



Name	Dr. Niranjana Biswal
Designation	Lecturer in Chemistry
Date of Joining	14-08-2019
Qualification	MSc, PhD

Publication in paper/magazines/journals etc:

- Unexpected rapid photo-catalytic decolourisation/degradation of organic pollutants over highly active hetero junction based vanadium phosphate catalyst. Gobinda Chandra Behera, **Niranjana Biswal**, Kulamani Parida. **Catalysis Today**, (284) (15 April 2017) 84-91. (SI: **Materials for photocatalytic degradation of contaminants of environmental concern**). (Impact Factor-4.636 & No. of Citations-5).
- Layered and Mixed Layered Metal (IV) Phosphates: An Overview on Syntheses, Modified Systems and Applications. **Niranjana Biswal** and K. M. Parida. **Proceedings of National Seminar on Emerging Trends in Engineering & Technology in India (NSETET-2014) (2014) 57-69**, Hi-Tech Institute of Technology, Khurda, Odisha in collaboration with Indian Society for Technical Education (ISTE), New Delhi, India (3rd-4th September 2014).
- Cs salt of tungstophosphoric acid promoted zirconium titanium phosphate (CsTPA-ZTP) solid acid catalyst: An active catalyst for the synthesis of bisphenols. **Niranjana Biswal**, Dipti Prakasini Das, K.M. Parida. **J. Chem. Sci.** **126 (2) (March 2014) 455–465. (SI: Catalysis for Sustainable Development)**. (Impact Factor-1.235 & No. of Citations-4).
- Enhanced hydrogen production over CdSe QD/ZTP composite under visible light irradiation without using co-catalyst. **Niranjana Biswal**, K.M. Parida. **Inter. J. Hydro. Ener.** **38 (2013) 1267-1277. (SPECIAL SECTION: 2011 International Hydrogen and Fuel Cells Conference: from Nanomaterials to Demonstrators)**. Source: **Also in the Book Edition titled as- “Phosphorus Acids-Advances in Research and Application, 2013 Edition, Scholarly Brief, Q. Ashton Acton, PhD, General Editor, Scholarly Edition.** (Impact Factor-3.582 & No. of Citations-20).
- Facile synthesis of visible light responsive V₂O₅/N,S-TiO₂ composite photocatalyst: enhanced hydrogen production and phenol degradation. Satyabadi Martha, D.P. Das, **Niranjana Biswal**, K.M. Parida. **J. Mater. Chem.** **22 (2012) 10695–10703 (as J. Mater. Chem. A)**. (Impact Factor-8.867 & No. of Citations-82).
- Facile synthesis of InGaZn mixed oxide nanorods for enhanced hydrogen production under visible light. Satyabadi Martha, K. Hemalata Reddy, **Niranjana Biswal**, Kulamani Parida. **Dalton Transactions** **41 (2012) 14107–14116**. (Impact Factor-4.029 & No. of Citations-31).
- Efficient hydrogen production by composite photocatalyst CdS-ZnS/Zirconium-titanium phosphate (ZTP) under visible light illumination. **Niranjana Biswal**, D.P. Das, Satyabadi Martha, K.M. Parida. **Inter. J. Hydro. Ener.** **36 (2011) 13452-13460. (SPECIAL SECTION: 2010 Asian/APEC BioH2)**. (Impact Factor-3.582 & No. of Citations-69).
- Corrigendum to “Efficient hydrogen production by composite photocatalyst CdS–ZnS/zirconium–titanium phosphate (ZTP) under visible light illumination” [International Journal of Hydrogen Energy, 36 (2011) 13452–13460]. **Niranjana Biswal**, D.P. Das, Satyabadi Martha, K.M. Parida. **Inter. J. Hydro. Ener.** **37 (2012) 6118. (SPECIAL SECTION: XII International Symposium on Polymer Electrolytes: New Materials for Application in Proton Exchange Membrane Fuel Cells)**.
- Incorporation of silver ions into zirconium titanium phosphate: A novel approach toward antibacterial activity. **Niranjana Biswal**, Satyabadi Martha, Umakanta Subudhi, Kulamani Parida. **Ind. Eng. Chem. Res.** **50 (2011) 9479–9486. (SECTION: APPLIED CHEMISTRY)**. (Impact Factor-2.843 & No. of Citations-14).
- Solar-light induced photodegradation of organic pollutants over CdS-pillared zirconium–titanium phosphate (ZTP). D.P. Das, **Niranjana Biswal**, Satyabadi Martha, K.M. Parida. **J. Mol. Catal. A: Chemical** **349 (2011) 36–41 (as Molecular Catalysis)**. (Impact Factor-3.615 & No. of Citations-37).
- Visible light response photocatalytic water splitting over CdS-pillared zirconium-titanium phosphate (ZTP). K.M. Parida, **N. Biswal**, D.P. Das, S. Martha. **Inter. J. Hydro. Ener.** **35 (2010) 5262-5269. (SPECIAL SECTION: 3rd Argentinean and 2nd Latin American Congress in Hydrogen and Sustainable Energy Sources)**. Source: **Energy and Ecology Business (2010-07-23) (Hydrogen)**. New findings from K.M. Parida and co-authors in the area of hydrogen published, July 23rd, 2010. Source: **Also in the Book Edition titled as- “Phosphoric Acids: Advances in Research and Application, 2011 Edition, Scholarly Brief, Q. Ashton Acton, PhD, General Editor, Scholarly Edition.** (Impact Factor-3.582 & No. of Citations-35).
- Facile fabrication of hierarchical N-doped GaZn mixed oxides for water splitting reactions. K.M. Parida, S. Martha, D.P. Das, **N. Biswal**. **J. Mater. Chem.** **20 (2010) 7144–7149 (as J. Mater. Chem. A)**. (Impact Factor-8.867 & No. of Citations-47).
- Fabrication of nanocrystalline LaFeO₃: An efficient sol-gel auto-combustion assisted visible light responsive photocatalyst for water decomposition. K.M. Parida, K.H. Reddy, S. Martha, D.P. Das, **N. Biswal**. **Inter. J. Hydro. Ener.** **35 (2010) 12161-12168. (SPECIAL SECTION: Bio-Ethanol and Other Renewable Sources and Reforming Process for Sustainable Hydrogen Production)**. (Impact Factor-3.582 & No. of Citations-221).

Patents Filed

1. A Novel N-doped GaInZn mixed oxide photocatalyst and a process for the preparation thereof. Kulamani Parida, Satyabadi Martha, Dipti Prakasini Das, **Niranjana Biswal**. **India Patent, 1506DEL2011, 26.05.2011**.
2. Synthesis of a novel N-doped TiV mixed oxide for overall water splitting. Kulamani Parida, Satyabadi Martha, **Niranjana Biswal**, Dipti Prakasini Das. **India Patent, 0536DEL2010, 09.03.2010**

Meetings/Seminars/Workshop/Conference attended:

- **Poster presentation (By Colleague cum Student, Voronkov Evgeny): “Undergraduate Exam”** organized by The Faculty of Chemical Engineering, Technion-IIT, Haifa, Israel (**23th June, 2016**).
- **Oral presentation: “International conference on Nanoscience, Nanotechnology & Advanced Materials (NANOS-2015)”** organized by Gitam University, Visakhapatnam, Andhra Pradesh (**14-17th December, 2015**).
- **Poster presentation (By Colleague, Sagi Pasternak and Itamar Benisti): “Retreat 2015”** organized by The Faculty of Chemical Engineering, Technion-IIT, Haifa, Israel (**26th November, 2015**).
- **Oral presentation: “National Seminar on Emerging Trends in Engineering & Technology in India (NSETET-2014)”** organized by Hi-Tech Institute of Technology, Khurda, Odisha in collaboration with Indian Society for Technical Education (ISTE), New Delhi, India (**3rd-4th September, 2014**).
- **Oral presentation: “99th Indian Science Congress 2012”** organized by KIIT University, Bhubaneswar, Odisha, India (**3rd-7th January, 2012**).
- **Poster presentation: “20th National Symposium on Catalysis for Energy Conversion and Conservation of Environment (20NSC10)”** organized by IIT Madras, Chennai, Tamilnadu, India (**19-22th December, 2010**).
- **“30th Annual Conference of Orissa Chemical Society (OCS)** organized by Department of Chemistry, School of Applied Sciences, KIIT University, Bhubaneswar, Odisha, India (**24-25th December, 2016**).
- **“The 51th Annual Meeting of the Israel Institute of Chemical Engineers (IICHE 2016)”, Conference & Exhibition** organized by Bioforum in The David Intercontinental Hotel, Tel Aviv, Israel (**21th June 2016**).
- **Elsevier Author Seminar on “How to Write Great Papers: From title to references, from submission to publication”** organized by the Department of Central Library, Technion-IIT, Haifa, Israel (**24th November, 2015**).
- **“The 33rd Israel Vacuum Society conference – IVS 2015”** organized by The Weizmann Institute of Science, Herzl St 234, Rehovot, 7610001, Israel (**9th September, 2015**).
- **National Seminar on “RECENT DEVELOPMENTS IN COMPOSITE AND NANO MATERIALS, RDCN-2015”** organized by Depts. of Mechanical Engineering, Civil Engineering and Physics, Hi-Tech College of Engineering, Bhubaneswar, Odisha, India (**7-8th February, 2015**).
- **“Indian Society for Technical Education (ISTE) Annual Diploma Students’ Convention (Odisha Section)-2014”** organized by Hi-Tech Institute of Technology (HIT), Khurda, Odisha, India (**26-27th September, 2014**).
- **“National Seminar on Computing, Communication & Information System (NSCCI-14)”** organized by HIT, in collaboration with Institute of Electronic & Telecommunication Engineers (IETE, India) (**19-20th September, 2014**).
- **“National Seminar on Advances in Special Materials (NSASM-13)”** organized by **Dept. of Basic Sciences**, HIT, in collaboration with Institute of Engineers (IEI), Orissa State Center (**9-10th November, 2013**).
- **“National Seminar on Science and Technology of Functional Materials (NSSTFM)-2013”** organized by Dept. of Basic Science, Hi-Tech College of Engineering, Bhubaneswar, Odisha, India (**28-29th September, 2013**).
- **“National Conference on Nano-Materials as Catalysts (NCNMC-2012)”** organized by Dept. of Chemistry, ITER, SOA University, Bhubaneswar, Odisha, India (**25-26th January, 2013**).
- **“26th Annual Conference of Orissa Chemical Society (OCS) & National Seminar on Chemistry in Technology”** organized by P.G. Department of Chemistry, Ravenshaw University, Cuttack, Odisha, India (**8-9th December, 2012**).
- National level seminar on **“Recent Trends In Chemical Science (RETICS)”** organized by P.G. Department of Chemistry (Autonomous), Sambalpur University (SU), Jyoti Vihar, Burla, Odisha, India (**23-25th March, 2007**).
- **“19th Orissa Chemical Society (OCS)’s Annual Conference”** organized by P.G. Department of Chemistry (Autonomous), SU (**2005**).
- **T20 (TEM) Practical Course** organized by the Department of Materials Science & Engineering, Technion-IIT, Haifa, Israel (**17-25th February, 2016**).
- **Schulich Winter School on “Frontiers in Inorganic Chemistry” honoring Prof. Harry B. Gray’s 80th Birthday** organized by the Schulich Department of Chemistry with Grand Technion Energy Programme (GTEP), Technion-IIT, Haifa, Israel (**1st-3rd December, 2015**).
- **Technion-Protochips-Nano Instruments Workshop on “New possibilities in High-End TEM Instrumentation and In Situ TEM Analysis in Gas and Liquid Environments”** organized by the Department of Materials Science & Engineering, Technion-IIT, Haifa, Israel (**13-14th October, 2015**).
- Workshop on **“New and Nano Materials (WNNM)-2012”** organized by Institute of Materials Science (IMS), Planetarium Building, Bhubaneswar, Odisha, India (**20th-21st January, 2012**).
- Pre-school on **“Photocatalysis”** organized by NCCR, IIT Madras, Chennai, Tamilnadu, India (**9-10th December, 2011**).
- National workshop on **“Development of Novel Materials for Hydrogen Production and Photocatalysis (DNHP-2010)”** organized by Colloids and Materials Chemistry Department, CSIR-IMMT, Bhubaneswar, Odisha, India (**26-27th March, 2010**).
- “60th BRNS-IANCAS (Board of Research in Nuclear Sciences-Indian Association of Nuclear Chemists and Allied Scientists) National Workshop on **“Radio Chemistry & Application of Radiosotopes”** organized by P.G. Department of Chemistry (Autonomous), Sambalpur University, Jyoti Vihar, Burla, Odisha, India (**17-23th August, 2006**).

Distinction/prizes/awards received:

- **Postdoctoral Fellowship (2015-2016):** Faculty of Chemical Engineering, Technion-IIT, Haifa, Israel.
- **Felicitation (2014):** Felicitation as an Academician by Hi-Tech Institute of Technology (HIT), Bhubaneswar, Khurda, Odisha on the occasion of National Seminar on Emerging Trends in Engineering & Technology in India (NSETET-2014) and Inauguration of ISTE Chapter/ Students’ Chapter/Institution Membership of ISTE in collaboration with Indian Society for Technical Education (ISTE), New Delhi, India (3rd-4th September 2014).
- **Senior Research Fellowship (SRF) (2011-2014):** Council of Scientific and Industrial Research (CSIR), Govt. of India, New Delhi, India.
- **Post Matric Scholarship in Postgraduate (2005-2007):** ST & SC Development, Minorities & Backward Classes Welfare Department, Govt. of Odisha, Bhubaneswar, India.
- **National Rural Talent Scholarship (NRTS) (1997-2000):** Board of Secondary Education (BSE), Govt. of Odisha, Cuttack, India.

Membership

- **Member [LSO(SM)10] of the Indian Science Congress Association (ISCA)** for 2012-2013, New Delhi, India.
- **Life Time Member [LM-902/12] of Orissa Chemical Society (OCS)**, Odisha, India.
- **Life Member [LM-685] of the Society for Materials Chemistry (SMC), Bhabha Atomic Research Centre (BARC)**, Mumbai 400085, India