

List of Publications:

1. Iron(III) complexes of 2-(1H-benzo[d]imidazol-2-yl)phenol and acetate or nitrate as catalysts for epoxidation of olefins with hydrogen peroxide.
A. K. Dutta, S. Samanta, S. Dutta, C. R. Lucas, L. N. Dawe, P. Biswas, B. Adhikary, *J.Mol. Struct.* **1115** (2016) 207–213.
2. Syntheses, structural, spectroscopic and magnetic properties of polynuclear Fe(III) complexes containing N and O donor ligands
A. K. Dutta, S. Biswas, S. Dutta, L. N. Dawe, C. R. Lucas, B. Adhikary, *Inorg. Chim. Acta* **444** (2016) 141–149.
3. Morphological tuning of Eu₂O₂S nanoparticles, manifestation of peroxidase-like activity and glucose assay use
A. B. Ghosh, N. Saha, A. Sarkar, **A. K. Dutta**, P. Biswas, K. Nag, B. Adhikary, *New J.Chem.* **40** (2016) 1595–1604.
4. Structure, luminescence and antimicrobial properties of mononuclear silver(I) complexes of pyridine 2-carboxamide
S. Joardar, S. Roy, S. Samanta, **A. K. Dutta**, *J. Chem. Sci.* **127** (2015) 1819–1826.
5. Highly active spherical amorphous MoS₂: facile synthesis and application in photocatalytic degradation of rose bengal dye and hydrogenation of nitroarenes
N. Saha, A. Sarkar, A. B. Ghosh, **A. K. Dutta**, G. R. Bhadu, P. Paul, B. Adhikary, *RSC Adv.* **5** (2015) 88848–88856.
6. Supramolecular interactions in mononuclear iron(III) complex derived from a diamide ligand: Spectroscopic and electrochemical properties
S. Samanta, **A. K. Dutta**, P. Biswas, *Indian J Chem.* **54A** (2015) 478–483.
7. Enhanced photocatalytic activity of Eu-doped Bi₂S₃ nanoflowers for degradation of organic pollutants under visible light illumination
A. Sarkar, A. B. Ghosh, N. Saha, **A. K. Dutta**, D. N. Srivastava, P. Paul, B. Adhikary, *Catal. Sci. Technol.* **5** (2015) 4055–4063.
8. Non-enzymatic amperometric sensing of hydrogen peroxide at a CuS modified electrode and its application to human urine sample.
A. K. Dutta, S. Das, P. K. Samanta, S. Roy, B. Adhikary, P. Biswas, *Electrochimica Acta* **144** (2014) 282–287.
9. Colorimetric estimation of human glucose level using -Fe₂O₃ nanoparticles: An easily recoverable effective mimic peroxidase
K. Mitra, A. B. Ghosh, A. Sarkar, N. Saha, **A. K. Dutta**, *Biochem. Biophys. Res. Comm.* **451** (2014) 30–35.

10. Single source precursor approach to the synthesis of Bi₂S₃ nanoparticles: A new amperometric hydrogen peroxide biosensor.
A. K. Dutta, S. K. Maji, K. Mitra, A. Sarkar, N. Saha, A. B. Ghosh, B. Adhikary. *Sens. Actuat. B Chem.* **192** (2014) 578–585.
11. -Fe₂O₃ nanoparticles: An easily recoverable effective photo-catalyst for the degradation of rose bengal and methylene blue dyes in the waste-water treatment plant.
A. K. Dutta, S. K. Maji, B. Adhikary, *Mat. Res. Bull.* **49** (2014) 28–34.
12. A novel amperometric biosensor for hydrogen peroxide and glucose based on cuprous sulfide nanoplates.
S. K. Maji, **A. K. Dutta**, G. R. Bhadu, P. Paul, A. Mondal, B. Adhikary, *J. Mater. Chem. B* **1** (2013) 4127–4134.
13. CuS nanoparticles as a mimic peroxidase for colorimetric estimation of human blood glucose level.
A. K. Dutta, S. Das, S. Samanta, P. K. Samanta, B. Adhikary, P. Biswas, *Talanta* **107** (2013) 361–367.
14. New peroxidase–substrate 3,5–di–tert–butylcatechol for colorimetric determination of blood glucose in presence of prussian blue–modified iron oxide nanoparticles.
A. K. Dutta, S. K. Maji, P. Biswas, B. Adhikary, *Sens. Actuat. B Chem.* **177** (2013) 676–683.
15. Visible–light–driven synthesis of 2–substituted benzothiazoles using CdS nanosphere as heterogenous recyclable catalyst
S. Das, S. Samanta, S. K. Maji, P. K. Samanta, **A. K. Dutta**, D. N. Srivastava, B. Adhikary, P. Biswas, *Tetrahedron Lett.* **54** (2013) 1090–1096
16. Synthesis of FeS and FeSe nanoparticles from a single source precursor: a study of their photocatalytic activity, peroxidase–like behavior, and electrochemical sensing of H₂O₂.
A. K. Dutta, S.K. Maji, D.N. Srivastava, A. Mondal, P. Biswas, P. Paul, B. Adhikary, *ACS App. Mater. Interfaces* **4** (2012) 1919–1927.
17. Iron selenide thin film: Peroxidase-like behavior, glucose detection and amperometric sensing of hydrogen peroxide.
A. K. Dutta, S.K. Maji, D.N. Srivastava, A. Mondal, B. Karmakar, P. Biswas, B. Adhikary. *Sens. Actuat. B Chem.* **173** (2012) 724–731.
18. Peroxidase–like activity and amperometric sensing of hydrogen peroxide by Fe₂O₃ and prussian blue–modified Fe₂O₃ nanoparticles.
A. K. Dutta, S. K. Maji, D. N. Srivastava, A. Mondal, P. Biswas, P. Paul, B. Adhikary, *J. Mol. Cat. A: Chem.* **360** (2012) 71–77.

19. Syntheses, crystal structure, spectroscopic, redox and magnetic properties of oxo- and carboxylato-bridged polynuclear iron(III) complexes with phenolate and pyridine-substituted benzimidazole ligands.
A. K. Dutta, S. K. Maji, S. Dutta, C. R. Lucas, B. Adhikary, *Polyhedron* **44** (2012) 34–43.
20. A symmetric oxo-centered trinuclear chloroacetato bridged iron(III) complex: structural, spectroscopic and electrochemical studies.
A. K. Dutta, S. K. Maji, S. Dutta, *J. Mol. Struct.* **1027** (2012) 87–91.
21. Synthesis, structural and magnetic properties of oxo-, chloroacetato-bridged tetra-nuclear iron(III) complex.
A. K. Dutta, S.K. Maji, S. Dutta, C.R. Lucas, B. Adhikary, *J. Mol. Struct.* **1029** (2012) 68–74.
22. Single-source precursor approach for the preparation of CdS nanoparticles and their photocatalytic and intrinsic peroxidase like activity.
S. K. Maji, **A. K. Dutta**, S. Dutta, D.N. Srivastava, P. Paul, A. Mondal, B. Adhikary, *App. Cat. B: Env.* **126** (2012) 265–274.

Conference / Seminar Proceedings:

1. UGC Sponsored National Seminar on “**Recent Development in Bio-Active Molecules (RDBAM-2016)**” Department of Chemistry, Haldia Govt College, Haldia in collaboration with Vivekananda Mission Mahavidyalaya, Chaitanyapur (August 4th-5th, 2016) (*Poster Presentation*).
2. UGC-SAP Sponsored National Symposium on “**Recent Advances in Chemistry Research**” Department of Chemistry, Visva-Bharati, Santiniketan, West Bengal (March 04, 2016) (*Poster Presentation*).
3. UGC Sponsored National Seminar on “**Mathematics and its Impact on Natural Sciences**” Bangabasi Morning College, 19, Rajkumar Chakraborty Sarani, Kolkata-700009 (September 11-12, 2015) (*Poster Presentation*).
4. UGC Sponsored National Seminar on “**Cyber Crime**” Bangabasi Morning College, 19, Rajkumar Chakraborty Sarani, Kolkata-700009 (September 16, 2015).
5. **MTIC-XVI symposium**, Department of Chemistry, Jadavpur University, Kolkata-India (December 3–5, 2015) (*Poster Presentation*).
6. **20th West Bengal state science and technology congress 2013**, held at Bengal Engineering and Science University, Shibpur, Howrah 711 103, West Bengal, India (February 28–March 02, 2013) (*Oral Presentation*)

7. International symposium on “**Molecular Organization and Complexity: A Chemical Perspective**”, Department of Chemistry, University of Calcutta, Kolkata, India (February 6–8, 2013) (*Poster Presentation*).
8. **19th West Bengal state science and technology congress 2012**, held at Saha institute of nuclear physics (SINP), Kolkata, India (March 01–02, 2012) (*Oral Presentation*).
9. **MTIC–XIV symposium**, School of chemistry, University of Hyderabad, India (December 10–13, 2011) (*Poster Presentation*).
10. National seminar on “**Recent advances in selected topics of chemistry–II**”
Department of Chemistry, Bengal Engineering and Science University, Shibpur, Howrah, India (March 24–25, 2011) (*Poster Presentation*).
11. **13th CRSI National Symposium in Chemistry**, NISER and KIIT university, Bhubaneswar, India (February 04–06, 2011) (*Poster Presentation*).
12. International symposium on “**Facets of weak interaction in Chemistry**”, Department of Chemistry, University of Calcutta, Kolkata, India (January 13–15, 2011) (*Poster Presentation*).
13. International symposium on “**Frontiers in inorganic chemistry (FIC–2010)**”
Department of Inorganic Chemistry, Indian Association for the cultivation of science(IACS), Kolkata, India, (December 11–13, 2010) (*Poster Presentation*).
14. Symposium–VIII on “**Advances in chemical research, CRSI (Kolkata chapter)**”
Department of Chemistry, Bengal Engineering and Science University, Shibpur, Howrah, India (August 06, 2010) (*Poster Presentation*).