91%, First class with distinction**) **June 1994**

HONORS AND AWARDS

- **Innovation to Impact** Award designated by Gujarat Technological University (GTU), Ahmedabad for "Research on plastics waste management." **February 2017**
- **National Award** (Cash prize Rs. 2 lacs, Citation and Shield) from Ministry of Chemicals & Fertilizers, New Delhi. for outstanding contribution in the field of waste plastics management technology for Biomass derived bio-oil **February 2015**
- **National Award** from Indian society for technical education, New Delhi (ISTE-Syed Sajid Ali National Award for outstanding research work in the field of Renewable Energy). **November 2014**
- **Research Grant** of Rs. 15 lacs from Ministry of New and Renewable Energy (MNRE), GoI, New Delhi in association with Indian Oil Corporation, Faridabad, India for extension of project titled "Co-pyrolysis of deoiled cake of Jatropha with waste plastics to produced upgraded bio-oil". **March 2014-March 2015**
- **Travel grant** of Rs.79,000 awarded by Science and Engineering Research Board (SERB), Department of Science and Technology, GoI, New Delhi for presentation of technical paper titled "Methods of production modified bio-oil by co-pyrolysis of waste plastics and biomass" at Waste to Fuel Conference & Trade show, Connecticut, USA. **September 2012**

- **Research Grant** of Rs.18.86 lacs from Ministry of New and Renewable Energy (MNRE), GoI, New Delhi in association with Indian Oil Corporation, Faridabad, India for project titled "Co-pyrolysis of deoiled cake of Jatropa with waste plastics to produced upgraded bio-oil".
November 2011-November 2012
- **Research Grant** of Rs.2.42 millions from Gujarat Energy Development Agency (GEDA), Gandhinagar, Gujarat, India for project on Waste plastics to liquid fuel.
June 2009- June 2011
- **Noel Deerr Gold Medal** awarded by "The Sugar Technologists Association of India" for best paper titled "Thermal Pyrolysis of Bagasse: Yield and Characterization of Bio-oil".
August 2010

PUBLICATIONS

Journal Papers

1. **Rotliwala Y.C.** and Parikh P.A., 2012, Thermal co-processing of high density polyethylene with coal, fly ashes and biomass: characterization of liquid products. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 34(11):1055.
2. **Rotliwala Y.C.** and Parikh P.A., 2011, Study of thermal co-pyrolysis of de-oiled cake of Jatropa with plastics, *Waste Management & Research*, 29(12): 1251.
3. Shah J.A., Umrigar Z.F. and **Rotliwala Y.C.**, 2011, Evaluation of air quality near traffic junctions in the city of Surat, India using air quality index, *Research Journal of Chemistry and Environment*, 15 (2): 210.
4. **Rotliwala Y.C.** and Parikh P.A., 2011, Thermal degradation kinetic study of rice-bran with high density polyethylene, *Korean Journal of Chemical Engineering*, 28(3):788.
5. Parekh D.B., **Rotliwala Y.C.** and Parikh P.A., 2009, Synergistic pyrolysis of high density polyethylene and Jatropa and Karanj cakes: a thermogravimetric study. *Journal of Renewable and Sustainable Energy* 1:1-10.
6. Parikh P.A. and **Rotliwala Y.C.**, 2008, Resource recovery through catalytic cracking of waste plastics. *Waste and Resource Management* 161: 85.

Conferences

1. Rotliwala U., Rotliwala V., Dhingra N., Patel P., **Rotliwala Y.C.**, Resource recovery of reject water from domestic reverse osmosis (RO) plant presented at *National Technical Festival "Visvesmruti-2015"*, F.E.T.R, Gujarat, September, 2015.
2. **Rotliwala Y.C.**, Chevli M.H., Maheshwari N., Isotherm studies of equilibrium sorption of Fe(III) onto unmodified Hen Eggshell Adsorbent, presented at *International conference on Engineering: Issues, Opportunities and Challenges for Development (EIOCD; 2015)*, S.N.P.I.T & R.C, Gujarat, April 2015.
3. **Rotliwala Y.C.**, Shah D.V, Treatability study of waste water from dye manufacturing industry by coagulation, presented at *International conference on Engineering: Issues, Opportunities and Challenges for Development (EIOCD; 2015)*, S.N.P.I.T & R.C, Gujarat, April 2015.

4. N. Dhingra, **Rotliwala Y.C.**, The role of NGOs in realizing and promoting reproductive rights in India, presented at *National Conference on Women in 21st Century: Concerns & Issues*, S.N.P.I.T & R.C, Gujarat, April 2015.
5. N. Dhingra, D. Bhanti, **Rotliwala Y.C.**, J.A. Shah and V. B. Pathak, Resource recovery of heavy metal-containing sludge for brick production, presented at *International conference on Sustainable Innovative Techniques in Civil & Environmental Engineering*, J.N.U., New Delhi, May 2013.
6. **Rotliwala Y.C.**, Parikh P.A., Parekh D.B., Shah J.A., Dhingra N., Methods of production modified bio-oil by co-pyrolysis of waste plastics and biomass, presented at *International Conference on Waste to Fuel*, Connecticut, USA, 16-19 September 2012.
7. **Rotliwala Y.C.**, Patel J.T., Patel M.L., A hybrid nanofiltration and reverse osmosis process for the treatment of distillery spent wash, *Annual convention of "The Deccan Sugar Technologists' Association* (India), 14-15 July 2012.
8. **Rotliwala Y.C.**, Parikh P.A., Preliminary evolution of de-oiled cake of Jatropha derived bio-oil, *International Congress of Chemistry & Environment*, Malaysia, May 2011.
9. Shah J.A., Umrigar Z.F., **Rotliwala Y.C.**, Evaluation of air quality near traffic junctions in the city of Surat, India using air quality index, *International Congress of Chemistry & Environment*, Malaysia, May 2011.
10. **Rotliwala Y.C.**, Patel B.I., Patel M.L., Patel S.J., Pyrolysis of bagasse: Yield and characterization of bio-oil, *Annual convention of Sugar technologist*, Chennai, December 2010.
11. **Rotliwala Y.C.**, Parikh P.A., Thermal pyrolysis of de-oiled cake of Jatropha: yield and characterization of bio-oil, *1st International Conference on Biofuels*, New Delhi, January 18-19, 2010.
12. **Rotliwala Y.C.**, Mehta G.M., Electro-Chemical waste treatment, *National conference of Society of electrochemist*, SVNIT, Surat, December 21-23, 2009.
13. **Rotliwala Y.C.**, Patel B.I., Patel M.L., Patel S.J., Implementation of CDM for sugar and distillery unit, *Annual convention of Sugar technologist*, Udaipur, November 2009.
14. **Rotliwala Y.C.**, Implementation of CDM project to enhance economical viability of biodiesel production, *International Conference on Waste Utilisation*, SVNIT, Surat, May 2008.
15. Parimal P.A., **Rotliwala Y.C.** and Barad J.M., Effect of co-processing on degradation of polyethylene for producing hydrocarbons, in *International Conference on Cleaner Technologies and Environmental Management*, Pondicherry, pp. 533-536, January 4-6, 2007.
16. **Rotliwala Y.C.**, Patel S.J., Cleaner production-need of the day for sustainable development, *Annual Convention of ISTE*, Erode, Tamilnadu, December 20-24, 2006.
17. **Rotliwala Y.C.** and P.A. Parikh; Oxygenated Diesel: A Remedy to reduce PM emissions, *57th Annual Session of Indian Institute of chemical Engineers (Chemcon-2004)*, Mumbai, December 27-30, 2004.
18. **Rotliwala Y.C.**, Chakraborty M.C., Pyrolysis of waste tyres to activated charcoal, *Annual Convention of Indian Institute of Chemical Engineers (Chemcon-1997)*, PU, Chandigarh, December 27-30, 2004.
19. **Rotliwala Y.C.** and P.A. Parikh; Reduction in emission of particulate matters using oxygenated diesel, *International Symposium on Fuels & Lubricants*, New Delhi, October 27-29, 2004.
20. **Rotliwala Y.C.**, Patel S.J., Bio-diesel-an alternative of diesel to reduce automobile emission, *National convention of urban air pollution*, SVNIT, Surat, October 10-12, 2003,
21. Patel S.J., **Rotliwala Y.C.**, Automobile norms-Indian & Euro standards, *National convention of urban air pollution*, SVNIT, Surat, October 10-12, 2003.
22. **Rotliwala Y.C.** and Chakraborty M.C., Semiconducting Polymers, *Annual Convention of Indian Institute of Chemical Engineers (Chemcon-2001)*, CLRI, Chennai, December 21-24, 2001.

23. **Rotliwala Y.C.**, Patel S.J., Desai J.R., Scope of testing & consultancy for educational institute, *State level convention of ISTE, SVMIT, Bharuch, 21st September, 2001.*

PATENT

Rotliwala Y. C. and Parikh P. A. have filed a patent in March 2013, titled "Method of production of Bio-oil and device thereof", *IP Provisional No. 827/MUM/2012 (Under examination stage)*

TEACHING EXPERIENCE

- **Principal, Pacific School of Engineering, Surat** **June 2016 to Till date**

- **S.N.P. Institute of Technology & Research Centre, Centre for Environmental Research**
Bardoli, Gujarat, India
- (a) Principal** **April 2015 to June 2016**

- (b) Head of Department (Chemical Engineering)** **June 2013- Present**
 - Handled consultancy projects for various Multinational companies and Government sponsored projects.
 - Raised infra-structural and academic facilities for the students of under graduate and post graduate at the Research Centre of Environmental Pollution Control Programmes.

- (c) Training and Placement Officer** **June 2009- June 2012**
 - Responsible for Training and Placement of under graduate students of the Institute.

- **N. G. Patel Polytechnic, Chemical Engineering Department** Bardoli, Gujarat, India
Head of Department **July 2000- June 2009**
 - Developed various laboratories of the department
- Senior Lecturer** **July 2000- June 2009**
 - Held lectures, tutorial sessions, lab experiments for the following courses:
 - Mass Transfer Operation,
 - Petroleum Refining and Petrochemicals
 - Plant Utilities and Instrumentation

- **S.V. National Institute of Technology, Chemical Engineering Department** Surat, Gujarat, India
Adhoc Lecturer **November 1997- June 2000**
 - Developed laboratories of the newly established departments.
 - Held lectures, tutorial sessions, lab experiments for the following courses:
 - Process Calculation,
 - Mass Transfer Operation
 - Petroleum Refining and Petrochemicals

PROFESSIONAL EXPERIENCE

- **S.N.P. Institute of Technology & Research Centre, Environmental Audit Cell**
Bardoli, Gujarat, India
Chief Co-ordinator
June 2009- Present
 - Supervised environmental audit (Environmental Management Plan) for more than 500 industries.
Some of renowned Industries are Oil and Natural Gas Corporation -India, Indian Oil Corporation Ltd.-India, Larson & Turbo Speciality Steel-India, Krishk Bharti Co-operative Ltd.-India, Gujarat Mineral Development Corporation-India, Gujarat State Energy Generation Corporation-India, Torrent Sugem Mega Power Project-India, Glenmark Pharmaceuticals-India, Kakrapar Atomic Power Station-India, Essar Steel-India, Essar Power-India, etc.
 - Environmental Management Adequacy verification and detailed project report for TSDF site.
 - Environmental management plan for the use of Pet-Coke at Thermal power plant.
 - Use of Psychometric evaporator for the treatment of effluent from dyes intermediate production unit.
 - Utilization of domestic sewage effluent for the treatment of final discharge effluent from the Penicillin G manufacturing unit.
 - Treatability study for the common effluent treatment plant (CETP) of textile effluent to achieve zero effluent discharge.
 - Technical study and verification of zero effluent schemes proposed by pharmaceutical industry. It mainly includes study and performance of multiple effect evaporator, reverse osmosis plant and cooling tower.
 - Design verification of incinerator as per the guidelines of Central pollution control board for pharmaceutical and agrochemical industry.
 - Laboratory scale treatability of black colored effluent discharge from the production of bleached cotton linters in the nitrocellulose plant and scale up to the requirement of the industry.
 - Experimental study of recovery of copper and zinc from brass ash with zero effluent discharge and implementation to industry.
 - Technical review of manufacturing process of biaxially oriented PET film (BOPET) and Metalized Polyester for the purpose of environmental clearance.
 - Estimation and assessment of pollution load due to waste management and resource recovery project using plasma thermal destruction and recovery (PTDR) technology.

- **Aaditya Aromedic and Bio Energies Pvt. Ltd.**
Navsari, Gujarat, India
Technical Advisor
April 2008- Present
 - Technical advisor for R & D projects on Bio-diesel from renewable sources as well as Diesel from waste plastics.

- **N. G. Patel Polytechnic, Environmental Audit Cell**
Bardoli, Gujarat, India
Chief Co-ordinator
July 2002- June 2009
 - Supervised environmental audit (Environmental Management Plan) for industries.

- Environmental Management Adequacy verification and detailed project reports.
- **Beta Organic Pvt. Ltd.,** Navsari, Gujarat, India
Trainee Engineer **April 1997- November 1997**
 - Production of Para-dichloro benzene and Sulphur monochloride.
 - Maintenance and process modification.

TECHNICAL SKILLS

- Measurement and Characterization techniques:
Gas Chromatography-Mass spectrometry, Thermogravimetric Analysis,
- Physico-chemical characterization techniques:
Viscosity (Brookfield Viscometer), Calorific Values (Bomb Calorimeter)

PROFESSIONAL AFFILIATIONS

- Life Member, Indian Institute of Chemical Engineers (IICHE) **December 2000-Present**
- Life Member, Indian Society of Technical Education **November 2012- Present**
- Fellow Member, International congress of Chemistry & Environment **June 2011- Present**
- PAUL HARRIS FELLOW, The Rotary Foundation of Rotary International **August 2011-Present**

EXTRACURRICULAR ACTIVITIES

- Two days workshop on CAD in Chemical Engineering **April 2015**
- Two days National Seminar on Renewable energy & Environmental Protection. **May 2013**
- STTP on Waste water treatment and utilization for domestic purpose. **May 2011**
- National level One day workshop on Sustainable development through Energy & environmental Audit, Synergy 2009. **October 2009**
- National level One day conference on Biodiesel-towards energy independence, BIOFUELS 2007 **May 2007**
- State level one day Interactive Meet on Occupational health & Safety Management System **September 2006**
- State level workshop on Environmental Management System for Sugar Industries, EMSSI 2005 **June 2005**
- Involved in social activities like adoption of schools, distribution of rain coats and woollen clothes to students of rural areas, matching grants for educational programmes, book bank for students of engineering, organizing medical camps for the patients of cataract, Thalassaemia awareness camp and blood donation camp. **June 2009- Present**

Workshops/Seminar/STTP Attended

- Three days training on " Environmental Impact Assessment" at Gujarat Pollution Control Board, Gandhinagar **July 2014**

- One day seminar on Nuclear Energy: Powering the Sustainable Development at S. N.P. Institute of Technology and Research Centre, Bardoli, Surat. **July 2013**
- Three days workshop on Nanotechnology: Applications for Sustainable Development at SVNIT, Surat. **April 2013**
- One week training on Environmental Awareness attended at Grass Roots Research & Creation India (P) Ltd., Noida. **February 2013**
- One day seminar attended on Carbon credit: Trading and its prospects at TIFEC, SCET, Surat. **March 2008**
- S.T.T.P. attended on Institutional Management & Accreditation, NITTTIR, Bhopal. **January 2007**
- One day work-shop attended on Pollution-An Anthropogenic disaster at BBIT, V. V. Nagar. **April 2006**
- One day work-shop attended on Importance & Relevance of PhD for achieving Excellence in Technical Education at SVNIT, Surat. **December 2005**
- Winter school (two weeks) attended on Waste water treatment emphasis on Anaerobic and Membrane separation technology at Pondicherry Engineering College, Pondicherry. **December 2002**
- Short term training (one week) attended on Methodology for Environmental Audit at En-vision Environmental Consultant, Surat. **December 2002**
- Short term training (four weeks) attended on Microsoft Certified Solution Developer (M.C.S.D.) at N. G. Patel Polytechnic, Bardoli. **October 2002**

Ph.D. Guide

- Gujarat Technological University, Ahmedabad approved Ph.D. guide
- Guiding two students

References

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- Dr. H. R. Patel, Director, S. N. Patel Institute of Tech. & Research Centre, Bardoli, Gujarat. Mobile No.: +91 962 432 1123, e-mail: dr.hrpatel@gmail.com
 - Dr. P. A. Parikh, Professor, Chemical Engineering Department, S.V.N. I. T., Surat, Gujarat. Mobile No.: +91 922 813 5425, e-mail: parimal.svr@gmail.com
 - Dr. P. A. Joshi, Dean, Engineering, D. D. University, Nadiad, Gujarat. Phone No.: +91 268 2520502, e-mail: pajoshi@ddu.ac.in