

Curriculum Vitae

1. **Name** : Dr. Neetu Patel
2. **Father's Name** : Bhaiya Lal Patel
3. **Date of Birth** : 22/07/1994
4. **Address** : E6, THP Colony, Sirmour, Rewa (M.P.)
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6. **Academic Qualifications** : B.Sc, M.Sc, M.Phil., Ph.D.
7. **Membership/Fellowship of Academies/Institutions /Professional Societies** : Life Member of Indian Science Congress Association (Membership No. – L41236)
8. **Experience Detail** :
 - As Guest Faculty in Institute of Excellence in Higher Education, Bhopal (M.P.) From 16 Sep. 2022-09 Nov. 2022.
 - As Guest Faculty in Higher Education in Mandsaur Govt. PG College (10 Nov. 2022-05 Oct. 2023)
 - Presently working as Assistant Professor A.P.S.U, Rewa (M.P.) from (06 Oct. 2023 - till date)



9. EDUCATION DETAILS

S.NO	EXAM/DEGREE	BOARD/UNIVERSITY	YEAR OF PASSING
1	B.Sc.	A.P.S.Univ. REWA	2014
2	M.Sc. Chemistry	A.P.S.Univ. REWA	2016
3	M.Phil. Chemistry	A.P.S.Univ. REWA	2018
4	Ph.D. Chemistry	M.S.U. Baroda, Vadodara	2021

10. Publications and Conferences/ Seminar/Workshops

Published Papers	:	23
In Press	:	02
Communicated	:	02
Total Publications	:	27
Paper Presented in Conferences	:	08
Participated in workshops and seminars	:	07

Awards

Prof. B.C. Halder Memorial Award at International Conference on Recent Trends in Chemical Sciences organized by Indian Chemical Society, Hosted by SOS, Pt. Ravishankar Shukla University, Raipur on-14-16th November 2019.

Paper Presented in Conferences

- 1 39th Annual National Conference of Indian Council of Chemists held at Department of Chemistry, Veer Narmada South Gujarat University, Surat, Gujarat on 11th April, 2021 in Virtual Mode. (Oral Presentation)
- 2 Online International Seminar on current trends in chemical and pharmaceutical sciences (CTCPS-2021) department of chemistry Dr. Harisingh Gour Vishwavidyalaya, Sagar (M.P.) 20th-22th January 2021. (Oral Presentation)
- 3 International Conference on Recent Trends in Chemical Sciences organized by Indian Chemical Society, Hosted by SOS, Pt. Ravishankar Shukla University, Raipur on-14-16th November 2019.
- 4 Decadal trends in chemistry research: The perspective of women scientists (W-CHEM 2020) 8th March 2020. (Poster Presentation)
- 5 Indian Council of Chemists 37th annual national conference at National Institute of Technology Karnataka (NITK) Surathkal, Mangalore 12-14th December 2018 (Poster Presentation).
- 6 Indian Council of Chemists 6th International Conference at Penta hotel, Roissy-en-France (Paris) and Courtyard by Marriot- avenue des Olympiads (Brussels) 6-8th June 2019. (Oral Presentation)
- 7 National Symposium on advances in chemical research (ACR-2019), Department of Chemistry, The Maharaja Sayajirao University of Baroda, Vadodara on 24th February 2019. (Poster Presentation)
- 8 UGC-DAE Consortium for Scientific Research annual science day celebrations CRS research scholar workshop 8-9 January 2019. (Oral Presentation)

Participated in workshops and seminars

- 1 National Webinar on “Impact and Prospects of Science” organized by Department of Life Science Sardar Patel University, Balaghat (M.P.) on 12th Sept. 2020.
- 2 International Webinar on “Recent Innovations in Chemical Sciences” organized by Department of Chemistry AKS University, Satna (M.P.) on 18th-20th July 2020.
- 3 Workshop on Computational Chemistry Department of Chemistry, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara 3-7 March 2020.
- 4 Seminar on nuclear magnetic resonance (NMR) spectroscopy: Concepts and applications, Department of chemistry Gujarat University Ahmadabad, 24-25 August 2018.
- 5 One day seminar on, “Analytical Instrumental Techniques” organized by Department of Environmental Studies, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara on 9th April 2019.
- 6 One-day seminar on “Applications of X-Ray techniques- XRF, XPS, Auger” organized by Indian Society of Analytical Scientists, Baroda chapter and Department of Chemistry, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara on 9th March 2019.
- 7 National workshop on “Advanced Analytical Techniques for Elemental Analysis (AAT-2019)” organized by Department of Chemistry, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara on 28th December 2019.

List of Publications

- 1 Metal-organic hybrids based on $[\text{VO}_2(\text{L})]^-$ tecton with cations of imidazole and its derivative: Synthesis, single-crystal structures and molecular docking studies, **N. Patel**, A.K. Patel, M. Travadi, R.N. Jadeja, R.J. Butcher, M. Muddassir, S. Kumar, R. Kapavarapu, *Polyhedron* 227 (2022) 116125 (Publisher- Elsevier).
- 2 Syntheses, spectral characterization and antidiabetic activities of oxidovanadium(V) complexes with bi-and tridentate ligands, **N. Patel**, A.K. Patel, A.K. Prajapati, R.N. Jadeja, *Indian Journal of Chemistry-Section A* 61 (2022) 254-262 (Publisher- CSIR, New Delhi).
- 3 Copper(II) Mononuclear complexes incorporating pyridine derivatives: Synthesis, structural characterization and unusual X-band epr spectra, D. Kumhar, R.N. Patel, S.K. Patel, A.K. Patel, **N. Patel**, R.J. Butcher, *Journal of Chemical Crystallography* (2022) 1-16 (Publisher- Springer Science).
- 4 Mono- and binuclear copper(II) complexes with different structural motifs and geometries: Synthesis, spectral characterization, DFT calculations and superoxide dismutase enzymatic activity, S.K. Patel, R.N. Patel, **N. Patel**, A.K. Patel, S. Herrero, D. Choquesillo-Lazarte, R.J. Butcher, *Polyhedron* 222 (2022) 115913 (Publisher- Elsevier).

- 5 Copper hydrazone complexes with different nuclearties and geometries: Synthesis, characterization, single crystal structures, Hirshfeld analysis and superoxide dismutase mimetic activities, S.K. Patel, R.N. Patel, A.K. Patel, **N. Patel**, D. Choquesillo-Lazarte, **Journal of Molecular Structure** 1257 (2022) 132545.
- 6 New copper(II) μ -alkoxo- μ -carboxylato double-bridged complexes as models for the active site of catechol oxidase: synthesis, spectral characterization and DFT calculations, A.K. Patel, **N. Patel**, R.N. Patel, R.N. Jadeja, **Heliyon** 8 (2022) e09373 (Publisher- Elsevier).
- 7 Interaction of pseudohalides copper(II) complexes of hydrazide ligand with DNA: Synthesis, Spectral characterization, Molecular Docking simulations and Superoxide dismutase activity, A.K. Patel, **N. Patel**, R.N. Jadeja, S.K. Patel, R.N. Patel, S. Kumar, R. Kapavarapu, **Inorganic and Nano-Metal Chemistry** (2021) 1-16 (Publisher- Taylor and Francis).
- 8 A tetranuclear nickel(II) complex, $[\text{Ni}_4(\text{L})_4](\text{ClO}_4)_4 \cdot 2\text{H}_2\text{O}$, with an asymmetric Ni_4O_4 open-cubane core R.N. Patel, S.K. Patel, A.K. Patel, **N. Patel**, R.J. Ray, **Acta Crystallographica Section** 78E (2022) 98-102 (Publisher- International Union of Crystallography (IUCr)).
- 9 Structural diversity of copper(II) complexes with three dimensional network: Crystal structure, Hirshfeld surface analysis, DFT calculations and catalytic activity, D. Kumhar, R.N. Patel, S.K. Patel, A.K. Patel, **N. Patel**, R.J. Butcher, **Polyhedron** 214 (2021) 115633 (Publisher- Elsevier).
- 10 Synthesis, single crystal structures, DFT and in vitro antioxidant superoxide dismutase studies of copper(II) complexes derived from the di-(2-picoly)amine and co-ligands: Promising antioxidants, S.K. Patel, R.N. Patel, A.K. Patel, **N. Patel**, M. Cortijo, S. Herrero, D. Choquesillo-Lazarte, **Polyhedron** 212 (2022) 115609 (Publisher- Elsevier).
- 11 Copper(II) hydrazone complexes derived from (Z)-N'-{(2-hydroxynaphthalen-1-yl)methylene}acetohydrazide: Synthesis, Spectral Characterization, Electrochemical Behaviour, Density Functional Study, in vitro Catalytic Activity and Molecular Docking, A.K. Patel, **N. Patel**, R.N. Jadeja, R.N. Patel, S.K. Patel, R.J. Butcher, **Results in Chemistry** 4 (2021) 100244 (Publisher- Elsevier).
- 12 Non-covalent interactions governing the supramolecular assembly of copper(II) complexes with hydrazone-type ligand: Experimental and quantum chemical study, Y. Singh, R.N. Patel, S.K. Patel, R.N. Jadeja, A.K. Patel, **N. Patel**, H. Roy, P. Kumar, R.J. Butcher, J.P. Jasinski, M. Cortijo, S. Herrero, **Polyhedron** 200 (2021) 115142 (Publisher- Elsevier).
- 13 Synthesis, characterization and in vitro antidiabetic activity of anionic dioxidovanadium(V) complexes **N. Patel**, A.K. Prajapati, R.N. Jadeja, I.P. Tripathi, N. Dwivedi, **Journal of The Indian Chemical Society** 98 (2021) 100047 (Publisher- Elsevier).

- 14 Two new copper(II) binuclear complexes with 2-[(E)-(pyridine-2-yl-hydrazono)methyl]phenol: Molecular structures, quantum chemical calculations, cryomagnetic properties and catalytic activity, R.N. Patel, S.K. Patel, D. Kumhar, Nirmala Patel, A.K. Patel, R.N. Jadeja, **N. Patel**, R.J. Butcher, M. Cortijo, S. Herrero, **Polyhedron** 188 (2020) 114687 (Publisher- Elsevier).
- 15 Dioxidovanadium(V) complexes of a tridentate ONO Schiff base ligand: Structural characterization, quantum chemical calculations and in-vitro antidiabetic activity, **N. Patel**, A.K. Prajapati, R.N. Jadeja, R.N. Patel, S.K. Patel, I.P. Tripathi, N. Dwivedi, V.K. Gupta, R.J. Butcher, **Polyhedron** 180 (2020) 114434 (Publisher- Elsevier).
- 16 Experimental, quantum computational study and *in vitro* antidiabetic activity of oxidovanadium(IV) complexes incorporating 2,2'-bis(pyridylmethyl)amine and polypyridyl ligands, **N. Patel**, A.K. Prajapati, R.N. Jadeja, I.P. Tripathi & N. Dwivedi, **Journal of Coordination Chemistry** 73 (2020) 1131-1146 (Publisher- Taylor & Francis).
- 17 Supramolecular assemblies of new pseudohalide end-to-end bridged copper(II) complex and molecular structural variety of penta and hexa-coordinated metal(II) complexes with hydrazido-based ligand Y. Singh, R.N. Patel, S.K. Patel, R.N. Jadeja, A.K. Patel, **N. Patel**, H. Roy, P. Bhagriya, R. Singh, R.J. Butcher, J.P. Jasinski, S. Herrero, M. Cortijo, **Inorganica Chimica Acta** 503 (2020) 119371.
- 18 Experimental and quantum computational study of two new bridged copper(II) coordination complexes as possible models for antioxidant superoxide dismutase: Molecular structures, X-band electron paramagnetic spectra and cryogenic magnetic properties, Y. Singh, R.N. Patel, S.K. Patel, A.K. Patel, **N. Patel**, R. Singh, R.J. Butcher, J.P. Jasinski, A. Gutierrez, **Polyhedron** 171 (2019) 155-171 (Publisher- Elsevier).
- 19 Model investigations for vanadium-protein interactions: Synthesis, characterization and antidiabetic properties, **N. Patel**, A.K. Prajapati, R.N. Jadeja, R.N. Patel, S.K. Patel, V.K. Gupta, I.P. Tripathi, N. Dwivedi, **Inorganica Chimica Acta** 493 (2019) 20-28 (Publisher- Elsevier).
- 20 Three new tetranuclear phenoxy-bridged metal (II) complexes: Synthesis, structural variation, cryomagnetic properties, DFT study and antiproliferative properties, S.K. Patel, R.N. Patel, Y. Singh, Y.P. Singh, D. Kumhar, R.N. Jadeja, H. Roy, A.K. Patel, **N. Patel**, A. Banerjee, D. Choquesillo-Lazarte, A. Gutierrez, **Polyhedron** 161 (2019) 198-212 (Publisher- Elsevier).
- 21 Synthesis, characterization and catalytic activity of vanadium(IV) complexes with L-histidine and imidazole/1,10-phenanthroline as insulin mimetic agents, Y. Singh, R.N. Patel, Y.P. Singh, S.K. Patel, D. Kumhar, A.K. Patel, **N. Patel**, **Vindhya Bharti** 16 (2018) 65-75 (Publisher- APSU Rewa).

- 22 Varying structural motifs, unusual X-band electron paramagnetic spectra, DFT studies and superoxide dismutase enzymatic activity of copper (ii) complexes with N'-[(E)-phenyl(pyridin-2-yl)methylidene] benzohydrazide, R.N. Patel, Y. Singh, Y.P. Singh, A.K. Patel, **N. Patel**, R. Singh, R.J. Butcher, J.P. Jasinski, E. Colacio, M.A. Palacios, **New Journal of Chemistry** 42 (4) (2018) 3112-3136 (Publisher- Royal Society of Chemistry).
- 23 Unprecedented tetranuclear complexes with “weighing balance shaped” topology: single crystal structures, unusual EPR spectra, magnetic properties and antioxidant activity, Y. Singh, R.N. Patel, Y.P. Singh, A.K. Patel, **N. Patel**, R. Singh, R.J. Butcher, J.P. Jasinski, E. Colacio, M.A. Palacios, **Dalton Transactions** 46 (35) (2017) 11860-11874 (Publisher- Royal Society of Chemistry).
- 24 Fabrication, molecular structure, and in vitro antidiabetic efficacy of new vanadium(V) complexes containing hydrazone Schiff bases, **N. Patel**, A.K. Patel, R.N. Patel, **Inorganic and Nano-Metal Chemistry** (2023) (In Press) (Publisher- Taylor and Francis).
- 25 Tetranuclear nickel(II) complexes of $[\text{Ni}_4(\text{L}1)_4] \cdot (\text{ClO}_4)_4 \cdot 2\text{H}_2\text{O} \cdot \text{CH}_3\text{OH}$ and $[\text{Ni}_4(\text{L}2)_4] \cdot (\text{ClO}_4)_4 \cdot 5\text{H}_2\text{O}$ with an asymmetric Ni_4O_4 open-cubane core, R.N. Patel, S.K. Patel, A.K. Patel, **N. Patel**, **Inorganic and Nano-Metal Chemistry** (2023) (In Press) (Publisher- Taylor and Francis).
- 26 Metal organic frame work based on ionic vanadium complex and imidazolate moiety as counter ion, **N. Patel** & A.K. Prajapati, **Indian Journal of Chemistry (Sec A)** (2023) (Communicated) (Publisher- CSIR, New Delhi).
- 27 Structural variety, unusual X-band Epr spectra, quantum chemical investigation and biological studies of new copper(II) complexes, Y. Singh, R.N. Patel, R.N. Jadeja, A.K. Patel, **N. Patel**, H. Roy, R.J. Butcher, M.C. Monttes, S.H. Dominguez, **J. Coord. Chem.** (2023) (Communicated) (Publisher- Taylor & Francis).