

Brief resume

Research Areas of Interest:

- ❖ *Functional nanocomposite materials based on metal oxides, mixed oxides, graphene, conducting polymer, industrial wastes. Electrometallurgy of nonferrous metals.*
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- ❖ *Their applications in photocatalytic water detoxification, electrochemical sensors, rechargeable battery, supercapacitors.*

Publications:

International

1. Synthesis and characterization of low-cost electroactive hybrid composites derived from Polyaniline and NiS. **Bijayalaxmi Panda** and Pragma Bansal, **Int. J. Polymeric materials and Biomaterials**, 64, 7, 378–384, 2015. (*Taylor and Francis*)
2. Effect of added divalent cobalt ion on electrodeposition of copper using graphite and Pb-Sb anodes. **Bijayalaxmi Panda et al**, **Hydrometallurgy**, 95, (2009) 87. (*Elsevier*)
3. Synergistic effects of added bivalent aqua cobalt ion, bivalent aqua iron ion and aqueous sulfurous acid on a graphite anode during electrodeposition of copper from a sulfate bath. **Bijayalaxmi Panda et al**, **Hydrometallurgy**, 72 1-2 (2004). (*Elsevier*)
4. Cathodic deposition of copper in the presence of aqueous sulfurous acid, bivalent aquacobalt ion or both using a stainless steel cathode and a graphite anode. **Bijayalaxmi Panda et al**, **Metallurgical and Materials Transactions B**, 34 6 (2003). (*Springer*)
5. Electrowinning of copper from sulfate electrolyte in the presence of sulfurous acid. **Bijayalaxmi Panda** and S. C. Das, **Hydrometallurgy**, 59 1 (2001). (*Elsevier*)

6. Effects of added chloride ion on electrodeposition of copper from a simulated acidic sulfate bath containing cobalt ions. **Bijayalaxmi Panda**, ISRN Metallurgy, article no. 930890, Hindawi, 2012.

National

1. Oxidation of sulfurous acid on a graphite anode in the presence and absence of cobalt ion during electrodeposition of copper from a acidic sulfate bath, **Bijayalaxmi Panda et al**, J. Met. & Mat. Sc, 52, 3, 2010.

Patents:

1. Development of low cost, convenient and electroactive polyaniline-ceramic chalcogenide composites. **Bijayalaxmi Panda**, Date of filing- 30/04/2012, application no. 1373/DEL/2012.
2. Low cost and eco-friendly production of an electro-active hybrid composite of polyaniline and binary metal dichalcogenide. **Bijayalaxmi Panda**, Date of filing- 14/03/2013, application no. 778/DEL/2013.
3. Microwave mediated synthesis of an oxidizing agent for dye degradation. **Bijayalaxmi Panda**, Date of filing- 02/07/2013, application no. 2310/DEL/2013.
4. Synthesis of Iron based Low cost binary mixed metal oxide semiconductor. **Bijayalaxmi Panda**, Date of filing- 23/12/2013, application no. 3748/DEL/2013.
5. Reduced graphene oxide (RGO)-Metal oxide based visible light active photocatalyst for pollutant abatement and a process thereof. **Bijayalaxmi Panda** Date of filing- 16/10/2014 application no. 2894/DEL/2014.

Paper presented at Conferences

1. Oral presentation, “Characterization of Iron and Arsenic based mixed oxide nanoparticles as VLA photocatalyst” synthesized by microwave method National Symposium on “Recent Advances in Analytical Sciences and Applications (NSAS)”, 9-10 February, 2015, Jamia Milia Islamia, Delhi.

2. Poster presentation “Green synthesis of Iron and Arsenic based Mixed oxide nano/micro mixed particles” National conference on “Advances in Nanotechnology and Renewable Energy (NCNRE)” April 28-29, 2014, Jamia Milia Islamia, Delhi.
3. Poster presentation “Low cost efficient oxidizing agent for dye degradation” in “Energy Environment and Materials Research (EEMR)”, August 12-13, 2013, IMMT, Bhubaneswar, India.
4. Poster presentation “I-V Characterisation of Polyaniline based inorganic-organic hybrid composites” International conference in recent advances in composite materials (ICRACM), February 18-21, 2013, Goa, India (organized by IIT BHU).
5. Oral presentation “Electrodeposition of copper in presence of sulfurous acid using graphite anode” **9th National Convention of Electrochemists**, SVRCET, Surat 26-27th November 1999.

Project:

“HPLC method development that includes extraction and quantitation of analytes of interest from active nanoformulations” **Post-doctoral project** in Pharmaderm Laboratories Ltd., Innovation place, Saskatoon, Canada from 2007 to 2008.