

Published Papers

1. New copper(II) complexes with (Z)-N'-{(2-hydroxynaphthalen-1-yl)methylene}acetohydrazide]: X-ray structure, Hirshfeld analysis, X-band electron paramagnetic resonance spectra, TD-DFT calculations and superoxide dismutase mimetic activity

Abhay K Patel, R.N. Jadeja, R.J. Butcher, M.K. Kesharwani, J. Kästner, M. Muddassir *Polyhedron* 195 (2021) 114969.

2. Copper(II) hydrazone complexes with different nuclearities and geometries: Synthesis, structural characterization, antioxidant SOD activity and antiproliferative properties

Abhay Kumar Patel, R.N. Jadeja, H. Roy, R.N. Patel, S.K. Patel, R.J. Butcher, M. Cortijo, S. Herrero *Polyhedron* 186 (2020) 114624.

3. Pseudo-tetrahedral copper(II) complex derived from N'-[(2E,3Z)-4-hydroxy-4-phenylbut-3-en-2-ylidene]acetohydrazide: Synthesis, molecular structure, quantum chemical investigations, antioxidant and antiproliferative properties

Abhay Kumar Patel, R.N. Jadeja, H. Roy, R.N. Patel, S.K. Patel, R.J. Butcher *Journal of Molecular Structure* 1185 (2019) 341-350.

4. Mononuclear Copper (II) complexes with (Z)-N'-{(2-hydroxynaphthalen-1-yl)methylene}acetohydrazide: X-ray single-crystal structures, Hirshfeld analysis, X-band epr spectra, DFT calculations and SOD mimetic activity

Abhay Kumar Patel, R.N. Jadeja, R.J. Butcher, A. Kumar *Inorganica Chimica Acta* 2021 (Accepted manuscript, Manuscript Number: ICA-D-21-00123R2).

Paper Presented in Conferences

- 1 38th Annual Conference of Indian Council of Chemists at Department of Chemistry, VNSG University, Surat and Dr. B.R. Ambedkar University, Agra in 11 April, 2021 (Online Mode).
- 2 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 (Oral Presentation).
- 3 Indian Council of Chemists 37th Annual National conference at National Institute of Technology Karnataka (NITK) Surathkal, Mangalore 12-14th December 2018 (Poster Presentation).
- 4 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).

Participated in workshop and seminar

- 1 Online International seminar on current trends in chemical and pharmaceutical sciences (CTCPS-2021) department of chemistry Dr. Harisingh Gour Vishwavidyalaya, Sagar (M.P.) 20-22 January 2021(Oral Presentation).
- 2 Webinar on emerging trends in heterogenous catalysis & new challenges, organized by Catalysis Society of India, Baroda chapter, Navrachana university & MS University of Baroda, Vadodara 28th November 2020.
- 3 “Software and Applications of Single Crystal X-Ray Diffraction” organized by Department of Chemistry, Smt. S. S. Patel Nootan Science and Commerce College, Visnagar, Mehsana (Gujarat) during 29th-31th August 2019.
- 4 UGC-DAE Consortium for Scientific Research annual science day celebrations CRS research scholar workshop 8-9 January 2019 (Oral Presentation).
- 5 Seminar on nuclear magnetic resonance (NMR) spectroscopy: Concepts and applications, Department of chemistry Gujarat University Ahmadabad, 24-25 August 2018.
- 6 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.

- 8 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.

- 9 Webinar on “Practical aspects of patents and IPR” Organized by Vikram Sarabhai Institute of Cell and Molecular Biology, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara on 9th September 2020.