### Prof. (Dr.) Hitendrakumar Mangubhai Patel, FRSC

**Designation**: Professor

**Specialization**: Organic Chemistry

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Shastri Marg, Vallabh Vidyanagar-388 120,

Gujarat, India

### **Educational Qualifications:**

- Graduated in Science with Chemistry as principal subject from South Gujarat University in the year 1994.
- Masters in Science with Organic Chemistry as principal subject from South Gujarat University in the year 1996.
- Doctor of Philosophy in Chemistry from Sardar Patel University on the title "Synthesis, Characterization and Material Applications of azo dyes based on derivatives of hydroxybenzophenones" in the year 2008.

### **Academic Experience:**

- Lecturer in Chemistry, St. Xavier's College, Ahmadabad 15<sup>th</sup> March 1997 to 25<sup>th</sup> September 1998.
- Lecturer in Chemistry, V. P. & R. P. T. P. Science College, Vallabh Vidyanagarfrom 26<sup>th</sup> September 1998 to 14<sup>th</sup> March 2003.
- Sr. Lecturer in Senior Scale, V.P. & R.P.T.P. Science College, Vallabh Vidyanagar from 15<sup>th</sup> March 2003 to 14<sup>th</sup> March 2008.
- Sr. Lecturer in Selection Scale, V.P.& R.P.T.P. Science College, Vallabh Vidyanagar from 15<sup>th</sup> March 2008 to 14<sup>th</sup> March 2011.
- Associate Professor in Chemistry, V. P. & R. P. T. P. Science College, Vallabh Vidyanagar, 15th March 2011 to 4<sup>th</sup> February 2015.
- Associate Professor in Organic Chemistry, Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, 5<sup>th</sup> February 2015 to 28<sup>th</sup> October 2016.
- Professor in Chemistry, Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, 29<sup>th</sup> October 2016 to continue....

### **Research Area:**

Organic Synthesis, Sustainable Chemistry, Development of Crystals, Types of Catalysis, Multi-Component Reactions, Ionic Liquids and DESs, Medicinal Chemistry, Natural Products, Spiro-Heterocycles and Bio-Organic Molecules, Anti-proliferative Activity, Synthesis of Various types of Dyes and their Intermediates.

**Expertise**: Organic Chemistry

No. of Publication : 30

### **List of Publications**

List of Publications by Prof. (Dr.) H. M. Patel: (Total Citations: 422; h-index: 13; i10-index: 17)

### I. Peer-Reviewed Research Papers

- Synthesis and in vitro study of antiproliferative benzyloxy dihydropyrimidinones. Ruturajsinh M Vala, Mayank G Sharma, Divyang M Patel, Adrián Puerta, José M Padrón, Venkatachalam Ramkumar, Ramesh L Gardas, Hitendra M Patel, Archiv der Pharmazie, 2021, (I.F.= 2.59), DOI: 10.1002/ardp.202000466
- 2. Pyridine-2-Carboxylic Acid As An Effectual Catalyst For Rapid Multi-Component Synthesis Of Pyrazolo[3,4-B] Quinolinones. Mayank G. Sharma, Ruturajsinh M. Vala and Hitendra M. Patel, RSC Advances. 2020, 10, 35499-35504. (I.F. = 3.119).

- 3. A novel substrate directed multicomponent reaction for the synthesis of tetrahydrospiro [pyrazolo[4,3-f]quinoline-8,5'-pyrimidines and tetrahydro-pyrazolo[4,3-f]pyrimido[4,5-b] quinolines via selective multiple C-C bonds formation under metal-free reaction condition, Divyang M. Patel a , Hetal J. Patel a , José M. Padrón b , and Hitendra M. Patel\*,RSC Advances, 2020, 10(33), 19600-19609. (I.F. = 3.119).
- 4. One-Pot Assembly for Synthesis of 1,4-Dihydropyridine Scaffold and Their Biological Applications., Mayank G. Sharma, Juhee Pandya, Divyang M. Patel, Ruturajsinh M. Vala, V. Ramkumar, Raghunandankumar Subramanian,Vivek K. Gupta, Ramesh L. Gardas, Anuradha Dhanasekaran & Hitendra M. Patel, Polycyclic Aromatic Compounds, 2019, 39 (5), 395-485. (I.F. = 1.894).
- 5. Trimethylglycine-Betaine-Based-Catalyst-Promoted Novel and Ecocompatible Pseudo-Four-Component Reaction for Regioselective Synthesis of Functionalized 6, 8-Dihydro-1' H, 5 H-spiro [[1, 3] dioxolo [4, 5-g] quinoline-7, 5'-pyrimidine]-2', 4', 6'(3' H)-trione Derivatives DM Patel, HM Patel ACS Sustainable Chemistry & Engineering, 2019, 7(22), P.P.18667–18676. (I.F. = 7.632).
- 6. Impact of an aryl bulky group on a one-pot reaction of aldehyde with malononitrile and Nsubstituted 2-cyanoacetamide. Ruturajsinh M. Vala, Divyang M. Patel, Mayank G. Sharma and Hitendra M. Patel, RSC Advances, 2019,9, 28886-28893. (I.F. = 3.119).
- 7. Hydroxyl Alkyl Ammonium Ionic liquid assisted Green and One-potregioselective access to Functionalized Pyrazolodihydropyridine core and theirpharmacological evaluation. Divyang M Patel, Mayank G Sharma, Ruturajsinh M Vala, Irene Lagunes, AdriánPuerta, José M Padrón, Dhanji P Rajani, Hitendra M Patel, Bioorganic chemistry, 86,2019,137-150. (I.F. = 4.831).
- 8. A Practical Green Visit to the Functionalized [1,2,4]Triazolo[5,1- b ] quinazolin-8(4 H) one Scaffolds Using the Group-Assisted Purification (GAP) Chemistry and Their Pharmacological Testing. DM Patel, RM Vala, MG Sharma, DP Rajani, HM Patel, Chemistry Select, 4(3),2019, 1031-1041. (I.F. = 1.811).
- 9. Anti-Proliferative 1,4-Dihydropyridine and Pyridine Derivatives Synthesized through a Catalyst-Free, One-Pot Multi-Component Reaction. Mayank G.Sharma, Ruturajsinh M. Vala, Divyang M. Patel, Irene Lagunes, Miguel X. Fernandes, Dr. José M. Padrón, Venkatachalam Ramkumar, Dr. Ramesh L. Gardas, Prof. Hitendra M. Patel, ChemistrySelect, 3(43), 2018, 12163–12168. (I.F. = 1.811).
- 10. Synthesis, molecular docking and biological evaluation of Mannich products based on thiophene nucleus using ionic liquid. Hitendra M. Patel\*, Dhanji PRajani, Mayank G. Sharma, Hardik G Bhatt. Letters in Drug Design & Discovery, 15(10) 2018. (I.F. = 1.169).
- 11. Synthesis, Characterizations and Microbial Studies of Novel Mannich Products Using Multicomponent Reactions., Hitendra M. Patel, Current BioactiveCompounds.14(3), 278-288,2018. (I.F. = 0.69).

- 12. Green approach for synthesis of bioactive Hantzsch 1,4-dihydropyridinederivatives based on thiophene moiety via multicomponent reaction. Sharma M.G, Rajani D.P., Patel H.M.\*, Royal Society Open Science, 4 (6) 2017. (I.F. = 2.68)
- 13. Facile synthesis and biological evaluation of new Mannich products as potential antibacterial, antifungal and antituberculosis agents: Molecular docking study., Hitendra M. Patel\*, Kinjal D. Patel, Hitesh D. Patel, Current Bioactive Compounds, 13(1),2017. (I.F. = 0.69).
- 14. Synthesis of New Mannich Products Bearing QuinolineNucleous Using Reusable Ionic Liquid and Antitubercular Evaluation., Hitendra M. Patel, Green and Sustainable Chemistry, 5, 137-144, 2015. (G.I.F. = 3.08)
- 15. Solvent-Free Synthesis Of Mannich Products Catalyzed By Ethyl Ammonium Nitrate As Reusable Ionic Liquid And There In Vitro Microbial Studies., Hitendra M. Patel, International Journal of Recent Scientific Research, 2014, 5(10), 1799-1805.
- 16. Design, Synthesis And Biological Evaluation Of New Mannich Products Using Ethyl Ammonium Nitrate As Reusable Ionic Liquid., Hitendra M. Patel, IOSR Journal Of Applied Chemistry, 2014, 7(8), Ver. II., 40-47,.
- 17. Synthesis, Characterization And Dyeing Assessment Of Novel Bisazo-Acid Dyes Derived From2-Hydroxy-4-Methoxy Benzophenone-5-Sulphonic Acid.,Hitendra M. Patel, International Journal of Scientific & Engineering Research., 2014, 5(1), 2213-2217.
- 18. Synthesis, Structure Investigation And Dyeing Assessment Of Novel Bisazo Disperse Dyes Derived From U V Absorbing Material. Hitendra M. Patel. IOSR Journal of Applied Chemistry. 2014, 6(5), 51-55.
- 19. Synthesis, Characterization And Application Of Some Novel Mordent And Heterocyclic Disperse Dyes Based On Polyester And Wool Fibers., Hitendra M. Patel, Orbital The Electronic Journal Of Chemistry. 2012, 4(3), 159-170.
- 20. Synthesis, Characterization And Dyeing Behaviour Of Heterocyclic Acid Dyes and Mordent Acid Dyes On Wool And Silk Fabrics., Hitendra M. Patel., J. Serb. Chem. Soc. 2012, 77(11), 1551-1560. (I.F. =1.097)
- 21. Material Applications Of Novel Heterocyclic Disperse And Mordent Dyes Based On 2-Butyl-3-(4-Hydroxybenzoyl)Benzofuran, Hitendra M. Patel, Journal of Advances In Applied Science Research. 2012, 3(1), 235-241,.
- 22. The Synthesis, Antimicrobial Activity And Absorption Studies Of Some Novel Heterocyclic Dyes Based On 4-Hexylbenzene-1,3-Diol., Hitendra M. Patel, European Journal of Chemistry, 2012, 3(1), 44-50,. (I.F.=0.4531)
- 23. Dyeing Assessment Of Some Novel Mordent And Heterocyclic Disperse Dyes Based On Dihydrobenzofuran Derivatives On To Polyester And Wool Fibers., Hitendra M. Patel, Der Chemica Sinica. 2012, 3(1),175- 181,.

- 24. Synthesis, Characterization And Application Of Some Novel Mordent And Heterocyclic Disperse Dyes Based On 2-Butyl-3-(4-Hydroxybenzoyl) Benzofuran., Hitendra M. Patel, Der Chemica Sinica. 2011, 2(6), 89-96.
- 25. Synthesis, Characterization And Dyeing Assessment Of Novel Acid Azo Dyes And Mordent Acid Azo Dyes Based On 2-Hydroxy-4-Methoxybenzophenone-5-Sulfonic Acid On Wool and Silk Fabrics, Hitendra M. Patel, Bharat C. Dixit, Journal Of Saudi Chemical Society. 2014, 18(5), 507-512. (I.F. =3.517)
- 26. Synthesis, Characterization And Printing Application Of Solvent Dyes Based On 2-Hydroxy-4-N-Octyloxybenzophenone., Hitendra M. Patel, Bharat C. Dixit, E-Journal Of Chemistry. 2011, 8(2), 615-620. (I.F. =1.790)
- 27. Material Applications Of Novel Disperse And Mordent Azo Dyes Based On 2-Hydroxy-4-Methoxy Benzophenone., Hitendra M. Patel, Bharat C. Dixit, Asian Journal of Chemistry. 2010, 22(2), 921-928.
- 28. Synthesis, Characterization And Dyeing Assessment Of Novel Acid Azo Dyes And Mordent Acid Azo Dyes Based On 2-Hydroxy-4-Methoxybenzophenone On Wool And Silk Fabrics., Hitendra M. Patel, Bharat C. Dixit, Ritu B. Dixit And Dhirubhai J. Desai, Journal of Serb. Chem. Soc. 2010, 75(5), 605-614. (I.F. = 1.097)
- 29. Studies on Dyeing Performance Of Novel Acid Azo Dyes And Mordent Acid Azo Dyes Based On 2,4-Dihydroxybenzophenone., Hitendra M. Patel, Bharat C. Dixit, Dhirubhai J. Desai and Ritu B. Dixit, E-Journal of Chemistry. 2009, 6(2), 315-322. (I.F. =1.790)
- 30. Synthesis and Application Of New Mordent And Disperse Azo Dyes Based On 2, 4-Dihydroxybenzophenone., Hitendra M. Patel, Bharat C. Dixit And Dhirubhai J. Desai, Journal of Serb. Chem. Soc. 2007, 72, 119-127. (I.F. = 1.097)

### **II. Published Books:**

Sr. No.	Title of the Book	Publisher
1	Synthetic Dyes and Their	LAP LAMBERT Academic Publishing GmbH
	Applications (Part - 1)	& Co.,Germany ISBN:978-3-8473-4584-8
2	Synthetic Dyes and Their	LAP LAMBERT Academic Publishing GmbH
	Applications(Part - 2)	& Co.,Germany ISBN:978-3-8484-3761-0
3	Study Guide To Chemistry For	LAP LAMBERT Academic Publishing GmbH
	(First year B. Sc.)	& Co.,Germany ISBN: 978-3-659-26367-5

## List of Minor/ Major projects carried out

Sr.	Title	Agency	Period	Grant/Amount
No.				Mobilized
				(Indian Rupees)
1.	Synthesis, Characterization and	UGC, New	2012-2015	3,19000/-
	Biological Activity of Some New			
	Heterocyclic Compounds Based on U.			
	V. Absorbing Materials using Mannich			
	Reaction. (Completed)			
2.	An efficient synthesis of biologically	DST-SERB,	2016-2021	48,62000 /-
	active compounds via one-step synthesis	New Delhi		
	from diverse heterocyclic scaffolds			
	(Completed)			

# **Others**

## Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

Sr.	Name of Award	Awarding Agency	Year
No			
1	Elected Member	Organic Division Council, Royal	2020 to 2023
		Chemical Society, U.K.	
2	Fellow	Royal Chemical Society, U.K.	2021 to continue.
3	Member	American Chemical Society, U.S.A.	2016 to continue.
4	Member	Royal Chemical Society, U.K.	2015 to continue.
5	Reviewer Panel Member	RSC Advances Journal, UK	2020 to continue.
6	Review Editor	Frontiers in Chemistry(Organic	2019 to continue.
		Section), Switzerland	
7	Member of Editorial Board	Arkivoc Journal, USA	2018 to continue.
	Referees		
8	Editorial Board Member	Frontiers in Chemistry, Switzerland	2019 to continue.
9	Life Member	Indian Chemical Society	2011 to continue.
10	Life Member	Indian Society of Chemistry and	2018 to continue.
		Biology	
11	Life Member	The Association of Chemical	2010 to continue.
		Technologist of India	
12	Member Advisory	Sardar Patel University, V.V. Nagar,	2012 to continue.
	Committee for SC/ST Cell,	Gujarat	
13	Member of IQAC (Worked	Sardar Patel University, V.V. Nagar,	March 2015 to

	as Convener for Criterion-I)	Gujarat	2017
14	CAS Registry Innovator	A Division of American Chemical	2020
	Certificate	Society, USA	
15	Received Travel Award(To	DST-SERB	2019
	attend the ISGC 2019 at		
	Larochelle, France 2019)		
16	Outstanding Contribution	Journal of Molecular Structure,	2018
	Award for reviewing Journal	Elsevier	
17	Brand Ambassador	Bentham Science Publishers.	2018-19
18	Top Peer Reviewer Award -	Publons database & Web of Science	2019
	2019,		
19	Received Distinguished	Venus international Foundation,	2017
	Faculty in science Award-	Chennai, India	
	2017		

### **Honors**

### Awards:

- International Travel Support from DST-SERB to attend the International Symposium of Green Chemistry (ISGC- 2019) at Larochelle, France 2019.
- Top 1% Peer Reviewer Award -2019 from Publons & Web of Science.
- CAS Registry Innovator Certificate-2020 received from a Division of American Chemical Society, USA
- Brand ambassador 2018-19, Bentham Science Publishers.
- Outstanding Contribution Award for reviewing Journal of Molecular Structure, Elsevier, 2018
- Distinguished Faculty in science Award-2017 by Venus international Foundation, Chennai, India.

### **Recognition:**

- Member of American Chemical Society, USA.
- Fellow Member Royal Society of Chemistry, UK.
- The European Federation for Medicinal Chemistry and Chemical Biology (EFMC), Belgium.
- Life Member of Indian Society of Chemist and Biologist, India
- Life Member of Indian Chemical Society, INDIA
- Life Member of the Association of Chemical Technologist of India.
- Outstanding Contribution Award for reviewing Journal of Molecular Structure, Elsevier.

### **Highlights of achievements**

- Elected Member of Organic Division of Council, The Royal Society of Chemistry, UK.
- Worked as an Expert reviewer in many high reputes International Journals: As per record of Publons, more than 100 articles were reviewed.
- Reviewer Panel Member in RSC Advances Journal, UK from 2020.
- Delivered many invited talks at the National and International level in Conferences and Universities respectively.
- Act as a Review Editor inFrontiers in Chemistry (Organic Section), Switzerland
- Editorial Board Member in: (1) Frontiers in Chemistry, Switzerland (2) Arkivoc, U.S.A.
- Worked as Junior Scientific Assistant in Gujarat Pollution Control Board