

Dr. Snigdha Khuntia Assistant Professor, School of Engineering and Applied Science Ahmedabad University, Gujarat, India	Ph.D (Chemical Engineering), IIT Guwahati MTech (Chemical Engineering), IIT Guwahati
---	---

☎ +91-9726263832 | ✉ snigdha.khuntia@ahduni.edu.in [Google Scholar](#) | [University Profile](#)

Research Profile

- 10+ years' experience in Chemical Engineering and Environmental Engineering
- Expertise: Microbubbles, flue gas treatment, membrane science, advanced oxidation processes, water treatment
- Book: [*Microbubbles: Engineering Aspects and Industrial Applications*](#) (Wiley, 2025); Two Book Chapters

Funded Projects (PI)

- **DST-WTI:** Magnetic graphene-stabilized ozone microbubbles for wastewater (₹72 Lakhs)
- **DST-SERB ECR:** NO_x & SO₂ removal via low-temp ozone process (₹42 Lakhs)
- **Seed Grants** (Ahmedabad University): Peroxone mineralization (2016); NO_x absorption (2020)

Publications & Citations

- 30+ peer-reviewed journal articles
- **1000+ citations** (Google Scholar)
- *J. Water Process Eng.*, 2025 – Magnetic nanoparticles for wastewater; *J. Cleaner Prod.*, 2023; *Chem. Eng. J.* 20202 – Ozone-UV method for flue gas treatment; *Ind. & Eng. Chem. Res.*, 2021 – NO_x removal kinetics; *J. Membr. Sci.*, 2020–2021 – Antifouling ultrafiltration membranes
- Reviewer: 80+ international articles

Innovation, Teaching & Academic Roles

- Developed interdisciplinary, lab-integrated modules & real-world project-based learning
- Program/course developer, UG lab developer
- Curriculum design
- Designed and led foundation course "Water Studio" engaging UG students in sustainability
- Organized industrial visits to water treatment plants, chemical facilities, and R&D labs
- Developed several core courses and elective courses: Heat Transfer, Environmental Studies, Thermodynamics, Fluid Mechanics, Membrane Science and Technology
- PhD supervisor (4 students, 2 to submit in 2025) | Doctoral committee member (10+ students)
- Set up & maintained Chemical Engineering research labs (Lab 336)

Innovation & IP

4 Published/Filled Patents, including: Silicon nanomaterial from lab glass; ZIF-based membranes for CO₂/CH₄ separation; Ozone microbubble-based pharma degradation

Institutional & Societal Contributions

- Major advisor for Chemical Engineering (2020 to 2023)
 - Initiated AIChE Student Chapter (4times Global Best Chapter Winner)
 - Faculty Coordinator: Ingenium, Career Development Cell, Circle of Care, Anti-Ragging
 - Led community outreach activities through Women Development Cell, promoting academic mentoring, gender sensitization, and student well-being, admission outreach programme
 - Member: Disciplinary Committee non-academic, Academic, Library, Women's Development Committees
 - Member, AIChE | Technical tools: MATLAB, ASPEN+, AAS, HPLC, GC-MS
-