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Department : Chemical Engineering  
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**Dr. Raghwendra Singh Thakur**

**Qualifications**

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| **Ph.D.,** Chemical Engg. | Indian Institute of Technology, Kanpur | 2012 |
| **M. Tech.,** Chemical Engg. | Institute of Technology,  Banaras Hindu University | 2001 |
| **B.E.,** Chemical Engg. | Govt. Engg. College Raipur  (Now, National Institute of Technology, Raipur) | 1998 |

**Area of Interest**

* CO2 Capture, Adsorptive Gas Separation, Process Intensification, Water treatment, Renewable Energy.

**Work Experience**

* **Associate professor,** Department of Chemical Engineering, School of Studies of Engineering and Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India. **20-02-2023 to Present.**
* **Assistant professor,** Department of Chemical Engineering, SOSET, GGV, Bilaspur, Chhattisgarh, India. **30- Nov-2011 to 19-02-2023.**
* **Lecturer**, Raipur Institute of Technology, Raipur, C.G., India, **Mar 2004 - Oct 2006**
* **Marketing** **executive**, Protocol Solutions Pvt. Ltd. Delhi, India, **May 2003-Feb 2004**
* **Visiting lecturer**, Institute of Technology, Guru Ghasidas University, Bilaspur, C.G., India, **July 2001- Jan 2002**.

**Award**

* Best speaker award at NCNE-2020, national conference, organized by NIT Raipur.

**Projects**

**Ph.D. :** Process intensification in Pressure Swing Adsorption(PSA).

**M. Tech.:** Studies on optimal design of baffled agitated vessel for improved mass transfer.

**Selected Publications**

1. Gautam Prasad Dewangan Samarendra Nath Saha | Raghwendra Singh Thakur, Saurabh Meshram, Pankaj Kumar, Fluidization characteristics of rice husk with and without coal using a bubbling fluidized cold bed model, Can J Chem Eng. **2025**;1–13, DOI: 10.1002/cjce.70081
2. Anuradha Nanewar Joshi, Anil Kumar Chandrakar, Kailas L. Wasewar, and **Raghwendra Singh Thakur** Experimental investigation of reactive extraction of p-hydroxybenzoic acid using TOA in toluene, petroleum ether and MIBK, Separation Science and Technology, **2023**, vol. 58, nos. 17–18, 2971–2987
3. Saurabh Meshram, **Raghwendra Singh Thakur**, Sandeep Dharmadhikari, Chandrakant Thakur, Anupam B. Soni Fixed-bed adsorption of lead from battery recycling unit wastewater-Optimization using Box-Behnken method. Journal of Hazardous Materials Advances 10 (**2023**) 100297.
4. Neeraj Chandraker, Parmesh Kumar Chaudhari, Ghoshna Jyoti, Raghwendra Singh Thakur, (**2022**), Defluoridation of water by electrocoagulation using aluminium electrode, Indian Journal of Chemical Technology, 29, (**2022**), 554-559.
5. Saurabh Meshram, **Raghwendra Singh Thakur**, Ghoshna Jyoti, Chandrakant Thakur, Anupam B. Soni, (**2022**), Optimization of lead adsorption from lead-acid battery recycling unit wastewater using H2SO4 modified activated carbon, J. Indian Chem. Soc. 99 (2022) 100469 <https://doi.org/10.1016/j.jics.2022.100469>
6. Neeraj Chandraker, Parmesh Kumar Chaudhari, Ghoshna Jyoti, Abhinesh Prajapati, **Raghwendra Singh Thakur,** (**2021**), Removal of fluoride from water by electrocoagulation using Mild Steel electrode, J. Indian Chem. Soc. 98(2021) 100026.
7. Anuradha N. Joshi, Anil K. Chandrakar, Kailash L. Wasewar, **Raghwendra S. Thakur**, Amit Jain, (**2020**), Extractive recovery of p-coumeric acid using natural and conventional organic solvents. J. Indian Chem. Soc., NCNE -2020 special issue 97, 148-151.
8. Vibha Verma, **Raghwendra Singh Thakur**, Akanksha Agrawal, Parmesh Kumar Chaudhari, (**2020**), Wet oxidation of coking wastewater: Optimization of degratdation parameters through RSM. J. Indian Chem. Soc., NCNE -2020 special issue, 97, 29-33.
9. S. Meshram, D. Katiyar, T. Asha, G.P. Dewangan, A.N. Joshi, **R.S. Thakur**, (**2020**), Preparation and characterization of activated carbon from spent coffee grounds using NaOH and KCl as activating agent. J. Indian Chem. Soc., NCNE -2020 special issue, 97, 160-163.
10. Saurabh Meshram, Anuradha Nanewar Joshi, Sandeep Dharmadhikari, **Raghwendra Singh Thakur,** (**2020**), Adsorption of cadmium from water using activated carbon derived from Ipomoea Carnea using chemical impregnation, IOP, conf. Series: Earth and Environmental Science 597, 012005.
11. Neeraj Chandraker, **Raghwendra Singh Thakur**, Saurabh Meshram, Parmesh Kumar Chaudhari, (**2020**), Removal of fluoride using bagasse adsorbent: Process optimization using response surface methodology. IOP, conf. Series: Earth and Environmental Science 597, 012016.
12. Neeraj Chandraker, Ghoshana Jyoti, **Raghwendra Singh Thakur**, Parmesh Kumar Chaudhari, (**2020**), Removal of fluoride using flyash adsorbent. IOP, conf. Series: Earth and Environmental Science 597, 012009.
13. Shreyas Gondudey, Parmesh Kumar Chaudhari, Sandeep Dharmadhikari, **Raghwendra Singh Thakur,** (**2020**), Treatment of sugar industry effluent using electrocoagulation process: Process optmization using response surface methodology. J. Serb. Chem. Soc. 85 (0), 1-14.
14. **R.S. Thakur**, Nitin Kaistha, and D.P. Rao, (**2015**), Novel single-bed and twin-bed pressure swing adsorption systems. [**Chemical Engineering and Processing: Process Intensification**](http://www.sciencedirect.com/science/journal/02552701)**.** 95, 165–174.
15. **R.S. Thakur**, Nitin Kaistha, Nishith Verma and D.P. Rao, **(2011)**, Process Intensification in Duplex Pressure Swing Adsorption. **Computers and Chemical Engineering** 35,973-983.
16. S. Gadde, **R.S.Thakur**, Nitin Kaistha and D.P. Rao, (**2011),** Process Intensification in PSA Processes for Upgrading Synthetic Landfill and Lean Natural Gases. **Adsorption** 17, 121-133.
17. **R.S. Thakur**, Nitin Kaistha, Nishith Verma and D.P. Rao, **(2010),** Process Intensification in Duplex PSA. **Computers Aided Chemical Engineering** 28,1865-1870.

**Conference Presentations**

1. **R.S.Thakur**, A.N.Joshi, Saurabh Meshram, Ghoshna Jyoti, Amit Jain, “ Understanding pressure swing adsorption based oxygen concentrator”, **CCEEMSGPI**, 10-11th Septemeber, 2021, at Dept of Chemical Engg. SoS, E&T, GGV Bilaspur, India.
2. S. Meshram, D. Katiyar, T. Asha, G.P. Dewangan, A.N. Joshi, **R.S. Thakur,** Preparation and Characterisation of activated carbon from spent coffee grounds using NaOH and KCl as activating agent., **NCNE-2020**, 13-14th February 2020, NIT, Raipur, India.
3. Anuradha Nanewar Joshi, Anil Kumar Chandrakar, **Raghwendra Singh Thakur**, Kinetics studies on adsorption of formic acid using bio-sorbent, Recent advances in biotechnology & biofuels, 12-13 September, 2016, Dept. of microbiology & bioinformatics, Bilaspur University,
4. **Raghwendra S. Thakur**, Mayank Gupta, Saikat Sen, CO2 capture Using Ionic Liquid Impregnated Zeolite Adsorbent in a 4-bed PSA Process, **CHEMCON 2015** IIT, Guwahati, **India**.
5. **R.S.Thakur**, Mayank Gupta, Priyanuj Bhuyan, Mayank Gupta. Separation of CH4- N2 Mixture Using Pressure Swing Adsorption Process, **CHEMCON 2014**, 27-30 Dec, Punjab University, Chandigarh, **India**.
6. **R.S.Thakur**, R.K.Gupta, D.P. Rao, N. Kaistha. Annular Moving Bed Adsorber for Upgrading Natural Gas, 13 AIChE Annual Meeting, 3-8 Nov, **2013**, **San Fransico**, **USA**
7. Vikash Dhanuka, **R.S. Thakur,** A. Chakravarty. Pressure Swing Adsorption: A Promising Technology for CO2/H2 Gas Mixture Separation, **CHEMCON 2013**, 27-30 December, ICT Mumbai **India.**
8. **R.S. Thakur,** A. Chakravarty. Separation of CO2/H2 Gas mixture using Pressure Swing  
   Adsorption, 8-9 March, **2013 NIT Raipur**, **India.**
9. **R.S.Thakur,** Nitin Kaistha, and D.P.Rao. Hybrid duplex and molecular gate PSA. **AIChE** annual meeting, 16-21 October, **2011**, **Minneapolis, USA.**
10. S. Gadde, A. Issac**, R.S.Thakur**, N. Kaistha and D.P. Rao. Process Intensification in PSA Processes. Fundamentals of adsorption10(**FOA10),** 23-28 May, **2010** Awaji, **Hyogo, Japan.**
11. **R.S.Thakur**, Nitin Kaistha, Nishith Verma and D.P. Rao. Process Intensification in Duplex Pressure Swing Adsorption. 20th European Symposium on Computer Aided Process Engineering – **ESCAPE20,** 6-9 June, **2010**, **Ischia, Italy.**
12. A.Issac, **R.S.Thakur**, N.Verma, N.Kaistha, D.P.Rao. Process Intensification in 4-bed PSA, GPE-EPIC ,14-17 June, **2009**, **Venice, Italy.**
13. **R.S. Thakur,** A. Issac, N. Kaistha, N. Verma, D.P. Rao. Pressure Swing Adsorption for CO2 Capture from Flue Gas. **Chemcon**, 27-30 Dec, **2008,** Chandigarh, **India.**

**Invited Lectures / Session Chair**

* **Session Co-Chair** at international conference **CCEEMSGPI-2021,** Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh, India.
* **Session Chair** for **CHEMCON-2018**, at NIT Jalandhar, **India**.
* **Delivered lecture** on CO2 Capture: Adsorption Process, Workshop on Advances in non-conventional energy sources, **2015** Rungta College of Engineering, Chhattisgarh, **India.**
* **Delivered lecture** Modeling and Simulation of Pressure Swing Adsorption Process. Chemical Process Modeling & Simulation (CPMS-14) **2014**, NIT Raipur, **India.**

**Administrative Post/Responsibility in the University**

* Former, Academic Council member, Executive Council Member, Court Member.
* **Coordinator** B.Tech. admission committee for the sessions **2015-16, 2016-17**.
* **Convener** Anti Ragging cum Discipline committee, School of Studies of Engineering & Technology, GGV **2017-18.**
* **Coordinator** Techfest School of Studies of Engineering & Technology, GGV 2017-18.
* **Warden**, Swami Vivekanand Boys Hostel, GGV, Since **March 2018 to November 2022**
* (**I/c) Head Department of Law**, GGV, **May 2018 to Nov. 2019**.**Member** Academic Council, GGV, Since Oct, 2021.
* **Coordinator,** Institution of Engineers India Activity Committee, School of Studies of Engg. & Tech. GGV., **Since Nov, 2021.**
* **Co-Coordinator**, ISO Certification committee **2021-23**.
* **Coordinator,** Liquid Waste Management Committee **2021-22**.
* **(I/c) Head** Chemical Engineering, Since **Aug, 2022.**
* **Assistant Director UGC-HRDC, GGV,** Since **Nov. 2022**