LIST OF PUBLICATIONS: DR. SHABIH UL HASAN

Publication in Peer Reviewed International Journals:

1. Singh D., Dutta A., Gaur A., Hasan, S.U., (**2025**). Selectivity engineering with single-feed hybrid reactive distillation configurations: Complex reaction schemes having nonideal kinetics with/without inerts, *Comput. Chem. Eng*. 197, 109046. https://doi.org/10.1016/j.compchemeng.2025.109046

2. Khatoon, B., **Hasan, S.U.,** Alam, M. S., (**2023**). CO2 capturing in cross T-junction microchannel using numerical and experimental approach, *Chemical Papers*, https://doi.org/10.1007/s11696-023-02941-x.

3. Yadav, S., Khatoon, B., **Hasan, S.U.,** Alam, M. S., (**2023**). "Hydrodynamics of Shear Thinning Fluid in a Square Microchannel: A Numerical Approach", *Chem. Prod. Process Model.*, 2194-6159. https://doi.org/10.1515/cppm-2022-0076.

4. Khatoon, B., Khan, W., **Hasan, S.U.,** Alam, M. S., (**2023**). A review of frictional pressure drop characteristics of single phase microchannels having different shapes of cross sections, *Chem. Prod. Process Model.*, 1-39. https://doi.org/10.1515/cppm-2022-0084.

5. Khatoon, B., **Hasan, S.U.,** Alam, M. S., (**2022**). Study of Mass Transfer Coefficient of CO2 Capture in different Solvents using Microchannel: A Comparative Study, *Computer-Aided Chemical Engineering*, 49, 691-696. https://doi.org/10.1016/B978-0-323-85159-6.50115-9.

6. Singh D., Gaur A., **Hasan, S.U.,** (**2021**). Selectivity engineering with Single Feed Hybrid Reactive Distillation Configurations: Complex reaction schemes with inerts and inert forming azeotropes, *Chemical Engineering Research and Design*, 176, 296-309. https://doi.org/10.1016/j.cherd.2021.09.028.

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9. 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

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10. 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. https://doi.org/10.1016/B978-0-12-818634-3.50069-2.

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Book Chapters published/accepted in edited books:

1. Alam, M.S., Kamil, S., Khatoon, B., **Hasan, S.U.,** Datta, A., "Introduction to Novel Reactors" An Indian Adaptation of Chemical Reaction Engineering by Octave Levenspiel, 3rd Edition, Chapter-30, Pages 803-821, 2022.
2. Kathoon, B., Choudhary, 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, Volume-1, Chapter -8, Pages 83-97, December 2020. (ISBN:978-93-89947-256-7).

3. Datta, A., Singh, D., Alam, M. S., **Hasan, S. U.,** "PEMs for Direct Methanol Fuel Cells-Geological Structure Viewpoint for structural System" Industrial Application of Nanoscience and Nanotechnology, Volume-1, Chapter -13, Pages 147-162, December 2020. (ISBN:978-93-89947-256-7).
4. 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).

Publications/Presentations in Peer International/National Conferences:

1. Khatoon, B., Choudhary, V. K., **Hasan, S.U.,** Alam, M. S., "Study of CO2 Absorption in Superhydrophobic T-junction Microchannel, Proceedings of the International Conference on Chemical Engineering: Enabling Transition Towards Sustainable Future (Chemtsf22), IIT Roorkee, India, September, 8-10, 2022.
2. Khatoon, B., Choudhary, V. K., **Hasan, S.U.,** Alam, M. S., "Numerical Study of Non-Newtonian Fluid Flow Behavior in T- Type Microchannel" Proceedings of the International Conference on Technological Interventions for Sustainability (Chem Conflux22), MNNIT Allahabad, India, April, 15-16, 2022.
3. Khatoon, B., **Hasan, S.U.,** Alam, M. S., "Study of Mass Transfer Coefficient of CO2 Capture in different Solvents using Microchannel: A Comparative Study" *ESCAPE-32' 2022*, Toulouse, France.
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10. 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.
11. 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.
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17. 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

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