

**Dr. Biplab BISWAS**

Department of Chemistry,  
Presidency University,  
86/1- College Street, Kolkata-73  
West Bengal, India

Tel: 0091-9734246721

Email: [biplab.chem@presiuniv.ac.in](mailto:biplab.chem@presiuniv.ac.in)  
[biplabchem@gmail.com](mailto:biplabchem@gmail.com)



**Position:** Assistant Professor

**Date of Birth:** 23/05/1983

**City, State and Country of Birth:** Nadia, West Bengal, India

**Citizenship:** Indian

**Education & Work Experience:**

- 2000- 2003 Bachelor of Science (B.Sc) in Chemistry  
[University of Calcutta, West Bengal, India](#)
- 2003- 2005 Master of Science (M.Sc), Chemistry  
[Indian Institute of Technology, Bombay \(IIT, Bombay\)](#)
- 2005- 2009 Doctor of Philosophy (Ph.D) in Chemistry  
[Max Planck Institute, Muelheim an der Ruhr, Germany](#)
- 2009- 2011 Post Doctoral Fellow  
[CEA, Grenoble, France](#)
- 2011- 2013 Guest Scientist  
[Karlsruhe Institute of Technology \(KIT\), Karlsruhe, Germany](#)

**Abstract of Scientific Work**

After completing my M.Sc in Inorganic Chemistry from Indian Institute of Technology, Bombay in 2005 I moved to Max-Planck-Institut für Bioanorganische Chemie, Muelheim an der Ruhr, Germany. In the Max-Planck-Institute I worked in Prof. Karl Wieghardt's group under the supervision of Prof. Phalguni Chaudhuri on molecular-magnetism project with 3d-transition metal to complete my Ph.D thesis. My Ph.D Thesis entitled "*A Magneto-Structural Study on Polynuclear Metal Complexes*" was completed in 2008, September.

In 2009 I moved to Laboratoire de Reconnaissance Ionique et Chimie de Coordination, SCIB/INAC/CEA Grenoble for my post-doctoral research. There I was working with Prof. Marinella Mazzanti on low valent uranium chemistry and also on U-oxo cluster. Together with uranium chemistry I was also doing the synthetic and the reactivity study of lanthanide complexes. In the lanthanide's project our main aim was to activate CO<sub>2</sub> using those newly synthesized lanthanide complexes.

In 2011 I moved to KIT as a Guest Scientist. In KIT I am working with Prof. Annie K. Powell on molecular magnetism. Synthesis of Single Molecule Magnets (SMMs) and their characterizations are the main of this project. Since December 2013 I am working as an assistant professor in Department of Chemistry, Presidency University.

### **Skills**

- Synthesis and characterization of metal complexes (mainly polynuclear).
- Manipulation of air sensitive, moisture sensitive or temperature sensitive compounds using Schlenck or glove box techniques.
- Proficiency with basic spectroscopy (IR, NMR, UV-VIS, CD, MCD, Mass).
- Extensive experience with **magnetochemistry (SQUID)**, Mössbauer Spectroscopy, EPR-spectroscopy, NMR-spectroscopy, electrochemistry, spectroelectrochemistry, X-ray crystallography.

**Instrumental Expertise:** SQUID, IR, NMR, UV-VIS, etc.

### **Honors and Awards**

- 2000 National Scholarship (India) on the basis of H.S results
- 2003 National Scholarship (India) on the basis of B.Sc results
- 2005 Godrej Scholarship for the extraordinary performance in M.Sc
- 2005 Qualified in NET (Govt. of India)
- 2005 Qualified in GATE (Govt. of India)
- 2005 DFG-Fellowship for Ph.D work with Prof. P.Chaudhuri and Prof. Karl Wieghardt
- 2008 Max-Planck fellowship for postdoctoral research in MPI, Mülheim
- 2009 CEA fellowship for Post-Doctoral research with Dr. Marnella Mazzanti
- 2011 KIT fellowship for Guest Scientist
- 2013 Assistant Professor, Presidency University

### **Conference – Oral Presentation and Posters:**

1. Participated in Coordination Chemistry conference 2006, in University of Göttingen.
2. Poster Presentation May, 2007, in SPP (Special Priority Programm)-Molecular Magnetism Workshop by DFG (Deutsche Forschungs Geminschaft) at Bad Dürkheim, Germany.
3. Oral Presentation July, 2007, in *ICBIC- XIII* at Viena, Austria.
4. Oral Presentation (Magneto-structural Studies on Polynuclear 3d-Metal Clusters) October, 2007, in International Young Chemist Conference 2007, Poland.
5. Poster Presentation February, 2008, in *Coordination Chemistry Conference*, at Giessen, Germany.
6. 2010, I have represented my department during the Evaluation of CEA.
7. Participated in International Symposium on Frontiers in Inorganic Chemistry (FIC-2010), IACS, Kolkata.

## List of Publications:

1. Elsa Mora, Leonor Maria, **Biplab Biswas**, Clément Camp, Isabel C. Santos, Jacques Pécaut, Adelaide Cruz, José M. Carretas, Joaquim Marçalo and Marinella Mazzanti, Diamine Bis(phenolate) as Supporting Ligands in Organoactinide(IV) Chemistry. Synthesis, Structural Characterization and Reactivity of Stable Dialkyl Derivatives *Organometallics* **2013**, 32, 1409. (IF 4.145)
2. Clément Camp, Valentin Guidal, **Biplab Biswas**, Jacques Pécaut, Lionel Dubois and Marinella Mazzanti, Multielectron Redox Chemistry of Lanthanide Ions Supported by Tetradentate Schiff Bases *Chemical Science*, **2012**, 3, 2433. (IF 8.314)
3. Clément Camp, Valentin Guidal, **Biplab Biswas**, Jacques Pécaut, Lionel Dubois and Marinella Mazzanti, Inside Cover: Multielectron Redox Chemistry of Lanthanide Ions Supported by Tetradentate Schiff Bases *Chemical Science*, **2012**, 3, 2398. (IF 8.314)
4. **Biplab Biswas**, Victor Mougel, Jacques Pécaut and Marinella Mazzanti, Base Driven Assembly of Large Uranium Oxo/Hydroxo Clusters *Angew. Chemie., Int. Ed.*, **2011**, 50, 5744. (IF 13.734)
5. **Biplab Biswas**, Victor Mougel, Jacques Pécaut and Marinella Mazzanti, Back Cover: Base Driven Assembly of Large Uranium Oxo/Hydroxo Clusters *Angew. Chemie., Int. Ed.*, **2011**, 50, 5588. (IF 13.734)
6. Thomas Weyhermüller, Rita Wagner, **Biplab Biswas**, Phalguni Chaudhuri, A non-linear (2,2,2) alkoxo-bridging in a Fe(III)<sub>4</sub>O<sub>6</sub> core potentially relevant to iron-tunicates *Inorganica Chimica Acta*, **2011**, 374, 140-146. (IF 1.687)
7. Victor Mougel, **Biplab Biswas**, Jacques Pécaut and Marinella Mazzanti, New insights into the acid mediated disproportionation of pentavalent uranyl. *Chem. Commun.*, **2010**, 46, 8648. (IF 6.378)
8. **Biplab Biswas**, Sunita Salunke-Gawali, Thomas Weyhermüller, Vinzenz Bachler, Eckhard Bill and Phalguni Chaudhuri, Metal-Complexes As Ligands to Generate Asymmetric Homo- and Heterodinuclear M<sub>A</sub><sup>III</sup>M<sub>B</sub><sup>II</sup> Species: a Magneto-Structural and Spectroscopic Comparison of Imidazole-N versus Pyridine-N *Inorg. Chem.* **2010**, 49, 626. (IF 4.593)
9. Manuel Prinz, Karsten Kuepper, Christian Taubitz, Michael Raekers, Sumit Khanra, **Biplab Biswas**, Thomas Weyhermüller, Marc Uhlarz, Joachim Wosnitza, Jürgen Schnack, Andrei V. Postnikov, Christian Schröder, Simon J. George, Manfred Neumann and Phalguni Chaudhuri, A Star-Shaped Heteronuclear Cr<sup>III</sup>Mn<sup>II</sup><sub>3</sub> Species and Its Precise Electronic and Magnetic Structure: Spin Frustration Studied by X-Ray Spectroscopic, Magnetic, and Theoretical Methods *Inorg. Chem.*, **2010**, 49, 2093. (IF 4.593)
10. **Biplab Biswas**, Ulrich Pieper, Thomas Weyhermüller and Phalguni Chaudhuri, Polynuclear Nickel(II) Complexes: A Magnetostructural Study of Ni<sup>II</sup><sub>4</sub>, Ni<sup>II</sup><sub>6</sub>, and Ni<sup>II</sup><sub>9</sub> Species with Oxime Ligands *Inorg. Chem.*, **2009**, 48, 6781. (IF 4.593)
11. **Biplab Biswas**, Thomas Weyhermüller, Eckhard Bill and Phalguni Chaudhuri, A Magneto-Structural Study of a Hexanuclear (V<sup>IV</sup>=O)<sub>6</sub>-Complex and a Tetranuclear Mixed-Valent [V<sup>III</sup><sub>2</sub>V<sup>IV</sup><sub>2</sub>] Species *Inorg. Chem.*, **2009**, 48, 1524. (IF 4.593)

12. **Biplab Biswas**, Sunita Salunke-Gawali, Thomas Weyhermüller, Vinzenz Bachler, Eckhard Bill and Phalguni Chaudhuri, A Ferromagnetically Coupled Diiron(III) Complex with a m-Phenylenediamine Based Ligand *Eur. J. Inorg. Chem.* **2008**, 2391. (IF 3.120)
13. Phalguni Chaudhuri, Eckhard Bill, Rita Wagner, Ulrich Pieper, **Biplab Biswas** and Thomas Weyhermüller, Radical-Ligand Derived C-N Coupling. Ga(III)-Radical vs. low-spin Co(III)-Radical Reactivity *Inorg. Chem.*, **2008**, 49, 5549. (IF 4.593)
14. Phalguni Chaudhuri, Rita Wagner, Ulrich Pieper, **Biplab Biswas** and Thomas Weyhermüller, Effect of the substituents on the spin coupling between iminosemiquinone-radicals mediated by diamagnetic metal ions: l.s. Co(III) vs Ga(III) *Dalton Trans.* **2008**, 1286. (IF 3.806)
15. **Biplab Biswas**, Sumit Khanra, Thomas Weyhermüller and Phalguni Chaudhuri, A one-pot synthesis of a paramagnetic high-nuclearity nickel(II) cluster: an octadecanuclear  $\text{Ni}^{\text{II}}_{16}\text{Na}_2$  metal aggregate *Chem. Commun.* **2007**, 1057. (IF 6.378)
16. Sumit Khanra, **Biplab Biswas**, Christian Golze, Bernd Büchner, Vladislav Kataev, Thomas Weyhermüller and Phalguni Chaudhuri, A spin-frustrated star-shaped heterotetranuclear  $\text{Cr}^{\text{III}}\text{Mn}^{\text{II}}_3$  species and its magnetic and HF-EPR measurements *Dalton Trans.* **2007**, 481. (**Highlighted as Top Ten Articles**) (IF 3.806)
17. Phalguni Chaudhuri, Thomas Weyhermüller, Rita Wagner, Sumit Khanra, **Biplab Biswas**, Eberhard Bothe, and Eckhard Bill, Tridentate Facial Ligation of Tris(pyridine-2-aldoximato)nickel(II) and Tris(imidazole-2-aldoximato)nickel(II) To Generate  $\text{Ni}^{\text{II}}\text{Fe}^{\text{III}}\text{Ni}^{\text{II}}$ ,  $\text{Mn}^{\text{III}}\text{Ni}^{\text{II}}$ ,  $\text{Ni}^{\text{II}}\text{Ni}^{\text{II}}$ , and  $\text{Zn}^{\text{II}}\text{Ni}^{\text{II}}$  and the Electrooxidized  $\text{Mn}^{\text{IV}}\text{Ni}^{\text{II}}$ ,  $\text{Ni}^{\text{II}}\text{Ni}^{\text{III}}$ , and  $\text{Zn}^{\text{II}}\text{Ni}^{\text{III}}$  Species: A Magnetostructural, Electrochemical, and EPR Spectroscopic Study *Inorg. Chem.* **2007**, 46, 9003. (IF 4.593)