

## **CURRICULUM VITAE**

**ANSHU PRIYA**, Ph.D.

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### **ACADEMIC RECORD:**

#### **EDUCATIONAL QUALIFICATIONS**

<b>Examination/ Degree</b>	<b>University/ Board</b>	<b>Institute/ College/ School</b>	<b>Duration (from mm/yy to mm/yy)</b>	<b>Subjects studied/ Specialization</b>	<b>Percentage/ CGPA/Rank</b>
Ph.D.	Indian Institute of Technology Patna	Indian Institute of Technology Patna	July 2013- November 2018	Development of Hybrid Bioleaching Process for Recovery of Metals from Electronic waste	Degree Awarded
M.Sc.	Central University of Bihar	Central University of Bihar	July 10-May 12	Biotechnology	8.85 (1 <sup>st</sup> Rank in University)
B.Sc	Patna University	Patna Women's College (Dept. of Industrial Microbiology)	June 07-June 10	Industrial Microbiology	82.75% (5 <sup>th</sup> Rank in University)
I.Sc. (10+2)	Patna University	Magadh Mahila College, P.U	June 05-June 07	Physics, Chemistry, Biology, English, Hindi	68%
Matric	I.C.S.E.	St. Paul's High School	April 04-May 05	English, Hindi, Maths, Science, Social Science, Economics	78%

### **ACADEMIC AWARDS and HONORS:**

Selected for **BIRAC SPARSH 2020**, Department of Biotechnology, Govt. of India

Recipient of **CSIR International Travel Grant** in 2017.

**Best Paper Award** in Recycle-2016: International Conference on Waste Management, Indian institute of Technology Guwahati, Assam, April 1-2, 2016.

**Best Poster Award** in 5th Research Scholars' Day at Indian Institute of Technology Patna in the year 2016.

**DST INSPIRE** award for doctoral study, department of Science and Technology, Govt. of India, India, 2013.

Recipient of **Chancellor's Gold Medal** in M.Sc. Biotechnology at Central University of Bihar: session 2010-2012.

**University Rank Fifth** in B.Sc. Industrial Microbiology from Patna Women's College, Patna University: session 2007-2010.

**Merit Scholarship recipient** for the year 2010 and 2012, Department of Biotechnology, Central University of Bihar, Bihar.

Won **Second Prize** for UGC sponsored Research Project entitled “Isolation of Phenol degrading fungi from cow dung and poultry droppings”, under the UGC scheme of Basic Scientific Research for undergraduate students (2010).

#### RESEARCH INTERESTS:

- Environmental Biotechnology
- Biohydrometallurgy
- Waste and biomass valorization
- Environmental Microbiology
- Bioremediation Technology
- Microbial Ecology
- Metal-microbe Interaction

#### TECHNICAL SKILLS:

- Analytical techniques like inductively coupled plasma-mass spectrometry, atomic absorption spectrometer, ion chromatography, high pressure liquid chromatography
- Physical, chemical and microbial analysis of water, wastewater, soil and solid waste
- Water, wastewater monitoring techniques
- Restriction Digestion, Ligation, Cloning and Transformation techniques.
- Techniques involving isolation, maintenance, storage and transfer of microorganisms.
- Basic operation and maintenance of bright field, fluorescent and phase contrast microscopes, scanning electron microscope.
- IT and programming skills: Sigma plot, origin plot, SPSS, Windows, MS office

#### RESEARCH/ INDUSTRIAL EXPERIENCE/ PROJECTS:

- Isolation, Biochemical and Molecular Characterization of Heavy Metals (Cadmium, Lead, Iron) resistant bacteria from soil samples of Bokaro Coal Mines at Central University of Bihar, 2012.
- UGC sponsored research work on “Isolation of Phenol Degrading Fungi from Cowdung and Poultry Droppings”, under Basic Scientific Research for Undergraduate students, at Patna Women’s College, Patna University 2010.
- Project training in “Environment Management System” at Hindustan Coca Cola Pvt. Ltd., Patna, 2009.
- Development of Gravity-based Household Filter for Simultaneous Removal of Arsenic and Iron Contamination of Groundwater in Patna District, Bihar, India. [Project sponsored by Shastri Indo-Canadian Institute and the Ministry of Human Resource Development, Department of Higher Education (MHRD), Government of India; *Project Investigator*: Dr. Subrata Hait].

#### PUBLICATIONS:

##### Peer-reviewed Journals: 15

[J1] Priya, A., Dutta, K., Daverey, A., A comprehensive biotechnological and molecular insight into plastic degradation by microbial community. **Journal of Chemical Technology and Biotechnology**. DOI: <https://doi.org/10.1002/jctb.6675> . 2021 (**Impact factor: 3.174**)

[J2] Kumar, A. N., Dissanayake, P.D., Masek, O., Priya, A., Lin, C.S.K., Ok, Y.S., Kim, S-H. Recent trends in biochar integration with anaerobic fermentation: Win-win strategies in a closed-loop. **Renewable and Sustainable Energy Reviews**. 2021, 149, 111371. (Impact factor: 14.982)

[J3] Mettu, S., Hathi, Z., Athukoralalage, S., Priya, A., Lam, T.N., Ong, K.L., Choudhury, N.R., Dutta, N.K., Curvello, R., Garnier, G. and Lin, C.S.K., Perspective on Constructing Cellulose-Hydrogel-Based Gut-Like Bioreactors for Growth and Delivery of Multiple-Strain Probiotic Bacteria. **Journal of Agricultural and Food Chemistry**. (DOI: <https://doi.org/10.1021/acs.jafc.1c00468>) 2021. (Impact factor: 5.279)

[J4] Hathi, Z., Mettu, S., Priya, A., Athukoralalage, S., Lam, T.N., Choudhury, N.R., Dutta, N.K., El-Omar, E. M., Gong, L., Mohan, G., Lin, C. S. K., Methodological Advances and Challenges in Probiotic Bacteria Production: Ongoing Strategies and Future Perspectives. **Biochemical Engineering Journal**. 2021, 108199. (DOI: <https://doi.org/10.1016/j.bej.2021.108199>) (Impact factor: 3.978)

[J5] Priya, A. and Hait, S., Characterization of particle size-based deportment of metals in various waste printed circuit boards towards metal recovery. **Cleaner Materials**, 1, 100013. (DOI: <https://doi.org/10.1016/j.clema.2021.100013>)

[J6] Lin, C. S. K., Kirpluks, M., Priya, A., Kaur., G., Conversion of food waste-derived lipid to bio-based polyurethane foam, **Case Studies in Chemical and Environmental Engineering**, 2021, 100131. (DOI: <https://doi.org/10.1016/j.cscee.2021.100131>)

[J7] Priya, A., Hait, S., Biometallurgical recovery of metals from waste printed circuit boards using pure and mixed strains of *Acidithiobacillus ferrooxidans* and *Acidiphilium acidophilum*. **Process Safety and Environmental Protection**. 2020, 143, 262-272. (Impact factor: 6.158).

[J8] Kumar, K., Priya, A., Arun, A., Hait, S., Chowdhury, A., Antibacterial and natural room-light driven photocatalytic activities of CuO nanorods. **Materials Chemistry and Physics**. 2019, 226, 106-112. (Impact factor: 4.094)

[J9] Priya, A., Hait, S., Comprehensive characterization of printed circuit boards of various end-of-life electrical and electronic equipment for beneficiation investigation. **Waste Management**. 2018, 75, 103-123. (Impact factor: 7.145)

[J10] Priya, A., Hait, S., Extraction of metals from high grade waste printed circuit board by conventional and hybrid bioleaching using *Acidithiobacillus ferrooxidans*. **Hydrometallurgy**. 2018, 177, 132-139. (Impact factor: 4.156)

[J11] Priya, A., Hait, S., Feasibility of Bioleaching of Selected Metals from Electronic Waste by *Acidiphilium acidophilum*. **Waste and Biomass Valorization**. 2018, 9(5), 871-877. (Impact factor: 3.703)

[J12] Priya, A., Hait, S., Toxicity characterization of metals from various waste printed circuit boards. **Process Safety and Environmental Protection**. 2018, 116, 74-81. (Impact factor: 6.158)

[J13] Priya, A., Hait, S., Comparative assessment of metallurgical recovery of metals from electronic waste with special emphasis on bioleaching. **Environmental Science and Pollution Research**. 2017, 24(8), 6989–7008. (Impact factor: 4.223)

[J14] Priya, A., Hait, S., Qualitative and quantitative metals liberation assessment for characterization of various waste printed circuit boards for recycling. **Environmental Science and Pollution Research**. 2017, 24(35), 27445-27456. (Impact factor: 4.223)

[J15] Gandhi, V., Priya, A., Priya, S., Daiya, V., Kesari, J., Prakash, K., Kumar Jha, A., Kumar, K. and Kumar, N., Isolation and molecular characterization of bacteria to heavy metals isolated from soil samples in Bokaro Coal Mines, India. **Pollution**. 2015, 1(3), 287–295.

### **Peer-reviewed Book Chapters: 03**

[B1] Priya, A., Hait, S. (2019). Toxicity Characterization of Heavy Metals from Waste Printed Circuit Boards, In: S.K. Ghosh (Ed.) Waste Management and Resource Efficiency (DOI: 10.1007/978-981-10-7290-1), Springer Nature, Singapore, pp. 833–840.

[B2] Priya, A., Hait, S. (2019). Extraction of Cu And Zn from High Grade Printed Circuit Board Scraps by Conventional and Hybrid Bioleaching, In: A.S. Kalamdhad, J. Singh, K. Dhamodharan (Eds.) Advances in Waste Management (DOI: 10.1007/978-981-13-0215-2), Springer Nature, Singapore, pp. 511–524.

[B3] Priya A., Hait, S., Hussain, C. M. (2021). Process engineering for bioleaching of metals from waste electrical and electronic equipment. Environmental Management of Waste Electrical and Electronic Equipment (ISBN 9780128224748) (DOI: <https://doi.org/10.1016/B978-0-12-822474-8.00010-6>). Elsevier pp. 185-202.

### **CONFERENCES, SEMINARS:**

#### **Conference/Seminar Papers: 07 [06: International; 01: National]**

[C1] Priya, A., Hait, S., (2017). Extraction feasibility of Cu and Pb from high grade waste printed circuit board by exploiting *Acidithiobacillus ferrooxidans* based conventional and hybrid bioleaching. Emerging trends in biotechnology for waste conversion 2017, October 08-10, CSIR-NEERI, Nagpur, Maharashtra.

[C2] Priya, A., Hait, S., (2017). Recycling based comprehensive characterization of waste printed circuit boards of various brown and white goods. Waste Management Convention 2017, 5<sup>th</sup> World Convention on Recycling and Waste Management, September 11-12, Singapore.

[C3] Priya, A., Hait, S., (2016). Toxicity Characterization of Heavy Metals from Waste Printed Circuit Boards. 6th International Conference on Solid Waste Management, November 24-26, Jadavpur University, Centre for Quality Management System (CQMS), Kolkata.

[C4] Priya, A., Hait, S., (2016). Extraction of Cu and Zn from high grade printed circuit board scraps by conventional and hybrid bioleaching. International Conference on Waste Management, April 1-2, Indian Institute of Technology Guwahati. Guwahati, Assam, India. (Best Paper Award)

[C5] **Priya, A.**, Hait, S., (2016). Comparative assessment of conventional and hybrid bioleaching of selected metals from e-waste employing *Acidiphilium acidophilum*. International Conference on Human Implications of Biotechnology. February 12-14. Central University of South Bihar, Patna, Bihar, India.

[C6] **Priya, A.**, Hait, S., (2015). Bioleaching of selected metals from waste printed circuit board by *Acidiphilium acidophilum*. CHEMCON 2015, Indian Chemical Engineering Congress, December 27-30, Indian Institute of Technology Guwahati. Guwahati, Assam, India.

[C7] **Priya, A.**, Kumar, N., (2012). Isolation, biochemical and molecular characterization of heavy metals (Cd, Pb and Fe) resistant bacteria from Bokaro coal mines area. National Seminar on Recent Trends in Life Sciences. May 30, Patna University, Patna, Bihar, India.

## PROFESSIONAL EXPERIENCE:

- **Post-doctoral researcher** at School of Energy and Environment. City University of Hong Kong. (19/04/2021-Till date).
- **Guest Editor**, Sustainability (IF: 3.251, ISSN 2071-1050) Special Issue: Resources Conservation, Recycling and Waste Management. ([https://www.mdpi.com/journal/sustainability/special\\_issues/Resources\\_Conervation\\_Recycling\\_Waste\\_Management](https://www.mdpi.com/journal/sustainability/special_issues/Resources_Conervation_Recycling_Waste_Management))
- **Guest Editor**, Frontiers in Energy Research (I.F: 4.008, ISSN 2296598X) Special Issue: Sustainable Planning and Life-Cycle Thinking of Energy Infrastructure. (<https://www.frontiersin.org/research-topics/26142/sustainable-planning-and-life-cycle-thinking-of-energy-infrastructure#overview>)
- **Assistant Professor**, Amity University Kolkata (03/02/2020-10/04/2021)
- **Reviewer** of peer reviewed international journals: **Chemosphere**, **Journal of Hazardous Materials** (Elsevier); **Biochemical Engineering Journal** (Elsevier) and **Waste and Biomass Valorization** (Springer), **SN Applied Sciences** (Springer), **PLOS-ONE**, **Cogent Environmental Science**.
- **Research Associate** on Biohydrometallurgical Extraction of Metals under Dr. Subrata Hait, IIT Patna (December 2018- December 2019)
- **Teaching Assistant** in Environmental Engineering Laboratory (PG Laboratory Course) at IIT Patna (July 2014-July 2018)
- **Teaching Assistant** in Physico-chemical Processes For Water and Wastewater Treatment (UG Course) at IIT Patna (July 2014-July 2018)
- **Lecturer** at Patna Women's College, Patna University, B.Sc. Industrial Microbiology (August 2012- November 2013) (UG courses)

## OUTREACH ACTIVITIES:

- An interview 'Talk The Walk' with Bharat Vaani, Bharat's Innovation Destination (**Link:** <https://bharatvaani.in/interviews/talk-the-walk-with-dr-anshu-priya>; **LinkedIn:** <https://www.linkedin.com/showcase/bharatvaani>)

## PERSONAL DETAILS:

NAME : ANSHU PRIYA  
DATE OF BIRTH : 06.04.1990  
SEX : FEMALE  
MARITAL STATUS : MARRIED  
NATIONALITY : INDIAN  
LANGUAGES KNOWN : ENGLISH, HINDI.  
**COMMUNICATION ADDRESS** : DR. ANSHU PRIYA  
W/o- DR. AMBRESH SHIVAJI  
602, ME BLOCK, IISER MOHALI, SECTOR 81,  
SAS NAGAR, PUNJAB, PIN CODE-140306

## REFERENCES:

1. **Carol Sze Ki Lin**, Associate Professor, School of Energy and Environment, City University of Hong Kong, Tat Chee Avenue, KOWLOON TONG, HONG KONG, Email: carollin@cityu.edu.hk, Tel: +852 34427497, Mobile No. +852 62903804
2. **Subrata Hait**, Ph.D., Associate Professor, Department of Civil and Environmental Engineering, Indian Institute of Technology Patna, Bihta, Patna-801106, BIHAR, INDIA, Email: shait@iitp.ac.in, Tel: +91-612-3028195, Mobile No. +91 9470648113
3. **Sunil Kumar**, Ph.D., Sr. Principal Scientist & Head, Technology Development Centre, Council of Scientific and Industrial Research, National Environmental Engineering Research Institute (CSIR – NEERI), Nehru Marg, Nagpur-440020, MAHARASHTRA, INDIA, Email: s\_kumar@neeri.res.in, Mobile No. +91 8806029925

**Declaration:** I hereby declare that the above mentioned particulars are true to the best of my knowledge and belief.



**ANSHU PRIYA**