Curriculum Vitae Prof. Bharatkumar Z. Dholakiya Professor & Head, Department of Chemistry

Office Address

Department of Chemistry,

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SUMMARY:

- Twenty-five years of teaching experience.
- Two years' Industrial experience in Torrent Gujarat Biotech Ltd. (TGBL) as Production Executive.
- Extensive research experience as **Program Faculty (Post- Doctoral)** in acid and alkali catalyzed Bio-diesel manufacturing and reactor designing for continuous process.
- Recognized Ph. D. guide for Chemistry by SVNIT, Surat and Sardar Patel University, Vallabh Vidyanagar.
- Recognized Post-graduate teacher for the Industrial Chemistry by Sardar Patel University, Vallabh Vidyanagar.
- Schedule I Environmental Auditor, Gujarat Pollution Control Board (GPCB), Gandhinagar.
- Nodal Officer and Coordinator, Rashtriya Avishkar Abhiyan, Gandhinagar.
- Chairman, Sardar Vallabhbhai Patel School managed by SVNIT, Surat.

EDUCATION:

Ph.D. (Gold Medal): Sardar Patel University, Gujarat, India, 2006

M.Sc. (Gold Medal): Sardar Patel University, Gujarat, India, 1996

B.Sc. (Gold Medal): Sardar Patel University, Gujarat, India, 1994

MEMBERSHIP:

- > Fellow of The Royal Society of Chemistry, FRSC
- > Associate Fellow of International Academy of Physical Sciences
- > Fellow of Indian Chemical Society
- > Member of Board of Studies, CVM University, Vallabh Vidyanagar
- > Member of Board of Studies, P. P. Savani University, Surat
- > Member of Board of Studies, I. T. M. Vocational University, Vadodara
- > Member of Board of Studies, I. T. M. (SLS) University, Vadodara
- > Member of Board of Studies, Parul University, Vadodara
- > Fellow member of International Congress of Chemistry and Environment (F. I. C. C. E.).
- > Fellow member of the Indian Council of Chemists (LF 1386).
- > Fellow member of International Academy of Physical Sciences.
- > Life Member of Medicinal and Aromatic Plants Association of India.
- Life Member of Industrial Chemistry Student Association (MISA)
- > Life Member of Society for Materials Chemistry, BARC, India.
- > Life member of the Association of Environmental Analytical Chemistry of India (AEACI), BARC, India.
- > Member, Executive Council, International Academy of Physical Sciences.

TEACHING EXPERIENCE:

 I. <u>Professor in Chemistry:</u> Department of Chemistry, Sardar Vallabhbhai National Institute of Technology (SVNIT),

 Surat, Gujarat, India.
 21/12/2023 - Till date

 2. <u>Associate Professor in Chemistry:</u> Department of Chemistry, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, Gujarat, India.

 28/01/2019 - 20/12/2023

 3. <u>Assistant Professor in Chemistry:</u> Department of Applied Chemistry, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, Gujarat, India.
 13/03/2009 – 27/01/2019

4. <u>Senior Lecturer in Industrial Chemistry</u>: Department of Chemical Sciences, Natubhai V. Patel College of pure and applied sciences, Sardar Patel University, Gujarat, India.
 June 1998 – June 2008

PROFESSIONAL EXPERIENCE:

 1. <u>Program Faculty (Postdoctoral Research</u>): Institute of Environmental and Industrial Science (IEIS), Texas State

 University, San Marcos, Texas

 March 2008 – December 2008

INDUSTRIAL EXPERIENCE:

<u>Production Executive</u> Torrent Gujarat Biotech Ltd. (TGBL), Vil. Masar-391 421, Tal. Padra, Dist. Vadodara, Gujarat – India. Phone: (+91 2662-237212) June 1996 to June 1998

Name of the Scholar	Title of the Thesis	Year
Jigarkumar R. Patel	Study on Synthesis of Some Thiophene, Pyrrole, Furan Based Dione	28/11/2013
	Derivatives and their Biological Evaluation	
Bhusan Choubisa	Microbial Production of Lactic acid, Polylactic Acid (PLA) Synthesis and Its	15/07/2014
	Application	
Mahesh H. Malani	Studies on Design, Synthesis and Biological Evaluation of Carbazole and	25/09/2014
	Tetrazole based Heterocycles	
Bhavesh D. Dhorajiya	Studies on Design, Synthesis and Biological Evaluation of Barbiturates	29/09/2014
	and Thiobarbiturates Based Heterocyclic Scaffold	
Tejas S. Gandhi	Synthesis and Characterization of Sustainable Rigid Polyurethane Foam	09/12/2014
	from Cashew Nut Shell Liquid	
Gopal Chawada	Environmentally Friendly Organic-Inorganic Hybrid Coatings for Corrosion	04/02/2015
	Protection of Metal Alloys	
Mehul L. Savaliya	Eco-friendly solid reinforced heterogeneous acid & alkali catalysts for the	29/11/2017
	preparation of biodiesel using different feedstocks	
Jayanti S. Makasana	Phytochemical Investigations of Clitoria Ternatea (L.), Aegle marmelos (L.)	29/11/2017
	Corr. and Centella Asiatica (L.) Urb.: Important Medicinal Plants Used in	
	Indian Traditional Medicine System	
Amitkumar G. Shirke	Tung Oil Based Polyurethane and its Applications	16/12/2019
Ashishkumar Raychura	A Renewable Approach towards the Development of Wood Protective	03/01/2020
	Polyurethane Coatings from Vegetable Oil-Based Polyols	

PH.D. STUDENTS GUIDED:

M. Sc. DISSERTATION GUIDED: 37

RESEARCH PROJECTS:

Project under taken	Sponsoring Authority	Status	PI/CO-PI
Synthesis of Novel Pyrimidine-(2, 4, 6)-(1H, 3H, 5H) Trione	GUJCOST, Gandhinagar	Completed	PI
Based Anticancer Agents from Rasphanus Stavivus L.	GUJCOST/MRP/202042/		
(Brassieaceae) as Plant Source and Algae as Marine Source.	12-3/04/1319, 18-03-		
	2013.		
"Biodiesel Purification: Preparation of Novel Biodegradable	CSIR, New Delhi	Completed	PI
Purification Material from Saw Dust and Development of Cutting	02(0170)/13/EMR-II		
Cost Dry Wash Biodiesel Purification Technology."	Date:21-10-2013		
"Towards Higher Generation Biofuels: Characterization,	GUJCOST/MRP/2014-	Completed	CO-PI
Material Compatibility, Storage Stability and Engine	15/393 dated 30th June		
Performance"	2014		
"Synthesis and Biological Evaluation of Antrocinamomide C	Dean (R&C)/1503/2013-	Completed	PI
and Unnatural Analogues"	2014/priority-I/14		
Performance, emission and system compatibility studies of CI	Dean (R&C)/1503/2013-	Completed	CO-PI
engine using biodiesel obtained from high free fatty acid oil.	2014		
Waste Water Treatment: Polyoxometalates Hybrids as	GUJCOST/STI/2021-	On going	CO-PI
Adsorbent of Organic Dyes	22/3901		

PUBLICATIONS:

Patents (Process/Product):

- "3-halo derivatives of thiomaleic anhydride and process for the preparation thereof" Application No. 3599/MUM/2011, Patent no. 296833 (16/05/2018).
- "Controlled release of therapeutic agents using drug impregnated polymer film" Application No. 149/MUM/2012, Patent No. 298644 (09/07/2018).
- 3. "An improved process for the preparation of high molecular weight polylactic acid" Application No. 1348/MUM/2014, Patent No. 390158 (23/02/2022).
- 4. "Novel biologically active maleimide compounds and use thereof" Application No. 2604/MUM/2014, Patent no. 327323 (24/02/2020).
- 5. "Novel process for the preparation of furan 2, 5,- dione derivatives" Application No. 2607/MUM/2014, Patent no. 334762 (16/03/2020).
- "Polymer mortar composite from post-consumer PET modified with MMA and POFA and process for preparation thereof" Application no. 202121024624 dated 02/06/2021, Patent no. 387089 (21/01/2022)
- "Cardanol based bio-polyol of formula (I) and process for preparation thereof" Application no. 202221031336, Patent no. 480560 (11/12/2024).
- "Polymer mortar composite and a process for preparation thereof" Application no. 202223016579, Patent no. 508289 (07/02/2024).
- 9. "Cardanol based sol-gel derived polyurethane polymer mortar (SGPM) composites and process for preparation thereof" Application no. 202321089584 dated 29/12/2024.

Patents (Design):

- 1. "Hydrogen Sulfide Gas Generator " Patent no. 363344-001 (27/04/2022).
- 2. "Orthopaedic Implant" Patent No. 364383-001 (18/05/2022).

Book:

 Chemistry of Barbiturates and Thiobarbiturates based Chalcones : Fluorinated Barbiturates and Thiobarbiturates, LAP Lambert Academic Publishing, ISBN-13: 978-3-659-87091-0, ISBN-10: 3659870919, 2016.

Book Chapters:

- Polyester, ISBN 978-953-51-0770-5, , INTECH, Unsaturated Polyester Resin for Specialty Applications, 199-234, 2012.
- 2. Recent Trends in Water Science and Technology, ISBN 978-93-80358-90-1, First Edition, Charotar Publishing House Pvt. Ltd., Influence of oil and grease towards dairy waste water generation, 176-179, 2014.
- 3. Plants & Microbes, Discovery of Anticancer Agents from Marine World.
- 4. Plant Bioactive Compounds for Pancreatic Cancer Prevention and Treatment, ISBN: 978-1-63463-357-4, Plants in the Subcontinent as Potential Anti-Cancer Agents.
- "Prevention and control of mycotoxins for food safety and security of human and animal feed" in Elsevier book entitled "Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-technology: Volume 3: Fungal Metabolites and Nano-technology" ISBN: 978-0-12-821734-4, 2021.
- 6. Cashew Nut Shell Oil: A Versatile by-product of cashew Industry in Nova book entitled "Properties and Uses of Vegetable Oils, ISBN: 978-1-53619-207-0, 2021.
- Experimental Investigation on Corrosive Nature of Acid Oil Biodiesel on Selected Automotive Materials in Springer Book entitled "Advances in Clean Energy and Sustainability" ISBN no. 978-981-99-2278-9, 2023.
- Biosynthesis of nanomaterials and applications in biomedical industry in the Springer Book "Encyclopedia of Green Materials, ISBN no. 978-981-16-4921-9, 2023.
- 9. Utilization of Potential of PET Resin and Pond Ash in Cement Mortar in the Springer Book "Sustainable Building Materials and Construction", ISBN no. 978-981-16-8495-1, 2022.

Papers Published:

- 1. A review on polyurethane based multifunctional materials synthesis for advancement in textile coating applications, Journal of Polymer Research, DOI: 10.1007/s10965-024-03941-5, 2024.
- Valorization of tung oil derived free fatty acid by non-conventional method using novel microcrystalline cellulose based mesoporous acid catalyst for sustainable application: Process optimization using response surface methodology, Industrial Crops and Products, 212, 118256, 2024.
- 3. Redefining Construction: An In-Depth Review of Sustainable Polyurethane Applications. J Polym Environ, https://doi.org/10.1007/s10924-023-03161-w, 2024.
- 4. Preparation of sodium alginate/Cur-PLA hydrogel beads for curcumin encapsulation, 254(3), 128005, 2024.
- Effect of red mud and palm oil fuel ash as cement replacement on the properties of PET resin modified MMA polymer concrete at elevated temperature, Journal of Materials in Civil Engineering, 36(1), https://doi.org/10.1061/JMCEE7.MTENG-15682, 2024.
- Preparation and characterization of slow-release fertilizers loaded guar gum-g-poly methylmethacrylate-clpolylactic acid (Gg-g-PMMA-cl-PLA) hydrogel and its effect on wheat growth, International Journal of Biological Macromolecules, 253(4), 126979, https://doi.org/10.1016/j.ijbiomac, 2023.
- Covalent Organic Framework Impregnated with Silver and Copper Nanoparticles: An Advanced Approach for Catalytic Degradation of Organic Pollutants in Wastewater, ACS Appl. Mater. Interfaces, 16, 1, 1553–1563, https://doi.org/10.1021/acsami.3c15766, 2024.
- 8. Rational design of hierarchically porous sulfonic acid and silica hybrids with highly active sites for efficient catalytic biodiesel synthesis, Chemistry of Inorganic Materials, 1 (2023) 100005, 2023.
- 9. Novel cardanol based bio-polyols for sustainable construction applications. Polymers from Renewable Resources. 15(1):3-24. doi:10.1177/20412479231202092, 2024.
- An overview of kaolin and its potential application in thermosetting polymers, Materials Today Communications, 36, 106827, https://doi.org/10.1016/j.mtcomm.2023.106827, 2023.
- 11. Microbial Synthesis of Lactic Acid from Cotton Stalk for Polylactic Acid Production, Microorganisms, 11(8), 1931, https://doi.org/10.3390/microorganisms, 11081931, 2023.
- 12. Copper-Catalyzed Synthesis of Diaryl Sulfones via Cross-Coupling of Boronic Acids and p-Toluenesulfonyl Hydrazide, ChemistrySelect, 8(28), https://doi.org/10.1002/slct.202301681, 2023.

- 13. Iron Catalyzed N, N-Formyl Ethylation of Amines, Asian Journal of Organic Chemistry, doi.org/10.1002/ajoc.202300237, 2023.
- 14. A review on the synthesis of maleic anhydride-based polyurethanes from renewable feedstock for different industrial applications, Journal of Polymer Research, 30:175, doi.org/10.1007/s10965-023-03543-7, 2023.
- 15. Chemical Sciences in Sustainable Technology and Development, Environmental Science and Pollution research, doi.org/10.1007/s11356-023-27070-6, 2023.
- Exploration of HPTLC Technology for Rapid Chemical Fingerprinting and Simultaneous Determination of Bioactive Constituents from Clitoria ternatea Linn, ChemistrySelect, e202203217, 1 to 9, DOI:10.1002/slct.202203217, 2023.
- 17. A novel approach towards the use of an agro-industrial waste-based polymer composite delineated from palm oil fuel ash and red mud for sustainable construction applications, Asian Journal of Civil Engineering, https://doi.org/10.1007/s42107-023-00642-0, 2023.
- Effect of PET Resin as Cement Substitute on Properties of Cement Mortar Subjected to Different During Conditions, U. Porto Journal of Engineering, 9:1, 16-27, 2023.
- 19. Employing copper slag and pet polymer in self-compacting concrete, Materials Today: Proceedings, 93(3), 515-521, https://doi.org/10.1016/j.matpr.2023.08.378, 2023.
- 20. Ritambhara Jangir, Amorphous tetrazine–triazine-functionalized covalent organic framework for adsorption and removal of dyes, New J. Chem., 47(29), 13676-13686, DOI: 10.1039/D3NJ01913F, 2023.
- 21. The Recent advances in cobalt-catalyzed C(sp3)–H functionalization reactions, Organic & Biomolecular Chemistry, 21, 673-699, 2023.
- 22. Optimization of biodegradable cross-linked guar-gum-PLA superabsorbent hydrogel formation employing response surface methodology, International Journal of Biological Macromolecules, 223(A), 652-662, 2022.
- 23. Effect of calcined kaolin clay on mechanical and durability properties of pet waste-based polymer mortar composites, Construction and Building Materials, Elsevier, 318, 126027, 2022.
- 24. Recent advances in visible-light-mediated functionalization of olefins and alkynes using copper catalysts, *Chem. Commun.*, **58**, 7850-7873, 2022.
- 25. Use of PET resin and metakaolin in sustainable production of cement mortar, materials Today: Proceedings, 65(2), 1298-1306, https://doi.org/10.1016/j.matpr.2022.04.193, 2022.
- Effect of Pre-Hydrolyzed Tertaethoxysilane Addition in Organic-Inorganic Films Applied on Aluminium Alloy, J. Int. Acad. Phys. Sci., 26(1):99-107, 2022.
- 27. Recent Advances in Mono- and Difunctionalization of Unactivated Olefins, Asian Journal of Organic Chemistry, 10(12), 3201-3232, 2021.
- Role of organometallic complexes in olefin polymerization: a review report, Journal of Organometallic Chemistry, 953, 122066, https://doi.org/10.1016/j.jorganchem, 2021.
- 29. Evaluation of effectiveness of palm oil fuel ash as green filler and methyl methacrylate as additive in recycled PET resin polymer composite, Journal of Building Engineering, 43, 103107, https://doi.org/10.1016/j.jobe.2021.103107, 2021.
- Recent Developments in the Palladium Catalyzed/Norbornene-Mediated Synthesis of Carbo- and Heterocycles. Chemistry Select, 6, 8085-8106, 2021.
- Recent advances in directed sp2 C–H functionalization towards the synthesis of N-heterocycles and Oheterocycles, Chem. Commun., 57 (70), 8699-8725, 2021.
- 32. Use of PET Resin Derived in Various Glycols as a Cement Substitute, Design Engineering, 9, 16689-16704, 2021.
- 33. Impregnation of activated carbon in Polyurethane foam for enhanced solvent and oil absorption from water, Journal of Surface Science and Technology, Volume 36, Issue 3-4, 2020.
- 34. Supported Heterogeneous Silica Sulphuric Acid: Reusable Catalysts for Synthesis of Barbituric Acid Based Knoevenagel Adducts, Journal of International Academy of Physical Sciences, 347- 359, Vol. 24 No. 3, 2020.
- 35. Preparation of stable and optimized antibody-gold nanoparticle conjugates for point of care test immunoassays, Advanced Materials Letters, 11(1), 20011461, 2020.

- 36. Enhancement of physico-chemical and anti-corrosive properties of tung oil based polyurethane coating via modification using anhydrides and inorganic acid, Surface and Interfaces, 15, 18-190, 2019
- 37. Eco-friendly process for preparation of biodiesel from WFO over MTSA-Si catalyst: An innovative approach for the utilization of side product, Journal of Industrial and Engineering Chemistry, 64,352-366, 2018.
- Kinetics, Thermodynamics and Isothermic Evaluation in Sorption Study of Hazardous Dye Using Sodium Dodecylsulfate Physically Impregnated in Polyeter-Type Polyurethane Foam, Journal of Surfactants and Detergents, DOI 10.1002/jspd.12004, 2018.
- Development of Non-Traditional Vegetable-Oil-Based Two-Pack Polyurethane for Wood-Finished Coating: An Alternative Approach, Chemistry Select, 3,10837–10842, 2018.
- 40. A renewable approach toward the development of mahua oil-based wood protective polyurethane coatings: Synthesis and performance evaluation, Journal of Applied Polymer Science, 46722 (2 of 11), 2018.
- 41. Synthesis and performance evaluation of vegetable oil-based wood finish polyurethane coating, Bioresource Technology Reports 3, 88–94, 2018.
- 42. Development of wood protective polyurethane coatings from mahua oil-based polyetheramide polyol: a renewable approach, Journal Soft Materials, 16 (3), 2018.
- 43. A simple and sustainable process for the preparation of fuel grade esters using PE-Si composite: A reusable catalytic system, Renewable energy, 109, 1-12, 2017.
- 44. Extractive determination of bioactive flavanoids from butterfly pea (Clitoria ternatea Linn.), Research on Chemical Intermediates, DOI 10.1007/s11164-016-2664-y, 43(2), 783-799, 2017.
- 45. Modification of tung oil-based polyurethane foam by anhydrides and inorganic content through esterification process, Journal of Applied Polymer Science, DOI: 10.1002/APP.45786, 2017.
- 46. Cutting cost technology for the preparation of biodiesel using environmentally benign and cheaper catalyst, Catalysis Letters, 146:2313-2323, 2016.
- 47. Effect of seed treatment on germination and flavonoids diversity in accessions of butterfly pea (Clitoria ternatea), Indian Journal of Agricultural Sciences 86 (12): 1553–8, 2016.
- Assessment of chemical diversity in Clitoria ternatea accessions by an improved and validated HPTLC method, Indian Journal of Agricultural Sciences 86 (9): 1133–9, 2016.
- 49. Design, Synthesis and Comparative Study of Anti-Microbial Activities on Barbituric Acid and Thiobarbituric Acid based Chalcone Derivatives Bearing the Pyrimidine Nucleus, Chemical Sciences Journal, 7:2, 2016.
- 50. Extraction of Sapodilla Seeds Oil from Sapodilla Seeds and Study of Their Physico-Chemical Parameter, Journal of Applicable Chemistry, 5(6), 1267-1275, 2016.
- Influence of organic corrosion inhibitors on the corrosion performance of organic–inorganic hybrid coatings applied on aluminium alloy, Research on Chemical Intermediates, 42 (2), 545-557 DOI: 10.1007/s11164-015-2040-3:2015, 2016.
- 52. A simpler and highly efficient protocol for the preparation of biodiesel from soap stock oil using a BBSA catalyst, RSC Advances, Royal society of chemistry 5, 74416, 2015.
- 53. Novel applications of castor oil-based polyurethanes: a short review, Polymer Science, Series-B, Vol. 57, No. 4, pp. 292–297, 2015.
- 54. Mechanical, thermal and fire properties of sustainable rigid polyurethane foam derived from cashew nut shell liquid, International Journal of Plastics Technology, DOI 10.1007/s12588-015-9114-3, 2015.
- 55. Synthesis of Cashew Mannich Polyol via three Step Continuous Route and Development of Polyurethane rigid foams with Mechanical, Thermal and Fire Studies, J Polym Eng, DOI 10.1515/polyeng 2014-0176, 2014.
- 56. A notice on newly synthesized silica-induced boron trisulfonic acid catalyst towards biodiesel synthesis from refined soybean oil, Research on Chemical Intermediates, DOI 10.1007/s11164-014-1885-1, 2014.
- 57. Cellulose sulfuric acid catalyzed esterification of biodiesel derived raw glycerol to medium chain triglyceride: The dual advantage, Catalysis letters, DOI 10.1007/s10562-014-1275-8, 2014.
- "Nucleobase-Based Barbiturates: Their Protective Effect against DNA Damage Induced by Bleomycin–Iron, Antioxidant and Lymphocyte Transformation Assay", BioMed Research International, http://dx.doi.org/10.1155/ 2014/898670, 2014.

- 59. Current Trends in Separation and Purification of Fatty Acid Methyl Ester: A Review, Separation & Purification Reviews, Taylor & Francis, DOI: 10.1080/15422119.2013.872126, 2014.
- 60. Synthesis and Selective Cytotoxicity of Novel Biphenyl-based Tetrazole Derivatives, Medicinal Chemistry Research, DOI: 10.1007/s00044-014-1010-4, 2014.
- Tung Oil Based Polyurethanes: A short review, Journal of Polymer & Composites Volume 3, Issue 3 ISSN: 2321-2810(online), ISSN: 2321-8525, 2015.
- "In Vitro Cytotoxicity, Antioxidant, Bleomycin dependent DNA Damage and Immunomodulatory Evaluation of 1-(4-acetylphenyl)-3-aryloxypyrrolidine-2, 5-dione based Derivatives", Medicinal Chemistry Research, DOI 10.1007/s00044-014-0965-5, 2014.
- 63. "Hybrid Probes of Aromatic Amine and Barbituric Acid: Highly Promising Leads for Antibacterial, Antifungal and Anticancer Activities", Medicinal Chemistry Research, DOI 10.1007/s00044-014-0973-5, 2014.
- 64. An Experimental Investigation on Methyl Laurate Production via Direct Esterification of Solid Fatty Acid by using Amylum sulfuric acid: An efficient, biodegradable and recyclable solid acid catalyst", Research on Chemical Intermediates, DOI 10.1007/s11164-014-1548-2, 2014.
- 65. Environment friendly sol-gel pre-treatments for corrosion protection of aluminium alloys, Research Journal of Chemistry and Environment, Vol. 18(10), 22-27, 2014.
- Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid, GSTF International Journal of Chemical Sciences (JChem), Vol.1 No.2, 24-31, DOI 10.1007/s10562-014-1275-8, 2014.
- Green Chemistry Multi-Component Protocol for Formylation and Knoevenagel Condensation for Synthesis of (Z)-5-arylaminomethylene pyrimidine 2, 4, 6-trione Derivatives in Water, Green Chemistry Letters and Reviews, Taylor & Francis, 2014.
- An Efficient Synthesis and Antiviral Activity Evaluation of 1-[4-(5-Phenyl- 4, 5 dihydro-1H-pyrazole [& (4, 5 dihydroisoxazole)]-3-yl)-phenyl]-pyrrole-2, 5-dione derivates, Anti-Infective Agents, Bentham Science Publisher, Vol. 12, 104-111, 2014.
- A Concise Review on Acid, Alkali and Enzyme Catalyzed Transesterification of Fatty Acid Esters of Glycerol (FAEG) to Fatty Acid Methyl Ester (FAME) Fuel, International Journal of Chemical Studies Volume 1 Issue 3, 5-19, 2013.
- Thermal and Mechanical Properties of Adipic Acid Modified Unsaturated Polyester Resin and Jute Composite, International journal of pharmaceutical research scholars (IJPRS) ISSN NO.2277-7873 Vol 2, I-4, 131-138, 2013.
- Organic–inorganic hybrid sol–gel pretreatments for corrosion protection of mild steel in neutral and acidic solutions, Research on Chemical Intermediates, DOI 10.1007/s11164-013-1479-3, 2013.
- 72. Fatty acid methyl ester production from acid oil using silica sulfuric acid: Process optimization and reaction kinetics, Chemical Papers, Springer, DOI: 10.2478/s11696-013-0488-4, 2013.
- 73. Extraction protocol for isolation of CNSL by using protic and aprotic solvents from cashew nut and study of their physico-chemical parameter, Polish Journal of Chemical Technology, Vol. 15, No. 4, 2013.
- 74. Synthesis, Characterization and In Vitro Screening on Bacterial, Fungal and Malarial Strain of PiprazinylCyano Biphenyl Based Compounds, Bioorganic Chemistry, Science direct, Vol.51, Pages 16–23, 2013.
- 75. Design and synthesis of novel nucleobase-based barbiturate derivatives as potential anticancer agents, Medicinal Chemistry Research, Springer, DOI: 10.1007/s00044-013-0683-4, 2013.
- Green chemistry multi-component approach for N-formylation and Knoevenagel condensation for synthesis of thiobarbiturates in aqueous system, Research on Chemical Intermediates, Springer, DOI 10.1007/s11164-013-1190-4, 2013.
- 77. In vitro brain GABA-transaminase activity of 1-(4-acetylphenyl)-3-aryloxypyrrolidine-2, 5-dione derivatives, Journal of Pharmacy Research (JPR), Elsevier Vol. 6, 442-446, 2013.
- 78. Chemical Transformation of Triglycerides of Fatty Acid of Pongamiapinnata seed to Fatty Acid Methyl Esters by Microwave Irradiation, Chemical Sciences Journal, Vol. 2013, CSJ-104, 1-6, 2013.

- Synthesis and characterization of polylactic acid (PLA) by using SSA, CSA and TPA type solid acid catalyst system in polycondensation method, Journal of Macromolecular Science, Part A, Taylor& Francis, Vol. 50, 828 – 835, 2013.
- Synthesis and characterization of different types of epoxide-based Mannich polyols from low-cost cashew nut shell liquid, Research on Chemical Intermediates, Springer Vol. 39(2), DOI 10.1007/s11164-013-1034-2, 2013.
- Microbial Evaluation of Carbazonyloxy Based Chalcones, Research on Chemical Intermediates, Springer Vol. 39(2), DOI: 10.1007/s11164-012-0915-0, 2013.
- Synthesis of carbazonyloxy-based chalcones, Research on Chemical Intermediates, Springer 39, 1089-1100, DOI 10.1007/s11164-012-0668-9, 2013.
- 83. Measurement and evaluation of total dissolved solid (TDS) from dairy ETP and tis comparison with other plants and possible load reduction method, Acta Chimica & Pharmaceutica Indica, Vol. 3(1), 17-20, 2013.
- 84. A Study of Dairy Effluent on the basis of DO Value and a Comparative Analysis of ETP with respect to other Plants and Possible Load Reduction Method, International Journal of Pharmaceutical and Chemical Sciences, Vol. 2 (1) 187-190, 2013.
- Facile Michael-type addition of aromatic alcohols to N-(4-acetylphenyl)maleic imide, Research on Chemical Intermediates, Springer Vol. 38(9), DOI 10.1007/s11164-012-0932-z, 2012.
- Polyester Polyol Derived from Waste Poly (Ethylene Terephthalate) for Coating Application on Mild Steel, Chemical Sciences Journal, Vol. 2012, CSJ-76, 1-7, 2012.
- Synthesis, characterization, solvatochromic properties and antimicrobial evaluation of 5-acetyl-2-thioxodihydropyrimidine-4,6-dione-based chalcones, Medicinal Chemistry Research, Springer Vol. 22(9), 4075-4086, 2012.
- Synthesis and characterization of polylactic acid (PLA) using a solid acid catalyst system in the polycondensation method, Research on Chemical Intermediates, Springer Vol. 38(8), DOI 10.1007/s11164-012-0819-z, 2012.
- Silica Sulfuric acid catalysed Claisen-Schmidt Condensation of 1, 3, 4 Trisubstituted Pyrrole 2, 5 Dione to Chalcones, Research on Chemical Intermediates, Springer Vol. 34(8-9), DOI: 10.1007/s11164-012-0553-6, 2012.
- Extraction and Preservation Protocol of Anti-Cancer Agents from Marine World, Chemical Sciences Journal, Vol. 2012, CSJ-38, 1-12, 2012.
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- 92. Antimicrobial activities of synthesized and characterized 5-acetyl pyrimidine-2, 4, 6-(1H, 3H, 5H)-trione based chalcones, Der Pharma Chemica, Vol. 4(1), 141-146, 2012.
- 93. Microbial Production of Lactic Acid by Using Crude Glycerol from Biodiesel, Journal of Microbiology and Biotechnology Research, Vol. 2(1), 90-93, 2012.
- 94. Plant product (R) Roscovitine valuable inhibitor of CDKs as an anti-cancer agent, Der Pharmacia Sinica, Vol. 3 (1):131-143, 2012.
- 95. Synthesis of 1-(4-((E)-3-arylacryloyl) phenyl)-3, 4 dibromo-1H-pyrrole-2, 5-diones and screening for Anticandida and Antituberculosis Activity, Medicinal Chemistry Research, Vol. (21), 1977-1983, 2012.
- 96. Super Phosphoric Acid Catalyzed Biodiesel Production from Low-Cost Feed Stock, Archives of Applied Science Research, Vol. 4 (1), 551-561, 2012.
- 97. A Study of Dairy Effluent of Various Products on the Basis of oil and Grease Value and a Comparative Study Between Common ETP with respect to other Plants and Possible Load Reduction Method, Acta Chimica Pharmaceutica Indica, Vol. 2(3), 151-155, 2012.
- 98. Methods Involve in Protein Engineering for Study and Construction of Novel Proteins, Journal of Biochemistry and Biotechnology, Vol. 3(1), 55-67, 2012.
- Polymorphism in Organic Crystal Structure, Research Journal of Chemistry and Environment, Vol. 16(3), 134-145, 2012.

- 100.Synthesis, characterization & Antimicrobial activity of 4'-aminochalcone based dibromomaleimides, Der Pharma Chemica, Vol. 3(1), 458-466, 2011.
- 101.Plant derived compounds having activity against P388 & L1210 leukemia cells, Chemical Sciences Journal, Vol. 2011, CSJ 33, 1-16, 2011.
- 102.Antituberculosis, Antifungal and Thermal Activity of Mixed Ligand Transition Metal Complexes, Applied Organometallic Chemistry, John Willey & Sons, Vol. 24, 821-827, 2010.
- 103.Use of non-traditional fillers to reduce flammability of polyester resin composites, Polimeri, Vol. 30(1), 10-17, 2009.

PAPERS PRESENTED IN INTERNATIONAL/NATIONAL CONFERENCE:

1.	Novel Development of Bio-based Two-Pack Polyurethane for Wood Finished Coating from CNSO (Cashew Nut Shell Oil): An Agro- Industrial Waste.	International Conference on Natural Science and Environment (ICNSE), Toronto, Canada from 28 th – 29 th June, 2023.
2.	A coherent perceptive on hierarchically porous BTSA with silica species for efficient and sustainable conversion of soyabean oil to biodiesel.	2 nd International Conference on Chemical Sciences in Sustainable Technology and Development (IC ² S ² TD-2021) organized by Department of Chemistry, SVNIT, Surat in association with Department of Chemistry, Chung-Ang University, South Korea from 24 th -26 th November, 2021.
3.	Isolation and characterization of nanocrystalline cellulose from cotton plant stem.	^{2nd} International Conference on Chemical Sciences in Sustainable Technology and Development (IC ² S ² TD-2021) organized by Department of Chemistry, SVNIT, Surat in association with Department of Chemistry, Chung-Ang University, South Korea from 24 th -26 th November, 2021.
4.	Development of Bio-derived CNSL (Cardanol) based Functional Polymeric Materials.	International conference on Physical Science (ICPS-2021) organized jointly by DoC, DoP and AMHD, SVNIT, Surat from 5 th -6 th February, 2021.
5.	Catalytic Metamorphosis of Waste Frying Oil to Biodiesel: An Ultramodern Perspective for Effective Utilization of Side Derivatives.	International conference on Physical Science (ICPS-2021) organized jointly by DoC, DoP and AMHD, SVNIT, Surat from 5 th -6 th February, 2021.
6.	Feasibility of PET Resin as a Cement Substitute for Sustainable Construction.	5th International Conference on Building Materials and Construction (ICBMC 2020), Tokyo University of Science from 26 th -29 th February, 2020.
7.	Non-Conventional Insights into Preparation of Fuel Grade Esters from Non-Food Oil using Optimistic Mesostructured Catalyst.	International Conference on Chemical Sciences in Sustainable Technology and Development (IC ² S ² TD-2020) organized by Department of Chemistry, SVNIT, Surat in association with Department of Chemistry, Chung-Ang University, South Korea from 1 st -3 rd December, 2020.
8.	Development of Guar Gum and M. Oleifera Leaves based PLA hydrogel.	International Conference on Chemical Sciences in Sustainable Technology and Development (IC ² S ² TD-2020) organized by Department of Chemistry, SVNIT, Surat in association with Department of Chemistry, Chung-Ang University, South Korea from 1 st -3 rd December, 2020.
9.	Synthesis, Characterization, Engine Performance and Emission and Cold Flow Property Enhancement of Pongamia Pinnata Oil Based Fatty Acid Methyl ester (FAME).	25 th International Conference (CONIAPS XXV) on Physical and Biological Sciences at Cross-roads: Interdisciplinary Explorations and Exciting Challenges organized by Department of Chemistry, Guru Jambheshwar University of Science & Technology, Hisar from 29 th -31 st December, 2019.
10.	A greener approach: Preparation of biodiesel from waste frying oil using mesoporous MTSA- Si.	International Conference on Natural Science and Environment (ICNSE), Montreal, Canada from 29 th -30 th May 2019.
11.	Utilization of PET resin as cement substitute.	11 th Structural Engineering Convention–2018, Jadavpur University, Kolkata, India from 19 th – 21 st December 2018.
12.	Mahua Oil polyester amides as a Precursor for the Development of wood protective Polyurethane coatings: A Renewable Approach.	23rd International Conference of International Academy of Physical Science, Napal Academy of Science and Technology, Kathmandu, Nepal from 16 th – 18 th November, 2018.

13.	Development of Wood Protective Coating from	3 rd International Conference on Manufacturing, Material and
	Vegetable oil: A Green Approach.	Metallurgical Engineering (ICMMME-2018), Kuala Lumpur,
	0	Malaysia from 17th -19th March, 2018.
14.	An insight into the synthesis of fuel grade esters	6 th Annual International Conference on Chemistry, Chemical
	over PE-Si composite.	Engineering and Chemical Process, Global Science &
		Technology Forum, Singapore from 12 th – 13 th March, 2018.
15.	Development and performance Evaluation of	20 th international conference of International Academy of
	Vegetable Oil Based Wood Protecting	Physical Sciences (CONIAPS XX) on Recent Advances in
	Polyurethane Coating: An Alternative Approach.	Physical Science and Future Challenges, Faculty of science,
		Osmania University, Hyderabad from 14 th – 16 th July 2017.
16.	Polyurethane as modified anti-corrosive	International conference on environmental chemistry and
	material under the influence of anti-blistering	engineering (ICECE-17), Dubai, 30 th September 2017.
	agent.	
17.	Cutting cost technology for the preparation of	19th International Conference of International Academy of
	biodiesel using environmentally benign and	Physical Sciences (CONIAPS XIX) & symposium on Fixed
	cheaper catalyst.	Point and Dynamical Systems, Dept. of Maths & Dept. of
		Computer Science, Kumaun University, Nainital from 17th – 19th
		October 2016.
18.	A Material Compatibility Study of Automotive	7 th International Conference of Applied Energy (ICAE2015),
	Elastomers with high FFA based -Biodiesel,	Masdar Institute, Abu Dhabi-UAE from 28th - 31st March 2015.
	Energy Procedia 75 (2015), 105-110.	
19.	Synthesis, Characterization and In-vitro	34 th Annual Conference of Indian Council of Chemists,
	Screening on Bacterial, Fungal and Malarial	Department of Chemistry, Uka Tarsadia University, Bardoli,
	Strain of Tetrazole based Imidazole	Surat from 26 th – 28 th December 2015.
	Compounds.	
20.	A Green and Economical Viable Process for the	34 th Annual Conference of Indian Council of Chemists,
	Preparation of Biodiesel from High FFA Oil	Department of Chemistry, Uka Tarsadia University, Bardoli,
	using BBSA Catalyst.	Surat from 26 th – 28 th December. 2015.
21.	A facile approach towards biodiesel synthesis	3 rd Annual International Conference on Chemistry, Chemical
	from refined soybean oil over Silica sustained	Engineering and Chemical Process, Global Science &
	Boron tri sulfonic acid catalyst.	Technology Forum, Singapore from 26 th – 27 th January 2015.
22.	Synthesis, characterization and bioassay of	18 th international conference of International Academy of
	fluorinated quinoline derivatives.	Physical Sciences (CONIAPS XVIII) on recent Trends in
		Physical Science, Faculty of Science, University of Allahabad, Allahabad from 22 nd – 24 th December 2015.
23.	In vitro cytotoxicity, xanthene oxidase inhibition	17 th international conference of International Academy of
23.	& antimicrobial activities of thio-barbituric acid	Physical Sciences (CONIAPS XVII) on Emerging Trends in
	linked with various aromatic amines.	Physical Sciences & Technology, University of Rajsthan, Jaipur
	inked with various arothatic armites.	from 16^{th} - 18^{th} January 2015.
24.		
27.	Microporous silica induced MISA: Synthesis	International conference on Advances in Materials and Product
	Microporous silica induced MTSA: Synthesis and catalytic application in biodiesel synthesis	International conference on Advances in Materials and Product Design AMPD-2015 from 10 th -11 th January 2015
25	and catalytic application in biodiesel synthesis.	Design AMPD-2015 from 10 th -11 th January, 2015.
25.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and
25.	and catalytic application in biodiesel synthesis.ExtractionEfficiencyandHPLCMethodDevelopment forFlavonoid Analysis in Clitoria	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research
25.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka
	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant.	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014.
25. 26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical
	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant.	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science &
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid.	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014.
	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC-
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid.	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014.
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel fuel from low-cost feed stock by using phospho	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC- 2013, Dept. of Mechanical Engineering, SVNIT, Surat from 20 th
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel fuel from low-cost feed stock by using phospho sulfonic acid: A versatile and efficient solid acid	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC- 2013, Dept. of Mechanical Engineering, SVNIT, Surat from 20 th
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel fuel from low-cost feed stock by using phospho sulfonic acid: A versatile and efficient solid acid catalyst. Synthesis and Characterization of Fire	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC- 2013, Dept. of Mechanical Engineering, SVNIT, Surat from 20 th -22 nd November, 2013.
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel fuel from low-cost feed stock by using phospho sulfonic acid: A versatile and efficient solid acid catalyst. Synthesis and Characterization of Fire Resistance Polylactic Acid by Using	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC- 2013, Dept. of Mechanical Engineering, SVNIT, Surat from 20 th -22 nd November, 2013.
26.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel fuel from low-cost feed stock by using phospho sulfonic acid: A versatile and efficient solid acid catalyst. Synthesis and Characterization of Fire	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC- 2013, Dept. of Mechanical Engineering, SVNIT, Surat from 20 th -22 nd November, 2013. International Conference on Advanced Polymeric Materials (ICAPM 2013), Mahatma Gandhi University, Kottayam, Kerala,
26. 27. 28.	and catalytic application in biodiesel synthesis. Extraction Efficiency and HPLC Method Development for Flavonoid Analysis in Clitoria ternatea- A Memory Enhancer Medicinal Plant. Anticancer, Antibacterial, Antifungal Activities for Hybrid Probes of Aromatic Amine and Barbituric Acid. A convenient and efficient synthesis of biodiesel fuel from low-cost feed stock by using phospho sulfonic acid: A versatile and efficient solid acid catalyst. Synthesis and Characterization of Fire Resistance Polylactic Acid by Using Phosphotungstic Acid as Catalyst.	Design AMPD-2015 from 10 th -11 th January, 2015. International Conference on Current Status, Opportunities and Challenges in Medicinal Plants and Natural Product Research organized by C G Bhakta Institute of Biotechnology, Uka Trasadia University, Bardoli from 24 th – 26 th September, 2014. 2 nd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process, Global Science & Technology Forum, Singapore from 03 rd – 04 th February 2014. 2nd International Conference on Industrial Engineering ICIC- 2013, Dept. of Mechanical Engineering, SVNIT, Surat from 20 th -22 nd November, 2013. International Conference on Advanced Polymeric Materials (ICAPM 2013), Mahatma Gandhi University, Kottayam, Kerala, India from 11 th -13 th October 2013.

30.	Polyester Polyol Derived from Waste Poly(Ethylene Terephthalate) for Coating Application on Mild Steel.	15 th International Conference of International Academy of Physical Sciences (CONIAPS XV), Rajamangala University of Technology Thanyaburi, Thailand from 09 th -13 th December 2012.
31.	Studies on Effect of Various Solvents on Extraction of Cashew nut Shell Liquid (CNSL) and Isolation of Major Phenolic Constitutes from Extracted CNSL.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat from 22 nd -24 th December 2011.
32.	Synthesis of Carbazonyloxy β-Hydroxyamine Based Chalcones and Screening for Anti- Microbial Activity.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat from 22 nd -24 th December 2011.
33.	A Greener, Economical and Efficient Methodology for the Michael Addition of Phenols to 1-(4-Acetylphenyl)-1H-Pyrrole-2- Dione.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat from 22 nd -24 th December 2011.
34.	Synthesis, Characterization and Antimicrobial Activity of Pyrimidine Based Chalcones.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat from 22 nd -24 th December 2011.
35.	Advanced Chrome Free Organic-Inorganic Hybrid Pretreatments for Aerospace Aluminum Alloy 2024-T3: Application of Epoxy-Silane Sol- Gel Precursors.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat 22 nd -24 th December 2011.
36.	Bioconversion of Biodiesel Derived Raw Glycerol to Lactic Acid.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat 22 nd -24 th December 2011.
37.	Synthesis and Characterization of Polylactic acid (PLA) Using a Solid Acid Catalyst System in the Poly-condensation Method.	14 th International Conference, International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, 22 nd -24 th December 2011.
38.	Super Phosphoric Acid Catalyzed Biodiesel Production from Low-Cost Feed Stock.	I st IFIP International Conference on Bioinformatics, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat from25 th -28 th March 2010.
39.	Cutting Costs for Biodiesel Manufacturers with Fiber Reactors.	A Seminar on Commercial Presentation on Biodiesel for Lehigh Cement Ltd. USA, 6 th November 2008.
40.	Ultra Efficient Biodiesel Manufacturing using Fiber Film Reactor.	A Seminar on Commercial Presentation on Biodiesel for Merichem Ltd. USA, Institute of Environmental and Industrial Science, Texas State University, San Marcos, TX-USA, 15 th October 2008.
41.	Ultra Efficient Biodiesel Manufacturing.	A Seminar on Commercial Presentation on Biodiesel for Shell Ltd. USA, Institute of Environmental and Industrial Science, Texas State University, San Marcos, TX-USA, 24 th September 2008.
42.	Optimization of Process Parameters using "Design Expert-6 Software".	Seminar on "Design Expert-6", Institute of Environmental and Industrial Science, Texas State University, San Marcos, TX- USA, 02 nd September 2008.
43.	Recent advances in the use of non-traditional fillers to develop new ecological composites with reduced flammability and lowers cost of polyester resins.	UGC sponsored State Level one day Seminar on "Recent trends and future challenges in chemical sciences", Pramukh Swami Science & H. D. Patel Arts College, HNG University, Kadi, Gujarat, India, 28 th February 2008.

44.	Synthesis, Characterization and Glass	National Seminar on Novel Trends in Polymer Science &
	reinforced Composites of Low Styrene Emission	Technology, Dept. of Chemistry Sardar Patel Uni. V. V. Nagar-
	Unsaturated Polyester Resin having improved	388120, 8 th - 9 th March 2007.
	fire resistance and mechanical properties.	
45.	Reinforced polymer composites based on	State Level Seminar on "Recent Advances In Chemistry", V. P.
	acrylic modified unsaturated polyester resin-	& R. P. T. P. Science College, V. V. Nagar-388120, 18th - 19th
	mica having improved electrical and mechanical	June 2006.
	properties.	
46.	Kaolin filled unsaturated polyester resin based	XIX Gujarat Science Congress, Dept. of Chemistry Sardar Patel
	electrical laminates.	Uni. V. V. Nagar-388120, 19 th February 2005.

INTERNATIONAL / NATIONALCONFERENCES ORGANIZED

- Organized Ist IFIP International Conference on *Bioinformatics* at Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat on March 25-28, 2010.
- Organized 14th International conference of International Academy of physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity from 22-24 December 2011, SVNIT, Surat.
- Organized Virtual International Conference on Chemical Sciences in Sustainable Technology development (IC2S2TD-2020) in association with Department of Chemistry, Chung-And University, South Korea from 01st – 03rd December, 2020 at Department of Chemistry, SVNIT, Surat.
- Organized Virtual International Conference on Physical Sciences (ICPS-2021) under Diamond Jubilee Celebration in association with CCE from 05th – 6th February, 2021 at Department of Chemistry, SVNIT, Surat.
- Organized 2nd Virtual International Conference on Chemical Sciences in Sustainable Technology development (IC²S²TD-2021) in association with Department of Chemistry, Chung-And University, South Korea from 24th – 26th November, 2021 at Department of Chemistry, SVNIT, Surat.

WINTER, SUMMER SCHOOLS, STTP / SDP ORGANIZED

- Organized AICTE sponsored Staff Development Program (SDP) on "Recent developments and future trends of nanotechnology in modern science" at Applied Chemistry Department, SVNIT from 21/12/2009 to 25/12/2009.
- Organized DST sponsored Science Camp for INSPIRE Internship under INSPIRE Program from 20/12/2010 to 24/12/2010 at Applied Chemistry Dept., SVNIT, Surat.
- Organized DST sponsored Science Camp for INSPIRE Internship under INSPIRE Program from 12th -16th February, 2011 at Applied Chemistry Dept., SVNIT, Surat.
- Organized DST sponsored Science Camp for INSPIRE Internship under INSPIRE Program from 27th -31st August, 2011 at Applied Chemistry Dept., SVNIT, Surat
- Organized TEQIP-II sponsored One Week Short Term Training Programme on "Advanced Materials, Characterization and Applications in Materials Science and Engineering (AMCAME-2013)" from 2nd – 6th Sept, 2013 at Applied Chemistry Department, SVNIT, Surat.
- Organized TEQIP-II Sponsored Short Term Training Programme on Advanced Analytical Techniques for Materials Characterization (AATMC-2015) from 23/02/2015 to 27/02/2015 at Applied Chemistry Department, SVNIT, Surat.
- Organized TEQIP-II Sponsored Short Term Training Programme on Micro- & Macro Chemistry Meets Technological Developments (M²CMTD-2016) from 06/10/2016 to 10/10/2016 at Applied Chemistry Department, SVNIT, Surat.
- Organized TEQIP-II Sponsored Short Term Training Programme on Journey of Analytical Techniques in Chemical and Biological Sciences (JATCBS-2016) from 19/12/2016 to 24/12/2016 at Applied Chemistry Department, SVNIT, Surat.
- 9. Organized Short Term Training Programme on "Advanced Analytical Techniques in Chemistry (AATC-2020)" under Diamond Jubilee Celebration from 26/10/2020 to 30/10/2020 at Department of Chemistry, SVNIT, Surat.

- Organized Short Term Training Programme on "Micro- & Macro- Chemistry Meets Technological Developments (M²CMTD-2021)" under Diamond Jubilee Celebration from 05/07/2021 to 09/07/2021 at Department of Chemistry, SVNIT, Surat
- Organized Short Term Training Programme on "Journey of Analytical Techniques in Chemical and Biological Sceinces (JATCBS)" under Diamond Jubilee Celebration from 18/04/2022 to 22/04/2022 at Department of Chemistry, SVNIT, Surat.
- Organized "Fifteenth School on Analytical Chemistry (SAC-15)" jointly with Association of Environmental Analytical Chemistry of India (AEACI), Analytical Chemistry Division, Bhabha Atomic Research Centre, Mumbai from 12/12/2022 to 19/12/2022 at Department of Chemistry, SVNIT, Surat.
- Organized "School on Thermal Analysis- 2023 (STA-2023)" under the aegis of Indian Thermal Analysis Society (ITAS), Bhabha Atomic Research Centre (BARC), Trombay, Mumbai from 24/11/2023 to 25/11/2023 at Department of Chemistry, SVNIT, Surat.

HONORS AND AWARDS

- Awarded with ISERD Excellent Paper Award for the paper entitled "A green approach: Preparation of biodiesel from waste frying oil using mesoporous MTSA-Si for the category BEST CONTENT at the 165th ISERD International Conference held in Ottawa, Canada on 27-28th May 2019.
- 2. Awarded "Jawaharlal Nehru Memorial Fund Award" for securing first rank in B. Sc. Examination held by the Sardar Patel University during the year 1993-1994.
- Awarded Appreciation Certificate as Process Owner of Placement and Career Planning Committee to acknowledge efforts in bringing the honor of Achieving ISO 9001-2000 certificate to Natubhai V. Patel College of Pure & Applied Sciences.
- Won "M/S Overseas Silk Mills PVT. LTD., Surat" GOLD MEDAL for securing highest number of marks in the subject Industrial Chemistry from amongst all the students of T.Y.B.Sc. of V.P. & R.P.T.P. Science College in the year 1993-1994.
- Won "Shri Kuberbhai Vrajbhai Patel" GOLD MEDAL for passing the B.Sc. degree examination in the first class with Distinction and stood first class (i.e. 913/1280) in the external assessment in the theory examination of S. Y. B. Sc. and T.Y.B.Sc. Examination taken together by Sardar Patel University in the year 1994.
- 6. Won "Dipee Chemicals Private Limited (Ankleshwar)" GOLD MEDAL for passing the B.Sc. degree examination in the first class with Distinction obtaining highest number of marks (i.e. 542/720) in the external assessment (Theory only) from amongst the students who have passed the B.Sc. degree Examination offering 'Industrial Chemistry" as principal subject by Sardar Patel University in the year 1994
- Won "Sumanben Shantibhai Patel" GOLD MEDAL for securing highest number of marks in the subject Industrial Chemistry from amongst all the students of M. Sc. of V.P. & R.P.T.P. Science College in the year 1996.
- 8. Won "VPM Golden Jubilee" **GOLD MEDAL** for excellent work done during research for Ph.D. degree in the subject Chemistry at V.P. & R.P.T.P. Science College in the year 2006.
- Won Shri Mahijibhai and Shri Manibhai Devajibhai Patel prize for securing highest number of marks in the subject of Physics from amongst all the students of S.Y. B. Sc. of V.P. & R.P.T.P. Science College in the year 1993.
- 10. Won Shri Ramanbhai Ranchhodbhai Patel **prize** for securing highest number of marks in the subject Industrial Chemistry from amongst all the students of S.Y. B. Sc. of V.P. & R.P.T.P. Science College in the year 1993.
- 11. Won Shri Khusalbhai Kalidas Patel **prize** for securing highest number of marks in the subject Industrial Chemistry from amongst all the students of T.Y.B. Sc. of V.P. & R.P.T.P. Science College in the year 1993-1994.