

## Dr. Hemant Joshi

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Behind head post office, Jjn. road,  
Chirawa (Raj.), India 333026

### EDUCATION

Indian Institute of Technology Delhi, India PhD in Organometallic Chemistry and Nanocatalysis Principal Investigator – Prof. Ajai K. Singh 9.0 CGPA out of 10.00 (Course work)	July 2010 - October 2015
Malaviya National Institute of Technology Jaipur, India Master of Science in Chemistry 8.54 CGPA out of 10.00	July 2008 – June 2010
University of Rajasthan Jaipur, India Bachelor of Science (Chemistry, Botany, Zoology) 73.11 Percent	July 2005 – June 2008
Rajasthan Board of Secondary Education Ajmer, India Senior Secondary in Biology 71.08 Percent	March 2005
Rajasthan Board of Secondary Education Ajmer, India Secondary 65.67 Percent	June 2003

### CURRENT POSITION

Assistant Professor Department of Chemistry, Central University of Rajasthan, Bandarsindri, Rajasthan, India	June. 2019 – till date
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### EXPERIENCE

Assistant Professor (DST Inspire Faculty) Department of Chemistry, Birla Institute of Technology and Sciences Pilani (BITS Pilani), Pilani Campus, Rajasthan, India	Aug. 2018 – June 2019
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Postdoctoral Research Associate  
Department of Chemistry, Texas A&M University,  
College Station, Tx Feb. 2016 – Aug. 2018  
Principal Investigator – Prof. John A. Gladysz

Postdoctoral Research Associate  
Department of Chemistry, IIT Delhi, India March 2015 – Feb 2016  
Principal Investigator – Prof. Ajai K. Singh

## ACHIEVEMENTS

- Awarded “DST Inspire Faculty Award” by Department of Science and Technology, Government of India.
- Postdoctoral fellowship at Texas A&M University, College Station, USA.
- Actively reviewing manuscripts for RSC and Willey Journals.
- Young scientist oral presentation award at MTIC-XV IIT Roorkee.
- Senior Research Fellow (UGC) July 2012 – Dec. 2014.
- Junior Research Fellow (UGC) July 2010 – July 2012.
- Qualified National Eligibility Test Dec. 2009 for Lectureship.

## SPONSORED RESEARCH PROJECTS

- **Title:** Synthesis of Metal Complexes of Mechanically Interlocked Molecules and their Applications (2018 - 2023)
- **Sponsoring Agency:** Department of Science and Technology, New Delhi, India (Under DST Inspire Faculty Scheme)
- **Amount:** 35 Lakhs

## TEACHING

- ICHT 101 – Inorganic Chemistry 1 (Integrated MSc Programme, 3 Credits, 45L, 3h per week)
- ICHP 101 – Inorganic Chemistry Laboratory I (Integrated MSc Programme, 2 Credits, 4h per week)
- CHP 301 – Inorganic Chemistry Laboratory II (2 Yr MSc Programme, 3 Credits, 6h per week)

## RESEARCH PROJECTS HANDLED

### 1. Synthesis of Molecular Rotors and their Applications

- Synthesis of gyroscope and parachute like Platinum complexes behaving like molecular rotors.
- Understanding rotational barriers of gyroscope and parachute like complexes.

- Developing the mechanism of their rotation through variable temperature NMR studies.
- Synthesis of dibridgeheadphosphine empty cages by demetallation of gyroscope like molecules.
- Variable temperature NMR studies of dibridgeheadphosphine cages.
- Use of dibridgeheadphosphine cages as transport containers for transporting  $MCl_2$  ( $M=Ni, Pd, Pt$ ) fragments.
- Studying the host-guest chemistry of dibridgeheadphosphine cages with various guest molecules.

## **2. Chiral Hydrogen Bond Donor Cobalt(III) Complexes for Enantioselective Organocatalysis**

- Synthesis of chiral hydrogen bond donor Cobalt(III) complexes (Werner Complexes).
- Application of these chiral complexes as enantioselective organocatalyst for various organic transformations like michael addition reaction, aza-henry reaction,  $\alpha$ -aminations of dicarbonyl compounds and several other reactions.

## **3. Development of Supported Metal Phosphide/Chalcogenide Nanoparticles (NPs) Catalysts**

- Synthesis of phosphine and chalcogen containing ligands and their metal complexes.
- Use of these metal complexes as single source precursor to synthesize metal phosphide/chalcogenide NPs.
- Grafting of these NPs on solid supports like graphene, graphene oxide, iron oxide etc.
- Use of supported NPs for various organic transformations like C-C coupling, C-O coupling, hydration of nitriles, one pot aldehyde to amide transformations, oxidation of alcohols, transfer hydrogenations of carbonyl compounds etc.
- Use of these supported NPs for electro catalytic oxygen evolution reaction (OER) and hydrogen evolution reaction (HER) reactions.

## **4. Synthesis of Platinum Group Metal Complexes of Organochalcogen Ligands and their Catalytic Applications**

- Synthesis of achiral and chiral organo-sulphur, selenium and tellurium ligands.
- Synthesis of metal complexes (Pd, Pt, Ru, Rh, Ir) of organochalcogen ligands.
- Exploring their applications as catalysts in various organic reactions like C-C coupling, C-O coupling, oxidation of alcohols, transfer hydrogenations of carbonyl compounds etc.

## **RESEARCH SKILLS**

- Proficient in analysis of spectroscopic data *viz.*, NMR, IR, UV and mass spectra.
- Crystal mounting, data collection, reduction and indexing and solving crystal structures (organic, inorganic and organometallic molecules).

- Highly conversant in the modern experimental and analytical techniques such as thin-layer chromatography, column chromatography, flash chromatography and vacuum distillation.
- Capable of carrying independent and collaborative research.
- Profound efficiency in handling of hydroscopic, air sensitive reagents and reactions using glove box and schlenk / vacuum line techniques.
- Experience in carrying out the reactions at low temperatures.
- Experience in the characterization of nano-particles using SEM, SEM-EDX, HRTEM, Powder XRD.
- Skilled in presentations, paper writing and project conception and project implementation.

### INSTRUMENT HANDLING SKILLS

- NMR Spectrometer (300 MHz, Bruker, 400 and 500 MHz Varian)
- Single Crystal Diffractometer (*Smart Apex CCD*)
- Powder X-Ray Diffractometer (Bruker Axs Smart-Apex CCD)
- High Pressure Liquid Chromatography (HPLC Shimadzu)
- FT-Infra Red Spectrometer (*Nicolet Protege 460*)
- TGA & DTA (*Pyris Diamond TG/DTA, Perkin Elmer*)
- UV-Vis Spectrophotometer (*Perkin Elmer and Shimadzu*)
- CHN Analyzer (*Perkin Elmer*)
- Flash chromatography (*CombiFlash*)

### SOFTWARE SKILLS

- **Single Crystal X-ray Diffraction:** SMART, SAINT, SHELXTL, WINGX.
- **Graphics-Viewer:** ORTEP, DIAMOND, MERCURY.
- **Chemistry related and other software:** CHEM DRAW, ISIS DRAW, ACD NMR, Origin, Irfan View, PCPDF WIN (For JCPDS) etc.

### PUBLICATIONS

**In International Journals** (*Cumulative impact factor - ~145.00, H-index - 14, Citations >485*)

1. A. K. Sharma, **H. Joshi**, R. Bhaskar and A. K. Singh, [Solvent-tailored Pd<sub>3</sub>P<sub>0.95</sub> nano catalyst for amide-nitrile inter-conversion, the hydration of nitriles and transfer hydrogenation of the C=O bond.](#) *Dalton Trans*, **2019**, DOI: 10.1039/C8DT04667K. (Impact Factor = 4.099)
2. A. K. Sharma, **H. Joshi**, K. Ojha and A. K. Singh, [Graphene oxide supported cobalt phosphide nanorods designed from a molecular complex for efficient hydrogen evolution at low overpotential.](#) *Chem. Commun.*, **2019**, 55, 2186. (Impact Factor = 6.29)
3. M. Stollenz, **H. Joshi**, A. Ehnbohm, T. Fiedler, S. Kharel, J. H. Reibenspies, N. Bhuvanesh, M. B. Hall, J. A. Gladysz, [Platinum Complexes Containing or Derived from Olefinic Phosphines P\(X\)\(\(CH<sub>2</sub>\)<sub>6</sub>CH=CH<sub>2</sub>\)<sub>2</sub>; Ring Closing Metatheses, Structures, and \*trans/cis\*](#)

**Isomerizations.** *Polyhedron*, **2019**, 158, 325. (Invited article for the special issue in honor of Prof. William D. Jones). (Impact Factor = 2.067)

4. S. Kharel,<sup>‡</sup> **H. Joshi**,<sup>‡</sup> N. Bhuvanesh and J. A. Gladysz, **Syntheses, Structures, and Thermal Properties of Gyroscope Like Complexes Consisting of PtCl<sub>2</sub> Rotators Encased in Macrocyclic Dibridgehead Diphosphines P((CH<sub>2</sub>)<sub>n</sub>)<sub>3</sub>P with Extended Methylene Chains (n = 20/22/30), and Isomers Thereof.** *Organometallics*, **2018**, 37, 2991. (‡ = equal contribution). (Impact Factor = 4.051)
5. **H. Joshi**,<sup>‡</sup> S. Kharel,<sup>‡</sup> A. Ehnbohm, K. Skopek, G. D. Hess, T. Fiedler, F. Hampel, N. Bhuvanesh, and J. A. Gladysz, **Three Fold Intramolecular Ring Closing Alkene Metatheses of Square Planar Complexes with cis Phosphorus Donor Ligands P(X(CH<sub>2</sub>)<sub>m</sub>CH=CH<sub>2</sub>)<sub>3</sub> (X/m = -/5-10, O/3-5); Syntheses, Structures, and Thermal Properties of Macrocyclic Dibridgehead Diphosphorus Complexes.** *J. Am. Chem. Soc.*, **2018**, 140, 8463. (‡ = equal contribution). (Highlighted on Front Cover of JACS, Selected as Spotlight Article by JACS *J. Am. Chem. Soc.*, **2018**, 140, 8357, Highlighted by College of Science, Texas A&M University ([http://www.science.tamu.edu/news/story.php?story\\_ID=2018#.W1J9qdJKg2x](http://www.science.tamu.edu/news/story.php?story_ID=2018#.W1J9qdJKg2x)), Highlighted by Texas A&M Today (<https://today.tamu.edu/2018/07/18/texas-am-chemists-achieve-unprecedented-molecular-triple-jump-with-multi-ringed-metal-complexes/>), Highlighted by National Science Foundation, USA ([https://nsf.gov/news/news\\_summ.jsp?cntn\\_id=296059&org=NSF&from=news](https://nsf.gov/news/news_summ.jsp?cntn_id=296059&org=NSF&from=news)), Highlighted by EurekAlert, The Global Source for Science News ([https://www.eurekalert.org/pub\\_releases/2018-07/tau-cau071218.php](https://www.eurekalert.org/pub_releases/2018-07/tau-cau071218.php)). (Impact Factor = 14.357)
6. **H. Joshi**, S. Kharel, N. Bhuvanesh and J. A. Gladysz, **Synthesis, Structure, and Reactivity of Doubly trans-Spanning bis(dialkylselenide) Complexes; A New Route to Diselenamacrocycles via Alkene Metathesis in Metal Coordination Spheres.** *J. Organomet. Chem.*, **2018**, 875, 80. (Invited article for the special issue in honor of Prof. Richard J. Puddephatt). (Impact Factor = 1.946)
7. S. Kharel, **H. Joshi**, S. Bierschenk, M. Stollenz, D. Taher, N. Bhuvanesh and J. A. Gladysz, **Homeomorphic Isomerization as a Design Element in Container Molecules; Binding, Displacement, and Selective Transport of MCl<sub>2</sub> Species (M = Pt, Pd, Ni).** *J. Am. Chem. Soc.*, **2017**, 139, 2172. (Impact Factor = 14.357)
8. **H. Joshi**, S. K. Ghosh, and J. A. Gladysz, **Enantioselective Additions of Stabilized Carbanions to Imines Generated from  $\alpha$ -Amido Sulfones using Lipophilic Salts of Chiral tris(1,2-diphenylethylenediamine) Cobalt(III) Trications as Hydrogen Bond Donor Catalysts.** *Synthesis*, **2017**, 49, 3905. (Invited article for special issue "Cobalt in Organic Synthesis", Highlighted on Organic Chemistry Portal Website. <https://www.organic-chemistry.org/abstracts/lit5/971.shtm>) (Impact Factor = 2.722)
9. A. K. Sharma, **H. Joshi**, R. Bhaskar, and A. K. Singh, **Complexes of ( $\eta^5$ -Cp\*) Ir(III) with 1-Benzyl-3-Phenylthio/selenomethyl-1,3-Dihydrobenzoimidazole-2-Thione/Selenone: Catalyst**

for Oxidation and 1,2-substituted Benzimidazole Synthesis. *Dalton Trans*, **2017**, 46, 2228. (Impact Factor = 4.099)

10. A. K. Sharma, **H. Joshi**, R. Bhaskar, S. Kumar and A. K. Singh, Palladacycles of sulfated/selenated Schiff base of ferrocene-carboxaldehyde as catalysts for *O*-arylation and Suzuki–Miyaura coupling. *Dalton Trans.*, **2017**, 46, 2485. (Most cited Organometallic chemistry work of 2017). (Impact Factor = 4.099)
11. R. Bhaskar, **H. Joshi**, A. K. Sharma, and A. K. Singh, Reusable Catalyst for Transfer Hydrogenation of Aldehydes and Ketones Designed by Anchoring Palladium as Nano-Particles on Graphene Oxide Functionalized with Selenated Amine. *ACS Applied Materials & Interfaces*, **2017**, 9, 2223. (Highlighted as Most Read Materials Science & Engineering Articles of Jan. 2017 by ACS. <http://axial.acs.org/2017/03/03/materials-science-engineering/>). (Impact Factor = 8.097)
12. K. N. Sharma, A. K. Sharma, **H. Joshi**, and A. K. Singh, Polymeric Complex of 1-Phenylsulfanyl/selenylmethyl-1H-Benzotriazole with Ag(I): Pre-catalyst for A<sup>3</sup> Coupling Resulting Propargylamines on a Gram/Lab Scale. *ChemSelect*, **2016**, 1, 3573. (Impact Factor = 1.505)
13. S. Gupta, **H. Joshi**, N. Jain, and A. K. Singh, Cu<sub>6</sub>Se<sub>4.5</sub> Nanoparticles from a Single Source Precursor: Recyclable and Efficient Catalyst for Cross-Dehydrogenative Coupling of Tertiary Amines with Terminal Alkynes. *Journal of Molecular Catalysis A: Chemical*, **2016**, 423, 135. (Impact Factor = 4.397)
14. M. P. Singh, F. Saleem, G. K. Rao, S. Kumar, **H. Joshi**, and A. K. Singh, Palladacycles of unsymmetrical (N, C-, E)(E= S/Se) pincers based on indole: their synthesis, structure and application in the catalysis of Heck coupling and allylation of aldehydes. *Dalton Trans.* **2016**, 45, 6718. (Impact Factor = 4.099)
15. K. N. Sharma, **H. Joshi**, O. Prakash, A. K. Sharma, R. Bhaskar, and A. K. Singh, Pyrazole-Stabilized Dinuclear Palladium (II) Chalcogenolates Formed by Oxidative Addition of Bis [2-(4-bromopyrazol-1-yl) ethyl] Dichalcogenides to Palladium (II)–Tailoring of Pd–S/Se Nanoparticles. *Eur. J. Inorg. Chem.* **2015**, 4829. (Impact Factor = 2.507)
16. **H. Joshi**, O. Prakash, A. K. Sharma, K. N. Sharma, and A. K. Singh, Suzuki Coupling Reactions Catalyzed with Palladacycles and Palladium (II) Complexes of 2-Thiophenemethylamine-Based Schiff Bases: Examples of Divergent Pathways for the Same Ligand. *Eur. J. Inorg. Chem.* **2015**, 1542. (Impact Factor = 2.507)
17. O. Prakash, **H. Joshi**, K. N. Sharma, and A. K. Singh, Catalytic Synthesis of Bi/Teraryl in Aqueous Medium using Palladium(II) Complexes Designed with 2-(Pyridine-2-ylmethyl sulfanyl)benzoic acid. *Eur. J. Inorg. Chem.* **2015**, 520. (Impact Factor = 2.507)

18. O. Prakash, **H. Joshi**, U. Kumar, A. K. Sharma and A. K. Singh, Acridine based (S,N,S) pincer ligand: designing of silver(I) complexes for efficient activation of A<sup>3</sup>(aldehyde, alkyne and amine) coupling. *Dalton Trans.*, **2015**, 44, 1962. (Impact Factor = 4.099)
19. O. Prakash, **H. Joshi**, K. N. Sharma, P. L. Gupta and A. K. Singh, Transfer Hydrogenation (pH independent) of Ketones and Aldehydes in Water with Glycerol: Ru, Rh and Ir Catalysts with COOH Group Near Metal on (Phenylthio)methyl-2-Pyridine Scaffold. *Organometallics*, **2014**, 33, 3804. (Impact Factor = 4.051)
20. A. K. Sharma, **H. Joshi**, K. N. Sharma, P. L. Gupta, and A. K. Singh, 2-Propanol Vs Glycerol as Hydrogen Source in Catalytic Activation of Transfer Hydrogenation with ( $\eta^6$ -benzene)Ru(II) Complexes of Unsymmetrical Bidentate Chalcogen Ligands. *Organometallics*, **2014**, 33, 3629. (Impact Factor = 4.051)
21. **H. Joshi**, K. N. Sharma, A. K. Sharma, O. Prakash, A. Kumar and A. K. Singh, Magnetite nanoparticles coated with ruthenium *via* SePh layer as a magnetically retrievable catalyst for the selective synthesis of primary amides in an aqueous medium. *Dalton Trans.*, **2014**, 43, 12365. (Impact Factor = 4.099)
22. O. Prakash, K. N. Sharma, **H. Joshi**, P. L. Gupta and A. K. Singh, Half-sandwich rhodium/iridium(III) complexes designed with Cp\* and 1,2-bis(phenylchalcogenomethyl) benzene as catalysts for transfer hydrogenation in glycerol. *Organometallics*, **2014**, 33, 2535. (Impact Factor = 4.051)
23. O. Prakash, K. N. Sharma, **H. Joshi**, P. L. Gupta and A. K. Singh, ( $\eta^5$ -Cp\*)Rh/Ir(III) complexes with bis(chalcogenoethers) (E, E' ligands; E = S/Se; E' = S/Se): Synthesis, structure and applications in catalytic openauer-type oxidation and transfer hydrogenation. *Organometallics*, **2014**, 33, 983. (Impact Factor = 4.051)
24. **H. Joshi**, K. N. Sharma, A. K. Sharma and A. K. Singh, Palladium-phosphorous/sulfur nanoparticles (NPs) decorated on graphene oxide: synthesis using same precursor for NPs and catalytic applications in Suzuki-Miyaura coupling. *Nanoscale*, **2014**, 6, 4588. (Appear as most read article). (Impact Factor = 7.233)
25. K. N. Sharma, **H. Joshi**, A. K. Sharma, O. Prakash and A. K. Singh, Single source precursor routes for synthesis of PdTenanorods and particles: solvent dependent control on shapes. *Chem. Commun.*, **2013**, 49, 9344. (Impact Factor = 6.29)
26. **H. Joshi**, K. N. Sharma, A. K. Sharma, O. Prakash and A. K. Singh, Graphene oxide grafted with Pd<sub>17</sub>Se<sub>15</sub> nano-particles generated from a single source precursor as a recyclable and efficient catalyst for C–O coupling in *O*-arylation at room temperature. *Chem. Commun.*, **2013**, 49, 7483. (Highlighted on Cover Page, Highlighted by cheminform abstract). (Impact Factor = 6.29)
27. K. N. Sharma, **H. Joshi**, A. K. Sharma, O. Prakash and A. K. Singh, Selenium-containing *N*-heterocyclic carbenes and their first palladium(II) complexes: Synthesis, structure and

pendent alkyl chain length dependent catalytic activity for Suzuki–Miyaura coupling. *Organometallics*, **2013**, 32, 2443. (Listed among “Most Read Articles” published by *Organometallics*). (Impact Factor = 4.051)

28. O. Prakash, K. N. Sharma, **H. Joshi**, P. L. Gupta and A. K. Singh, Half sandwich complexes of chalcogenated pyridine based bi-(N, S/Se) and terdentate (N, S/Se, N) ligands with ( $\eta^6$ -benzene)ruthenium(II): synthesis, structure and catalysis of transfer hydrogenation of ketones and oxidation of alcohols. *Dalton Trans.*, **2013**, 42, 8736. (Impact Factor = 4.099)
29. **H. Joshi**, K. N. Sharma, V. V. Singh, P. Singh and A. K. Singh, Selenium containing imidazolium salt in designing single source precursors for silver bromide and selenide nanoparticles. *Dalton Trans.*, **2013**, 42, 2366. (Listed among “Most Read Articles” published by Dalton Transaction). (Impact Factor = 4.099)
30. K. N. Sharma, **H. Joshi**, V. V. Singh, P. Singh and A. K. Singh, Palladium(II) complexes of pyrazolatedthio/selenoethers: syntheses, structures, single source precursors of Pd<sub>4</sub>Se and PdSe nano-particles and potential for catalyzing Suzuki–Miyaura coupling. *Dalton Trans.*, **2013**, 42, 3908. (Impact Factor = 4.099)

#### Invited Talks

1. **H. Joshi**, Dibrigehead Diphosphine Cage as Molecular Receptor for Precious Metal Capture and Transport. **25th ISCB International Conference (ISCB-2019)**, CDRI Lucknow, 12-14, January 2019.
2. **H. Joshi**, Molecular Double-Dutch: Multiring Metal Complexes that Really Know how to Jump. **Frontiers at the Chemistry-Allied Sciences Interface (FCASI-2018)**, University of Rajasthan, Jaipur, 21-22, December 2018.

#### In Conferences

1. Palladium Anchored on Graphene Oxide and Fe<sub>3</sub>O<sub>4</sub> as Catalyst for *O*-Arylation Reaction. **H. Joshi** and A. K. Singh, **American Chemical Society on Campus Event (ACSOC-2015)**, IIT Delhi, 31 Sep-01 Oct, 2015. (**Oral Presentation**)
2. Palladium(II) complexes of selenated *N*-heterocyclic carbene ligands: pendent alkyl chain length dependent catalytic C–C coupling reaction. **H. Joshi**, K. N. Sharma and A. K. Singh, **Recent Advancements in Chemical Sciences (RAICS-2015)**, MNIT Jaipur, 21-23 August, 2015. (**Oral Presentation**)
3. Participation in **Indian Roadshow Workshop**, Organized by Royal Society of Chemistry, IIT Delhi, Nov. 4, 2014.
4. Graphene Oxide Grafted With PdP<sub>2</sub> and Pd<sub>4</sub>S Nanoparticles Generated From a Single Source Precursor: Catalyst For Suzuki-Miyaura Coupling Reaction. **H. Joshi**, K. N. Sharma, A. Sharma, and A. K. Singh, **International Conference on Nano Science and Technology (ICONSAT-2014)**, INST Mohali, 3-5 March, 2014. (**Poster Presentation**)



5. Palladium-Phosphorous/Sulfur Nanoparticles (NPs) Decorated On Graphene Oxide: Synthesis Using Same Precursor for NPs and Catalytic Applications in Suzuki-Miyaura coupling Reaction. **H. Joshi**, A. K. Singh, **Chemistry at the Interface of Innovative Researches in Science and Technology (CIIRST 2014)**, Allahabad, 27-28 Feb 2014. (**Oral Presentation**)
6. Pd<sub>17</sub>Se<sub>15</sub> Nano-Particles Grafted Graphene Oxide: Efficient and Recyclable Catalyst for C–O Coupling. **H. Joshi**, K. N. Sharma, A. Sharma and A. K. Singh, **Modern Trends in Inorganic Chemistry (MTIC-XV)**, IIT Roorkee, Dec. 13-16, 2013. (**Young Scientist Oral Presentation**)
7. 2-hydroxy-4-methoxy benzophenone and 2-hydroxy acetophenone with 2-thiophene methyl amine: Designing, Pd(II) complexes for efficient Suzuki-Miyaura C-C coupling reaction. **H. Joshi**, K. N. Sharma, and A. K. Singh, **New Directions in Chemical Sciences (NDCS-2012)**, IIT Delhi, New Delhi, India, Dec. 7-9, 2012. (**Poster Presentation**)
8. Palladium(II) complexes of O, N, S, Se hybrid ligands for efficient Suzuki-Miyaura C-C coupling reaction. **H. Joshi**, G. K. Rao, F. Saleem and A. K. Singh, **3rd Asian Conference on Coordination Chemistry (ACCC-3)**, India Habitat Center, New Delhi, India, October 17–20, 2011. (**Poster Presentation**)
9. Participation in **National Review and Coordination Meeting of Nano Mission Council (NSNT 2011)**, IIT Delhi, Feb. 25-27, 2011.

## PERSONAL BIODATA

Date of Birth	02 <sup>nd</sup> Feb. 1989
Sex	Male
Marital Status	Unmarried
Languages Known	English, Hindi
Nationality	Indian

## REFERENCES

- **Prof. Ajai K. Singh, Professor (Higher Academic Grade) and Ex Head:** Department of Chemistry, Indian Institute of Technology Delhi, New Delhi-110016, India. *Email: aksingh@chemistry.iitd.ac.in; Phone: 91-11-2659-1379 (Off), 91-9810408226 (Mob)*
- **Dr. N. Jain, Associate Professor,** Department of Chemistry, Indian Institute of Technology Delhi, New Delhi-110016, India. *Email: njain@chemistry.iitd.ac.in; Phone: 91-11-2659-1562 (Off).*
- **Prof. John A. Gladysz, Dow Chair Professor,** Department of Chemistry, Texas A&M University, College Station, Tx -77843, USA. *Email: gladysz@chem.tamu.edu; Phone: (979) 845-1399 (Off).*