

Proforma for information to be provided by the Teaching/ Academic/ Research Staff



1. Name: Dr. Kamlesh Kumar
2. Designation: Assistant Professor
3. Academic Qualifications:

Sr.	Degree	Institution	Year
1	B. Sc.	DDU Gorakhpur University, Gorakhpur	2004
2	M. Sc.	DDU Gorakhpur University, Gorakhpur	2006
3	Ph.D	IIT Kanpur	2012

4. Area of Specialization: (brief write up, 200 words)

Our group is actively involved in the research area of Inorganic and Organometallic Chemistry. We are synthesizing novel transition metal complexes and investigating their catalytic activities for selective olefins transformation reactions and hydrogen evolution reactions (HER). We are also designing new Inorganic and Organometallic materials by molecular assembly. Another research interest of this group is to synthesize organometallic compounds for potential therapeutic uses.

5. Contact Information:

Office Address

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Lab Address

Lab No. 41
Department of Chemistry, Institute of Science
Banaras Hindu University (B.H.U.)
Varanasi-221005, India

6. Projects Undertaken as PI/ Co PI: NA
7. Awards/ Recognitions if any:

- | | |
|--|-----------|
| (1) University Postdoctoral Fellow, University of Johannesburg, SA | 2013-2017 |
| (2) Postdoctoral Fellowship, Technion-IIT, Israel | 2012-2012 |
| (3) European Union Erasmus Mundus Postdoctoral Fellowship | 2012-2013 |
| (4) Senior Research Fellowship (SRF) from CSIR-UGC, India | 2009-2012 |

8. List of 10 major Publications: (in order of importance)

- (1) Palladium(II) complexes bearing mixed N^NX (X = O and S) tridentate ligands as pre-catalysts for the methoxycarbonylation of selected 1-alkenes by **Kamlesh Kumar** and James Darkwa, *Polyhedron* **2017**, *138*, 249–257.
- (2) Electronic effects on the structures and catalytic properties of (pyrazol-1-yl)phenylmethanone palladium(II) complexes by Simphiwe M. Nelana, **Kamlesh Kumar**,* Ilia A. Guzei, Tebello Mahamo, James Darkwa*, *J. Organomet. Chem.* **2017**, *848*, 159-165.
- (3) Tandem ethylene dimerization and Friedel-Crafts alkylation of toluene catalyzed by homo- and heterogeneous nickel(II) and palladium(II) pre-catalysts by **Kamlesh Kumar**, Taddese Godeto, James Darkwa*, *J. Organomet. Chem.* **2016**, *818*, 137–144.
- (4) Pentamethylcyclopentadienyl-Rhodium and Iridium complexes containing (N^N and N^O) bound chloroquine analogue ligands: synthesis, characterization and antimalarial properties, E. Ekengard[†], **Kamlesh Kumar**[†], T. Fogeron, C. de Kock, P. J. Smith, M. Haukka, M. Monari, E. Nordlander*, *Dalton Trans.* **2016**, *45*, 3905-3917. [†]Equal contribution
- (5) Gold(I) complex of 1,1'-Bis(diphenylphosphino)ferrocene-quinoline Conjugate: A virostatic agent against HIV-1, N. Gama, **Kamlesh Kumar**, E. Ekengard, M. Hukka, J. Darkwa*, E. Nordlander*, D. Meyer*, *Biometals* **2016**, *29*, 389–397.
- (6) Effect of chalcogens on CO insertion into the palladium-methyl bond of [(N^NX)Pd(CH₃)]⁺ (X = O, S, Se) and on CO/ethylene copolymerisation, **Kamlesh Kumar** and James Darkwa*, *Dalton Trans.* **2015**, *44*, 20714-20727.
- (7) Synthesis, Characterization, and Structure–Properties Relationship Study in Cobaloximes with Dithienylglyoxime as the Equatorial Ligand, **Kamlesh Kumar*** and B. D. Gupta, *J. Organomet. Chem.* **2011**, *696*, 3785–3791.
- (8) Inorganic and Organometallic Cobaloximes with Dioxime Containing Se Side Chain: Synthesis, Characterization and Comparison with Related B12 Model Compounds, **Kamlesh Kumar*** and B. D. Gupta, *J. Organomet. Chem.* **2011**, *696*, 3343–3350.
- (9) Reactivity Studies of Aryl Cobaloximes with Molecular Oxygen and Electrophiles, **Kamlesh Kumar** and B. D. Gupta,* *J. Organomet. Chem.* **2011**, *696*, 2280–2286.
- (10) Cobaloximes with Bis(thiophenyl)glyoxime: Synthesis and Structure–Property Relationship Study, G. Dutta, **Kamlesh Kumar** and B. D. Gupta,* *Organometallics* **2009**, *28*, 3485–3491.

9. Additional Information/ Achievements:

Teaching Experience

- (1) Assistant Professor, Department of Chemistry, B.H.U., Varanasi, January 23 , 2018 - Present
- (2) Assistant Professor, Rajendra College (JP University) Chapra, Bihar, October 30, 2017 - January 20, 2018

Research Experience

- (1) Postdoctoral Research Fellow (December, 2013-September, 2017), University of Johannesburg, South Africa (*Advisor*: Prof. James Darkwa)
- (2) European Union Erasmus Mundus Postdoctoral Fellow (December, 2012-September, 2013), Lund University, Sweden (*Advisor*: Prof. Ebbe Nordlander)
- (3) Postdoctoral Research Fellow (May, 2012–November, 2012), Technion-Israel Institute of Technology, Israel (*Advisor*: Prof. Moris S. Eisen)
- (4) Doctoral Research (2007-2012), IIT Kanpur, India (*Thesis Advisor*: Prof. B. D. Gupta (deceased) and Dr. G. Anantharaman)

Invited Talks

- (1) International Conference on Immerging Trends in Chemical Sciences (ICETCS), D. D. U. Gorakhpur University, Gorakhpur, February, 2018. "Late transition metal complexes of tridentate ligands containing hard and soft donor sites as olefin transformation catalysts"
- (2) Modern Trends in Inorganic Chemistry (MTIC), I.I.Sc. Bangalore, India, December, 2009. "Young Scientists' Lecture on Aryl Cobaloximes: Synthesis, Structure and Reactivity"

10. Full List of Publications:

- (1) Palladium(II) complexes bearing mixed N^NX (X = O and S) tridentate ligands as pre-catalysts for the methoxycarbonylation of selected 1-alkenes by **Kamlesh Kumar** and James Darkwa, *Polyhedron* **2017**, *138*, 249–257.
- (2) Electronic effects on the structures and catalytic properties of (pyrazol-1-yl)phenylmethanone palladium(II) complexes by Simphiwe M. Nelana, **Kamlesh Kumar**,* Ilia A. Guzei, Tebello Mahamo, James Darkwa*, *J. Organomet. Chem.* **2017**, *848*, 159-165.
- (3) Tandem ethylene dimerization and Friedel-Crafts alkylation of toluene catalyzed by homo- and heterogeneous nickel(II) and palladium(II) pre-catalysts by **Kamlesh Kumar**, Taddese Godeto, James Darkwa*, *J. Organomet. Chem.* **2016**, *818*, 137–144.
- (4) Inhibition of HIV-1 protease and plasmodium falciparum by a modified digold chloroquine derivative N Gama, Kamlesh Kumar, J Reader, B Gordhan, LM Birkholtz, B Kana, J Darkwa, *J. Int Aids Society*, 2016, 19. (Conference paper)
- (5) Pentamethylcyclopentadienyl-Rhodium and Iridium complexes containing (N^N and N^O) bound chloroquine analogue ligands: synthesis, characterization and antimalarial properties, E. Ekengard[†], **Kamlesh Kumar**[†], T. Fogeron, C. de Kock, P. J. Smith, M. Haukka, M. Monari, E. Nordlander*, *Dalton Trans.* **2016**, *45*, 3905–3917. [†]Equal contribution
- (6) Gold(I) complex of 1,1'-Bis(diphenylphosphino)ferrocene-quinoline Conjugate: A virostatic agent against HIV-1, N. Gama, **Kamlesh Kumar**, E. Ekengard, M. Hukka, J. Darkwa*, E. Nordlander*, D. Meyer*, *Biometals* **2016**, *29*, 389–397.
- (7) Effect of chalcogens on CO insertion into the palladium-methyl bond of [(N^NX)Pd(CH₃)]⁺ (X = O, S, Se) and on CO/ethylene copolymerisation, **Kamlesh Kumar** and James Darkwa*, *Dalton Trans.* **2015**, *44*, 20714-20727.

- (8) Synthesis, Characterization, and Structure–Properties Relationship Study in Cobaloximes with Dithienylglyoxime as the Equatorial Ligand, **Kamlesh Kumar*** and B. D. Gupta, *J. Organomet. Chem.* **2011**, 696, 3785–3791.
- (9) Inorganic and Organometallic Cobaloximes with Dioxime Containing Se Side Chain: Synthesis, Characterization and Comparison with Related B12 Model Compounds, **Kamlesh Kumar*** and B. D. Gupta, *J. Organomet. Chem.* **2011**, 696, 3343–3350.
- (10) Reactivity Studies of Aryl Cobaloximes with Molecular Oxygen and Electrophiles, **Kamlesh Kumar** and B. D. Gupta,* *J. Organomet. Chem.* **2011**, 696, 2280–2286.
- (11) Organo-bridged Dicobaloximes: Synthesis, Structure and Nuclear Magnetic Resonance Study, B. D. Gupta* and **Kamlesh Kumar**, *Inorg. Chim. Acta* **2011**, 372, 8–16.
- (12) Synthesis, Characterization, CV, and X-ray Structures of Aryl Cobaloximes, **Kamlesh Kumar** and B. D. Gupta,* *J. Organomet. Chem.* **2010**, 695, 2233–2239.
- (13) Weak Interactions between Furfuryl and Equatorial Dioxime Ligand in Furfuryl(O₂)Co(dmgH)₂Py: NMR, X-ray and DFT Calculations, **Kamlesh Kumar**, S. Kumar and B. D. Gupta,* *J. Organomet. Chem.* **2010**, 695, 512–517.
- (14) Cobaloximes with Bis(thiophenyl)glyoxime: Synthesis and Structure–Property Relationship Study, G. Dutta, **Kamlesh Kumar** and B. D. Gupta,* *Organometallics* **2009**, 28, 3485–3491.
- (15) Nickel(II) complexes of mixed terdentate (N^NO/S/Se) ligands: Highly active ethylene oligomerization pre-catalysts **Kamlesh Kumar** and J. Darkwa (**Manuscript under preparation**)
- (16) Nickel(II) complexes immobilization on solid support: A recoverable catalyst for Ethylene oligomerization, **Kamlesh Kumar** and J. Darkwa (**Manuscript under preparation**)
- (17) Hydrogenation of cinnamaldehyde using Palladium(0) immobilized on Fe₃O₄ using pyridine-imine ligands, **Kamlesh Kumar**, Manuel Mashavhela and J. Darkwa (**Manuscript under preparation**)

Kamlesh Kumar

Date: 09/07/2018

Signature

Place: BHU Varanasi