

List of Publications

33 peer-reviewed journal articles | H-index: 17 | Citations: 1,100+ (Google Scholar, July 2026)

Journal Articles

2026

Khalid, H. M., Mujahid, A., Khan, A. L., Khan, R. U., Aslam, R., & Santos, R. M. (2026). Dual-interfacial design of mixed matrix membranes using NH₂-UiO-66 MOF and choline chloride/urea DES for enhanced gas separation. *Journal of Molecular Liquids*. <https://doi.org/10.1016/j.molliq.2026.129233>

2025

Ghoury, A. S., Aslam, R., Siddiqui, S., & Sami, S. K. (2025). Wash fastness properties of conductive polymer-coated textiles for wearable electronics: A critical review. *Journal of Coatings Technology and Research*, 22(4), 1281–1299. <https://doi.org/10.1007/s11998-024-01068-2>

2024

Azeem, S., Safdar, M., Aslam, R., Wang, B., Ziani, I., Ansar, S., & Sher, F. (2024). Surface engineered sustainable nanocatalyst with improved coke resistance for dry methane reforming to produce hydrogen. *Process Safety and Environmental Protection*, 187, 962–973. <https://doi.org/10.1016/j.psep.2024.05.033>

Ghoury, A. S., Aslam, R., Hussain, S. N., & Siddiqui, S. (2024). Development of sustainable cotton-based textile electrode using DMSO-doped PEDOT:PSS for wearable applications. *MRS Energy & Sustainability*, 11(2), 565–579. <https://doi.org/10.1557/s43581-024-00102-5>

Khawaja, S., Usman, M. R., & Aslam, R. (2024). Conceptualization and process simulation of a CO₂-based methanol production plant. *Chemical Industry & Chemical Engineering Quarterly*, 30(4), 309–323. <https://doi.org/10.2298/CICEQ230817003K>

Aslam, R., Salman, M., Majid, A. U. R., & Munir, D. (2024). Hydrothermal-liquefaction of kitchen waste in the presence of HZSM-5 and silica-based meso/micro-porous composite catalyst and hydrogen gas. *Iranian Journal of Chemistry and Chemical Engineering*, 43(1), 193–203. <https://doi.org/10.30492/ijcce.2023.561149.5560>

2023

Anwar, M. M., & Aslam, R. (2023). Catalytic pyrolysis of rice husk to selectively produce furfural over zeolite beta with post aluminum impregnation. *Environmental Progress & Sustainable Energy*, 42(6), e14211. <https://doi.org/10.1002/ep.14211>

Iqbal, F., Shafeeq, A., Aslam, R., & Rauf, A. (2023). Comparative analysis of catalytic cracking and hydrocracking of waste plastic. *Chemical Engineering & Technology*, 46(4), 723–730. <https://doi.org/10.1002/ceat.202200439>

2022

Azeem, S., Aslam, R., & Saleem, M. (2022). Dry reforming of methane with mesoporous Ni/ZrO₂ catalyst. *International Journal of Chemical Engineering*, 2022, 3139696. <https://doi.org/10.1155/2022/3139696>

Javed, F., Rizwan, M., Asif, M., Ali, S., Aslam, R., Akram, M. S., Zimmerman, W. B., & Rehman, F. (2022). Intensification of biodiesel processing from waste cooking oil, exploiting cooperative microbubble and bifunctional metallic heterogeneous catalysis. *Bioengineering*, 9(10), 533. <https://doi.org/10.3390/bioengineering9100533>

2021

Javed, F., Shamair, Z., Hafeez, A., Fazal, T., Aslam, R., Akram, S., Rashid, N., Zimmerman, W. B., & Rehman, F. (2021). Conversion of poultry-fat waste to a sustainable feedstock for biodiesel production via microbubble injection of reagent vapor. *Journal of Cleaner Production*, 311, 127525. <https://doi.org/10.1016/j.jclepro.2021.127525>

Aslam, R. (2021). Experimental measurement and correlations of high pressure density data for potential liquid organic hydrogen carriers. *International Journal of Thermophysics*, 42(6), 92. <https://doi.org/10.1007/s10765-021-02844-7>

2020

Hamayun, M. H., Maafa, I. M., Hussain, M., & Aslam, R. (2020). Simulation study to investigate the effects of operational conditions on methylcyclohexane dehydrogenation for hydrogen production. *Energies*, 13(1), 206. <https://doi.org/10.3390/en13010206>

Usman, M. R., Shahid, Z., Akram, M. S., & Aslam, R. (2020). Densities and thermal expansion coefficients of pure methylcyclohexane, 1-methylcyclohexene, 4-methylcyclohexene, 1-methyl-1,4-cyclohexadiene, and toluene and binary mixtures of methylcyclohexane and toluene at 283.15 K to 358.15 K and 1 atm. *International Journal of Thermophysics*, 41(4), 44. <https://doi.org/10.1007/s10765-020-2622-1>

Ghouri, A. S., Aslam, R., Siddiqui, M. S., & Sami, S. K. (2020). Recent progress in textile-based flexible supercapacitor. *Frontiers in Materials*, 7, 58. <https://doi.org/10.3389/fmats.2020.00058>

Munir, D., Amer, H., Aslam, R., Bououdina, M., & Usman, M. R. (2020). Composite zeolite beta catalysts for catalytic hydrocracking of plastic waste to liquid fuels. *Materials for Renewable and Sustainable Energy*, 9(2), 9. <https://doi.org/10.1007/s40243-020-00169-3>

Akram, M. S., Aslam, R., Alhumaidan, F. S., & Usman, M. R. (2020). An exclusive kinetic model for the methylcyclohexane dehydrogenation over alumina-supported Pt catalysts. *International Journal of Chemical Kinetics*, 52(7), 415–449. <https://doi.org/10.1002/kin.21360>

Müller, K., Aslam, R., Fikrt, A., Krieger, C., & Arlt, W. (2020). Water removal from LOHC systems. *Hydrogen*, 1(1), 1–10. <https://doi.org/10.3390/hydrogen1010001>

2019

Hamayun, M. H., Hussain, M., Maafa, I. M., & Aslam, R. (2019). Integration of hydrogenation and dehydrogenation system for hydrogen storage and electricity generation – simulation study. *International Journal of Hydrogen Energy*, 44, 20213–20222. <https://doi.org/10.1016/j.ijhydene.2019.06.053>

Ahmad, N., Javed, F., Awan, J. A., Ali, S., Fazal, T., Hafeez, A., Aslam, R., Rashid, N., Rehman, M. S. U., & Zimmerman, W. B. (2019). Biodiesel production intensification through microbubble mediated esterification. *Fuel*, 253, 25–31. <https://doi.org/10.1016/j.fuel.2019.04.173>

2018

Aslam, R., Khan, M. H., Ishaq, M., & Müller, K. (2018). Thermophysical studies of dibenzyltoluene and its partially and fully hydrogenated derivatives. *Journal of Chemical & Engineering Data*, 63(12), 4580–4587. <https://doi.org/10.1021/acs.jced.8b00652>

2016

Aslam, R., Usman, M. R., & Irfan, M. F. (2016). A comparative study of LHHW and ER kinetic models for NO oxidation over Co₃O₄ catalyst. *Journal of Environmental Chemical Engineering*, 4(3), 2871–2877. <https://doi.org/10.1016/j.jece.2016.05.035>

Müller, K., Aslam, R., Fischer, A., Stark, K., Wasserscheid, P., & Arlt, W. (2016). Experimental assessment of the degree of hydrogen loading for the dibenzyl toluene based LOHC system. *International Journal of Hydrogen Energy*, 41(47), 22097–22103. <https://doi.org/10.1016/j.ijhydene.2016.09.196>

Aslam, R., Minceva, M., Müller, K., & Arlt, W. (2016). Development of a liquid chromatographic method for the separation of a liquid organic hydrogen carrier mixture. *Separation and Purification Technology*, 163, 140–144. <https://doi.org/10.1016/j.seppur.2016.01.051>

Do, G., Preuster, P., Aslam, R., Bösmann, A., Müller, K., Arlt, W., & Wasserscheid, P. (2016). Hydrogenation of the liquid organic hydrogen carrier compound dibenzyltoluene – reaction pathway determination by ¹H NMR spectroscopy. *Reaction Chemistry & Engineering*, 1(3), 313–320. <https://doi.org/10.1039/C5RE00080G>

Aslam, R., Müller, K., Müller, M., Koch, M., Wasserscheid, P., & Arlt, W. (2016). Measurement of hydrogen solubility in potential liquid organic hydrogen carriers. *Journal of Chemical & Engineering Data*, 61(1), 643–649. <https://doi.org/10.1021/acs.jced.5b00789>

2015

Usman, M. R., Alotaibi, F. M., & Aslam, R. (2015). Dehydrogenation-hydrogenation of methylcyclohexane-toluene system on 1.0 wt% Pt/zeolite beta catalyst. *Progress in Reaction Kinetics and Mechanism*, 40(4), 353–366. <https://doi.org/10.3184/146867815X14413752286029>

Cheel, J., Minceva, M., Urajová, P., Aslam, R., Hrouzek, P., & Kopecký, J. (2015). Separation of aeruginosin-865 from cultivated soil cyanobacterium (*Nostoc* sp.) by centrifugal partition chromatography combined with gel permeation chromatography. *Natural Product Communications*, 10(10), 1719–1722. <https://doi.org/10.1177/1934578X1501001022>

Aslam, R., Müller, K., & Arlt, W. (2015). Experimental study of solubility of water in liquid organic hydrogen carriers. *Journal of Chemical & Engineering Data*, 60(7), 1997–2002. <https://doi.org/10.1021/je501092m>

2014

Usman, M. R., & Aslam, R. (2014). Dehydrogenation of methylcyclohexane for on-board hydrogen use: Initial rate kinetics over 1.0 wt% Pt/ γ -Al₂O₃. *Arabian Journal for Science and Engineering*, 39(2), 615–620. <https://doi.org/10.1007/s13369-013-0694-y>

2013

Shafeeq, A., Aslam, R., Shahid, S. A., Muhammad, A., Ijaz, A., Ali, A. M., Ullah, I., Mushtaq, M., & Rashid, U. (2013). Poly(vinyl alcohol): An economical substitute to calcium lignosulphonate for PVC/PET separation by froth flotation. *Asian Journal of Chemistry*, 25(13), 7509–7512. <https://doi.org/10.14233/ajchem.2013.14956>

2011

Usman, M. R., Aslam, R., & Alotaibi, F. (2011). Hydrogen storage in a recyclable organic hydride: Kinetic modeling of methylcyclohexane dehydrogenation over 1.0 wt% Pt/ θ -Al₂O₃. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 33(24), 2264–2271. <https://doi.org/10.1080/15567036.2011.585388>

Book Published

Usman, M.R.; ; Saleem, M. 2015. Chemical Engineering Terminology. Rev. Ed. Lulu Publishing (543 pages).

Conference Presentations

1. Awais Sattar Ghouri, Rabya Aslam, S.Nadir Hussain, Saqib Siddique, Conductive Polymeric coated textile fabric based supercapacitor for wearable applications, MTME-2024(presented by my student).
2. Awais Sattar Ghouri, Rabya Aslam, S.Nadir Hussain, Saqib Siddique, Development of Novel Wearable supercapacitors, 1st Sustainable Indigenous Production & Upcycling of Polymers/Allied Materials (SIP-UP): Future Challenges, 2023.
3. Mansab Rafique, Rafi Ullah Khan, Rabya Aslam; Simulation and optimization study in Aspen HYSYS® V12 for CO₂ and H₂S removal from natural gas using aqueous MDEA and Sulfinol-M with Piperazine as an activator, International Conference on Chemical Engineering (ICCE,2022), Lahore, Pakistan(presented by my student).
4. Sameera Ghafoor, Rabya Aslam; Synthesis Of N-Modified TiO₂ Nano-powders for Efficient Photocatalysis of Rhodamine B Dye under Natural Sun Irradiation, 2021, Engineering Congress (Online) on Energy and Environment, Pakistan (presented by my student).
5. H. Khan, M. Ishaq, Rabya Aslam; Stable zeolite based catalyst for transesterification of waste cooking oil, PIEAS, 2018, Islamabad, Pakistan (presented by my student).
6. Rabya Aslam; Evaluation of Zeolites for Biodiesel Production from Waste Cooking Oil, ChemTech 2017, Dakam, Turkey (accepted for oral presentation)
7. Rabya Aslam; Hydrogen Loading Assessment in Potential Liquid Organic Hydrogen Carriers (LOHCs): A promising solution for energy storage and transportation, 6th symposium on Engineering Science, Lahore Pakistan, 2016.
8. Rabya Aslam; Hydrogen Loading Assessment in Potential Liquid Organic Hydrogen Carriers (LOHCs): A promising solution for energy storage and transportation, 6th symposium on Engineering Science, Lahore Pakistan, 2016.
9. Dureem Munir, Mahmood Saleem, Rabya Aslam, M. Rashid Usman; Investigating Hydrocracking of Actual Waste Plastics Mixture using Composite Mesoporous Zeolite Catalysts, 6th symposium on Engineering Science, Lahore Pakistan, 2016.
10. Rabya Aslam; Separation of isomeric mixture of dibenzyltoluene, a potential LOHC, 6th Canadian Chemical Engineering Conference, Accepted for oral presentation, 2016.
11. Rabya Aslam, Karsten Müller, Wolfgang Arlt; Separation of complex mixture of a potential LOHC, AIChE, Salt Lake City, USA, Oral presentation, 2015.
12. Rabya Aslam, Karsten Müller Wolfgang Arlt; Separation of isomers of a LOHC, ECCE 10, Nice, France, Oral presentation, 2015.

13. Rabya Aslam, Wolfgang Arlt; Separation of complex partially hydrogenated mixture of potential liquid organic hydrogen carrier using HPLC, ProcessNet Annual meeting, Bamberg, Germany, Oral presentation, 2015.
14. Rabya Aslam, Karsten Müller, Wolfgang Arlt; Separation of partially hydrogenated LOHC mixtures, ProcessNet Jahrestreffen der Fachgruppen Fluidverfahrenstechnik und Membrantechnik, Bremen, Germany, Poster Presentation, 2015.
15. Rabya Aslam, Wolfgang Arlt; Solubility of water and hydrogen gas in potential LOHCs, Bavarian hydrogen centre symposium, Germany, Poster presentation, 2015.
16. Rabya Aslam, Wolfgang Arlt; Separation of complex LOHC via high pressure liquid chromatography, Bavarian hydrogen centre symposium, Germany, Poster presentation, 2014.
17. Rabya Aslam, M.R. Usman, M.F. Irfan; Kinetic modelling of NO oxidation over cobalt catalyst, ICES-2012, Pakistan, Oral presentation, 2012.

Google Scholar profile: <https://scholar.google.com/citations?user=oDwTTI0AAAAJ> | *Email:* rabya.icet@pu.edu.pk