

Dr. Raghwendra Singh Thakur

Asst. Prof. Department of Chemical Engineering.

IT, GGV Bilaspur-495001

Contact: 08817697994

Email: raghwendra.s.thakur@gmail.com

Educational qualification:

BE. (1998) – Chemical Engg.- GEC, Raipur (Now **NIT Raipur**)

M.Tech (2001) – Chemical Engg.- **Banaras Hindu University**

Ph.D. (2012)- Chemical Engg.- **IIT Kanpur**

Teaching Experience:

- Worked as a lecturer at Raipur Institute of Technology, Raipur from 2004 to 2006
- Working at GGV, Bilaspur (A central University) as an assistant professor since November, 2011

Thesis/Project Guided:

- Guided **two M.Tech.** students at Raipur Institute of Technology, one of them worked on “Removal of Tin: a low cost remediation approach” and the other student worked on “Method of Reducing Pollutants from S.I. Engine Using Catalytic Converter”.
- Presently in my group there are **four B.Tech.** students who are working on gas separation using pressure swing adsorption (PSA)

Selected Journal Publication:

1. S. Gadde, **R.S.Thakur**, N. Kaistha, and D.P. Rao.; Process Intensification in PSA Processes for Upgrading Synthetic Landfill and Lean Natural Gases. **Adsorption**, 17 (2011), 121-133.
2. **R.S.Thakur**, N.Kaistha and D.P. Rao.; Process Intensification in Duplex Pressure Swing Adsorption. **Computers and Chemical Engineering**. 35(2011), 973-983.
3. **R.S.Thakur**, N.Kaistha and D.P. Rao.; CO₂ capture Part I: Single-bed PSA system. **Communicated** for possible publication in **Adsorption**.
4. **R.S.Thakur**, N.Kaistha and D.P. Rao.; CO₂ capture Part II: Twin-bed PSA system. **Communicated** for possible publication in **Adsorption**.

Publication in International / National Conference Proceedings

1. A. Issac, R.S.Thakur, N.Kaistha, N. Verma and D.P. Rao.; Process intensification in 4-bed PSA. **GPE-EPIC**. 14-17 June (2009) **Italy**.
2. R.S.Thakur, N.Kaistha, N. Verma and D.P. Rao.; Process Intensification in Duplex Pressure Swing Adsorption. **ESCAPE 20**. 6-9 June (2010) **Italy**.
3. S.Gadde, **R.S.Thakur**, N.Kaistha. and D.P. Rao.; Process Intensification in PSA Processes.10th International Conference on Fundamentals of Adsorption (**FOA10**), 23-28 May(2010) **Japan**.
4. R.S.Thakur, N.Kaistha, and D.P. Rao.; Hybrid Duplex and Molecular Gate PSA. **AIChE Annual Meeting**. 18 October (2011), **USA**.
5. A. Issac, R.S.Thakur, N.Kaistha, N. Verma and D.P. Rao.; Pressure Swing Adsorption for CO₂ Capture from Flue Gas. **Chemcon-2008**, 27-30 Dec (2008) **Chandigarh**.

Positions of Responsibilities

1. **Convener**, one day national level workshop on Biomass Energy organized at Raipur Institute of Technology, Raipur, on 7 Feb, **2006**.
2. **Core team member** of national symposium-Chemference2008 held in the Dept. of Chemical Engineering, IIT Kanpur, from 6-7 July, **2008**.
3. **Student convener** of national symposium-ChEmference2010 held in the Dept. of Chemical Engineering, IIT Kanpur, from 13-14 July, **2010**.

Research Interest

Our main focus of research is on process intensification of chemical engineering processes, particularly the adsorptive separation processes. Process intensification (PI) is a design philosophy that aims at innovation which can dramatically reduce the size of a process unit for the same production objective. As a subdivision of this main theme we are working on CO₂ capture from flue gas, landfill gas up-gradation and O₂ production from air using PSA, TSA and simulated moving bed (SMB) technology.