Dr. Uday Pratap Azad

Assistant Professor

Centre/School/Special Centre: Physical Sciences

Department: Chemistry

Phone: +918005304694

Email: azadchembhu@yahoo.co.in

Personal Webpage Link:

https://www.ggu.ac.in/Department-Staff.aspx

Qualifications

Ph.D., Electroanalytical Chemistry at Modified Electrodes (2012): Banaras Hindu University, Varanasi (U.P.) India.

M.Sc., Analytical Chemistry (2007): Banaras Hindu University, Varanasi (U.P.), India.

B.Sc., Chemistry, Hons (2005): Banaras Hindu University, Varanasi (U.P.) India.

Area of Interest/Specialization: Analytical Chemistry

Nano Materials, Modified Electrodes, Electrochemical Sensors, Biosensors. Electroanalytical Chemistry, Fuel Cell, Oxygen reduction, Electrochemical Water Splitting (Oxygen evolution and hydrogen evolution reactions), Energy Storage.

Experience: Above 7 Years, Teaching and Postdoctoral Research.

- **Assistant Professor** at GGV, Bilaspur, C.G. (**03rd Oct. 2019-Continued**)
- **National Post-Doctoral Fellow**: School of Material Science and Technology IIT-BHU, Varanasi. (**August 2017 to July 2019**).
- **Institute Post-Doctoral Fellow**: School of Material Science and Technology IIT-BHU, Varanasi. (**November 2016 to July 2017**).
- **Post-Doctoral Fellow**: Yonsei University, Seoul, South-Korea (**December 2014 to February 2016**).

- **Post-Doctoral Fellow**: Pusan National University, Busan, South-Korea (**December 2013 to November 2014**).

Awards and Honors

- CSIR-UGC NET (June 2008).
- Rajiv Gandhi National Fellowship (August 2007).
- CSIR-Senior Research Fellowship (April 2011).
- President Fellowship (December 2013 to Nov 2014), Awarded by KoreanGovernment.
- Brain Korean Fellowship (BK-21), (Dec 2014 to Feb 2016) Awarded by Korean Government.
- National Post-Doctoral Fellowship (NPDF, 2017) Awarded by Department ofScience and Technology.
- Best Reviewer Award (Sensors International) 2020.

Research Projects: One Completed and One Ongoing Research Project.

Research Project Completed

Funding Agency: SERB, New Delhi.

Reference Number and Amount: **File No.PDF/2017/002942), 19.2 Lacs.**

Title: Development of Metal Nanoclusters/Porous Carbon Composite Based Efficient Electrocatalysts for Fuel Cell/Energy Storage and Biosensing

Research Project Ongoing

Funding Agency and Amount: University Grants Commission (UGC), New Delhi, India

Reference Number and Amount: **File No. 30-551/2021(BSR), 10 Lacs.**

Title: Metal nanoclusters/porous carbon-based catalysts for fuel cell/energy storage and biosensing

International Collaboration/Consultancy: No

Best Peer Reviewed Publication (up-to 10)

1. Impedimetric immunosensor for the NS1 dengue biomarker based on the gold nanorod decorated graphitic carbon nitride modified electrode.
   Ravi Prakash Ojha, Priya Singh, **Uday Pratap Azad***, Rajiv Prakash, ***Electrochemica Acta*** 411 (2022) 140069.

2. Lanthanide based double perovskites: Bifunctional catalysts for oxygen evolution/reduction reactions,
   S. Kumar, M. Singh, R. Pal, **Uday Pratap Azad***, A. K. Singh, D. P. Singh, V. Ganesan, A. K. Singh, R. Prakash,
   International Journal of Hydrogen Energy 46 (2021) 17163-17172.

3. Studies on Some Spinel Oxides Based Electrocatalysts for Oxygen Evolution and Capacitive Applications.
   S. Pal, **Uday Pratap Azad***, Ashish Kumar Singh*, Dinesh Kumar and Rajiv Prakash,
   Electrochemica Acta 320 (2019) 134584.

4. Facile Synthesis of BSCF Perovskite Oxide as an Efficient Bifunctional Oxygen Electrocatalyst.
   Uday Pratap Azad, M. Singh, S. Ghosh, A. K. Singh, V. Ganesan, A. K. Singh, R. Prakash.
   International Journal of Hydrogen Energy 43 (2018) 20671-20679.

5. Efficient Oxygen Reduction Electrocatalysts Based on Gold Nanocluster-Graphene Composites.
   K. Kwak, **Uday Pratap Azad**, W. Choi, K. Pyo, M. Jang and D. Lee.
   ChemElectroChem 3 (2016) 1253-1260.

6. Hydrophobicity Effects in Iron Polypyridyl Complex Electrocatalysis within Nafion Thin-Film Electrodes.
   Uday Pratap Azad, D.K. Yadav, V. Ganesan and Frank Maren,
   Physical Chemistry Chemical Physics 18 (2016) 23365-23373.

7. Selective Determination of Isoniazid Using Bentonite Clay Modified Electrodes. **Uday Pratap Azad**, Nandlal Prajapati and Vellaichamy Ganesan, ***Bioelectrochemistry*** 101(2015) 120-125.

8. Tris(1,10-phenanthroline)iron(II)-Bentonite Film as Efficient Electrochemical SensingPlatform for Nitrite Determination.
Uday Pratap Azad, S. Turllapati, P. K. Rastogi and V. Ganes*an*,
Electrochimica Acta 127 (2014) 193-199.

9. Determination of Hydrazine by PolyNi(II) Complex Modified Electrodes with a WideLinear Calibration Range.
Uday Pratap Azad and Vellaichamy Ganesan,
Electrochimica Acta 56 (2011) 5766-5770.

10. Efficient Sensing of Nitrite by $Fe(bpy)3^{2+}$ Immobilized Nafion ModifiedElectrodes.
Uday Pratap Azad and Vellaichamy Ganesan,
***Chemical Communi*cations** 46 (2010) 6156-6158.

Recent Books/Book Chapters/Monographs etc. (01 Book Chapter)

1. Electrochemical biosensors for monitoring of bioorganic and inorganic chemical pollutants in biological and environmental matrices,
   Uday Pratap Azad*, Supratim Mahapatra, Ananya Srivastava, Nagaraj P Shetti, Pranjal Chandra,
   Microbial Biodegradation and Bioremediation, Second Edition. (**2021**). (**Elsevier, ISBN: 978-0-323-85455-9509-531**.)

Research Supervision (01 Ph.D.)

One Ph D students is working for her Ph. D. degrees under my supervision: **Nandita Singh**: Date of Registration w.e.f. 01. 12. 2021.

Administrative Responsibilities

- ☞ Coordinator of Slow Cycling Race (Female) in University Interschool Sports Meet-2019-2020
- ☞ Polling Officers for the Students' Council Election 2019-2020.
- ☞ Committee Member for verification in the selection of Adhoc faculties in 2021-2022.
- ☞ Mentor of M.Sc. IV Semester in 2019-2020.
- ☞ Mentor of B.Sc. VI Semester in 2021-2022.
- ☞ Member, Organizing conferences/seminars/workshops, GGV, Bilaspur (C.G.), India

- ☞ Committee member for organizing "**Science Speech Competition**" in National Science Day Celebration organized by GGV, Bilaspur (C.G.), India, held on 28th February, 2022.
- ☞ Member of UG & PG Admission Committee 2020-2021

Additional Information:

- ☞ Papers published in conference proceedings: **02**.
- ☞ Papers presented in International/National conferences: **12**.
- ☞ Attended Faculty Induction Program (FIP) in 2021 by UGC-HRDC, GGV.
- ☞ Reviewer for many international journals such as Scientific Reports, International Journal of Hydrogen Energy, Electrochemica Acta, Sensors International, etc.

****