

BRIEF CURRICULUM VITAE

Ammar Ali Abd (A.A Abd), Mobile (Whatsapp): +6017-2071989

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PROFILE:

- Highly self-motivated Ph.D candidate with demonstrated research expertise growing, methane enrichment and CO₂ separation.
- Rich experience in modeling and computer simulation, using Aspen Adsorption and Aspen Hysys.
- Rich experimence in Design of Expert.

Education:

Universiti Sains Malaysia, Malaysia

PhD. Candidate at School of Chemical Engineering.

Curtin University of Technology, Australia

MSc. Chemical Engineering Department. Graduated with excelent performance (2013-2015).

Babylon University, Iraq

BSc. Electrochemical Engineering Department, Jul. 2010. Graduated with honors (2006-2010).

Research Interest:

- Methane enrichment, purification and utilization.
- Adsorption processes i.e Pressure swing adsorption.
- Biogas Upgrading.
- Nano-material synthesis, characterization & process simulation
- Energy, renewable fuels, carbon neutrality & sustainability
- Petroleum-gas production, recovery & processing

Work Experience:

Year	Position	Location
2016-present	Lecturer/Researcher	Al-qasim Green University
2010-2012	Technical Engineer	Babylon University

A. PUBLICATION

Publication summary

Books, chapter & monographs	Book Chapter in revision
Citation indexed journals	21 + 4 papers under review
Reviewer International journals	93
Conference proceedings	2

Citation indexed journal

- [1] A.A. Abd, M.R. Othman, Z. Helwani, H.J.K. Shabbani, Role of heat dissipation on carbon dioxide capture performance in biomethane upgrading system using pressure swing adsorption, Sep. Purif. Technol. 280 (2022) 119959. <https://doi.org/10.1016/J.SEPPUR.2021.119959>.
- [2] A.A. Abd, M.R. Othman, Z. Helwani, Unveiling the critical role of biogas compositions on carbon dioxide separation in biogas upgrading using pressure swing adsorption, Biomass Convers. Biorefinery. 1 (2022)

- 1–14. <https://doi.org/10.1007/S13399-021-02106-4/TABLES/5>.
- [3] A.A. Abd, M.R. Othman, H.J.K. Shabbani, Z. Helwani, Biomethane upgrading to transportation fuel quality using spent coffee for carbon dioxide capture in pressure swing adsorption, *J. Environ. Chem. Eng.* 10 (2022) 107169. <https://doi.org/10.1016/J.JECE.2022.107169>.
- [4] A. Ali Abd, M. Roslee Othman, Biogas upgrading to fuel grade methane using pressure swing adsorption: Parametric sensitivity analysis on an industrial scale, *Fuel*. 308 (2022) 121986. <https://doi.org/10.1016/J.FUEL.2021.121986>.
- [5] A. Ali Abd, M. Roslee Othman, Z. Helwani, Evaluation of thermal effects on carbon dioxide breakthrough curve for biogas upgrading using pressure swing adsorption, *Energy Convers. Manag.* 247 (2021) 114752. <https://doi.org/10.1016/J.ENCONMAN.2021.114752>.
- [6] H.J.K. Shabbani, I. Khairunnisa Shamsudin, N.N. Dezaini, A.A. Abd, M.R. Othman, Effect of adsorption–desorption on hydrogen purity and recovery in non-adiabatic pressure swing mediated by microporous palm kernel shell adsorbent, *Fuel*. (2021) 122550. <https://doi.org/10.1016/J.FUEL.2021.122550>.
- [7] A.A. Abd, M.R. Othman, J. Kim, A review on application of activated carbons for carbon dioxide capture: present performance, preparation, and surface modification for further improvement, *Environ. Sci. Pollut. Res.* 2021. (2021) 1–36. <https://doi.org/10.1007/S11356-021-15121-9>.
- [8] A.A. Abd, M.R. Othman, S.Z. Naji, A.S. Hashim, Methane enrichment in biogas mixture using pressure swing adsorption: process fundamental and design parameters, *Mater. Today Sustain.* (2021) 100063. <https://doi.org/10.1016/j.mtsust.2021.100063>.
- [9] A.A. Abd, S.Z. Naji, M.R. Othman, C.T. Tye, Effect of acidic products from degradation of N-methyldiethanolamine amine on CO₂/H₂S capturing from natural gas, *Clean Technol. Environ. Policy.* (2021). <https://doi.org/10.1007/S10098-021-02112-0>.
- [10] S.Z. Naji, C.T. Tye, A.A. Abd, State of the art of vegetable oil transformation into biofuels using catalytic cracking technology: Recent trends and future perspectives, *Process Biochem.* (2021). <https://doi.org/10.1016/J.PROCBIO.2021.06.020>.
- [11] A.A. Abd, S.Z. Naji, C.T. Tye, M.R. Othman, Evaluation the effect of the ambient temperature on the liquid petroleum gas transportation pipeline, *Chem. Prod. Process Model.* (2021). https://doi.org/10.1515/CPPM-2021-0024/DOWNLOADASSET/SUPPL/J_CPPM-2021-0024_SUPPL.DOCX.
- [12] A.A. Abd, S.Z. Naji, T.C. Thian, M.R. Othman, Evaluation of hydrogen concentration effect on the natural gas properties and flow performance, *Int. J. Hydrogen Energy.* (2020). <https://doi.org/10.1016/j.ijhydene.2020.09.141>.
- [13] A.A. Abd, S.Z. Naji, A.S. Hashim, M.R. Othman, Carbon dioxide

- removal through Physical Adsorption using Carbonaceous and non-Carbonaceous Adsorbents: A review, *J. Environ. Chem. Eng.* (2020) 104142. <https://doi.org/10.1016/j.jece.2020.104142>.
- [14] A.A. Abd, S.Z. Naji, A.S. Hashim, Failure analysis of carbon dioxide corrosion through wet natural gas gathering pipelines, *Eng. Fail. Anal.* 105 (2019) 638–646. <https://doi.org/10.1016/j.engfailanal.2019.07.026>.
- [15] A.A. Abd, S.Z. Naji, A.S. Hashim, Effects of non-hydrocarbons impurities on the typical natural gas mixture flows through a pipeline, *J. Nat. Gas Sci. Eng.* 76 (2020) 103218. <https://doi.org/10.1016/j.jngse.2020.103218>.
- [16] H.F.M. Hameed Hussein Alwan, Ammar Ali Abd, Optimization of Oxidative Desulfurization Reaction with Fe₂O₃ Catalyst Supported on Graphene Using Box-Behnken Experimental Method, *Bull. Chem. React. Eng. Catal.* 15 (2020) 175–185. <https://doi.org/10.9767/bcrec.15.1.6670.175-185>.
- [17] A.A. Abd, S.Z. Naji, A. Barifcani, Comprehensive evaluation and sensitivity analysis of regeneration energy for acid gas removal plant using single and activated-methyl diethanolamine solvents, *Chinese J. Chem. Eng.* 28 (2020) 1684–1693. <https://doi.org/10.1016/j.cjche.2019.12.004>.
- [18] A.A. Abd, S.Z. Naji, Comparison study of activators performance for MDEA solution of acid gases capturing from natural gas: Simulation-based on a real plant, *Environ. Technol. Innov.* (2019). <https://doi.org/10.1016/j.eti.2019.100562>.
- [19] S.Z. Naji, A.A. Abd, Sensitivity analysis of using diethanolamine instead of methyldiethanolamine solution for GASCO'S Habshan acid gases removal plant, *Front. Energy.* (2019). <https://doi.org/10.1007/s11708-019-0622-2>.
- [20] A.A. Abd, M.Q. Kareem, S.Z. Naji, Performance analysis of shell and tube heat exchanger: Parametric study, *Case Stud. Therm. Eng.* 12 (2018). <https://doi.org/10.1016/j.csite.2018.07.009>.
- [21] A.A. Abd, S.Z. Naji, Analysis study of shell and tube heat exchanger for clough company with reselect different parameters to improve the design, *Case Stud. Therm. Eng.* 10 (2017). <https://doi.org/10.1016/j.csite.2017.10.002>.

International conference presentation

1. AA Abd, SZ Naji, HH Alwan, MR Othman, CT Tye. Impact of heavy hydrocarbon concentration on natural gas flow through transportation pipelines. *IOP Conference. Series: Materials Science and Engineering.* 1094 (2021) 012068

2. SZ Naji, AA Abd, AS Hashim. Tracking boil off gas generation into liquefied natural gas supply chain using HYSYS simulator. IOP Conference. Series: Materials Science and Engineering. 1094 (2019)

B. TUTORIAL, TEACHING & TRAINING

1. Final year project. 2017-2021. UQGreen.
2. Fluid Mechanics II, 2017-2021. UQGreen.

C. Manuscript Reviewer

1. Energy International.
2. Environmental Chemistry Letters
3. Environmental Progress & Sustainable Energy
4. Environmental Science and Pollution Research
5. Clean Technologies and Environmental Policy
6. Biomass Conversion and Biorefinery
7. Chemical Physics Letters
8. International Journal of Energy Research
9. International Journal of Refrigeration
10. Energy Reports
11. ACS Omega
12. Journal of Thermal Engineering
13. Arabian Journal of Science and Engineering
14. Iranian Journal of Science and Engineering

D. WORK STYLE:

- Willing to perform basic tasks and move on to solve complex problems
- Able to learn new knowledge and adapt to new environments quickly
- Strong independent work style and excellent teamwork skills
- Well-organized and passionate