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EDUCATIONAL BACKGROUND

- Jan 2013-Feb 2018** **Ph.D. in Biophysical and Biochemistry**
Indian Institute of Technology Bhubaneswar, India
- 2007-2009** **M.Sc (specialization in Organic Chemistry)**
- 2003-2006** **B.Sc (Chemistry Honours)**
University First Rank Holder
College of Basic Sciences and Humanities,
Orissa University of Agriculture and Technology, India
- 2001-2003** **Intermediate**
BJB Junior College, Bhubaneswar
Council of Higher Secondary Education (CHSE), Odisha
- 2001** **Matriculation**
Certificate of Merit from CBSE Board
St. Xaviers High School, Bhubaneswar
Central Board of Secondary Education (CBSE), India

RESEARCH EXPERIENCE

- Aug 2018-Present** **Assistant Professor (Chemistry)**
Department of Chemistry
School of Applied Sciences
KIIT Deemed University, Bhubaneswar
Odisha, India
- Nov 2017-Aug 2018** **Postdoctoral Associate**
Department of Chemistry, University at Albany
State University of New York, Albany, USA
- Jan 2013-Apr 2017** **Graduate Student**
Senior Research Fellow (CSIR/ICMR)
Indian Institute of Technology Bhubaneswar
- Aug 2012-May 2013** **Senior Research Fellow (CSIR Project)**
Indian Institute of Technology Bhubaneswar
- Jul 2010-Aug 2012** **Project Assistant (DST Project)**
Indian Institute of Technology Bhubaneswar

Mar 2009-Mar 2010 **Project Assistant (TRIFED Project)**
Institute of Minerals & Materials Technology Bhubaneswar

Summer 2008 **Summer Research Fellow**
Indian Institute of Science Bangalore

TEACHING EXPERIENCE

Aug 2018-Present **Assistant Professor (Chemistry)**
Department of Chemistry
School of Applied Sciences
KIIT Deemed University, Bhubaneswar
Odisha, India

Jun 2017-Aug 2017 **Assistant Professor (Chemistry)**
School of Science
Sandip University, Nashik, India

Aug 2016-Feb 2017 **Guest Faculty, Department of Chemistry**
College of Basic Sciences and Humanities,
Orissa University of Agriculture and Technology, India

Jan 2013-Dec2013 **Teaching Assistant**
Indian Institute of Technology Bhubaneswar

AWARDS AND HONORS

Sept 2013-Sept 2016 Direct ICMR Senior Research Fellowship, Indian Council of
Medical Research, India

Jun 2013-Sept 2013 Direct CSIR Senior Research Fellowship, Council of Scientific
and Industrial Research, India

Feb 2011 Third Prize in poster presentation held at Indian Institute of
Technology Bhubaneswar on National Science Day.

Summer 2008 JNCASR Summer Research Fellow at Indian Institute of
Science, Bangalore.

Aug 2006 University First Rank Holder in Chemistry Honours in Bachelor
of Science (B.Sc).

Mar 2001 Certificate of Merit from CBSE Board

RESEARCH PUBLICATIONS (Total – 33)

1. Soumyaranjan Senapati, Hemanta Kumar Nayak, Manisha Das, Prasanta Rath*, and **Alok Kumar Panda***, "Synthesis and characterization of biochar from dehradun rice straw and its application for adsorption of methylene blue dye", ***AIP Conference Proceedings***, 2740, 060008, (2023) [IF : 0.40]
2. Shibani Mohapatra, Saumya Ranjan Barik, Prasanta K. Dash, Devidutta Lenka, Kartika Chandra Pradhan, Reshmi Raj K. R, Shakti Prakash Mohanty, Mihir Ranjan Mohanty, Ambika Sahoo, Binod Kumar Jena, **Alok Kumar Panda**, Debabrata Panigrahi, Sushanta Kumar Dash, Jitendriya Meher, Chitta Ranjan Sahoo, Arup Kumar Mukherjee, Lipi Das, Lambodar Behera, and Sharat Kumar Pradhan, "Molecular Breeding for Incorporation of

- Submergence Tolerance and Durable Bacterial Blight Resistance into the Popular Rice Variety 'Ranidhan', *Biomolecules*, 13 (2), 198, (2023) [IF : 6.06]
3. Rushali Dudure, Kapil Ganorkar, Vishal Beldar, Sujit Kumar Ghosh, **Alok Kumar Panda**, Manojkumar Jadhao, "Effect of artificial sweetener saccharin on lysozyme aggregation: A combined spectroscopic and in silico approach", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 290, 122269, (2023) [IF : 4.83]
 4. Pulak Pritam, Soumyaranjan Senapati, Shusree Prachi Palai, Jyotirmayee Giri, Manisha Dash, Bijayalaxmi Sahoo, Tapan Kumar Bastia, Prasanta Rath, and **Alok Kumar Panda***, "Protein-Based Biomaterials for Sustainable Remediation of Aquatic Environments", *Biobased Materials: Recent Developments and Industrial Applications-Singapore: Springer Nature*, 153–70, (2023) [Book Chapter-Springer].
 5. Melaku Masresha Woldeamanuel, Mohamm Kasso Geda, Shibani Mohapatra, Tapan Kumar Bastia, Prasanta Rath* and **Alok Kumar Panda***, "Ethnobotanical study of endemic and non-endemic medicinal plants used by indigenous people in environs of Gullele botanical garden Addis Ababa, central Ethiopia: A major focus on Asteraceae family", *Frontiers in Pharmacology*, 13, 1020097, (2022) [IF : 5.98]
 6. Melaku Masresha Woldeamanuel, Soumyaranjan Senapati, Shibani Mohapatra, Hatanath Subudhi, Prasanta Rath and **Alok Kumar Panda***, "Ethnomedicinal and Ethnobotanical Investigations and Documentation of Plants Used by Traditional Healers of Eastern India", *Current Traditional Medicine*, 6, e100522204524, (2022) [IF : 0.6]
 7. Naushin Yasmin, Milleni Jamuda, **Alok Kumar Panda**, Kundan Samal and Jagdeep Kumar Nayak , "Emission of greenhouse gases (GHGs) during composting and vermicomposting: Measurement, mitigation, and perspectives", *Energy Nexus*, 7, 100092, (2022)
 8. Ashis Biswas* and **Alok Kumar Panda***, "**Editorial:** The Role of Mutations, Stresses and Post-Translational Modifications in the Structure and Function of Small Heat Shock Proteins and Their Relationship with Different Human Diseases", *Frontiers in Molecular Biosciences*, (2022) [IF : 5.25]
 9. Sandip K Nandi, Alok Kumar Panda, Ayon Chakraborty, Shivani Rathee, Ipsita Roy, Subhashree Barik, Saswati Soumya Mohapatra and Ashis Biswas, "Role of ATP-Small Heat Shock Protein Interaction in Human Diseases", *Frontiers in Molecular Biosciences*, 9,844826 (2022) [IF : 5.25]
 10. Shibani Mohapatra, **Alok Kumar Panda**, Akshaya Kumar Bastia, Arup Kumar Mukherjee, Priyadarshani Sanghamitra, Jitendriya Meher, Shakti Prakash Mohanty and Sharat Kumar Pradhan, "Development of Submergence-Tolerant, Bacterial Blight-Resistant, and High-Yielding Near Isogenic Lines of Popular Variety, 'Swarna' Through Marker-Assisted Breeding Approach", *Frontiers in Plant Sciences*, 12,1441 (2021) [IF : 5.73]
 11. Madhuri Hembram, Rashmirekha Tripathy, Jagannath Panda, Tejaswini Sahoo, Saraswati Soren, Deepak Senapati, J. R. Sahu, C. K. Rath, **Alok Kumar Panda***, and Rojalini Sahu*, "Solid-State Green Synthesis of Different Nanoparticles", *Advances in Green Synthesis. Advances in Science, Technology & Innovation (IEREK Interdisciplinary Series for Sustainable Development)*, 289-301 (2021) [Book Chapter-Springer, Cham]
 12. Shibani Mohapatra, Akshaya Kumar Bastia, **Alok Kumar Panda** and Sharat Kumar Pradhan, "Marker-assisted selection in rice backcross derivatives for transfer of

- submergence tolerance, bacterial blight resistance and yield potential enhancement in the progenies”, *Australian Journal of Crop Sciences*, 14(08),1288-1294 (2020) [IF : 0.62]
13. **Alok Kumar Panda**, Ayon Chakraborty, Sandip Kumar Nandi and Ashis Biswas, – “The impact of different mutations at arginine141 on the structure, subunit exchange dynamics and chaperone activity of Hsp16.3”, *Proteins*, 88, 759-774 (2020). [**Illustrated as Cover Page**] [IF – 2.50]
 14. Sandip Kumar Nandi, Ayon Chakraborty, **Alok Kumar Panda** and Ashis Biswas – “M. leprae HSP18 suppresses copper (II) mediated ROS generation: Effect of redox stress on its structure and function”, *International Journal of Biological Macromolecules*, 146, 648-660 (2020). [IF – 4.80]
 15. Ayon Chakraborty[‡], **Alok Kumar Panda**[‡], Rajesh Ghosh and Ashis Biswas, - “DNA minor groove binding of a well known anti-mycobacterial drug dapson: A spectroscopic, viscometric and molecular docking study”, *Archives of Biochemistry and Biophysics*, 655, 107-113 (2019). [[‡]equal contribution] [IF - 3.11]
 16. Ayon Chakraborty, **Alok Kumar Panda**, Rajesh Ghosh, Ipsita Roy and Ashis Biswas - “Depicting the DNA binding and photo-nuclease ability of anti-mycobacterial drug rifampicin: A biophysical and molecular docking perspective”, *International Journal of Biological Macromolecules*, 127, 187-196 (2019). [IF - 3.90]
 17. Sandip Kumar Nandi, Ayon Chakraborty, **Alok Kumar Panda**, Rajiv Kumar Kar, Anirban Bhunia and Ashis Biswas - “Evidences for zinc (II) and copper (II) ion interactions with Mycobacterium leprae HSP18: Effect on its structure and chaperone function”, *Journal of Inorganic Biochemistry*, 188, 62-75 (2018). [IF - 3.26]
 18. Ayon Chakraborty, Sandip Kumar Nandi, **Alok Kumar Panda**, Pinaki Prasad Mahapatra; Sourav Giri and Ashis Biswas - “Probing the structure-function relationship of *Mycobacterium leprae* HSP18 under different UV radiations”, *International Journal of Biological Macromolecules*, 119, 604-616 (2018). [IF - 3.90]
 19. Sudarshana Majumder, Sagarika Pasayat, **Alok Kumar Panda**, Subhashree P. Dash, Satabdi Roy, Ashis Biswas, Mokshada E. Varma, Bimba N. Joshi, Eugenio Garrriba, Chahat Kausar, Samir Kumar Patra, Werner Kaminsky, Aurélien Crochet, and Rupam Dinda - “Monomeric and Dimeric Oxidomolybdenum(V and VI) Complexes, Cytotoxicity, and DNA Interaction Studies: Molybdenum Assisted C=N Bond Cleavage of Salophen Ligands”, *Inorganic Chemistry*, 56(18), 11190-11210 (2017). [IF - 4.85]
 20. Priyabrata Mukhi, Swapna Sarita Mohapatra, M Bhattacharjee, Kalyan Kumar Ray, T.S. Muraleedharan, A Arun, R. Sathyavathi, R. R. Juluri, P.V. Satyam, **Alok Kumar Panda**, Ashis Biswas, S Nayak, Sreedhar Bojja, S. Pratihari, Sujit Roy - “Mercury based drug in ancient India: The case of red sulfide of mercury in nanoscale”, *Journal of Ayurveda and Integrative Medicine*, 8(2), 93-98 (2017). [IF - 0.69]
 21. **Alok Kumar Panda**, Ayon Chakraborty, Sandip Kumar Nandi, Abhishek Kaushik and Ashis Biswas – The C-terminal extension of *Mycobacterium tuberculosis* Hsp16.3 regulates its oligomerization, subunit exchange dynamics and chaperone function” *FEBS Journal*, 284, 277-300. (2017). [IF - 4.20]
 22. Subhashree P. Dash[‡], **Alok Kumar Panda**[‡], Sarita Dhaka[‡], Sagarika Pasayat, Ashis Biswas, Mannar R. Maurya, Paresh Kumar Majhi, Aurélien Crochet and Rupam Dinda - “A study of DNA/BSA interaction and catalytic potential of oxidovanadium(v) complexes with ONO donor ligands” *Dalton Transactions*, 45, 18292-18307 (2016).

[[‡]equal contribution]

[IF - 4.02]

23. Sandip Kumar Nandi, Ayon Chakraborty, **Alok Kumar Panda** and Ashis Biswas - "Conformational perturbation, hydrophobic interactions and oligomeric association are responsible for the enhanced chaperone function of *Mycobacterium leprae* HSP18 under pre-thermal condition" *RSC Advances*, 6, 62146-62156 (2016). [IF - 3.10]
24. **Alok Kumar Panda**[‡], Sandip Kumar Nandi[‡], Ayon Chakraborty, Ram H. Nagaraj and Ashis Biswas - "Differential role of arginine mutations on the structure and functions of alpha-crystallin", *Biochimica et Biophysica Acta-General Subjects*, 1860, 199-210 (2016) [[‡]equal contribution]. [IF - 4.80]
25. Subhashree P. Dash, **Alok Kumar Panda**, Sagarika Pasayat, Rupam Dinda, Ashis Biswas, Edward R. T. Tiekink, Subhadip Mukhopadhyay, Sujit K. Bhutia, Werner Kaminsky and Ekkehard Sinn - "Oxidovanadium(V) complexes of aroylhydrazones incorporating heterocycles: Synthesis, characterization and study of DNA binding, photo-induced DNA cleavage and cytotoxic activities", *RSC Advances*, 5, 51852 – 51867 (2015). [IF - 3.10]
26. Sandip Kumar Nandi, **Alok Kumar Panda**, Ayon Chakraborty, Sougata Sinha Ray and Ashis Biswas - "Role of subunit exchange and electrostatic interactions on the chaperone activity of *Mycobacterium leprae* HSP18", *PLoS One*, 10(6), e0129734 (2015). [IF - 2.80]
27. Saswati, Ayon Chakraborty, Subhashree P. Dash, **Alok Kumar Panda**, Rama Acharyya, Ashis Biswas, Subhadip Mukhopadhyay, Sujit K Bhutia, Aurelien Crochet, Yogesh P. Patil, Munirathinam Nethaji and Rupam Dinda - "Synthesis, X-ray structure and in vitro cytotoxicity studies of Cu(I/II) complexes of thiosemicarbazone: special emphasis on their interactions with DNA", *Dalton Transactions*, 44(13), 6140-6157 (2015). [IF - 4.02]
28. Subhashree P. Dash, **Alok Kumar Panda**, Sagarika Pasayat, Sudarshana Majumder, Ashis Biswas, Werner Kaminsky, Subhadip Mukhopadhyay, Sujit K. Bhutia, Rupam Dinda - "Evaluation of the cell cytotoxicity and DNA/BSA binding and cleavage activity of some dioxidovanadium(V) complexes containing aroylhydrazones", *Journal of Inorganic Biochemistry*, 144, 1-12 (2015). [IF - 3.26]
29. Sandip Kumar Nandi, Ayon Chakraborty, **Alok Kumar Panda**, Sougata Sinha Ray, Rajiv Kumar Kar, Anirban Bhunia and Ashis Biswas - "Interaction of ATP with a small heat shock protein from *Mycobacterium leprae*: effect on its structure and function", *PLoS Neglected Tropical Diseases*, 9(3), e0003661 (2015). [IF - 3.94]
30. Subhashree. P. Dash, **Alok Kumar Panda**, Sagarika Pasayat, Rupam Dinda, Ashis Biswas, E. R. Tiekink, Yogesh P. Patil, M. Nethaji, Werner Kaminsky, Subhadip Mukhopadhyay and Sujit K. Bhutia - "Syntheses and structural investigation of some alkali metal ion-mediated LV(V)O₂(-) (L(2-) = tridentate ONO ligands) species: DNA binding, photo-induced DNA cleavage and cytotoxic activities", *Dalton Transactions*, 43(26), 10139-10156 (2014). [IF - 4.02]
31. Sandip Kumar Nandi, Elengikal A. A. Rehna, **Alok Kumar Panda**, Sugathan Shiburaj, Kuppamuthu Dharmalingam and Ashis Biswas – "A S52P mutation in the 'α-crystallin domain' of *Mycobacterium leprae* HSP18 reduces its oligomeric size and chaperone function", *FEBS Journal*, 280(23), 5994-6009 (2013). [IF - 4.20]
32. Ram H. Nagaraj, **Alok Kumar Panda**, Shilpa Shanthakumar, Puttur Santhoshkumar, NagaRekha Pasupuleti, Benlian Wang and Ashis Biswas - "Hydroimidazolone modification

of the conserved Arg12 in small heat shock proteins: studies on the structure and chaperone function using mutant mimics”, *PLoS One*, 7, e30257 (2012). [IF - 2.80]

33. Ram H. Nagaraj, Rooban B. Nahomi, Shilpa Shanthakumar, Mikhail Linetsky, Smitha Padmanabha, Nagarekha Pasupuleti, Benlian Wang, Puttur Santhoshkumar, **Alok Kumar Panda** and Ashis Biswas - “Acetylation of alphaA-crystallin in the human lens: effects on structure and chaperone function”, *Biochimica et Biophysica Acta-Molecular Basis of Disease*, 1822, 120-129 (2012). [IF - 5.70]
34. Sasmita Baliarsingh, **Alok Kumar Panda**, Jyostna Jena., Trupti Das and Nalini Bihari Das – “Exploring sustainable technique on natural dye extraction from native plants for textile: Identification of colourants, colourimetric analysis of dyed yarns and their antimicrobial evaluation”, *Journal of Cleaner Production* 37, 257-264 (2012). [IF - 6.27]

RESEARCH GRANTS

1. Role of C-Terminal Domain of M. Tuberculosis Small Heat Shock Protein Hsp16.3 for Its Structure, Stability and Chaperone Function Under Thermal Stress (**Funding Agency: UGC, 2021-23**).

SERVICES

1. Guest Associate Editor in *Frontiers in Molecular Biosciences* .
2. Guest Editor in *Pharmaceutics MDPI*
3. Reviewer in *PLoS One Journal*, *Processes*, *Methane*, *Frontiers in Pharmacology*, *Frontiers in Molecular Biosciences*, *Current Traditional Medicine*, *Sustainability MDPI*
4. Undergraduate and Postgraduate Laboratory Coordinator in Department of Chemistry, School of Applied Sciences, KIIT Deemed to be University, Bhubaneswar.
5. Professor in Charge for Spectrofluorometer and UPLC-HRMS/MS in Central Research Facility of KIIT Deemed to be University.
6. Research Coordinator for Integrated Analytical Laboratory, School of Applied Sciences, KIIT Deemed to be University, Bhubaneswar.

STUDENT SUPERVISION

DOCTORAL STUDENTS: 4 (Ongoing), 1 (Awarded)

MASTER STUDENTS: 1 (Ongoing), 3 (Awarded)

INVITED TALKS/LECTURES

1. **Alok Kumar Panda-Science Popularization Lecture** organized by **Indian Science Congress Association, Bhubaneswar Chapter, Bhubaneswar, Odisha** held on November 2018.
2. **Alok Kumar Panda-Popular Nobel Lecture Series** organized by **KIIT Deemed to be University, Bhubaneswar, Odisha** held on November 2018.
3. **Alok Kumar Panda** – “Socializing the Concept of Carbon Footprint”, *Human Future in Digital Era, XLII Indian Social Science Congress, Session: Global warming and climate change* (held at **KIIT Deemed to Be University, Bhubaneswar, Odisha** during December 27-31, 2018). [**Chairman Talk**]

CONFERENCES/SYMPOSIA

POSTER PRESENTATIONS

1. **Alok Kumar Panda** and Ashis Biswas – “Dissecting the Structure-Function Relationship of the C-terminal Region of *Mycobacterium tuberculosis* Hsp16.3: Importance of the C-terminal Extension”, **The Third International Symposium on Protein Folding and Dynamics** (held at **NCBS, Bengaluru** during November 8-11, 2016).
2. **Alok Kumar Panda**, Ayon Chakraborty and Ashis Biswas – “Role of the surface mutants on the electron transfer and catalytic activity of endothelial nitric oxide synthase: A new horizon for gene therapy”, **National Science Day** (held at **Indian Institute of Technology Bhubaneswar** during February 28, 2016).
3. **Alok Kumar Panda**, Ram. H. Nagaraj and Ashis Biswas – “Role of *in vitro* Acetylation on the Structure and Chaperone Function of alphaA-Crystallin”, **National Science Day** (held at **Indian Institute of Technology Bhubaneswar** during February 28, 2014).
4. **Alok Kumar Panda**, Shilpa Shanthakumar, Puttur Santhoshkumar, NagaRekha Pasupuleti, Benlian Wang, Ram H. Nagaraj and Ashis Biswas – “Hydroimidazolone Modification of the Conserved Arg12 on the Structure and Chaperone Function of Small Heat Shock Proteins – A Site-directed Mutagenesis and Biophysical Study”, **Asia-ARVO 2013 Conference** (held at **Ashok International Convention & Exhibition Centre New Delhi, India** during October 28-31, 2013).
5. **Alok Kumar Panda**, Sandip Kumar Nandi, Ram H. Nagaraj and Ashis Biswas – “Implications of the Byproducts Derived from Maillard Reaction on the Structure and Chaperone Function of α A-crystallin”, **National Science Day** (held at **Indian Institute of Technology Bhubaneswar** during February 28, 2013).
6. **Alok Kumar Panda**, Sandip Kumar Nandi, Ram H. Nagaraj and Ashis Biswas – “Role of Hydroimidazolone Modifiable Conserved Arginine12 on Structure and Chaperone Function of Human alphaA Crystallin—A Site Directed Mutagenesis Study”, **National Science Day** (held at **Indian Institute of Technology Bhubaneswar** during February 28, 2012).
7. **Alok Kumar Panda**, Sandip Kumar Nandi and Ashis Biswas – “Effect of Surface Mutants on the Electron Transfer and Catalytic Activity of Endothelial Nitric Oxide Synthase”, **National Science Day** (held at **Indian Institute of Technology Bhubaneswar** during February 28, 2010).

TALKS/LECTURES

WORKSHOPS

1. “7-days Faculty Development Programme” (held at **KIIT School of Applied Sciences, Bhubaneswar** during June 21-June 27, 2019).

2. "15-days Workshop on Basic Tools and Techniques in Cell Biology and Immunology" (held at **KIIT School of Biotechnology, Bhubaneswar** during August 26-September 14, 2019).
3. "5-days Workshop on Molecular Biotechnology & Bioinformatics" (held at **International Institute of Information Technology, Pune** during January 17-21, 2011).