

LIST OF PUBLICATIONS: DR. SHABIH UL HASAN

Publication in Peer Reviewed International Journals:

1. Singh D., Dutta A., Gaur A., **Hasan, S.U.**, (2021). Effect of Pseudo-Homogeneous Concentration Based Kinetics on Hybrid Reactive Distillation Columns for Selectivity Engineering, *Computer-Aided Chemical Engineering*, 50, 313-318.
2. Gehlaut, A.K., Gaur, A., **Hasan, S.U.**, 2021, Evaluation of effects of piperazine on Barium carbonate via upgrading biogas with absorption of CO₂ using alkaline solution, *Research Journal of Chemistry and Environment*, 25 (5), 108-113.
3. Singh, P., Singh, R.K., Gokul, P.V., **Hasan, S.U.**, Sawarkar, A.N., (2020). "Thermal degradation and pyrolysis kinetics of two Indian rice husk varieties using thermogravimetric analysis", *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 1-12. [<https://doi.org/10.1080/15567036.2020.1736215>]
4. Singh D., Dutta A., Gaur A., **Hasan, S.U.**, (2019). Effect of Nonideal Kinetics on Hybrid Reactive Distillation Models for Selectivity Engineering, *Computer-Aided Chemical Engineering*, 46, 409-414.
5. Gehlaut, A.K., Gaur, A., **Hasan, S.U.**, Wonpark, J. (2018). "A Study of Upgrading Real Biogas via CO₂ Precipitation Route Under Indian Scenario", *Korean Chemical Engineering Research*, 56(3), 381-387.
6. Singh, D., Dutta, A., Gaur, A., **Hasan, S.U.**, (2018). "Selectivity Engineering with Hybrid Reactive Distillation Columns: Mixtures Containing Inerts and Multi-Azeotropes", *Chemical Engineering Transactions*, 69, 619-624.
7. **Hasan, S.U.**, Mahajani, S., & Malik, R.K., (2015). "Selectivity Engineering with Single Feed Multi-Side Draw Hybrid Reactive Distillation Columns", *Chemical Engineering Journal*, 278, 479-491.
8. **Hasan, S.U.**, Malik, R.K., & Mahajani, S., (2014). "Selectivity Engineering with Simple and Complex Hybrid Reactive Distillation Columns", *Industrial and Engineering Chemistry Research*, 53, 18526-18538.
9. **Hasan, S.U.**, Mahajani, S., & Malik, R.K., (2013). "A conceptual design algorithm for single-feed hybrid reactive distillation column involving azeotropic systems", *Computer Aided Chemical Engineering*. 32, 313-318.
10. **Hasan, S.U.**, Malik, R.K., & Mahajani, S., (2013). "Selectivity engineering with single-feed hybrid reactive distillation columns", *Chemical Engineering Science*, 99, 324-334.

Book Chapters published/accepted in edited books:

1. Dutta, A., Singh, D., **Hasan, S.U.**, Alam, M.S., "PEMs for Direct Methanol Fuel Cells-Geological Structure Viewpoint for structural System" Industrial Application of Nanoscience and Nanotechnology, Vol-1, Pages 147-162, December 2020. (ISBN:978-93-89947-256-7).
2. Gehlaut, A.K., **Hasan, S.U.**, Sushil, K., Gaur, A., "An Overview of Application of Advanced Nano Material for Carbon Dioxide Capture and Storage" Industrial Application of Nanoscience and Nanotechnology, Vol-1, Pages 19-30, December 2020. (ISBN:978-93-89947-256-7).
3. Khatoon, B., Chaudhary, V.K., Khan, W., **Hasan, S.U.**, Alam, M.S., "Kinetic Study of CO₂ Capture using Amines in Conventional and Microfluidic Devices" Industrial Application of Nanoscience and Nanotechnology, Vol-1, Pages 83-97, December 2020. (ISBN:978-93-89947-256-7).

Publications/Presentations in Peer International/National Conferences:

1. Singh, D., Mukherjee, R., Singh, H., Gaur, A., & **Hasan, S. U.**, "Effect of Pseudo-Homogeneous Concentration Based Kinetics on Hybrid Reactive Distillation Columns for Selectivity Engineering" *ESCAPE-31' 2021*, Istanbul, Turkey.
2. Singh, D., Dutta, A., Gaur, A., & **Hasan, S.U.**, "Effect of Nonideal Kinetics on Hybrid Reactive Distillation Models for Selectivity Engineering". *ESCAPE-29' 2019*, Eindhoven, The Netherlands.
3. Singh, D., Gaur, A., & **Hasan, S.U.**, "Selectivity Engineering for Hybrid Reactive Distillation Models having Nonideal reaction Kinetics with Inerts". *NOIEAS-2019*, NIT Warangal, India.
4. Gehlaut, A.K., Kumar, H., Gaur, A., **Hasan, S.U.**, "An overview of Application of advanced Nano material for Carbon Dioxide Capture and storage" National conference on "Industrial Applications of Nanoscience & Nanotechnology" *IANN-2019* Organized by Motilal Nehru National Institute of Technology (MNNIT), Allahabad, Uttar Pradesh, India November 15-16, 2019.
5. Singh, D., Dutta, A., Gaur, A., & **Hasan, S.U.**, "Selectivity Engineering with Hybrid Reactive Distillation Column: Mixtures Containing Inerts and Multi-Azeotropes". *Distillation and absorption'2018*, Florence, Italy.
6. Gehlaut, A.K., Gaur, A. and **Hasan, S.U.**, Park, J.W., Makin, S., Kim, B.H., "Methane Enhancement of biogas using carbonation method" 4th 3R International Scientific Conference on Material Cycles and Waste Management (*3RINCS*) 2017, held at New Delhi, India.
7. Singh, P., Sawarkar, A.N. and **Hasan, S.** " Study the effect of different turbulence and drag models on hydrodynamics of fast pyrolysis of rice husk in fluidized bed reactor ". 3rd Indian Conference on Applied Mechanics(*INCAM-2017*) at MNNIT Allahabad, Uttar Pradesh during 5-7 July 2017.
8. Gokul, P.V., Singh, P., **Hasan, S.**, Sawarkar, A. N. "Bio-oil and bio-char potential of arecanut husk". International Conference on Emerging Materials & Applications" (*ICEMA-2017*) at Allahabad University, Allahabad, Uttar Pradesh during February 20-22, 2017.
9. Gokul, P.V., Singh, P., **Hasan, S.**, Sawarkar, A. N. "Prospective pyrolysis product distribution of two rice husk varieties." 4th 3R International Scientific Conference on Material Cycles and Waste Management (*3RINCS*) held at Habitat Centre, New Delhi during March 8-10, 2017.
10. Singh, P., Sawarkar, A.N. and **Hasan, S.** "CFD on fast pyrolysis of biomass in fluidized bed reactor: focusing on yield of bio-oil". 70th Annual Session of the Indian Institute of Chemical Engineers (*CHECOM-2017*) at Haldia Institute of Technology, from December 27 to 30th 2017 at Haldia, West Bengal.
11. Gehlaut, A.K., Gaur, A. and **Hasan, S.U.**, Park, J.W., "Enhancement and study of biogas production from Cow dung" In: The 9th Asia-Pacific Landfill Symposium on Integrated Waste Management and Sustainable Landfilling, *APLAS2016*, November 9-11, 2016, The University of Hong Kong, Hong Kong.
12. Rizwan, M., and **Hasan, S.U.**, "Modelling and Simulation of Process in a Reactive Dividing Wall Column for Transesterification of Dimethyl Carbonate with Ethanol" 69th Annual Session of Indian Institute of Chemical Engineers held at Chennai Regional Centre of IChE, Chennai, Tamilnadu during 27-30 December, 2016.
13. Gehlaut, A.K., Singh, D., Gaur, A. and **Hasan, S.U.**, " Enhancement of biogas production from cow dung using Tectona Grandis (Sagwan leaves) and Pistia Stratiotes (Jalkumbhi)" 69th Annual Session of Indian Institute of Chemical Engineers held at Chennai Regional Centre of IChE, Chennai, Tamilnadu during 27-30 December, 2016.
14. **Hasan, S.U.**, Rizwan, M., Sawarkar, A.N., Gaur, A. and Kamsonlian, S., "Conceptual Design of Reactive Divided Wall Columns for Selectivity Engineering" In: *AICHe Annual Meeting 2016*, November 13-18, 2016 San Francisco, CA, USA.
15. Kamsonlian, S., Gautam, S.B., Alam, M.S. and **Hasan, S.U.**, "Adsorption of As (III) from Contaminated Water Using Iron Impregnated Coconut Husk" In: *AICHe Annual Meeting 2016*, November 13-18, 2016 San Francisco, CA, USA.

16. Sawarkar, A.N. and **Hasan, S.U.**, "Insight into the Mechanism of Coke Formation during Cracking of Heavy Residues in a Novel Laboratory Scale Assembly" In: *AICHE Annual Meeting 2016*, November 13-18, 2016 San Francisco, CA, USA.
17. **Hasan, S.U.**, Mahajani, S., & Malik, R.K., "Selectivity Engineering with Hybrid Reactive Distillation Column with Side Draw", In: *Distillation and absorption 2014*, September 14-17, 2014 - Friedrichshafen, Germany.
18. **Hasan, S.U.**, Mahajani, S., Malik, R.K., "Selectivity Engineering with Multi-Side draw Hybrid Reactive Distillation Columns" In: 23rd International Symposium on Chemical Reaction Engineering (*ISCRE- 23*) and 7th Asia Pacific Chemical Reaction Engineering Symposium (*APCRE-7*), **2014**, September 7-10, Centara Grand & Bangkok Convention Centre at Central World, Bangkok, Thailand.
19. **Hasan, S.U.**, Mahajani, S., Malik, R.K., "Selectivity Engineering with Multi-Side draw Hybrid Reactive Distillation Column involving azeotropic systems" In: XXI International Conference on Chemical Reactors - *CHEMREACTOR-21*, September 22-25, **2014**, Delft, The Netherlands.
20. **Hasan, S.U.**, " Selectivity Engineering with Single Feed Multi-Side Draw Hybrid Reactive Distillation Columns for Multireactant Multireaction Schemes" In: 9th International Symposium on Catalysis in Multiphase Reactors (*CAMURE-9*) and the 8th International Symposium on Multifunctional Reactors (*ISMR-8*); December 7-10, **2014** - Valpre, Lyon-France.
21. **Hasan, S.U.**, "Conceptual Design of Multi-Side Draw Hybrid Reactive Distillation Columns for Multi-Reactant Multireaction Schemes Involving Multiple Azeotropes" In: Proceedings of the *AICHE Annual Meeting 2014*, November 16-21, **2014** Atlanta Marriott Marquis, Atlanta Georgia USA.
22. **Hasan, S.U.**, Mahajani, S., & Malik, R.K., "A Conceptual Design Algorithm for Single-Feed Hybrid Reactive Distillation Column Involving Azeotropic Systems", In: 23rd European Symposium on Computer Aided Process Engineering – *ESCAPE 23*, 9th -12th June, 2013, Lappeenranta, Finland.
23. **Hasan, S.U.**, Mahajani, S., & Malik, R.K., "A Graphical Design Methodology for Hybrid Multiproduct Reactive Distillation Column involving Complex Reaction Scheme", *Research Scholars Symposium-2012*, Department of Chemical Engineering, IIT Bombay.
24. **Hasan, S.U.**, Mahajani, S., & Malik, R.K., " Conceptual Design of Single-Feed Hybrid Multi-Product Reactive Distillation Column for Selectivity Engineering " In: Proceedings of the *AICHE Annual Meeting 2012*, Pittsburgh, PA, USA, Oct 28 – Nov 02, 2012 David L. Lawrence Convention Center.
25. **Hasan, S.U.** and Ahmad, S.A. "Modeling of Start-up of Ethyl Acetate Reactive Distillation Column", Presented in 19th International Congress of Chemical and Process Engineering *CHISA 2010* & 7th European Congress of Chemical Engineering - *ECCE-7*, Prague (Czech Republic), 28 August - 1 September, **2010**. (art.nr.1913).
26. **Hasan, S.U.**, Ahmad, S.A., Hamid Ali, "Dynamic Modeling & Simulation for Catalytic Reaction in Non-Isothermal Spherical Particle", Proceedings of *23rd National Convention of Chemical Engineers & Seminar*, IIT Roorkee, 5-7 Oct, **2007**.
27. **Hasan, S.U.**, Ahmad, S.A., "Prediction of Start-Up Behavior of Ethyl Acetate Reactive Distillation Column via Dynamic Simulation", *Proceedings of the National Conference on Frontiers in Chemical Engineering, NCFCE-2007*, IIT Guwahati, 12-14 Dec, **2007**.