# Curriculum Vitae (CV)

## Personal Information

*Name*: Dr. Joydev Acharya
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## Objective

"To be associated with an organization that gives scope to utilize my training, knowledge, and skills, while making a significant contribution to the success of the organization as well as my personal growth"

## Research and Academic Background

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| **June 2020 – Till date** | **Post-Doctoral Fellow (Synthetic chemistry)**<br>*Research Supervisor*: **Dr. Pabitra Kr. Nayak**, Division of Chemistry, Tata Institute of Fundamental Research Hyderabad – 500046<br>*Research Topic*: Synthesis of neutral, anionic, cationic ion radicals and their application as n-type/p-type dopant in organic semiconductors |
| **December 2014 – October 2020** | **Ph.D.**<br>*Thesis Supervisor*: **Prof. Vadapalli Chandrasekhar**, Department of Chemistry, Indian Institute of Technology Kanpur – 208016<br>*Thesis Title*: Mono and Polynuclear Lanthanide and Transition Metal Complexes as Single-Molecule and Single-Ion Magnets.<br>(From February 2017 to July 2017, as a short term visiting scholar in the working group of **Prof. G. Rajaraman** and **Prof. M. Shanmugam**, Indian Institute of Technology Bombay, Mumbai, India)<br>*Thesis Co-Supervisors*: **Prof. J. K. Bera**, IIT Kanpur and **Prof. S. Verma**, IIT Kanpur |

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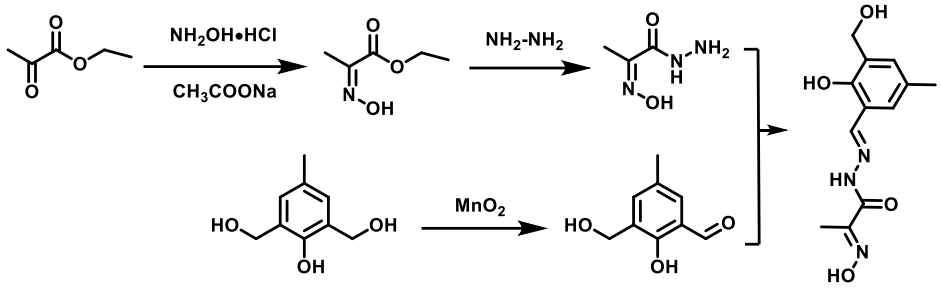
| **October 2012 – July 2014** | **M.Sc.**<br>*From:* The University of Burdwan, Burdwan, West Bengal-713104 |
| **July 2009- July 2012** | **B.Sc.**<br>*From:* Midnapore College (Autonomous), Midnapore, West Bengal-721101 (Affiliated to Vidyasagar University) |

## Experimental Research & Software Skills

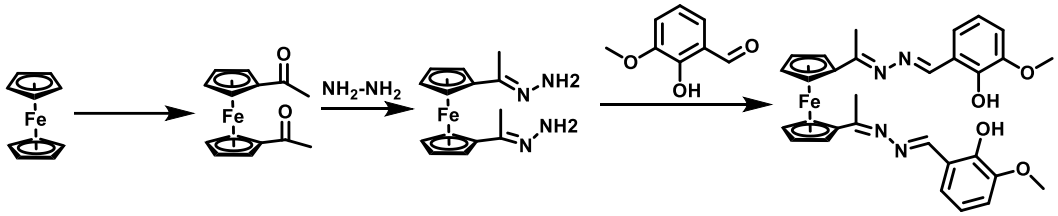
- Experience in conducting air, moisture sensitive and potentially hazardous reaction.
- Familiarize handling organic/organometallic reagents, Schlenk-type glassware and Glove box
- Skills in ligand design through multi step synthetic pathways for new targeted metal complexes
- Experience in multistep synthesis and handling of air and moister sensitive organic radicals ions
- Habituated with handling Single Crystal XRD Machine (Rigaku) and data refinements there by
- Expertise on different crystallization methods and solving crystal structure by different softwares
- Hands on performing, Chromatography Techniques, Cyclic Voltammetry, UV-visible and FT-IR spectroscopy
- Experience in handling BRUKER 300/400/500 MHz NMR Spectrometers
- Skills on essential software like: Mercury, Wingx, Olex2, Bruker AXS Programs, Top spin (NMR software), Structure solution and refinement using SHELXL-97, SHELXTL, DIAMOND, ORTEP and PLATON program packages, Origin, Adobe Illustrator, ChemBio Draw, MS Office, Gauss View, Chem Craft
- Strong working knowledge in most of the chemical databases like Sci-Finder, Scopus etc.

## Research Experiences

- **Multistep Synthesis of Flexible Compartmental Ligands**

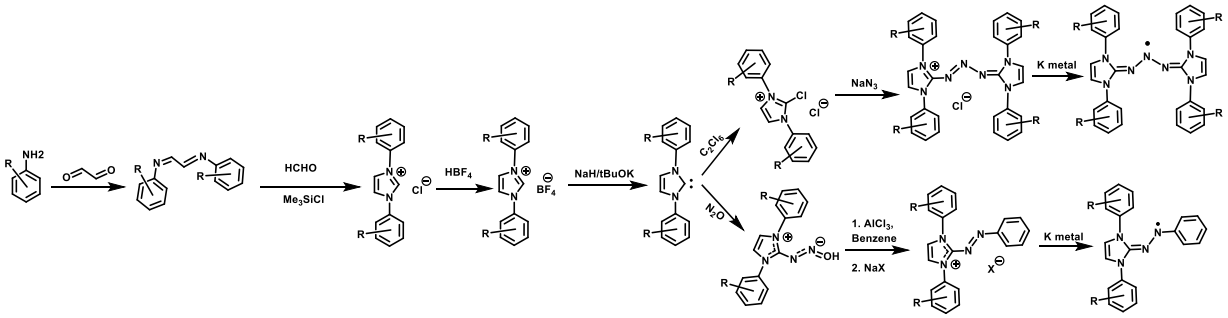



- **Multistep Synthesis of Ferrocene Based Compartmental Ligands**

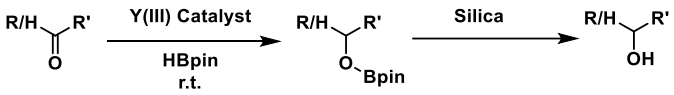



- **One Step Multi-Component Synthesis of Ligands**


- **Multistep Synthesis of N-Hetero Cyclic Based Organic Radicals**




- **Catalytic Hydroboration of Carbonyl Compounds**




## Publications in Peer-reviewed Journals

1. *Exploring Tuning of Structural and Magnetic Properties by Modification of Ancillary β-Diketonate Co-ligands in a Family of Near-Linear Tetranuclear Dy$^{III}$ Complexes:* **Joydev Acharya**, Sourav Biswas, Jan van Leusen, Pawan Kumar, Vierandra Kumar, Ramakirushnan Suriya Narayanan, Paul Kögerler, Vadapalli Chandrasekhar, ***Cryst. Growth Des.***, 2018, *18*, 4004-4016

2. *Slow Magnetic Relaxation in Dinuclear Co$^{II}$Y$^{III}$ Complexes:* **Joydev Acharya**, Abinash

Swain, Amit Chakraborty, Vierandra Kumar, Pawan Kumar, Jessica Flores Gonzalez, Olivier Cador, Fabrice Pointillart, Gopalan Rajaraman, Vadapalli Chandrasekhar, ***Inorg. Chem.,*** 2019, *58*, 10725-10735.

3. *Influence of ligand field on magnetic anisotropy in a family of pentacoordinate $Co^{II}$ complexes:* **Joydev Acharya**, Arup Sarkar, Pawan Kumar, Vierandra Kumar, Jessica Flores Gonzalez, Olivier Cador, Fabrice Pointillart, Gopalan Rajaraman, Vadapalli Chandrasekhar, ***Dalton Trans.,*** 2020, *49*, 4785-4796

4. *Slow magnetic relaxation in a homo dinuclear Dy(iii) complex in a pentagonal bipyramidal geometry:* **Joydev Acharya**, Naushad Ahmed, Jessica Flores-Gonzalez, Pawan Kumar, Fabrice Pointillart, Olivier Cador, Saurabh Kumar Singh, Vadapalli Chandrasekhar, ***Dalton Trans.,*** 2020, *49*, 13110-13122

5. *Mononuclear Pentagonal Bipyramidal Ln (III) complexes: Syntheses and Magnetic Properties:* Pankaj Kalita,[#] **Joydev Acharya**,[#] Vadapalli Chandrasekhar, ***J. Magn. Magn. Mater.,*** 2020, *49*,166098.

6. *Ferrocene-Supported Compartmental Ligands for the Assembly of 3d/4f Complexes:* Amit Chakraborty,[#] **Joydev Acharya**,[#] and Vadapalli Chandrasekhar, ***ACS Omega,*** 2020, *16*, 9046–9054.

7. *Organotin Phosphates Assembled from a Sterically Hindered Organophosphate, $ArOP(O)(OH)_2$, (Ar = 2,6-$(CHPh_2)$2-4-i-Pr-$C_6H_2$): Syntheses and Structures:* Vierandra Kumar, **Joydev Acharya**, Pawan Kumar, Vivek Gupta, Pankaj Kalita, Sourav Biswas, Ramakirushnan Suriya Narayanan, Biswajit Santra, Srinivas Anga, Anukul Jana, and Vadapalli Chandrasekhar, ***Cryst. Growth Des.,*** 2020, *20*, 3034–3043.

8. *Heterometallic 3d–4f Complexes as Single-Molecule Magnets:* Atanu Dey, **Joydev Acharya**, Vadapalli Chandrasekhar, ***Chem. Asian J.,*** 2019, *14*, 4433 –4453

9. *Homometallic $Dy^{III}$ Complexes of Varying Nuclearity from 2 to 21: Synthesis, Structure, and Magnetism*: Sourav Biswas, Sourav Das, **Joydev Acharya**, Vierandra Kumar, Jan van Leusen, Paul Kögerler, Juan Manuel Herrera, Enrique Colacio, Vadapalli Chandrasekhar, ***Chem. -Eur. J.,*** 2017, *23*, 5154 –5170

10. *Functionalized Iron Oxide Nanoparticles Conjugate of Multi-Anchored Schiff's Base Inorganic Heterocyclic Pendant Groups: Cytotoxicity Studies*: Dinesh Kumar, Ananthan Alagumalai, **Joydev Acharya**, Pawan Kumar, Koustav Sarkar, Senthil A Gurusamy Thangavelu, Vadapalli Chandrasekhar, ***Appl. Surf. Sci.,*** 2020, *501*, 143963

11. *Reactions of 4-diphenylphosphino benzoic acid with organotin oxides and-oxy-hydroxide:* Ramakirushnan Suriya Narayanan, Pakkirisamy Thilagar, **Joydev Acharya**, Pawan Kumar, Doddapuneni Krishna Rao, Vadapalli Chandrasekhar, Anukul Jana, ***J. Chem. Sci.,*** 2018, *130*, 92

12. *An Unsymmetric Imino─Phosphanamidinate (NPN) Ligand and its Y(III) Complex: Synthesis, Characterization and Catalytic Hydroboration of Carbonyl Compounds:* Srinivas Anga, **Joydev Acharya**, Vadapalli Chandrasekhar, ***J. Org. Chem.,*** 2021, 86, 2224–2234

13. *High-Coordinate Mononuclear Ln(III) Complexes: Synthetic Strategies and Magnetic Properties:* **Joydev Acharya**, Pankaj Kalita, Vadapalli Chandrasekhar, ***Magnetochemistry,*** 2021, *7*, 1

14. *A Novel Quinoline Derivative for Selective and Sensitive Visual Detection of PPB Level* $Cu^{2+}$ *in Aqueous Solution:* Nilimesh Das, Tanmoy Khan, Aritra Das, Vipin Kumar Jain, **Joydev Acharya**, Md. Serajul Haque Faizi, Joseph Daniel, Pratik Sen, ***Curr. Anal. Chem.,*** (DOI : 10.2174/1573411016999201123162027)

15. *Electronic Coupling between the Organic and Inorganic Sub-Lattices of a Hybrid Organic-Inorganic Perovskite Single Crystal:* Gabriel J. Man, Cody Sterling, Chinnathambi Kamal, Konstantin A. Simonov, Sebastian Svanström, **Joydev Acharya**, Fredrik O.L. Johansson, Erika Giangrisostomi, Ruslan Ovsyannikov, Thomas Huthwelker, Sergei M. Butorin, Pabitra K. Nayak, Michael Odelius, Håkan Rensmo, ***Phys. Rev. B.,*** 2021, 104, L041302

16. *Azide-Coordination in Homometallic Dinuclear Lanthanide (III) Complexes Containing Nonequivalent Lanthanide Metal Ions: Zero-Field SMM Behavior in the Dysprosium Analogue:* Pawan Kumar, Sourav Biswas, Abinash Swain, **Joydev Acharya**, Vierandra Kumar, Pankaj Kalita, Jessica Flores Gonzalez, Olivier Cador, Fabrice Pointillart, Gopalan Rajaraman, Vadapalli Chandrasekhar, ***Inorg. Chem.,*** 2021, 60, 8530–8545

# Contributed equally to the manuscript

## Awards & Honors

- **Junior Research Fellowship (JRF)** from DST-INSPIRE, New Delhi, India from 2015-2017.
- **Senior Research Fellow (SRF)** from DST-INSPIRE, New Delhi, India from 2017-2020.
- **GATE-2014** in Chemical Sciences

## Seminars and Symposium Attended

- Attended *Modern Trends in Molecular Magnet (MTMM-2016)* in IIT Bombay.
- Presented poster in *Indo-French School cum Workshop on Molecular Magnetism, 2018*, organized by Solid State and Structural Chemistry Unit, Indian Institute of Science, Bengaluru-560012
- Presented poster in *Asian Conference on Coordination Chemistry, 2019*, organized by Institut Kimia Malaysia, Malaysia
- Presented poster in *Modern Trends in Molecular Magnet (MTMM-2019)* in IISER Bhopal.