Dr. HITESHKUMAR MANUBHAI PAREKH

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Dr. Hitesh M. Parekh, having Master in Inorganic Chemistry and Doctorate in Chemistry from Sardar Patel University, Vallabh Vidyanagar, Gujarat. He has 9+ years rich exposure in Pharmaceutical Research and Development in Industry, 2.5 years as Post Doctorate Fellow in School of Physics and Chemistry at University KwaZulu-Natal, Durban, South Africa, 7 years as Assistant Professor, Department of Chemistry, Gujarat University, Ahmedabad, and currently working as Associate Professor in Inorganic Chemistry at Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, India since June-2022. His area of research includes Supramolecular Chemistry, Homo- and Heterogeneous Catalysis, Peptide Chemistry and Coordination Chemistry. He has published 37 research articles in well-repute medium to high impact International journals and presented his research work in USA, Spain, South Africa and various parts of India. Two M. Phil and four Ph.D. students already completed their degree and three Doctorate students working under his guidance. He is recipients of UGC-BSR Research Start-Up grant of INR10,00,000.

Dr. Hitesh M. Parekh

Scholastic Credentials

Dec-2013 **Post Doctorate**at the University of KwaZulu-Natal, Westville Campus, Durban, South Africa **(Published 7 research Articles)**

"Cavitand-capped metalloporphyrin catalysts for selective oxidation of linear paraffins"

Prof. Holger B. Friedrich
School of Chemistry
Westville Campus
University of KwaZulu-Natal
Durban 4041 South Africa
Email: friedric@ukzn.ac.za
Tel: +27-31-2603107
Fax: +27-31-2603091

May-2006 **Ph. D. in Chemistry** from Sardar Patel University, VallabhVidyanagar, Gujarat, India **(Published 16 research Articles)**

"Studies on novel coordination compounds involving biological important ligands"

Dr. Mohan. N. Patel
Professor in Chemistry
Department of Chemistry
Sardar Patel University
VallabhVidyanagar, Gujarat
Email:jeenen@gmail.com
Cell: +91-9427549983

April-2002 **M. Sc. in Inorganic Chemistry** with Second Division from Sardar Patel University, Vallabh Vidyanagar, Gujarat, India

April-2000 **B. Sc. in Chemistry** with Second Division from M. B. Patel Science College, Sardar Patel University, VallabhVidyanagar, Gujarat, India

Career Highlights (Dr. Hitesh M. Parekh)

Since 09, June, 2022 with Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar as a Associate Professor.

- To teach theory in Inorganic chemistry.
- Practical for Semester I to IV and Dissertation for IV

June ‘15 to June ‘22 with Department of Chemistry, Gujarat University, Ahmedabad as a Assistant Professor.

- To teach theory in Inorganic chemistry and polymer chemistry for Post graduate degree.
- Practical, and Dissertation for Semester I to IV
- In-charge of Spinsolve NMR machine

Dec ‘13 to June ‘15 with Intas Pharmaceuticals Ltd., as Assistant Manager, Ahmedabad

- Worked as Team leader for the development on Carfilzomib (Peptide based Anticancer Drug), and successfully develop and ANDA file (Para IV) Vilazodone Hydrochloride Amorphous, Developed molecule in lab and Technologies transfer from laboratory to Kilo-lab, and Plant.

June ’11 to Dec ‘13 with University of kwaZulu-Natal as Post Doctorate Research Scholar, School of Chemistry, Durban, South Africa

- Working with the catalysis research group (catalysis.ukzn.ac.za) Prof. Holger B. Friedrich & Dr. Glenn Maguire in the area of homogeneous catalysis (Cavitand Chemistry).
- Work includes multistep organic synthesis to prepare Cavitand-capped Porphyrin analogue of Cytochrome P450 Enzyme for selective catalysis. Project is sponsored by “Centre of Excellence in Catalysis-DST/NRF-South Africa”.
- Involved in Oxidation of alkene using mixed nano-metal catalyst.
- Incharge of Homogeneous catalysis lab and supervised honours, masters and doctorate students.
- Safety officer of Homogeneous catalysis lab.

Sep ’08 to June ’11 with Dishman Pharmaceuticals and Chemicals Ltd., as Research Scientist (API & CRO division), Ahmedabad

- Organization mainly popular for Anti-Bacterial, Anesthetic, Anti-hyperlipidmic, Antibiotic, Oncology, Anti- tuberculosis, disinfectant & CRAMS products.
- Worked on molecules like, Besifloxacine, Pantoprazole sodium sesquihydrade , Paliperidone, Rapthyl acid PEA salt, Technologies transferred from laboratory to Kilo-lab, pilot plant and finally in plant using complete efficacy with online monitoring, and DMF filling

- Design multi step synthesis, Purification and Characterization by using modern Chromatographic and Spectroscopic Techniques
- Practical experience of scaling up products from 100mg to 1 Kg. Level

Oct ’06 to Sep ’08 with ZydusCadila Healthcare Ltd., as Executive Research Scientist (API division), Ankleshwar

- Developed molecules like Atorvastatin Ca, Cilensetron, Pantoprazole Na, Duloxetine HCl, Candesartan
- Reduced cost of Atorvastatin & Pantoprazole and technology transferred successfully
- Drug master filling

Mar ’06 to Oct ’06 with Cheminova India Ltd., as Senior Officer, Panoli, Ankleshwar

- Literature survey for new product & existing product for process development by using Sci-Finder and CA for Flufenacet (Herbicide) &Monocrotophos

Research Interest: Synthesis of Supramolecules and their applications as sensors, biological activity, Catalysis, Peptide Chemistry and applications, Coordination Chemistry, Homogeneous catalysis.

Research Publication:

- Full length Research articles 37(International)
- Book Chapters 02

Fellowship/Award:

- 2011 Postdoctoral Fellowship (University of KwaZulu-Natal, Durban, South Africa)
- 2012 Postdoctoral Fellowship (University of KwaZulu-Natal, Durban, South Africa)
- 2013 Postdoctoral Fellowship (University of KwaZulu-Natal, Durban, South Africa)

Academic Conquest:

- Recognized Ph. D. guide (Department of Chemistry, Gujarat University)
- Recognized Ph. D. guide (Department of Chemistry, Sardar Patel University)
- Recognized M. Phil. guide (Department of Chemistry, Gujarat University)
- Principal Investigator, UGC-BSR Research Start-up Grant (Department of Chemistry, Gujarat University)

Representation in Academic & Administrative Bodies:

1. Nodal Officer, M.Sc. centralized admission (2016-17)
2. Nodal Officer, M.Sc. centralized admission (2017-18)
3. Member of Research and Development Committee, Department of Chemistry, Gujarat University (2018-19)
4. Member of Research and Development Committee, Department of Chemistry, Gujarat University (2018-19)
5. Member of Advisory Committee, M.Sc. HPP program (2018-19)
6. Member of Advisory Committee, M.Sc. HPP program (2018-19)
7. Coordinator, Refresher course in Chemistry, UGC-HRDC, Gujarat University (2019-20)
8. Chairman, Inorganic Chemistry Examination (2018-19, 2019-20)
9. Member of Research and Development Committee, Department of Chemistry, Gujarat University (2020-21)
10. Member of Research and Development Committee, Department of Chemistry, Gujarat University (2021-22)
11. Member of API evaluation committee, IQAC, Sardar Patel University. (2022-23, 2023-24)
12. Member of Board of Studies, Silver Oak University, Ahmedabad. (2022-23)
13. Member of Chemical and Glassware purchase committee, Sardar Patel University. (2022-23, 2023-24)

Ph. D. Guided:

- Ms. Juhi Upadhyay **Degree awarded (Sep-2020)**
- Mrs. Jinal Gajjar **Degree awarded (March-2021)**
- Mr. Vrajlal Pansuriya **Degree awarded (April-2022)**
- Mr. Suryajit Rathod **Degree awarded (Dec-2023)**
- Mr. Meet Panchal Registered (**June-2023**)
- Ms. Zalak Thakkar Registered **(Oct-2023)**
- Ms. Disha Patel Registered **(Oct-2023)**

M. Phil Guided:

- Mr. Devansh Trivedi 2017 **Degree awarded**
- Ms. Payal Modi 2018 **Degree awarded**

PG student dissertation Guided:

- **M. Sc. Inorganic Chemistry: 83 students**

Research Grant Obtained:

1. Synthesis and Extraction Studies of a Novel Phloroacetophenon[4]arene Schiff Base Derivatives for Toxic Oxoanions and Toxic Metals. UGC-BSR Research Start-up grant Rs.10,00,000/-

Journals Reviewed

- ✓ Journal of Saudi Chemical Society
- ✓ South African Journal of Chemistry
- ✓ Scientia Iranica
- ✓ Molecular Crystals & Liquid Crystals
- ✓ Indian Journal of Chemistry Sec: A
- ✓ Journal of Biomolecular Structure & Dynamics
- ✓ Current Organic Chemistry
- ✓ Molecules

Conference/Seminar Contributions

- ✓ No. of conferences/seminars attended 22 (Presented Oral/Poster)
- ✓ No. of Workshop attended 05

Publications

List of Research Paper Publication in International Peer Reviewed Journals:

1. A newly fascinating approach to construct pillar[5]arene functionalized ester derivatives for nematic liquid crystalline behavior.

   Suryajit L. Rathod, Vinay S. Sharma, Anuj S. Sharma, Dhruvisha K. Patel, Pranav S. Shrivastav, **Hitesh M. Parekh**,

   Journal of Molecular Liquids, 2023, 392(1), 123491. https://doi.org/10.1016/j.molliq.2023.123491 (IF. 6.663)

2. Lower rim functionalized bowl-shaped resorcin[4]arene with alkyl arms: A simplified approach to build supramolecular liquid crystals
   Suryajit L. Rathod, Vinay S. Sharma, Kena R. Patel, Hitendra A. Mali, Pranav S. Shrivastav, **Hitesh M. Parekh**,
   Journal of Molecular Structure, 2023, *1275*, 134571. https://doi.org/10.1016/j.molstruc.2022.134571

3. Blue light-emitting quinolone armed Thiacalix[4]arene 3D-scaffold: a systematic platform to construct fluorescent liquid crystals with Bio-imaging applications.
   Survajit L. Rathod, Vinay S. Sharma, Anuj S. Sharma, Mohd Athar, Pranav S.Shrivastav, **Hitesh M. Parekh**
   Journal of Molecular Structure, 2022, *1270*, 133830. https://doi.org/10.1016/j.molstruc.2022.133830

4. Octa-substituted resorcinarene based supramolecules and its liquid crystallineand biological applications.
   Jinal A. Gajjar, Rajesh H. Vekariya, Vinay S. Sharma, Dhanji P. Rajani, Edwin Pithawala, **Hitesh M. Parekh**
   Chemistry Select, 2022, 29(7), e202200490 https://doi.org/10.1002/slct.202200490

5. Columnar liquid crystal based on the lower rim functionalization on resorcin[4]arene core.
   Survajit L. Rathod, Vinay S. Sharma, Hitendra A. Mali, **Hitesh M. Parekh**
   World Scientific News, 2022, 169, 43-54.

6. In vitro cytotoxic activity against MCF-7 Breast cancer cells line: Pregabalin and Chiral amino acid-based Peptides.
   V. B. Pansuriya, K. M. Kapadiya, S. L. Rathod, U. B. Prajapati, B. M. Vavaiya, J. B. Padariya, F. U. Vaidya, C. Pathak, **H. M. Parekh**
   Asian Journal of Chemistry, 2022, 34(4), 871-878.
   DOI: https://doi.org/10.14233/ajchem.2022.23566

7. Anti-cancer activity of Gabapentin and chiral amino acids based hybrid-peptides against MCF-7 cancer cell-line.

V. B. Pansuriya, K. M. Kapadiya, S. L. Rathod, U. B. Prajapati, B. M. Vavaiya, J. B. Padariya, F. U. Vaidya, C. Pathak, **H. M. Parekh**

Journal of Pharmaceutical Research International, 2021, 33(46A), 431-446. (Web of Science)

DOI: 10.9734/jpri/2021/v33i46A32886

8. Mesomorphic Properties, Microwave-assisted synthesis, and Antimicrobial Evaluation of Novel Schiff base Functionalized Resorcin[4]arene Derivatives.

   JinalGajjar, Rajesh H. Vekariya, Seema N Kher, Vinay S. Sharma,Dhanji P. Rajani, Hitesh Parekh,

   Molecular Crystals and Liquid Crystals, 2021, 715(1), 37-55.

   https://doi.org/10.1080/15421406.2020.1856615

9. Extraction of Toxic Metal ions by Resorcin[4]arene Schiff base derivatives

   Juhi B. Upadhyay, **Hitesh M. Parekh**

   South African Journal of Chemistry, 2020, 73, 157–162.

   https://doi.org/10.17159/0379-4350/2020/v73a22

10. Recent advances in upper rim functionalization of resorcin[4]arene derivatives: Synthesis and applications

    JinalGajjar, Rajesh H. Vekariya, **Hitesh M. Parekh**

    Synthetic Communication, 2020, 50(7), 2545-2571.

    https://doi.org/10.1080/00397911.2020.1766080**(I.F. 1.796)**

11. Resorcin[4]arene Schiff base derivatives: Synthesis, characterization, and extraction studies.

    JuhiB. Upadhyay, **Hitesh M. Parekh**

    Journal of Chemical Research, 2020, 44(11-12), 660-666.

    https://doi.org/10.1177/1747519820915871**(I.F. 0.593)**

12. Novel coumarin derivatives: Synthesis, characterization and antimicrobial activity.

    Chirag G. Naik, Gulam. M. Malik, **Hitesh M. Parekh**

    South African Journal of Chemistry, 2019, 72, 248-252. (I.F. 0.60)

http://dx.doi.org/10.17159/0379-4350/2019/v72a32

13. Synthesis of supramolecular receptors for amino acid recognition.
    JuhiUpadhyay, **Hitesh Parekh**
    Current Chemistry Letters, 2019, 8(4), 225-237.*DOI:* ***10.5267/j.ccl.2019.6.002***

14. Synthesis, design and characterization of supramolecular self-assembly of calix[4]resorcinare substituted LCs.
    JinalGajjar, Rajesh H. Vekariya, Vinay S. Sharma, **Hitesh Parekh**
    Molecular Crystals and Liquid Crystals, 2018, 668(1), 48-58. (I.F. 0.559)
    https://doi.org/10.1080/00397911.2020.1766080

15. Heterogeneous oxidation of alkenes: The role of silica supported bimetallic and trimetallic catalysts.
    Hitesh Parekh,JigneshValand, Holger B. Friedrich
    South African Journal of Chemistry, 2016, 69, 227-235. (I.F. 0.600)
    http://dx.doi.org/http://dx.doi.org/10.17159/0379-4350/2016/v69a29

16. Clathrate tetraldehydecavitand: Single crystal and NMR study.
    Pramod B. Pansuriya, **Hitesh M. Parekh,** Glenn E. M. Maguire, and Holger B. Friedrich
    Supramolecular Chemistry, 2016, 28(3-4), 329-334. (I.F. 1.66)
    https://doi.org/10.1080/10610278.2015.1102261

17. Tetramethoxyresorcin[4]arene-tetraester derivatives: synthesis, characterization, and thermal degradation studies.
    Pramod B. Pansuriya, **Hitesh M. Parekh,** Glenn E. M. Maguire, and Holger B. Friedrich
    Journal of Thermal Analysis and Calorimetry, 2015, 120, 653-665. (I.F. 2.471)https://doi.org/10.1007/s10973-014-4314-1

18. Preparation of enantiomerically pure C_4-symmetric tetramethoxyresorcarenes by using the (-)-(*S*)-1-Phenylethyl isocyanate chiral auxiliary.
    Amit S. Thakar, **Hitesh M. Parekh,**Pramod B. Pansuriya, Holger B. Friedrich and Glenn E. M. Maguire

European Journal of Organic Chemistry, 2014, 21, 4600-4609. https://doi.org/10.1002/ejoc.201402125(I.F. 3.029)

19. Crystal structure of 1,21,23,25-tetrapentyl-2,20:3,19-dimetheno-1*H*,21*H*,23*H*,25*H*-bis[1,3]dioxocino[5,4-*i*:5',4'-*I'*]benzo[1,2-*d*:5,4-*d'*]-bis-[1,3]benzodioxocin-7,11,15,28-tetral, $C_{56}H_{72}O_{14}$.
Hitesh M. Parekh,Pramod B. Pansuriya, Holger B. Friedrich and Glenn E. M. Maguire
Z. Kristallogr. NCS, 2014, 229, 479-481. (I.F. 0.29)
https://doi.org/10.1515/ncrs-2014-0167
20. Mixed Cu-Ni-Co nano-metal oxides: A new class of catalysts for styrene oxidation.
JigneshValand, **Hitesh Parekh,** Holger B. Friedrich
Catalysis Communications, 2013, 40, 149-153. (I.F. 3.674)https://doi.org/10.1016/j.catcom.2013.06.008

21. Bisthiourea: thermal and structural investigation.
Pramod B. Pansuriya, **Hitesh M. Parekh,** Holger B. Friedrich and Glenn E. M. Maguire
Journal of Thermal Analysis and Calorimetry, 2013, 111, 597–603. (I.F. 2.471)
https://doi.org/10.1007/s10973-012-2309-3

22. Coordination chain polymeric assemblies of trivalent lanthanides with multidentate Schiff base synthetic, spectral investigation and thermal aspects.
S. H. Patel, P. B. Pansuriya, M. R. Chhasatia, **H. M. Parekh**, and M. N. Patel
Journal of Thermal Analysis and Calorimetry, 2008, 91, 413–418. (I.F. 2.471)
https://doi.org/10.1007/s10973-007-8542-5

23. Polymeric coordination compounds derived from transition metal (II) with tetradentate Schiff bases: synthetic, spectroscopic, magnetic and thermal approach.
Sanjay H. Patel, **Hitesh M. Parekh,**Pragnesh K. Panchal, and Mohan N. Patel
Journal of Macromolecular Science Part A: Pure and Applied Chemistry, 2007, 44(6), 599-603. (I.F. 1.163)https://doi.org/10.1080/10601320701284881

24. Coordination polymeric assemblies of some d-block elements with Schiff bases and its characterization.
    P. K. Panchal, P. B. Pansuriya, **H. M. Parekh,** M. R. Chhasatia, and M. N. Patel
    Journal of Macromolecular Science Part A: Pure and Applied Chemistry, 2007, 44(1), 1-6. (I.F. 1.163)https://doi.org/10.1080/10601320601188000

25. Synthesis, physicochemical characteristic and biocidal activity of some transition metal mixed-ligand complexes with bidentate (NO & NN) Schiff bases.
    N. H. Patel, **H. M. Parekh,** and M.N. Patel
    Pharmaceutical Chemistry Journal, 2007, 41(2), 78-81. (I.F. 0.510)
    https://doi.org/10.1007/s11094-007-0017-2

26. Preparation of Schiff base complexes of Mn(II), Co(II), Ni(II), Cu(II), Zn(II) and Cd(II) and their spectroscopic, magnetic, thermal and antifungal studies.
    H. M. Parekh, and M.N. Patel
    Russian Journal of Coordination Chemistry, 2006, 32(6), 431-436. (I.F. 0.636)
    https://doi.org/10.1134/S1070328406060066

27. Transition metal(II) ions with dinegativetetradentate Schiff base. Synthesis, thermal, spectroscopic and coordination aspects.
    H. M. Parekh, P. K. Panchal, and M. N. Patel
    Journal of Thermal Analysis and Calorimetry, 2006, 86(3), 803-807. (I.F. 2.471)
    https://doi.org/10.1007/s10973-005-7284-5

28. In-vitro fungitoxic activity of some Schiff bases and their oxovanadium(IV) complexes.
    H. M. Parekh, P. K. Panchal and M. N. Patel
    Toxicological and Environmental Chemistry, 2006, 88(4), 579-586. (I.F. 1.095)
    https://doi.org/10.1080/02772240600834638

29. Mode of antifungal activity and Synthesis of mixed-ligand complexes.
    H. M. Parekh and M. N. Patel
    Pharmaceutical Chemistry Journal, 2006, 40(12), 655-659. (I.F. 0.510)
    https://doi.org/10.1007/s11094-006-0213-5

30. Synthesis and antifungal activity of oxovanadium(IV) complexes with Schiff bases.
    H. M. Parekh, P. K. Panchal, and M. N. Patel
    Pharmaceutical Chemistry Journal, 2006, 40(9), 494-497. (I.F. 0.510)
    https://doi.org/10.1007/s11094-006-0162-z

31. Synthesis, structural characterization and antifungal activity of the Schiff bases and their transition metal mixed-ligand complexes.
    Hitesh M. Parekh,Saurabh R. Mehta, and M. N. Patel
    Russian Journal of Inorganic Chemistry, 2006, 51(1), 67-72. (I.F. 0.822)
    https://doi.org/10.1134/S003602360601013X

32. Bactericidal activity of different oxovanadium(IV) complexes with Schiff bases and application of chelation theory.
    Pragnesh K. Panchal, **Hitesh M. Parekh,**Pramod B. Pansuriya, and Mohan N. Patel
    Journal Enzyme Inhibition and Medicinial Chemistry, 2006, 21(2), 203-209. **(I.F. 4.027)**
    https://doi.org/10.1080/14756360500535229

33. Synthesis and physicochemical study of 3d metal coordination polymers with dinegativetetradentate (NSNS) Schiff base.
    P. K. Panchal, **H. M. Parekh,** P. B. Pansuriya, and M. N. Patel
    Polish Journal of Chemistry, 2006, 80, 989-992.

34. Characterization and antifungal study of genuine oxovanadium(IV) mixed-ligand complexes with Schiff bases.
    H. M. Parekh, P. B. Pansuriya, and M. N. Patel
    Polish Journal of Chemistry, 2005, 79, 1843-1851.

35. Synthesis, structural elucidation, electro-chemical behaviour and fungitoxic activity of transition metal(II) mixed-ligand complexes with some Schiff bases.
    Hitesh M. Parekh, and Mohan N. Patel
    Toxicological and Environmental Chemistry, 2005, 87(4), 449-461. (I.F. 1.095)
    https://doi.org/10.1080/02772240500301241

36. Preparation, characterization and toxic activity of oxovanadium(IV) mixed-ligand complexes.
    Pragnesh K. Panchal, **Hitesh M. Parekh,** and Mohan N. Patel
    Toxicological and Environmental Chemistry, 2005, 87(1-4), 313-320. (I.F. 1.095)
    https://doi.org/10.1080/02772240500126911

37. Synthesis, characterization and biological evaluation of manganese(II), cobalt(II), nickel(II), copper(II) and cadmium(II) complexes with monobasic (NO) and neutral (NN) Schiff bases.
    Nilesh H. Patel, **Hitesh M. Parekh,** and Mohan N. Patel
    Transition Metal Chemistry, 2005, 30(1), 13-17. (I.F. 1.016)
    https://doi.org/10.1007/s11243-004-3226-5