

# Profile



## Personal Data

**Name:** BHASKAR BISWAS

**Nationality:** Indian

**Marital Status:** Married

**Current Academic Position:** Professor

**Address for Correspondence:** Department of Chemistry, University of North Bengal, West Bengal, India.

**Permanent Address:** Bhaskar Biswas, Village & Post: Bansberia station road, Talpukur, District: Hooghly, West Bengal, Pin- 712502, India.

**E-mail:** [mr.bbiswas@rediffmail.com](mailto:mr.bbiswas@rediffmail.com) / [icbbiswas@gmail.com](mailto:icbbiswas@gmail.com)

**Contact No:** +91-9477089710 (M)

## Education

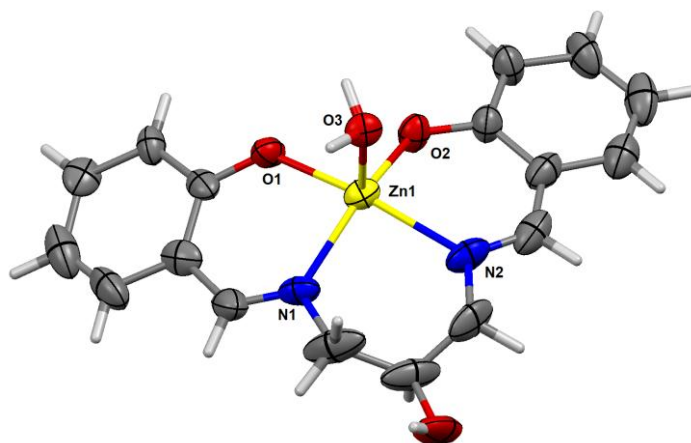
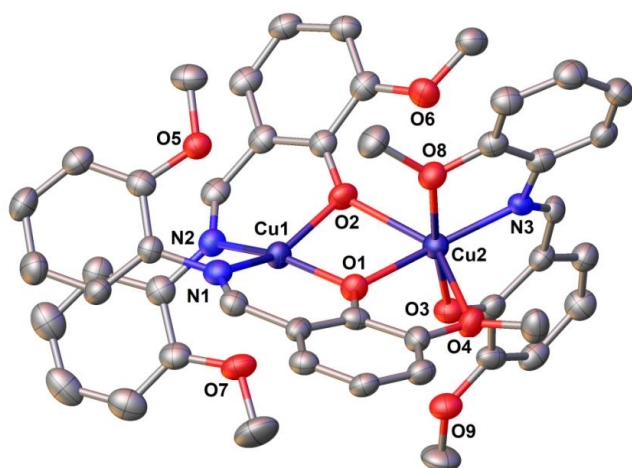
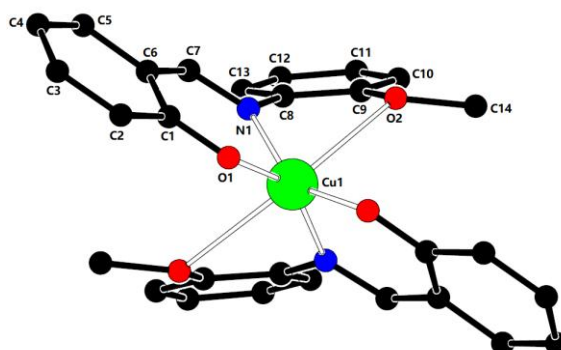
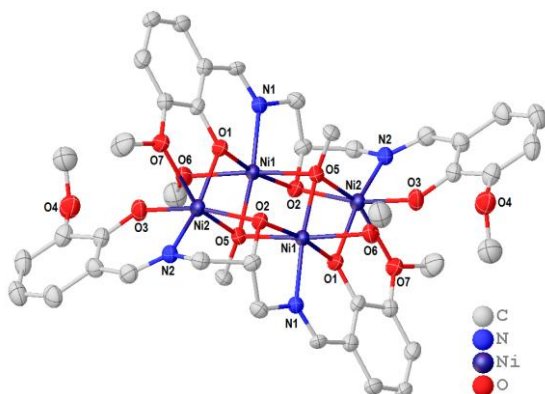
**Ph.D. (Science):** From The University of Burdwan, India.

**M.Sc.:** Chemistry (Inorganic Chemistry Special) from The University of Burdwan, India.

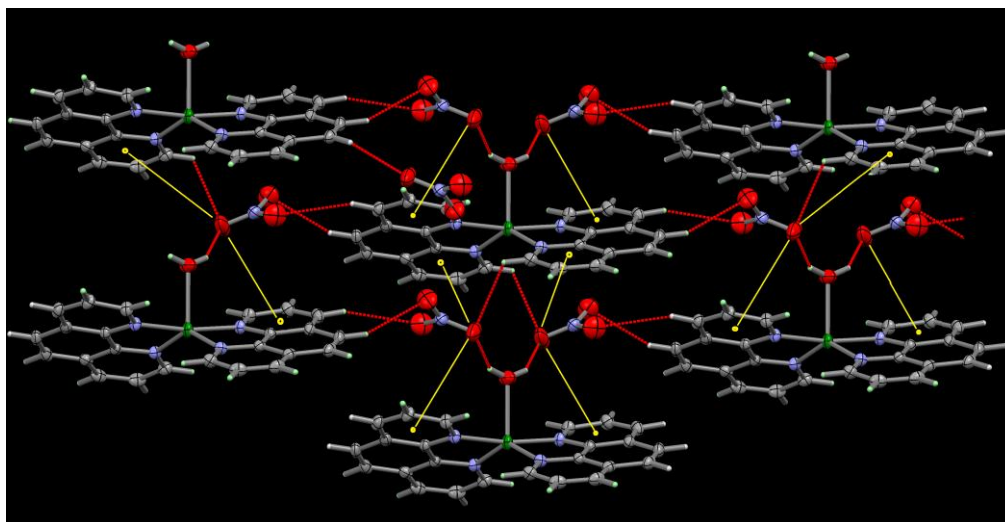
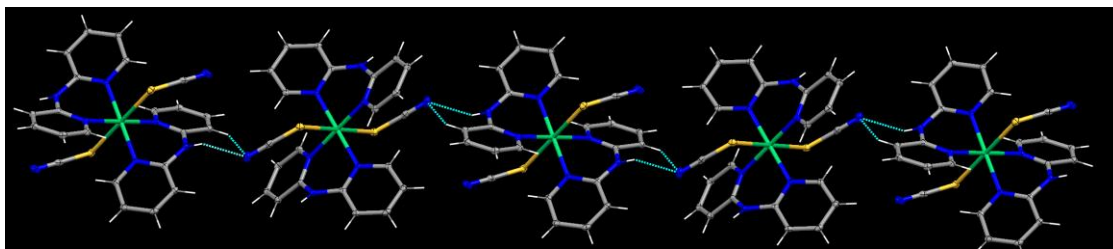
**B.Sc.** Chemistry (Major) from Hooghly Mohsin College, The University of Burdwan, India.

## Area of Research

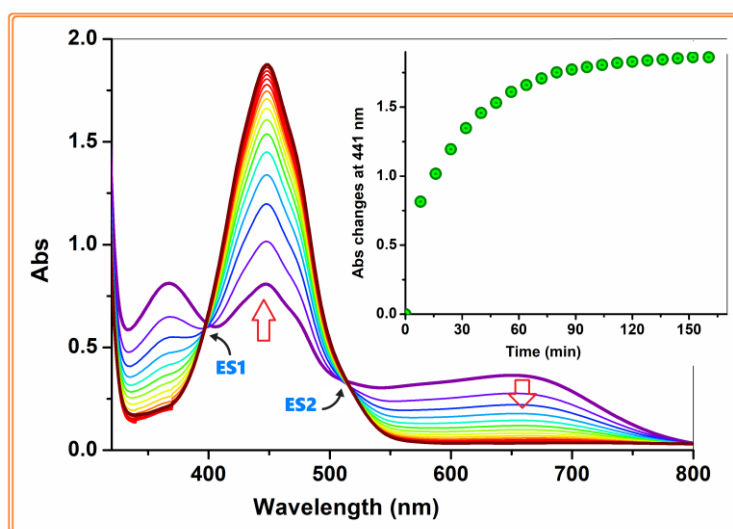
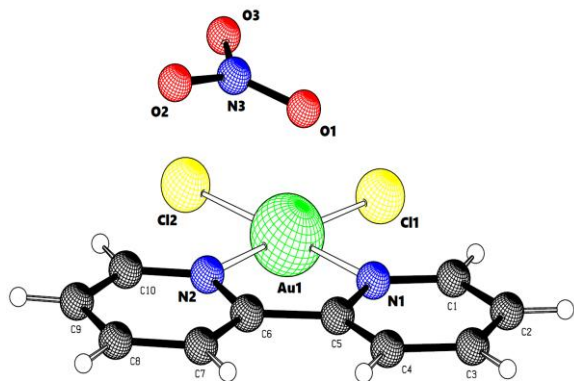
- **Synthesis of Coordination compounds using different synthetic ligands.**



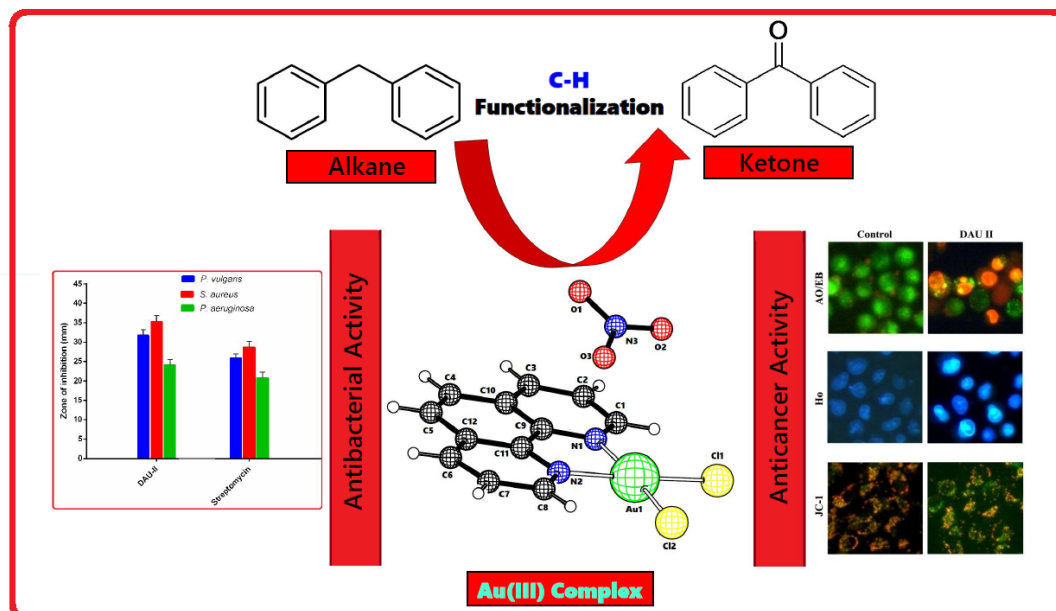
- **Supramolecular Chemistry, molecular self-assembly, molecular recognition, host-guest Chemistry, etc.**



- **Bio-mimicking Chemistry**



- Catalysis and Biological activities**



### Award and Fellowship

- National Scholarship for Higher Secondary Result from Government of West Bengal
- Director of Public Instruction Special Scholarship for B.Sc. Chem(H) Result from Government of West Bengal.
- Junior Research Fellowship under **CSIR Scheme** from Council of Scientific and Industrial Research, Govt. of India in 2004 (December).
- Junior Research Fellowship under **UGC Scheme** from Council of Scientific and Industrial Research, Govt. of India in 2004 (June).
- **YOUNG SCIENTIST AWARD UNDER FAST TRACK SCHEME, DST, NEW DELHI (SB/FT/CS-088/2013)**
- UGC Research Award (2014-17, Selected)
- Outstanding Paper Award in 1<sup>st</sup> Regional Science & Technology Congress, 2016 in Burdwan Division at Bankura Christian College, Bankura during 7<sup>th</sup>-8<sup>th</sup> November, 2016
- Selected as participant for best paper award (1<sup>st</sup> Regional Science & Technology Congress, 2016 in Burdwan Division) in Author Workshop on 2nd December, 2016 at the Sonnet, Salt Lake, Kolkata
- Outstanding Paper Award in 2<sup>nd</sup> Regional Science & Technology Congress, 2017 in Southern Region at Kalyani University, Kalyani, during 14<sup>th</sup>-15<sup>th</sup> December, 2017
- Selected as Outstanding Paper awardee (25<sup>th</sup> State Science & Technology Congress, 2018) on 4-5 March, 2018 at the Science City Auditorium, Kolkata

### Industrial Experiences

- Water Analyst in HydroChemical Service (ONDEO NALCO), Kolkata, West Bengal, from 2<sup>nd</sup> August, 2004 to October 2004.
- Production Chemist in IR Department, Dabur Pharmaceutical Limited, Kalyani, West Bengal, from 2<sup>nd</sup> October, 2004 to March 2005.

### Teaching Experiences

- Assistant Professor in Chemistry, Raghunathpur College, Purulia, W.B. India, July 2008- July 2017.
- Assistant Professor in Chemistry, Surendranath College, Kolkata, W.B. India, August 2017- August 2018.

## Research Guidance

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- 1) Dhananjay Dey (**PhD Awarded on 14<sup>th</sup> November 2017**)
- 2) Abhranil De (**PhD Awarded on 03<sup>rd</sup> December 2018**)
- 3) Subrata Das (**PhD Awarded on 07<sup>th</sup> June 2019**)
- 4) Biswajit Chowdhury (**PhD Awarded on 30<sup>th</sup> October 2019**)
- 5) Mamoni Garai (**PhD Awarded-pending 2020**)
- 6) Prafulla Kumar Mudi (**Registration on 20-1-2020**)
- 7) Chanchal Kumar Pal (**Registration on 20-1-2020**)
- 8) Suvojit Roy
- 9) Shreya Mahato
- 10) Suvam Mukherjee
- 11) Nilaj Bandopadhyay
- 12) Rajani Kanta Mahato
- 13) Sangharaj Diyal

## Member of the Learned Society

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- Indian Chemical Society (**F/8097/LM**)
- American Chemical Society (**32182808**)

## Research Projects

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- Synthesis, characterization and reactivity study of new Schiff base complexes of some bio-metals like Mn, Fe, Co, Ni, Cu and Zn; Funding Agency: **U G C: 2010-2011**; (Completed).
- Synthesis and characterization and DNA binding study of some transition metal complexes; Funding Agency: **U G C: 2013-2014**; (Completed).
- Synthesis and characterization of iron complexes and their catalytic aspects towards different organic transformations; Funding Agency: **D S T (SERB): 2014-2017** (Completed).
- Development of a Novel Synthetic Protocol in Designing a New Class of 3d-4f Complex salts with (N,N) Ligands and Evaluation of their Structural Aspects; Funding Agency: **SERB: 2018-2019**; Reference **NO. TAR/2018/000473 dated 05/11/2018** (Ongoing).

## List of Research Publications

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### Book (Editor)

- **Ligand**, Edited by Dr. Chandreleka & **Dr. B Biswas**, 2017-18, Intech Publishing House, 51000 Rijeka, Croatia (Published), **ISBN No. 978-1-78923-182-3**

### Book Chapter

- ✚ **B. Biswas**, **Platinum based anticancer therapeutics and their mechanistic aspects: An overview** □ **Antimicrobials: Chemical and Natural compounds**. (2015) Chapter 21 & 419-431 The book is published by CRC Press and Taylor & Francis Asia Pacific, Tel: 6741 5166 ext. 115; Email: li.ming@tandf.com.sg, <http://www.crcasiapacific.com>. (Catalogue No: K25354, ISBN No: 978-1-4987-1562-1).
- ✚ **Saikat Mondal & B. Biswas**, **Biocontrol Potential of Endosymbiotic Bacterium *Wolbachia* against Mosquito-Borne Diseases**, □ **Microbial Control of Vector-Borne Diseases**. (2017) Chapter 11 & 191-213 The book is published by CRC Press and Taylor & Francis Asia Pacific, Tel: 6741 5166 ext. 115; Email: li.ming@tandf.com.sg, <http://www.crcasiapacific.com>.

1. Organo-Cascade Catalysis: Application of Merged Iminium-Enamine Activation Technique and Related Cascade Reactivities, Shirshendu Mukherjee,<sup>\*,[a]</sup> **Bhaskar Biswas\***, *Chemistry Select*, 5 (2020) 10704-10726 (Corresponding Author) (Impact factor 1.81)









### List of Research Articles (2019-2020)

60. A Copper(II)-Schiff base Complex: Synthesis, Structural Characterization and Catalytic Oxidative Coupling of 2-Aminophenol, Shreya Mahato and **Bhaskar Biswas\***, *Journal of Indian Chemical Society*, in press (2020) (Corresponding Author)
59. Catalytic Oxidative Coupling of o-Phenylenediamine, In-vitro Antibacterial and Antitumor Activities of a Gold(III)-Bipyridine Complex, R.K. Mahato, A.K. Mahanty, S. Paul, V. Gopal, B. Perumalsamy, G. Balakrishnan, T. Ramasamy, D. Dharumadurai, **B. Biswas\***, *Journal of Molecular Structure*, in press (2020) [doi.org/10.1016/j.molstruc.2020.129264](https://doi.org/10.1016/j.molstruc.2020.129264). (Corresponding Author) (Impact factor 2.463)
58. Visible Light Induced Photocatalytic Dye Degradation by Cobalt Oxide Nanoparticles, B. Chowdhury, S.S. Pradhan, H.S. Das, **Bhaskar Biswas\***, *Fine Engineering Chemicals*, 01 (2020) 113-126. (Corresponding Author)
57. Iron Oxide Nanoparticles: Synthesis, Morphological Analysis, Antibacterial Activity, Cytotoxic Effect on Lung Cancer Cell line, Subrata Das, Sangharaj Diyali, G. Vinothini, Balaji Perumalsamy, Gowdhami Balakrishnan, Thirumurugan Ramasamy, Dhanasekaran Dharumadurai, **Bhaskar Biswas\***, *Heliyon*, 06 (2020) e04953 (Corresponding Author) (Impact factor 1.65)
56. A Gold(III)-Phenanthroline Complex in C-H Functionalization of Alkanes and its in-vitro Bio-activity, Dhananjay Dey, Rajani Kanta Mahato, Hare Ram Yadav, Afnan Al-Hunaiti, G. Vinothini, Balaji Perumalsamy, Gowdhami Balakrishnan, Thirumurugan Ramasamy, Dhanasekaran Dharumadurai, Angshuman Roy Choudhury and **Bhaskar Biswas\***, *Journal of Molecular Structure*, 1222 (2020) 128919. (Corresponding Author) (Impact factor 2.463)
55. Ligand Directed Synthesis of a Unprecedented Tetragonal bipyramidal Copper(II) Complex and its Catalytic Role in Oxidative Dimerisation of 2-Aminophenol, Shreya Mahato, Nishith Meheta, K. Muddukrishnaiah, Mayank Joshi, Prasanta Ghosh, Madhusudan Shit, Angshuman Roy Choudhury, **Bhaskar Biswas\***, *Applied Organometallic Chemistry*, (2020) e9535 (Corresponding Author) (Impact factor 3.14)
54. Oxidative Dimerisation of 2-Aminophenol by a Copper(II) Complex: Synthesis, Non-covalent interactions and Bio-mimics of Phenoxazinone Synthase Activity, S. Mukherjee, S. Roy, S. Mukherjee, **B. Biswas\***, *J. Mol. Struct.*, 1217 (2020) 128348 (Corresponding Author) (Impact factor 2.463)
53. Transesterification Activity by a Zinc(II)-Schiff Base Complex with Theoretical Interpretation. C.K. Pal, S. Mahato, M. Joshi, S. Paul, A.R. Choudhury, **B. Biswas\***, *Inorganica Chimica Acta* 506 (2020) 119541 (Corresponding Author) (Impact factor 2.304)
52. Excitation wavelength as logic operator. M. Karar, P. Paul, **B. Biswas**, T. Majumdar, A. Mallick, *Journal of Chemical Physics*, 152 (2020) 075102. (Impact factor 2.99)  
(Selected as **Feature and Scilight Article: Optical variations turn molecules into a diverse array of logical operators**)
51. Schiff Base Triggering Synthesis of Copper(II) Complex and its Catalytic Fate towards Mimics of Phenoxazinone Synthase Activity, P.K. Mudi, N. Bandyopadhyay, M. Joshi, M. Shit, S. Paul, A.R. Choudhury, **B. Biswas**, *Inorganica Chimica Acta*, 505 (2020) 119468 (Corresponding Author) (Impact factor-2. 304)
50. P.K. Mudi, R.K. Mahato, M. Joshi, S. Paul, A.R. Choudhury, **B. Biswas**, Synthesis and Structural Characterization of a Linkage Isomer to a Mononuclear Nickel(II) Complex: Experimental & Computational Depiction of Phosphoesterase Efficiency, *Journal of Molecular Structure*, 1200 (2020) Art no 114156 (Corresponding Author).



49. C.K. Pal, S. Mahato, H. R. Yadav, A.R. Choudhury, **B. Biswas**, Bio-mimetic of Catecholase and Phosphatase Activity by a Tetra-iron(III) Cluster, *Polyhedron*, 174 (2019) Art no 114156 (**Corresponding Author**). 2.34
48. [M. Karar](#), [P. Paul](#), [B. Biswas](#), S. Paul, [T. Majumdar](#) and [A. Mallick](#), Loading-Unloading-Receiving of selected Molecule with Nanomolar selectivity in Molecular Communication: Unprompted Carrier to Carrier Transformation, *ChemistrySelect*, 4 (2019) 10149-10156. (**Co-Author**)
47. P. K. Mudi, C.K. Pal, **B. Biswas**, Synthesis, Supramolecular Architecture and Fluorescence Property of a Mixed Ligand 1D Pb(II) Coordination Polymer” *European Journal of Chemistry*, 10 (2019) 125-130. (**Corresponding Author**)
46. A. De, D. Dey, C.K. Pal, S. Paul, **B. Biswas\***, Carbinol Mediated Clusterization of Nickel(II) ions in a Schiff base Backbone: Structural & Solution Properties, Phosphoester Cleavage Activity including Theoretical Support” *Journal of Molecular Structure*, 1195 (2019) 293-301. (**Corresponding Author**)
45. Ajit Das, A. Sahu, P.K. Mudi, H.R. Yadav, A.R. Choudhury, **B. Biswas\***, Synthesis and phenoxazinone synthase activity by a cobalt(II) complex, *Journal of Indian Chemical Society*, 96 (2019) 255-262. (**Corresponding Author**)
44. D. Dey, M. Garai, S. Arar, A. Almherat, A. Al-Hunaiti, H.R. Yadav, M. Maji, A. R. Choudhury, **B. Biswas\*** An Oxido-Acetato Bridged Tetra-iron Complex: Catechol Dioxygenase and C-H Activation Activity, *J. Mol. Str.*, 1180 (2019) 220-226. (**Corresponding Author**)

#### **Convener/Coordinator in National Level Seminar/Workshop**

-  **Coordinator of on-line test for M.Sc. 4<sup>th</sup> Sem students of Chemistry on 14<sup>th</sup> Feb 2020** organized by Syngene International, Bengaluru in collaboration with Mettler (**Coordinator of on-line test for Syngene International, Bengaluru**)
-  **One day state level Seminar on Petroleum Conservation opportunities in day to day life** organized by **Petroleum Conservation Research Association (PCRA)** in collaboration with **Dept. of Chemistry, University of North Bengal, Darjeeling 734013, India (10<sup>th</sup> Feb, 2020)** (**Coordinator of State level Seminar**)
-  **International Seminar on IYPT 2019 on *The Periodic Table of Chemical Elements: A Fundamental Resource for the Advancement of Chemical & Material Sciences***, by Dept. of Chemistry, University of North Bengal, Darjeeling 734013, India (22<sup>nd</sup> – 23<sup>rd</sup> November, 2019) (**Jt. Convener of International Seminar**)
-  **Science Academies’ Refresher Course on *Fundamentals and Applications of Chemical Sciences in Material & Biological Sciences***, by Dept. of Chemistry, Surendranath College, Kolkata 700009, India & Sponsored by IASc, INSA, NASI (2<sup>nd</sup> – 17<sup>th</sup> January, 2019) (**Coordinator of Lecture Workshop**)
-  **Indian Chemical Society Lecture Workshop on *Revisit of Chemistry: Past, Present & Future***, by Dept. of Chemistry, Surendranath College, Kolkata 700009, India (16<sup>th</sup> February, 2018) (**Coordinator of Lecture Workshop**)
-  **Science Academies’ Lecture Workshop on *Recent Trends in Chemical Science: Issues & Challenges***, by Dept. of Chemistry, Surendranath College, Kolkata 700009, India & Sponsored by IASc, INSA, NASI (29<sup>th</sup> – 30<sup>th</sup> November, 2017) (**Coordinator of Lecture Workshop**)
-  **State Level seminar on *A Scientific, Social and Economic Impact on Environment: Awareness, Benefits & Limitations***, 10<sup>th</sup> January 2017, by Teachers’ Council, Raghunathpur College, Purulia 723133, India. (**Jt. Convener**)
-  **Science Academies’ Lecture Workshop on *Chemistry: An Innovation Driver in Materials Science***, by Dept. of Chemistry, Raghunathpur College, Purulia 723133, India & Sponsored by IASc, INSA, NASI (27<sup>th</sup> – 28<sup>th</sup> September, 2016) (**Coordinator of Lecture Workshop**)

- ✚ **State Level seminar** on *A tribute to People's man APJ Abdul Kalam who served our nation through his life and works*, **15<sup>th</sup> October 2015**, by Dept. of Chemistry, Raghunathpur College, Purulia 723133, India (**15<sup>th</sup> October, 2015**) (**Convener**)
- ✚ **Science Academies' Lecture Workshop** on *Recent Advances in Chemistry: Challenges & Opportunities*, by Dept. of Chemistry, Raghunathpur College, Purulia 723133, India & Sponsored by IASc, INSA, NASI (**21<sup>st</sup> – 22<sup>nd</sup> August, 2014**) (**Coordinator of Lecture Workshop**)

**Research Summary of Dr. Bhaskar Biswas** (Updated on 25-9-2020)