

---

## CURRICULAM VITAE

### AMIT KUMAR RATHOURE

Vill. /Post –Yakubpur

Distt.- Auraiya–206255 (U.P), India

Email: [amitrathour04@gmail.com](mailto:amitrathour04@gmail.com)

Contact no.: 9616428049

---



### Professional Experience

➤ **Associate Professor in Department of Chemical Engineering**

Harcourt Butler Technical University, Nawabganj Kanpur-208002, Uttar Pradesh, India from 01/11/2023

➤ **Lecturer in Chemical Engineering Department**

Department of Technical Education Uttar Pradesh Govt., from 04/02/2015 to 31/10/2023

➤ **Guest Faculty in Chemical Engineering Department**

Harcourt Butler Technical University, Nawabganj Kanpur-208002, Uttar Pradesh, India from Aug. 2009 to June 2010

➤ **Shift Engineer**

➤ Bhushan Steel Limited Khapoli Mumbai, Maharashtra 400021 from Aug. 2008 to June 2009

### Academic Qualifications

➤ Doctor of Philosophy on the topic “**Development of Air Breathing Microfluidic Fuel Cell**” from IIT-BHU, Varanasi

➤ M.Tech (**Chemical Engineering**) from IIT-BHU, Varanasi (Secured **81.2%**)

➤ B.Tech (**Chemical Engineering**) from U.I.E.T, Kanpur (Secured **76.40%**)

### Administrative Responsibilities:

➤ **Account officer at** Government polytechnic Jugunia Deeh Harakh Barabanki (U.P.) from 2021-23

➤ **Establishment Officer at** Government polytechnic Lakhimpur Kheri (U.P) from 2015-21

➤ **In-charge Training and Placement Officer at** Government polytechnic Lakhimpur Kheri (U.P) from 2015-21

➤ **Time Table Coordinator at** Government polytechnic Lakhimpur Kheri (U.P) from 2015-21

### Extracurricular Activities:

➤ **Liaison Officer at** Uttar Pradesh Global Investor Summit 2033

➤ **Appreciation Certificate** from District Magistrate Lakhimpur Kheri (U.P.) in year 2017 for the successful conduction of Lok-Sabha election 2019

- **Best Teacher Award** from joint director central zone (U.P.) Govt.
- **Nodal Officer** for tablet/mobile distribution program (U.P.) Govt.

**Research Interests/Research Profile:** I obtained my PhD degree entitled "development of air breathing microfluidic fuel cell" from IIT (BHU) Varanasi under the supervision of Prof. Hiralal Pramanik. I developed and optimised an air-breathing microfluidic fuel cell employing methanol, ethanol, and sodium borohydride as fuels. The future scope of the air breathing microfluidic fuel cell using methanol, or ethanol, or sodium borohydride is promising in nature for powering small and portable electronic equipment, i.e., pacemakers, healthcare diagnostics, mobile phones and DNA analysis devices, as the single cell result shows the reasonable performance at a mild condition. The other favourable reasons are (i) availability of hydrogen-rich liquid fuels like methanol, ethanol and sodium borohydride which overcomes the storage challenges of hydrogen for fuel cell applications and (ii) use of ambient air as an oxidant which is freely available in nature, makes fuel cell cheaper.

### **Publications**

1. Rathoure AK, Pramanik H. Electrooxidation study of methanol using H<sub>2</sub>O<sub>2</sub> and air as mixed oxidant at cathode in air breathing microfluidic fuel cell. International Journal of Hydrogen Energy. 2016;41(34):15287-94 (**I.F=7.139**).
2. Pramanik H, Rathoure AK. Electrooxidation study of NaBH<sub>4</sub> in a membraneless microfluidic fuel cell with air breathing cathode for portable power application. International Journal of Hydrogen Energy. 2017;42(8):5340-50(**I.F=7.139**).
3. Rathoure AK, Singh A. Modelling and experimental validation of polarization behavior of airbreathing microfluidic fuel cell using some common fuels: Methanol, ethanol and sodium borohydride. Journal of Electroanalytical Chemistry. 2022;904:115876 (**I.F=4.598**).
4. Pal DB, Rathoure AK, Singh A. Investigation of surface interaction in rGO-CdS photocatalyst for hydrogen production: an insight from XPS studies. International Journal of Hydrogen Energy. 2021;46(53):26757-69(**I.F=7.139**).
5. Lal B, Pal DB, Rathoure AK, Singh A. Studies on acidity and activity of kaolin-supported Ag-doped HZSM-5 in methanol to olefins process. Biomass Conversion and Biorefinery. 2022;12(5):1771-85 (**I.F=4.05**).

6. Pramanik H, Jain V, Rathoure A, Srikanth P, editors. Electrooxidation study of methanol in a laminar flow membraneless microfluidic fuel cell-a review. 2014 1st International Conference on Non Conventional Energy (ICONCE 2014); 2014: IEEE.
7. Pramanik H, Rathoure AK. **Electrooxidation Study of Ethanol in Air Breathing Microfluidic Fuel Cell at Low Loading of Electrode-catalyst.** International Journal of Chemical and Environmental Engineering. 2015; **6(2) 90-94.**

### **Presentations**

1. H. Pramanik, A. K. Rathoure, S. Rahut, “Electro oxidation Study of Methanol in a Laminar Flow Membrane less Micro fluidic Fuel Cell” (Chemcon 2013) 66<sup>th</sup> Annual Session of Indian Institute of Chemical Engineers Hosted by Institute of Chemical Technology, Mumbai, December 2013, 27-30.
2. Study of methanol and ethanol fuel mixture on Pt-Ru Electrode using cyclic voltammetry” International conference IC-CAST-2015, IIT (BHU), Varanasi, August 2015.

### **Courses/Workshops attended**

- I. One week short term course on “Nanomaterials and Their Green Applications through ICT” from 28/03/2022 to 01/04/2022 organize by National Institute of Technical Teachers Training and Research, Chandigarh at Dr. Ambedkar Institute of Technology for Handicapped Kanpur (U.P.).
- II. One week faculty development program on “Free and Open Source Software (FOSS) Tools for Effective Teaching-Learning” from 15/02/2021 to 19/02/2021 organize by National Institute of Technical Teachers Training and Research, Chandigarh.
- III. One week online faculty development program on “Electric Vehicles” from 07/12/2020 to 11/12/2020 organize by AICTE Training and learning (Atal) Academy at Bhilai institute of technology.
- IV. One week online faculty development program on “DEEKSHARAMBH” from 10/08/2020 to 14/08/2020 organize by National institute of technology Patna.
- V. Three weeks online short term course on “Industrial Training Program on Energy Harvesting, Materials Characterization Techniques and Applications” from 13/07/2020 to 31/07/2020 organize by AICTE Training and learning (Atal) Academy at Bhilai institute of technology.

- VI. One week online faculty development program on “Green Technology & Sustainability Engineering” from 04/01/2021 to 08/01/2021 organize by AICTE Training and learning (Atal) Academy at Malaviya National Institute of technology Jaipur.
- VII. One week online faculty development program on “Next Generation of Chemical Manufacturing & Waste Management” from 29/06/2020 to 02/07/2020 organize by Department of Chemical Engineering Institute of Engineering & technology Lucknow, Uttar Pradesh.
- VIII. Three days’ workshops on “Facilitation Techniques” from 18/10/2022 to 20/10/2022 organize by Institute of Research Development & Training, U.P. Kanpur.
- IX. One week faculty development program on “Outcome Based Curriculum” from 04/02/2019 to 08/02/2019 organize by National Institute of Technical Teachers Training and Research, Chandigarh.
- X. One week faculty development program on “Recent Trends in Nano-biotechnology” from 20/11/2018 to 24/11/2018 organize by Indian Institute of Technology, Kanpur.
- XI. One week short term course on “Perfumery and Aroma Technology” from 14/03/2016 to 18/03/2016 organize by Institute of Research Development & Training, U.P. Kanpur at F.F.D.C. Kannauj.
- XII. One week short term course on “Environment Pollution and its Protection” from 01/05/2017 to 05/05/2017 organize by Institute of Research Development & Training, U.P. Kanpur
- XIII. One week short term course on “Industrial Automation Using PLC” from 08/02/2016 to 12/02/2016 organize by A.T.I., Kanpur.

#### **Course Taught**

1. Mass Transfer Operation
2. Fluid mechanics
3. Chemical Engineering Thermodynamics
4. Process Control
5. Heat Transfer Operation

#### **Paper Review in Different Reputed Journals**

1. International Journal of Energy Research

**Personal Details**

**Fathers Name:** Ravindra Kumar Rathoure

**Language Known:** Hindi, English

**Parmanent Address:** Vill. /Post- Yakubpur, District-Auraiya (U.P) India-206255

**Declaration:** I hereby declare that the information furnished above is true to the best of my Knowledge.

**DATE: 03 Nov 2023**

**(Dr Amit Kumar Rathoure)**