

Curriculum Vitae

ALI HUMAID MOHAMED HASSAN AL-MARZOUQI

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Education

- Ph.D., "Phase Behavior of Multicomponent Mixtures of Complex Molecules in Supercritical Fluids", Chemical Engineering, Oregon State University, Corvallis, OR, U.S.A., June 1997.
- B.Sc., Chemical Engineering, University of Washington, Seattle, WA, U.S.A., December 1991.

Career History

- Dean, College of Graduate Studies, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2019-present.
- Acting Dean, College of Graduate Studies, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2018-August 2019.
- Vice Dean, College of Graduate Studies, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2017-August 2018.
- Professor, Chemical & Petroleum Engineering Department, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2017-present.
- Visiting Scholar, School of Chemical Engineering, Purdue University, West Lafayette, Indiana, USA, August 2014-June 2015.
- Assistant Dean for Research and Graduate Studies, College of Engineering, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2004-August 2014 and September 2015-August 2017.
- Associate Professor, Chemical & Petroleum Engineering Department, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2007-2017.
- Assistant Professor, Chemical & Petroleum Engineering Department, United Arab Emirates University, Al-Ain, United Arab Emirates, September 2000-August 2007.
- Visiting Scholar, Department of Food Science, Swedish University of Agricultural Sciences and Department of Analytical Chemistry, Uppsala University, Uppsala, Sweden, June-July 2008.
- Visiting Scholar, Chemistry Department, University of British Columbia, Vancouver, Canada, June-August 2007.
- Visiting Scholar, Chemical Engineering Department, University of Birmingham, Birmingham, UK, June-August 2006.
- Visiting Scholar, Department of Pharmaceutical Sciences, University of Florence, Florence, Italy, June-August 2005.
- Visiting Scholar, Tohoku University, Sendai, Japan, June-August 2004.
- Visiting Scholar, US Environmental Protection Agency, Cincinnati, USA, June-August 2002.

- Instructor, Chemical Engineering Department, Oregon State University, Corvallis, OR, U.S.A., September 1997-June 2000.

Research Interests

- Brine Management
- CO₂ Capture
- Conversion of Biomass to High Value Chemicals
- Polymer Composite Materials
- Supercritical Fluid Technology

Patents

1. Galwiango, E., **Al-Marzouqi, A.H.**, Haris, S., "Biodegradable Product from Lignocellulose Biomass Waste, and Method of Making Same", Filed US Patent, Docket number 33090.03.
2. Galwiango, E., **Al-Marzouqi, A.H.**, Abu-Jdayil, B., Caires, Y., Mousa, N., Haris, S., "Biodegradable Devices, and Methods of Making the Same", US Patent 2022/0056262 A1.
3. Galwiango, E., **Al-Marzouqi, A.H.**, Abu-Jdayil, B., Caires, Y., Mousa, N., Haris, S., "Biodegradable Devices, and Methods of Making the Same", Filed UAE Patent, UTPS Reference number UDP 7826
4. Mohammad, A.F., Galwiango, E., Mustafa, J., Lwisa, E., **Al-Marzouqi, A.H.**, "Inexpensive Eco-Friendly Hydroxyethyl Cellulose Derived from Waste Biomass for Desalination, CO₂ Capture and Enhanced Oil Recovery Applications", Filed US Patent, Docket number 32715.76.
5. Mohammad, A.F., **Al-Marzouqi, A.H.**, El-Naas, M.H., "A Method for Ammonia Recovery from Solvay Effluent" Filed US Patent, Reference number EAT 156739.
6. Mohammad, A.F., **Al-Marzouqi, A.H.**, El-Naas, M.H., Suleiman, M.I., Al Musharfy, M., "A method for sulphate recovery from high salinity rejected brine", Filed US Patent, Docket number 96016IDM.
7. Mohammad, A.F., Saleh, A.D., Khoukhi, M., **Al-Marzouqi, A.H.**, "Method for Capturing CO₂ from Effluent Gases Using a Rice-Derived Product", Filed US Patent, Docket number 33090.00.
8. **Al-Marzouqi, A.H.**, Almarzooqi, A., "Smart Baby Bottle to Prevent Tooth Decay in Infants", US Patent 2020/10524987 B1.
9. **Al-Marzouqi, A.H.**, Abdelrahman, N.Sh., Al Ahbabi, A.M., Almusharrakh, A.E., Al Ali, A.S., Al-Ketbi, S.H., "Anti-corrosion Material Produced from Date Palm Tree Waste", US Patent 2020/0002820 A1.
10. **Al-Marzouqi, A.H.**, Ahmed, S.S., Rabbani, S.F., Al Mesmari, H.J., Al Ketbi, S.H., Abdel Rahman, N.Sh., "Method for Obtaining Paper from Sand and Products Obtained Therefrom", US Patent 2019/0315940 A1.
11. **Al-Marzouqi, A.H.**, Al Ahmad, M., Al Jabri, M., Al Dhaheri, S., Al Ameri, G., "Device For Providing Buoyancy", US Patent 2018/9957026 B2.
12. Al-Zuhair, S., **Al-Marzouqi, A.H.**, Hashim, I., Taher, H.E., "Biodiesel Production", US Patent 2014/0075828 A1.

Books & Book Chapters

1. Ahmed, W., Siraj, S., Alnajjar, F., **Al Marzouqi, A.H.**, "3D Printed Implants for Joint Replacement" in: Sharma N.R., Subburaj K., Sandhu K., Sharma V. (eds) Applications of 3D printing in Biomedical Engineering. Springer, Singapore (2021), https://doi.org/10.1007/978-981-33-6888-0_4.
2. Galiwango, E., **Al-Marzouqi, A.H.**, "Investigation of Nonisothermal Combustion Kinetics of Isolated Lignocellulosic Biomass: A Case Study of Cellulose from Date Palm Biomass Waste", IntechOpen (2020), DOI: 10.5772/intechopen.93549.

Journal Publications

1. Al-Mazrouei, N., Siraj, S., **Al-Marzouqi, A.H.**, Ahmed, W., "Producing Particulate Composite Using 3D Printing Plastics Waste", IEEE Xplore, in press (2022).
2. Mohammad, A.F., Saleh, A.F.D., Khoukhi, M., **Al-Marzouqi, A.H.**, "A New Method for Capturing CO₂ from Effluent Gases using a Rice-Based Product", Energies, 15, 2287 (2022). <https://doi.org/10.3390/en15062287>.
3. Al-Mazrouei, N., Ismail, A., Ahmed, W., **Al-Marzouqi, A.H.**, "ABS/Silicon Dioxide Micro Particulate Composite from 3D Printing Polymeric Waste", Polymers, 14, 509 (2022). <https://doi.org/10.3390/polym14030509>.
4. Hassan, M., Sulaiman, M., Yuvaraju, P.D., Galiwango, E., Rehman, I. **Al-Marzouqi, A.H.**, Khaleel, A., Mohsin, S., "Biomimetic PLGA/Strontium-Zinc Nano Hydroxyapatite Composite Scaffolds for Bone Regeneration", Journal of Functional Biomaterials, 13(1),13 (2022). <https://doi.org/10.3390/jfb13010013>.
5. Abu-Jdayil, B., **Al-Marzouqi, A.H.**, "Kinetic and thermodynamic analyses of date palm surface fibers pyrolysis using Coats-Redfern method Renewable Energy", Renewable Energy, in press (2022).
6. Mourad, A.A-H.I., Mohammad, A.F., **Al-Marzouqi, A.H.**, El-Naas, M.H., Al-Marzouqi, M.H., Altarawneh, M., "CO₂ Capture and Ions Removal through Reaction with Potassium Hydroxide in Desalination Reject Brine: Statistical Optimization", Chemical Engineering and Processing: Process Intensification, 170, 108722 (2022).
7. Mohammad, A., Mourad, A.A.H.I., **Al-Marzouqi, A.H.**, El-Naas, M.H., Van der Bruggen, B., Al-Marzouqi, M., Alnaimat, F., Al Musharfy, M., "Comprehensive Optimization of the Dispersion of Mixing Particles in an Inert-Particle Spouted-Bed Reactor (IPsBR) System", Processes, 9, 1921 (2021).
8. Mourad, A.A-H.I., Mohammad, A.F., **Al-Marzouqi, A.H.**, El-Naas, M.H., Al-Marzouqi, M.H., Altarawneh, M., "KOH-Based Modified Solvay Process for Removing Na Ions from High Salinity Reject Brine at High Temperatures", Sustainability, 13, 10200 (2021).
9. Mustafa, J., **Al-Marzouqi, A.H.**, El-Naas, M.H., Ghasem, N., "Electrodialysis based waste utilization methodology for the desalination industry", Desalination, 520, 115327 (2021).
10. Mohammad, A.F., Mourad, A.A-H.I., Galiwango, E., Lwisa, E.G., **Al-Marzouqi, A.H.**, El-Naas, M.H., Van der Bruggen, B., Al-Marzouqi, M.H., "Effective and sustainable adsorbent materials for oil spill cleanup based on a multistage desalination process", Journal of Environmental Management, in press, (2021).
11. Ahmed, W., Siraj, S., **Al-Marzouqi, A.H.**, "Embracing Additive Manufacturing Technology through Fused Filament Fabrication for Antimicrobial with Enhanced Formulated Materials", Polymers, 13, 1523 (2021).
12. Mourad, A.A-H.I., Mohammad, A.F., Altarawneh, M., **Al-Marzouqi, A.H.**, El-Naas, M.H., Al-Marzouqi, M.H., "Effects of potassium hydroxide and aluminum

oxide on the performance of a modified solvay process for CO₂ capture: A comparative study", *International Journal of Energy Research*, 1-13 (2021). <https://doi.org/10.1002/er.6737>.

13. Galiwango, E., **Al-Marzouqi, A.H.**, Khaleel, A.A., Abu-Omar, M.M., "Catalytic Depolymerization of Date Palm Waste to Valuable C₅-C₁₂ Compounds", *Catalysts*, 11, 371 (2021). doi.org/10.3390/catal11030371.
14. Mohammad, A., Mourad, A.A.H.I., **Al-Marzouqi, A.H.**, El-Naas, M.H., Van der Bruggen, B., Al-Marzouqi, M., Alnaimat, F., Suleiman, M., Al Musharfy, M., "CFD and statistical approach to optimize the average air velocity and air volume fraction in an inert-particles spouted-bed reactor (IPSBR) system", *Heliyon*, 7, e06369 (2021).
15. Galiwango, E., **Al-Marzouqi, A.H.**, Khaleel, A.A., Abu-Omar, M.M., "Investigation of Non-Isothermal Kinetics and Thermodynamic Parameters for the Pyrolysis of Different Date Palm Parts", *Energies*, 13, 6553 (2020); [doi:10.3390/en13246553](https://doi.org/10.3390/en13246553).
16. Siraj, S., **Al-Marzouqi, A.H.**, Iqbal, M.Z., "Mechanical and Wettability Performance of Sand/HDPE Composite Sheets", *Materials Science Forum*, 1015, 9-14 (2020); [doi:10.4028/www.scientific.net/MSF.1015.9](https://doi.org/10.4028/www.scientific.net/MSF.1015.9).
17. Ahmed, W., Siraj, S., **Al-Marzouqi, A.H.**, "3D Printing PLA Waste to Produce Ceramic Based Particulate Reinforced Composite Using Abundant Silica-Sand: Mechanical Properties Characterization", *Polymers*, 12, 2579 (2020); [doi:10.3390/polym12112579](https://doi.org/10.3390/polym12112579).
18. Ahmed, W., Alnajjar, F., Zanelidin, E., **Al-Marzouqi, A.H.**, Gochoo, M., Khalid, S., "Implementing FDM 3D Printing Strategies Using Natural Fibers to Produce Biomass Composite", *Materials*, 13, 4065 (2020); [doi:10.3390/ma13184065](https://doi.org/10.3390/ma13184065).
19. Mohammad, A.F., Mourad, A.A.-H.I., Mustafa, J., **Al-Marzouqi, A.H.**, El-Naas, M.H., Al-Marzouqi M., Alnaimat F., Suleiman M., Al Musharfy M., Firmansyah T., "Computational Fluid Dynamics Simulation of an Inert Particles Spouted Bed Reactor (IPSBR) System", *International Journal of Chemical Reactor Engineering*, 20200025 (2020).
20. Mustafa, J., Mourad, A.A.-H.I., **Al-Marzouqi, A.H.**, El-Naas, M.H., "Simultaneous treatment of reject brine and capture of carbon dioxide: A comprehensive review", *Desalination*, 483, 114386 (2020).
21. Galiwango, E., Abdel Rahman, N.S., **Al-Marzouqi, A.H.**, Abu-Omar, M.M., Khaleel, A.A., "Isolation and characterization of cellulose and α -cellulose from date palm biomass waste", *Heliyon*, 5(12), e02937 (2019).
22. Mohammad, A.F., El-Naas, M.H., **Al-Marzouqi, A.H.**, Suleiman, M.I., Al Musharfy, M., "Optimization of magnesium recovery from reject brine for reuse in desalination post-treatment", *Journal of Water Process Engineering*, 31, 100810 (2019).
23. **Al-Marzouqi, A.H.**, Zekri, A.Y., Azzam, A.A., Alraeesi, A.Y., "Optimization of Supercritical Fluid Extraction of Hydrocarbons from a Contaminated Soil: An Experimental Approach", *International Journal of Environmental Science and Development*, 10(10), 301-309 (2019).
24. Galiwango, E., Abdel Rahman, N.S., **Al-Marzouqi, A.H.**, Abu-Omar, M.M., Khaleel, A.A., "Klason Method: An Effective Method for Isolation of Lignin Fractions from Date Palm Biomass Waste", *Journal of Chemical and Process Engineering Research*, 57, 46-58 (2018).
25. Galiwango, E., **Al-Marzouqi, A.H.**, Abu-Omar, M.M., Khaleel, A.A., Abdel Rahman, N.S., "Estimating Combustion Kinetics of UAE Date Palm tree Biomass using Thermogravimetric Analysis", *Journal of Natural Sciences Research*, 7(12), 106-120 (2017).

26. El-Naas, M. H., Mohammad, A. F., Suleiman, M. I., Al Musharfy, M., **Al-Marzouqi, A. H.**, "Evaluation of a novel gas-liquid contactor/reactor system for natural gas applications", *Journal of Natural Gas Science and Engineering*, 39, 133-142 (2017).
27. El-Naas, M. H., Mohammad, A. F., Suleiman, M. I., Al Musharfy, M., **Al-Marzouqi, A. H.**, "A new process for the capture of CO₂ and reduction of water salinity", *Desalination*, 411, 69-75 (2017).
28. Fardoun, A.A., Hejase, H.A.N., **Al-Marzouqi, A.H.**, Nabag, M., "Electric Circuit Modeling of Fuel Cell System Including Compressor Effect and Current Ripples", *International Journal of Hydrogen Energy*, 42, 1558-1564 (2017).
29. **Al-Marzouqi, A.H.**, Ahmed, W.K., "Experimenting E-Learning for Postgraduate Courses", *International Journal of Emerging Technologies in Learning*, 11(4), 126-130 (2016).
30. Yousif, S.M., **Al-Marzouqi, A.H.**, Mahmoud A Mohsin, "Microencapsulation of Ibuprofen into Polyvinylpyrrolidone Using Supercritical Fluid Technology", *Journal of Chemical Engineering & Process Technology*, 7(4), 306 (2016), doi: 10.4172/2157-7048.1000306.
31. El-Naas, M.H., Mohammad, A.F., Suleiman, M.I., Al Musharfy, M., **Al-Marzouqi, A.H.**, "Statistical analysis and optimization of a process for CO₂ capture", *International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering*, 10(4), 350-357 (2016).
32. Abbaszadegan, S., **Al-Marzouqi, A.H.**, Salem, A.A., Amin, A., "Physicochemical characterizations of safranal- β -cyclodextrin inclusion complexes prepared by supercritical carbon dioxide and conventional methods", *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 83, 215-226 (2015).
33. Ahmed, W.K., **Al-Marzouqi, A.H.**, "Using blended learning for self learning", *International Journal of Technology Enhanced Learning*, 7(2), 91-98 (2015).
34. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., "Properties of biodiesel produced by enzymatic transesterification of lipids extracted from microalgae in supercritical carbon dioxide medium", *International Journal of Biological, Biomolecular, Agricultural, Food and Biotechnological Engineering*, 9(8), 689-692 (2015).
35. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., "Growth of microalgae using CO₂ enriched air for biodiesel production in supercritical CO₂", *Renewable Energy*, 82, 61-70 (2015).
36. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., "Mass transfer modeling of *Scenedesmus* sp. lipids extracted by supercritical CO₂", *Biomass and Bioenergy*, 70, 530-541 (2014).
37. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., "Enzymatic biodiesel production of microalgae lipids under supercritical carbon dioxide: Process optimization and integration", *Biochemical Engineering Journal*, 90, 103-113 (2014).
38. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., "Effective extraction of microalgae lipids from wet biomass for biodiesel production", *Biomass and Bioenergy*, 66, 159-167 (2014).
39. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., Tariq, S., "Supercritical carbon dioxide extraction of microalgae lipid: Process optimization and laboratory scale-up", *Journal of Supercritical Fluids*, 86, 57-66 (2014).
40. Hashim, I.B., Al Nuaimi, S., Afifi, H.S., Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, "Quality characteristics of low fat lamb meat produced by supercritical carbon dioxide extraction", *Global Journal of Biology, Agriculture & Health Sciences*, 2(1), 5-9 (2013).

41. Khaleel, A., **Al-Marzouqi, A.H.**, "Alkoxide-free sol-gel synthesis of aerogel iron-chromium mixed oxides with unique textural properties", *Materials Letters*, 68, 385-387 (2012).
42. Khaleel, A., Shehadi, I., **Al-Marzouqi, A.H.**, "Unique textural properties of titanium-doped alumina via sol-gel synthesis under non-acidic conditions", *Materials Letters*, 68, 11-13 (2012).
43. Al-Zuhair, S., Hussein, A., **Al-Marzouqi, A.H.**, Hashim, I., "Continuous production of biodiesel from fat extracted from lamb meat in supercritical CO₂ media", *Biochemical Engineering Journal*, 60, 106-110 (2011).
44. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M.M., "A review of enzymatic transesterification of microalgal oil-based biodiesel using supercritical technology", *Enzyme Research*, 2011, Article ID 468292, doi:10.4061/2011/468292.
45. Khaleel, A., Shehadi, I., **Al-Marzouqi, A.H.**, "Catalytic conversion of chloromethane to methanol and dimethyl ether over mesoporous γ -alumina", *Fuel Processing Technology*, 92, 1783-1789 (2011).
46. El Keblawy, A., Al Neyadi, S.S., Rao, M.V., **Al-Marzouqi, A.H.**, "Interactive effects of salinity, light and temperature on seed germination of sand dunes Glycophyte *Cyperus Conglomeratus* growing in the United Arab Emirates deserts", *Seed Science & Technology*, 39, 364-376 (2011).
47. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Hashim, I., "Extracted fat from lamb meat by supercritical CO₂ as feedstock for biodiesel production", *Biochemical Engineering Journal*, 55, 23-31 (2011).
48. Ashraf, S.S., Rao, M.V., Kaneez, F.S., **Al-Marzouqi, A.H.**, Qadri, S., Chandranath, I.S., Adem, A., "Nigella sativa extract as a potent antioxidant for petrochemical pollutant-induced oxidative stress", *Journal of Chromatographic Science*, 49 (4), 321-326 (2011).
49. El-Naas, M.H., **Al-Marzouqi, A.H.**, Chaalal, O., "A combined approach for the management of desalination reject brine and capture of CO₂", *Desalination*, 251, 70-74 (2010).
50. Gadermann, M., Kular, S., **Al-Marzouqi, A.H.**, Signorell, R., "Formation of naproxen/polylactic acid nanoparticles from supercritical solutions and their characterization in the aerosol phase", *Physical Chemistry Chemical Physics*, 11, 7861-7868 (2009).
51. **Al-Marzouqi, A.H.**, Elwy, H.M., Shehadi, I., Adem, A., "Physicochemical properties of antifungal drug-cyclodextrin complexes prepared by supercritical carbon dioxide and by conventional techniques", *Journal of Pharmaceutical and Biomedical Analysis*, 49, 227-233 (2009).
52. **Al-Marzouqi, A.H.**, Zekri, A.Y., Azzam, A.A., Dowaidar, A., "Hydrocarbon recovery from porous media using supercritical fluid extraction", *Journal of Porous Media*, 12 (6), 489-500 (2009).
53. **Al-Marzouqi, A.H.**, Solieman, A., Shehadi, I., Adem, A., "Influence of the preparation method on the physicochemical properties of Econazole- β -cyclodextrin complexes", *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 60, 85-93 (2008).
54. Hassan, H.A., **Al-Marzouqi, A.H.**, Hamza, A.A., Jobe, B., Ramadan, G.A., "Enhancement of dissolution amount and in vivo bioavailability of itraconazole by complexation with β -cyclodextrin using supercritical carbon dioxide", *Journal of Pharmaceutical and Biomedical Analysis*, 45, 243-250 (2007).
55. Rao, M.V., **Al-Marzouqi, A.H.**, Kaneez, F.S., Ashraf, S., Adem, A., "Comparative evaluation of SFE and solvent extraction methods on the yield and composition of black seeds (*Nigella sativa*)", *Journal of Liquid Chromatography & Related Technologies*, 30, 2545-2555 (2007).

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57. **Al-Marzouqi, A.H.**, Rao, M.V., Jobe, B., "Comparative evaluation of SFE and steam distillation methods on the yield and composition of essential oil extracted from spearmint (*Mentha spicata*)", *Journal of Liquid Chromatography & Related Technologies*, 30, 463-475 (2007).
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59. **Al-Marzouqi, A.H.**, Zekri, A.Y., Jobe, B., "Supercritical fluid extraction for the determination of optimum oil recovery conditions", *Journal of Petroleum Science and Engineering*, 55, 37-47 (2007).
60. **Al-Marzouqi, A.H.**, Shehatta, I., Jobe, B., Dowaidar, A., "Phase solubility and inclusion complex of Itraconazole with β -cyclodextrin using supercritical carbon dioxide", *Journal of Pharmaceutical Sciences*, 95 (2), 292-304 (2006).
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62. **Hassan, A.**, Tang, Y., Ayres, J., "Itraconazole formation using supercritical carbon dioxide," *Drug Development and Industrial Pharmacy*, 30 (10), 1029-1035 (2004).
63. **Hassan, A.**, Levien, K., Morrell, J.J., "Modeling phase behavior of multicomponent mixtures of wood preservatives in supercritical carbon dioxide with cosolvents," *Fluid Phase Equilibria*, 179, 5-22 (2001).
64. Sahle-Demessie, E., **Hassan, A.**, Levien, K., Kumar, S., Morrell, J.J., "Supercritical carbon dioxide treatment: effect on permeability of douglas-fir heartwood," *Wood and Fiber Science*, 27 (3), 296-300 (1995).

Conference Presentations & Oral Talks

1. Yusof, A.Z.M., Siraj, S., Isa, K.M., **Al-Marzouqi, A.H.**, Iqbal, M.Z., Osman, K., Ahmed, W., "Modeling of water droplet wettability on anti-wetting sheet of Sand/HDPE", *International Conference on Bioscience and Medical Engineering (ICBME)*, June 29-20, 2021, Virtual Conference.
2. Mohammad, A.F., Mourad, A.A-H.I., Mustafa, J., **Al-Marzouqi, A.H.**, El-Naas, M.H., Al-Marzouqi, M.H., Van der Bruggen, B., Suleiman, M.I., Al Musharfy, M., "A CFD Investigation on the Effect of IPSBR Operational Conditions on Liquid Phase Hydrodynamics," *6th International Conference on Renewable Energy: Generation and Applications (ICREGA)*, February 2021, pp. 153-157, Al-Ain, UAE, doi: 10.1109/ICREGA50506.2021.9388292.
3. Mustafa, J., Mohammad, A.F., Mourad, A.A-H.I., **Al-Marzouqi, A.H.**, El-Naas, M.H., "Treatment of saline wastewater and carbon dioxide capture using electrodialysis" *6th International Conference on Renewable Energy: Generation and Applications (ICREGA)*, February 2021, Al-Ain, UAE, doi: 10.1109/ICREGA50506.2021.9388277.
4. Sivaloganathan, S., **Al-Marzouqi, A.H.**, Zanelidin, E., Bastaki, N., "Teaching Conceptual Design to a Heterogeneous Group: A Workshop Method", *American Society for Engineering Education*, June 22-26, 2020, Virtual Conference.

5. Galiwango, E., **Al-Marzouqi, A.H.**, "Catalytic Cracking of Date Palm Lignocellulosic Waste to High Value Chemicals Using Commercial NiAl Alloy Catalyst", Catalysis Conference (CCE-2020), February 24-26, 2020, Los Angeles, CA., USA.
6. Siraj, S., **Al-Marzouqi, A.H.**, "Mechanical and Wettability Performance of Sand/HDPE Composite Sheets", The 8th Asia Conference on Mechanical and Materials Engineering (ACMME), June 11-14, 2020, Singapore.
7. Mousa, N., Galiwango, E., Haris, S., **Al-Marzouqi, A.H.**, Abu-Jdayil, B., Caires, Y., "New Green Composite for Food ware based on Biodegradable Polymers Mixed with UAE Date Palm Waste", International Workshop on Advanced Materials (IWAM2020), February 23-25, 2020, Virtual Conference.
8. Mohammad, A.F., Mustafa, J., **Al-Marzouqi, A.H.**, El-Naas, M.H., Al-Marzouqi, M.H., Suleiman, M.I., Al Musharfy, M., Firmansyah, T., "CFD Simulation of a Novel Gas-Liquid Reactor System", 8th ADNOC Refining Research Center - JCCP/ Idemitsu International Symposium, February 18-19, 2019, ADNOC Refining Research Centre, Abu Dhabi, UAE.
9. Galiwango, E., **Al-Marzouqi, A.H.**, "Reductive Fractionation; Date Palm Biomass to High Value Chemicals Using Commercial NiAl Alloy Catalyst", AIChE Annual Meeting, November 10-15, 2019, Orlando, FL., USA.
10. Galiwango, E., Abdel Rahman, N.S., **Al-Marzouqi, A.H.**, Khalil, A.A., Abu-Omar, M.M., "Isolation of date palm biomass waste into individual lignocellulosic fractions", 2nd International Bioresource Technology for Bioenergy, Bioproducts & Environmental Sustainability, September 15-19, 2018, Barcelona, Spain.
11. Galiwango, E., Abdel Rahman, N.S., **Al-Marzouqi, A.H.**, Khalil, A.A., Abu-Omar, M.M., "Integrated biorefinery process for isolation of date palm biomass waste into individual lignocellulosic fractions", UAE Graduate Student Research Conference 2018 (UAEGSRC'18), April 21, 2018, American University of Sharjah, Sharjah, UAE.
12. Galiwango, E., **Al-Marzouqi, A.H.**, Khalil, A.A., Abu-Omar, M.M., "High Value Chemicals from Palm Biomass: Combustion Kinetics of Leaflet, Rachis and Fibers of UAE Date Palm Tree Biomass using Thermogravimetric Analysis", 7th International Congress on Biofuels and Bioenergy, October 2-4, 2017, Toronto, Canada.
13. Mohammad, A.F., El-Naas, M.H., **Al Marzouqi, A.H.**, Suleiman, M.I., Al Musharfy, M., "Effect of pH and Temperature on CO₂ Capture and Brine Salinity during CO₂ Reaction with Reject Brine", International Conference on Petrochemical Engineering, July 10-12, 2017, Dubai, UAE.
14. Abdel Rahman, N.S., **Al-Marzouqi, A.H.**, "Corrosion Inhibitor from Palm Lignocellulosic Waste", First International Conference on Petrochemical Engineering, July 10-12, 2017, Dubai, UAE.
15. El-Naas, M.H., Mohammad, A.F., Suleiman, M.I., Al Musharfy, M., **Al-Marzouqi, A.H.**, "Recovery of Magnesium from High Salinity Water as Magnesium Hydroxide", Frontiers International Conference on Waste Water Treatment, May 21-24, 2017, Palermo, Italy.
16. Abdel Rahman, N.S., **Al-Marzouqi, A.H.**, "Production of Anti-Corrosion Material from Lignocelluloses Waste of Palm Tree", Ninth Annual International Workshop on Advanced Materials, February 19-21, 2017, Ras Al Khamiah, UAE.
17. Mohammad, A.F., El-Naas, M.H., Suleiman, M.I., Al Musharfy, M., **Al-Marzouqi, A.H.**, "CO₂ Capture through Reactions with Steel-Making Dust in High Salinity Water", 5th Gas Processing Symposium (GPS), November 27-29, 2016, Doha, Qatar.
18. El-Naas, M.H., Mohammad, A.F., Suleiman, M.I., Al Musharfy, M., **Al-Marzouqi, A.H.**, "Optimization of a Modified Process for CO₂ Capture and Water Salinity

- Reduction ICEST", 18th International Conference Environmental Science and Technology, April 11-12, 2016, Venice, Italy.
19. El-Naas, M.H., Mohammad, A.F., Suleiman, M.I., Al Musharfy, M., **Al-Marzouqi, A.H.**, "Assessment of a New Process for CO₂ Capture", 6th TRC-JCCP/Idemitsu International Symposium, February 10-11, 2016, Abu Dhabi, UAE.
 20. Mohammad, A.F., El-Naas, M.H., Suleiman, M.I., Al Musharfy, M., **Al-Marzouqi, A.H.**, "Evaluation of a dual-purpose process for the treatment of desalination reject brine and capture of CO₂", UAEU Annual Research & Innovation Conference, November 24th, 2015, Al Ain, UAE.
 21. Nabag, M., Fardoun, A., Hejase, H., **Al-Marzouqi, A.H.**, "Electrical Circuit Modeling of PEM Fuel Cells Including Compressor Effect", IEEE 58th International Midwest Symposium on Circuits and Systems, August 2-5, 2015, Fort Collins, CO, USA.
 22. Ahmed, W.K., **Al-Marzouqi, A.H.**, "Boosting students' proficiency in thermodynamics via E-learning", International Conference on Industrial Engineering and Operations Management, March 3 – 5, 2015, Dubai, U.A.E.
 23. Sivaloganathan, S., **Al-Marzouqi, A.H.**, "Innovative teaching of product design and development in an engineering management program", 121st ASEE Annual Conference & Exposition, June 15-18, 2014, Indianapolis, IN, USA.
 24. Taher, H., Al-Zuhair, S., **Al-Marzouqi, A.H.**, Haik, Y., Farid, M., "Effectiveness of Enzymatic Biodiesel Production from Microalga Oil in Supercritical Carbon Dioxide", The 3rd International Conference on Renewable Energy: Generation and Applications, March 2-5, 2014, Al-Ain, U.A.E.
 25. Nabag, M., Fardoun, A., Hejase, H., **Al-Marzouqi, A.H.**, "Review of Dynamic Electric Circuit Models for PEM Fuel Cells", The 3rd International Conference on Renewable Energy: Generation and Applications, March 2-5, 2014, Al-Ain, U.A.E.
 26. Al Ahmad, M., **Al-Marzouqi, A.H.**, "Exit Exam as Academic Indicator", The Second International Conference on E-Learning and E-Technologies in Education, September 23-25, 2013, Lodz, Poland.
 27. Dohai, B.S., **Al-Marzouqi, A.H.**, "Supercritical CO₂ Extraction of Henna Flower and its Compositional Analysis", 10th Conference on Supercritical Fluids and their Applications, April 29-May 6, 2013, Naples, Italy.
 28. Abbaszadegan, S., **Al-Marzouqi, A.H.**, Salem, A.A., Amin, A., "Physicochemical Characterization of Safranal- β -cyclodextrin Inclusion Complexes Prepared by Supercritical Carbon Dioxide and other Conventional Methods", The 24th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2013), June 30-July 3, 2013, Bologna, Italy.
 29. Yousif, S.M., **Al-Marzouqi, A.H.**, Mohsin, M.A., "Microencapsulation of Non-steroidal Anti-inflammatory Drugs into Biodegradable Polymers using Supercritical Fluid Technology", 5th Asian Particle Technology Symposium (APT2012), July 2-5, 2012, Singapore.
 30. Azzam, A.A., **Al-Marzouqi, A.H.**, Zekri, A.Y., "Remediation of soil contaminated with crude oil using supercritical CO₂", The 3rd International Multi-Conference on Engineering and Technological Innovation, June 29-July 2, 2010, Orlando, USA.
 31. **Al-Marzouqi, A.H.**, Awad, S., Hassan, A.H., "Clove extracts prepared by supercritical CO₂ and their anti-cancer activity", 57th International Congress and Annual Meeting of the Society For Medicinal Plant and Natural Product Research, August 16-20, 2009, Geneva, Switzerland.
 32. Jobe, B., Afifi, H., Kassama, L., **Al-Marzouqi, A.H.**, "Application of Response Surface Methodology and Central Composite Rotatable Design for Optimization of Supercritical Fluid Extraction of Lipids from Date Pits", 9th International Symposium on Supercritical Fluids, May 18-20, 2009, Bordeaux, France.

33. Rao, M.V., Al-Marzouqi, A.H., "HPLC and LCMS Determination of Genotoxic and Carcinogenic Polycyclic Aromatic Hydrocarbons in Soil and Sediments", Pittcon Conference and Exposition, March 8-13, 2009, Chicago, IL, U.S.A.
34. Al-Marzouqi, A.H., Azzam, A.A., Zekri, A.Y., "Supercritical Fluid Extraction of Hydrocarbons from Soil", The 4th Joint KISR-JCCP Environment Symposium, February 2-4, 2009, Kuwait.
35. El Keblawy, A., Rao, M.V., Al-Marzouqi, A.H., Al Neyadi, S.S.A., "Germination Ecology of Indigenous Cyperus Conglomeratus Seeds: a Sand Dunes Binder", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
36. Al Neyadi, S.S.A., Rao, M.V., Al-Marzouqi, A.H., El Keblawy, A., "Composition and Quality of Cyprus Conglomeratus Seeds Obtained from the Sand Dunes of UAE", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
37. Rao, M.V., Meetani, M.A., Al-Marzouqi, A.H., "HPLC and LCMS Determination of Genotoxic and Carcinogenic Polycyclic Aromatic Hydrocarbons in Contaminated Soils and Sediments", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
38. Azzam, A.A., Al-Marzouqi, A.H., Zekri, A.Y., "Remediation of Hydrocarbons from Contaminated Sediment Using Supercritical Carbon Dioxide", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
39. Emadi, F., Awad, S., Al-Marzouqi, A.H., Rizvi, T.A., Al-Marzouqi, A.H., "Anti-Cancer Compounds within the Clove Extract", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
40. El-Naas, M.H., Al-Marzouqi, A.H., Chaalal, O., "CO₂ Capture and Storage through Reactions with Seawater", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
41. Al-Marzouqi, A.H., Azzam, A.A., Zekri, A.Y., "Extraction of Hydrocarbons from Porous Media using Pure and Modified Supercritical CO₂", The Tenth Annual UAE University Research Conference, April 2009, Al-Ain, U.A.E.
42. Al-Marzouqi, A.H., Jobe, B., Shehatta, I., Hassan, H.A., Hamza, A.A., "Complexation of Itraconazole with Cyclodextrins for Enhanced Solubility, Dissolution and Bioavailability", 2nd World Conference on Magic Bullets (EHRlich II), October 3-5, 2008, Nurnberg, Germany.
43. Tang, Z.-R., Bartley, J.K., Davies, T.E., Taylor, S.H., Dickinson, C., Claridge, J.B., Rosseinsky, M.J., Lu, T., Leeke, G.A., Blackburn, S., Al-Marzouqi, A.H., Axon, S., Hutchings, G.J., "Preparation of TiO₂ as a Catalyst Support using Supercritical Antisolvent Precipitation", 14th ICC, July 13-18, 2008, Seoul, Korea.
44. Al-Marzouqi, A.H., Elwy, H.M., Shehadi, I., Adem, A., "Physicochemical Properties of Antifungal Drug-Cyclodextrin Complexes Prepared by Supercritical Carbon Dioxide and by Conventional Techniques", 11th European Meeting on Supercritical Fluids, May 4-7, 2008, Barcelona, Spain.
45. Al-Marzouqi, A.H., Elwy, H.M., Shehadi, I., Adem, A., "Effect of Preparation Method on Physicochemical Properties of Antifungal Drug-Cyclodextrin Complexes – Comparison between Supercritical Carbon Dioxide and Conventional Methods", 1st International Conference on Drug Design & Discovery, February 4-7, 2008, Dubai, UAE.
46. Al-Marzouqi, A.H., Zekri, A.Y., Azzam, A.A., Dowaidar, A., "Hydrocarbon Recovery from Porous Media and Reduction of Asphaltene Deposition during CO₂ Extraction Process", The 2nd International Conference on Porous Media and its Applications in Science, Engineering and Industry, June 17-22, 2007, Hawaii, USA.
47. El-Naas, M.H., Chaalal, O., Al-Marzouqi, A.H., "CO₂ Capture through Reactions with Desalination Reject Brine", Clean Air 2007, July 2-7, Portugal.

48. Chaalal, O., El-Naas, M.H., **Al-Marzouqi, A.H.**, "A Simple Global Warming Solution in a Novel Technique of Natural Gas Sweetening and Formation Water Desalting", Clean Air 2007, July 2-7, Portugal.
49. Angeles, M., **Al-Marzouqi, A.H.**, Al-Duri, B., Santos, R.C.D., "Catalytic Supercritical Water Oxidation of DBU", First Iberoamerican Conference on Supercritical Fluids - Prosciba 2007, April 10-13, 2007, Iguassu Falls, Brazil.
50. **Al-Marzouqi, A.H.**, Zekri, A.Y., Jobe, B., Dowaidar, A., "Extraction of Hydrocarbons from Soil and Rocks Using Carbon Dioxide, The 68th EAGE Conference & Exhibition, June 12-15, 2006, Vienna, Austria.
51. **Al-Marzouqi, A.H.**, Jobe, B., Corti, G., Cirri, M., Mura, P., "Physicochemical characterization of drug-cyclodextrin complexes prepared by supercritical carbon dioxide and by conventional techniques", XIII International Cyclodextrin Symposium, May 14-17, 2006, Torino, Italy.
52. **Al-Marzouqi, A.H.**, Jobe, B., Dowaidar, A., Maestrelli, F., Mura, P., "Evaluation of supercritical fluid technology as preparative technique of benzocaine-cyclodextrin complexes - comparison with conventional methods", XIII International Cyclodextrin Symposium, May 14-17, 2006, Torino, Italy.
53. **Al-Marzouqi, A.H.**, Shehatta, I., Jobe, B., Dowaidar, A., "Enhancement of Aqueous Solubility of Itraconazole by Complexation with Cyclodextrins", Pharmaceutical Sciences Fair & Exhibition, June 12-17, 2005, Nice, France.
54. **Al-Marzouqi, A.H.**, Zekri, A.Y., Jobe, B., "Supercritical Fluid Extraction for the Determination of Optimum Oil Recovery Conditions", Kuwait Oil and Gas Conference and Exhibition, March 7-9, 2005, Kuwait.
55. **Al-Marzouqi, A.H.**, Shehatta, I., Jobe, B., Dowaidar, A., "Enhancement of Aqueous Solubility of Itraconazole by Complexation with β -Cyclodextrin Using Supercritical Carbon Dioxide", The 2nd International Meeting on Medical and Pharmaceutical Chemistry (IMMPC-2), October 10-14, 2004, Antalya, Turkey.
56. **Al-Marzouqi, A.H.**, A. Busamra, F. Mohammed, Sh. Al-Shehhi, W. Abdulwahab, "An Absorbent-Skimmer Method to Clean-up Oil Spills", Second International Conference on Remediation of Contaminated Sediments, September 30-October 3, 2003, Venice, Italy.
57. **Al-Marzouqi, A.H.**, A. Busamra, F. Mohammed, Sh. Al-Shehhi, W. Abdulwahab, "A Novel Absorbent-Skimmer Technology for Cleaning Oil Spills", Sixth International Conference on Computer Modeling and Experimental Measurements of Seas and Coastal Regions (COASTAL ENGINEERING VI), June 23-25, 2003, Cadiz, Spain.
58. El-Naas, M.H., Chaalal, O., **Al-Marzouqi, A.H.**, "Controlling CO₂ Emission through Reactions with High Salinity Wastewater", Waste Management and Minimization Congress, May 28-29, 2007, Dubai, U.A.E.
59. **Al-Marzouqi, A.H.**, Elwy, H.M., Adem, A., Shehadi, I., "Physicochemical Properties of Antifungal Drug-Cyclodextrin Complexes Prepared by Supercritical Carbon Dioxide – Comparison with Conventional Methods", The Ninth Annual UAE University Research Conference, April 2008, Al-Ain, U.A.E.
60. Adel A. Azzam, **Al-Marzouqi, A.H.**, Zekri, A.Y., "Extraction of Hydrocarbons and Minimizing Organic Deposits from Crude Oil using CO₂", The Ninth Annual UAE University Research Conference, April 2008, Al-Ain, U.A.E.
61. **Al-Marzouqi, A.H.**, Adem, A., Shehadi, I., Soleiman, A., Dowaidar, A., Jobe, B., "Influence of the Preparation Method on the Physicochemical Properties of Econazole-Cyclodextrin Complexes", The Eighth Annual UAE University Research Conference, April 2007, Al-Ain, U.A.E.
62. Kaneez, F.S., Rao, M.V., Ashraf, S., **Al-Marzouqi, A.H.**, Qadri, S., Chandranath, I.S., Adem, A., "In vitro and in vivo Studies of Super Critical Fluid Extracted Nigella Sativa as an Antioxidant in Petrochemical Pollutant-Induced Oxidative

- Stress", The Eighth Annual UAE University Research Conference, April 2007, Al-Ain, U.A.E.
63. El-Naas, M.H., Chaalal, O., **Al-Marzouqi, A.H.**, "Management of Desalination Reject Brine through Reactions with CO₂", The Eighth Annual UAE University Research Conference, April 2007, Al-Ain, U.A.E.
 64. El-Naas, M.H., Dowaidar, A., **Al-Marzouqi, A.H.**, Chaalal, O., "Evaluation of the Solubility of NaHCO₃ in High Salinity Aqueous Solutions", The Eighth Annual UAE University Research Conference, April 2007, Al-Ain, U.A.E.
 65. Awad, S., Al-Marzouqi, A., **Al-Marzouqi, A.H.**, Rizvi, T.A., "Anti-cancer Activities of Indigenous UAE Herbs Extracted by Supercritical Carbon Dioxide: From Identification to Mechanisms of Action", The Eighth Annual UAE University Research Conference, April 2007, Al-Ain, U.A.E. Received the Research Project Award for this interdisciplinary project.
 66. **Al-Marzouqi, A.H.**, Rao, M.V., Jobe, B., "A Comparative evaluation of SFE and steam distillation methods on the yield and composition of essential oil extracted from Spearmint (*Mentha spicata*)", The Seventh Annual UAE University Research Conference, April 2006, Al-Ain, U.A.E. Received the Research Project Award for this non-funded project.
 67. **Al-Marzouqi, A.H.**, Adem, A., Hassan, H.A., Shehadi, I., Solieman, A., Dowaidar, A., Jobe, B., "Enhancement of Solubility, Stability, Dissolution Rate, and Bioavailability of Poorly Water-soluble Antifungal Drugs by Complexation with Cyclodextrins", The Seventh Annual UAE University Research Conference, April 2006, Al-Ain, U.A.E.
 68. Kaneez, F.S., Rao, M.V., Ashraf, S., Adem, A., **Al-Marzouqi, A.H.**, "In Vitro and In Vivo Animal Studies of Nigella Sativa Extract as an Antioxidant in Petrochemical Pollutant Induced Oxidative Stress", The Seventh Annual UAE University Research Conference, April 2006, Al-Ain, U.A.E.
 69. **Al-Marzouqi, A.H.**, Jobe, B., "Effect of Supercritical CO₂ on Yield and Composition of Mint Oil", The Sixth Annual UAE University Research Conference, April 2005, Al-Ain, U.A.E.
 70. Hassan, H.A., **Al-Marzouqi, A.H.**, Hamza, A.A., Jobe, B., Dowaidar, A., "In Vivo Bioavailability of Itraconazole- β -cyclodextrin Complex", The Sixth Annual UAE University Research Conference, April 2005, Al-Ain, U.A.E.
 71. Zaidi, A.S., Jassim, A., Mohsen, F., Hussain, M., **Al-Marzouqi, A.H.**, "Design of an Effective Remediation Method for Hydrocarbon Contaminated Soil", The Sixth Annual UAE University Research Conference, April 2005, Al-Ain, U.A.E.
 72. Ashour, I., **Al-Marzouqi, A.H.**, "Supercritical Fluid Technology", Seminar on Technology Transfer & Retention, Engineering Day (ENGEX 2004), UAE University, April 2004, Al-Ain, U.A.E.
 73. **Al-Marzouqi, A.H.**, I. Shehatta, B. Jobe, A. Dowaidar, "Phase Solubility and Inclusion Complex of Itraconazole with β -Cyclodextrin Using Supercritical Carbon Dioxide, The Fifth Annual UAE University Research Conference, April 2004, Al-Ain, U.A.E.
 74. Ashour, I., **Al-Marzouqi, A.H.**, Hussein, E.S.H., "Supercritical Fluid Extraction of Natural Products from Local Plants", The Fifth Annual UAE University Research Conference, April 2004, Al-Ain, U.A.E.
 75. Ashour, I., **Al-Marzouqi, A.H.**, "Evaluation of Supercritical Fluid-Essential Oil Components Published Data and Thermodynamic Modeling", The Fourth Annual UAE University Research Conference, April 2003, Al-Ain, U.A.E.
 76. **Al-Marzouqi, A.H.**, M. El-Naas, H. Hassan, I. Shehatta, A. Dowaidar, "Enhancement of Solubility, Stability, Dissolution Rate, and Bioavailability of Poorly Water-Soluble Antifungal and Antiviral Drugs by Complexation with

- Cyclodextrins", The Fourth Annual UAE University Research Conference, April 2003, Al-Ain, U.A.E.
77. **Al-Marzouqi, A.H., A. Busamra**, F. Mohammed, Sh. Al-Shehhi, W. Abdulwahab, "An Absorbent-Skimmer Method to Clean-up Oil Spills", The Fourth Annual UAE University Research Conference, April 2003, Al-Ain, U.A.E.
 78. **Hassan, A.**, Y. Tang, J. Ayres, "Itraconazole Formation Using Supercritical Carbon Dioxide", American Institute of Chemical Engineers (AIChE) Annual Meeting, November 12-17, 2000, Los Angeles, CA, U.S.A.
 79. **Hassan, A.**, K. Levien, J. J. Morrell, "Modeling Phase Behavior of Multicomponent Mixtures of Wood Preservatives in Supercritical Carbon Dioxide with Cosolvents", American Institute of Chemical Engineers (AIChE) Annual Meeting, November 1996, Chicago, IL, U.S.A.
 80. **Hassan, A.**, K. Levien, J. J. Morrell, "Phase Behavior of Binary and Ternary Mixtures of Wood Preservatives in Supercritical CO₂ and Cosolvent", American Institute of Chemical Engineers (AIChE) Annual Meeting, November 1994, San Francisco, CA, U.S.A.

Attendance at Other Conferences, Exhibitions & Workshops

1. 2019 Summer Workshop & New Deans Institute, San Diego, USA, July 13-17, 2019.
2. Seminar on Leadership of the Faculty: A COACHE Program at the Harvard Institutes for Higher Education, Cambridge, MA, USA, August 5-8, 2019.
3. Think Science and Connect Platform, April 21-23, 2013, Dubai, UAE.
4. 21th Joint GCC-Japan Environment Symposium, February 5-6, 2013, Doha, Qatar.
5. Training program on Science & Technology Park at Daedeok Innopolis Headquarters, September 6-17, 2010, Daejeon, South Korea.
6. Symposium on Engineering Education, May 16-18, 2009, Al-Ain, UAE.
7. 9th International Defense Exhibition & Conference (IDEX 2009), February 22-26, 2009, Abu Dhabi, UAE.
8. 2nd International Conference on Nanotechnology, November 16-20, 2008, Abu Dhabi, UAE.
9. Renewable Energy Seminar (RES08), April 9, 2008, Abu Dhabi, UAE.
10. The 1st World Future Energy Summit (WFES-08), January 21-23, 2008, Abu Dhabi, UAE.
11. 8th International Defense Exhibition & Conference (IDEX 2007), February 18-22, 2007, Abu Dhabi, UAE.
12. CONSTRUCT Abu Dhabi 2006 Exhibition, April 2-5, 2006, Abu Dhabi, UAE.
13. The Second International Conference on Thermal Engineering Theory and Applications (ICTEA 06), January 2006, Al-Ain, UAE.
14. 7th International Defense Exhibition & Conference (IDEX 2005), February 12-17, 2005, Abu Dhabi, UAE.
15. Environment 2005 Exhibition and Conference, January 30-February 2, 2005, Abu Dhabi, UAE.
16. JCCP Symposium 2005 on Preservation of Environmental and Water Resources amid Economic Development, February 6-8, 2005, Muscat, Oman.
17. Annual Supercritical Fluid Symposium, July 22-23, 2004, Akita, Japan.
18. Nanoparticles and Nanostructures through Vapor Phase Synthesis, June 16-21, 2002, Barga, Italy.

Editorial Board Membership

- International Journal of Environmental Pollution Control and Management, 2008-present

Research & Consultation Grants

1. Principal-investigator on an external Project titled, "Date Fruit Pomace (DFP): Integrated sustainable conversion to biomaterial and food supplement", 980,000 AED, Aspire, 2022-2024.
2. Principal-investigator on an external Project titled, "Palmade-Date Palm Biomass Processing, Value Addition and Commercialization", 72,650 AED, Thaneya Investment Company LLC, 2020-2021.
3. Principal-investigator on an External Project titled, "Design and Evaluation of a Pilot Plant for CO₂ Capture through Reactions with High Salinity Water", 2,556,510 Dhs, ADNOC Refining Company, 2019-2022.
4. Principal-investigator on an external Project titled, "Sustainable Solutions: Using UAE Sand in Paper-Based Products", 50,000 Dhs, Expo Dubai 2020 LLC-SO, 2019-2020.
5. Principal-investigator on an external Project titled, "Palmade-Date Palm Biomass Processing, Value Addition and Commercialization", 66,890 AED, Thaneya Investment Company LLC, 2018-2019.
6. Principal-investigator on a Center-Based Project titled, "Evaluation of Multi-Stage Process for the Treatment of Reject Brine", 900,000 Dhs, UAEU, 2018-2022.
7. Principal-investigator on a Center-Based Project titled, "Conversion of lignocellulosic wastes from palm tree to high-value chemicals", 900,000 Dhs, UAEU, 2017-2021.
8. Principal-investigator on a SURE PLUS Project titled, "UAE Sand into Paper", 65,000 Dhs, UAEU, 2017-2018.
9. Co-investigator on an interdisciplinary UPAR Project titled, "Value-Added Utilization of Inferior Quality Dates (VALORDATE)", 800,000 Dhs, UAEU, 2016-2019.
10. Co-investigator on an Interdisciplinary Project titled, "Evaluation of Effect of oil and gas industrial environments on efficiency and life span of PVs and Batteries", 120,000 Dhs, UAEU, 2015-2017.
11. Co-investigator on an External Project titled, "Green Self-Powered Low Power Circuit", 1,212,000 Dhs, Information and Communications Technology (ICT) Fund, 2015-2017.
12. Co-investigator on an External Project titled, "CO₂ Capture through Reactions with High Salinity Water", 2,227,500 Dhs, Takreer Research Center (TRC), 2013-2016.
13. Principal-investigator on an External Project titled "In vitro and In vivo studies of saffron extract as a novel biodegradable anti-cancer drug", 150,000 Dhs, Sheikh Hamdan Bin Rashid Al Maktoum Award for Medical Sciences, 2013-2015.
14. Co-investigator on an External Project titled "Effect of fluidization hydrodynamics on the carbonation of industrial alkaline solid wastes", 160,000 Dhs, UAEU-NRF, 2013-2015.
15. Principal-investigator on an External Project titled "Introducing safranal-based nanoparticles as a novel biodegradable anti-cancer drug using supercritical fluid technology", 170,000 Dhs, National Research Foundation, 2012-2014.

16. Co-investigator on an external project titled "Ecological Studies and Seed Oil Composition of the Indigenous *Moringa peregrina*: Toward Conservation and Economic use of UAE plants", 200,000 Dhs, Emirates Foundation, 2010-2012.
17. Co-investigator on an external project titled "Production of Camel Milk Powder using Spray Drying and Supercritical Carbon Dioxide technique", 200,000 Dhs, Emirates Foundation, 2009-2011.
18. Principal-investigator on an External Project titled "Supercritical Carbon Dioxide Extraction and Fractionation of *Moringa Oleifera* Seed Oil", 190,000 Dhs, Emirates Foundation, 2009-2011.
19. Principal-investigator on an Interdisciplinary Project titled "Microencapsulation of Non-steroidal Anti-inflammatory Drugs into Biodegradable Polymers using Supercritical Fluid Technology", 200,000 Dhs, UAEU, 2009-2012.
20. Co-investigator on an Interdisciplinary Project titled "Biodiesel Production by Enzymatic Conversion of Extracted Fats from Lamb Meat under Supercritical Conditions", 200,000 Dhs, UAEU, 2009-2012.
21. Co-investigator on an Interdisciplinary Project titled "Catalytic Conversion of Natural Gas to Higher Hydrocarbons for Cleaner Energy Source and Valuable Chemicals", 200,000 Dhs, UAEU, 2009-2012.
22. Principal-investigator on an Interdisciplinary Project titled "Enhancement of Solubility, Stability, Dissolution Rate, and Bioavailability of Poorly Water-soluble Antifungal Drugs by Complexation with Cyclodextrins", 200,000 Dhs, UAEU, 2005-2008.
23. Co-investigator on an Interdisciplinary Project titled "Anti-cancer activities of indigenous UAE herbs extracted by supercritical carbon dioxide: from identification to mechanisms of action", 200,000 Dhs, UAEU, 2005-2008.
24. Co-investigator on an Interdisciplinary Project titled "In vitro and in vivo animal studies of *Nigella sativa* extract as an antioxidant in petrochemical pollutant induced oxidative stress", 185,000 Dhs, UAEU, 2004-2007.
25. Co-investigator on an Individual Project titled "A Novel Approach to the Management of Seawater Desalination Reject Brine", 27,800 Dhs, UAEU, 2006-2007.
26. Faculty advisor on a Student Project titled "Desalination of seawater using exhaust CO₂", 2000 \$ = 7,345 Dhs, EnPro AS, 2005-2006.
27. Principal-investigator on an Individual project titled "Effect of Supercritical CO₂ on Yield and Composition of Mint Oil", 20,000 Dhs, UAEU, 2004-2005.
28. Principal-investigator on an Interdisciplinary project titled "Enhancement of Solubility, Stability, Dissolution Rate, and Bioavailability of Poorly Water-soluble Antifungal and Antiviral Drugs by Complexation with Cyclodextrins", 200,000 Dhs, UAEU, 2002-2004.
29. Co-investigator on an Individual project titled "Thermodynamic Evaluation of Published Essential Oils Supercritical-Liquid Equilibrium Data and Their Modeling", 22,000 Dhs, UAEU, 2002-2003.

Teaching Experiences

UAE University

CHEM 1094	Math and Engineering Applications I
CHEM 255	Organic Chemistry and Engineering Applications I
CHEM 2705	Physical Chem. & Eng. Appl. I
CHEM 3706	Physical Chem. & Eng. Appl. II
GENG 220	Fundamentals of Engineering II (Engineering Thermodynamics)
GENG 330	Chemical Engineering Fluid Mechanics

CMHE 300	Introduction to Chemical Engineering
CHME 322	Chemical Engineering Thermodynamics
CHME 421	Mass Transfer
CHME 517	Mass Transfer Operations
CHME 575	Independent Studies in Chemical Engineering
CHME 570	Special Topics in Chemical Engineering
CHME 585	Graduation Project I
CHME 590	Graduation Project II
CHME 612	Advanced Reaction Engineering
CHME 640	Directed Studies in Chemical Engineering
ENVR 6217	Selected Topics in Environmental Studies
ENVR 6220	Independent Studies in Environment
ENVR 6112	Thesis Research
CPSE 605	Thesis Research
MTSE 660	Thesis
PTSE 705	Thesis Research
CHME 900	Dissertation Doctoral Research

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CHE 102	Introductory Chemical Engineering Computation
CHE 311	Thermodynamic Properties and Relationships
ENGR 311	Engineering Thermodynamics
ENGR 333	Momentum, Energy, and Mass Transfer
CHE 527	Chemical Engineering Analysis
CHE 537	Chemical Engineering Thermodynamics
CHE 540	Chemical Reactors

Supervision of graduate students

UAE University

- PhD Dissertation of Ms. Noran Mousa, 2021-present, "Utilization of Ionic Liquids in Enhanced Oil Recovery of Emirati Oil Reservoirs", Co-supervisor, Chemical Engineering, UAE University.
- PhD Dissertation of Ms. Sidra Ahmed, 2020-present, "Preparation and Characterization of Polymer Composite Materials for 3D Printing Applications", main supervisor, Chemical Engineering, UAE University.
- PhD Dissertation of Mr. Jawad Mustafa, 2018-present, "CO2 Capture and Brine Management", main supervisor, Chemical Engineering, UAE University.
- PhD Dissertation of Mrs. Aya Abdelhamid Mourad, 2018-present, "Theoretical Studies on the CO2 Capture and Brine Management", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Mr. Ahmad Elsayed, 2018-present, "Reject-Brine Treatment with Carbon Capture: Process Optimization using Artificial Intelligence", main supervisor, Chemical Engineering, UAE University.
- PhD Dissertation of Mrs. Sabeera Haris, 2019-present, "Valorization of Date Fruit Pomace to Polylactic Acid and Adsorbent Material", main supervisor, Water Resources, UAE University.
- PhD Dissertation of Mrs. Ameera Fares Mohammad, 2016-2021, "CO2 Capture through Reactions with High Salinity Water", main supervisor, Chemical Engineering, UAE University.

- PhD Dissertation of Mr. Emmanuel Mubiru, 2017-2021, "Conversion of Date Palm Biomass to High Value Chemicals", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Noran Mousa, 2018-2020, "A new Green Composite Based on Polylactic Acid Mixed with Biomass from UAE Date Palm Waste for Cutlery and Food Packaging Applications", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Sidra Ahmed, 2020, "Preparation and Characterization of Sand-Polymer Composite Sheets for Printing Applications", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Nour Abdelrahman, 2019, "Production of Anti-Corrosion Materials from UAE Date Palm Waste", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Haliemeh Sweidan, 2017, "Effect of Supercritical CO₂ Treatment on Date Pits for Lead Ions Removal", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Mr. Suhaib Mohammad Hameedi, 2016, "Carbon Dioxide Capture by Steel By-Products in a Fluidized Bed Reactor", Co-supervisor, Chemical Engineering, UAE University.
- PhD Dissertation of Ms. Hanifa Taher, 2014, "The Use of Supercritical Fluid Technology in the Enzymatic Production of Biodiesel from Microalgae", co-supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Alia Ali Busamra, 2014, "Treatment of Oil Sludge by using Supercritical Water Oxidation (SCWO)", main supervisor, Environmental Sciences Master Program, UAE University.
- M.Sc. Thesis of Ms. Sanaz Abbaszadegan, 2013, "Introducing Safranin-based Nanoparticles as a Novel Biodegradable Anti-cancer Drug using Supercritical Fluid Technology", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Bushra Saeed Duhai, 2012, "Supercritical CO₂ Extraction of Henna Flower Oil Experimental, Mathematical Modeling and Antimicrobial Properties", main supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Safaa Mohammed Yousif, 2012, "Microencapsulation of Non-Steroidal Anti-inflammatory Drugs into Biodegradable Polymers using Supercritical Fluid Technology", main supervisor, Material Science and Engineering Master Program, UAE University.
- M.Sc. Thesis of Ms. Hanifa Eassa Taher, 2010, "Enzymatic Production of Biodiesel from Animal Fats using SCF", co-supervisor, Chemical Engineering, UAE University.
- M.Sc. Thesis of Ms. Sheikha Al Neyadi, 2009, "A Study on the Germination Ecology and Composition of the Seeds of indigenous *Cyperus conglomeratus*: A sand dunes binder", co-supervisor, Environmental Sciences, UAE University.
- M.Sc. Thesis of Mr. Adel Azzam, 2009, "Extraction of hydrocarbons from crude oil using CO₂ while minimizing organic deposition", main supervisor, Environmental Sciences, UAE University.

Oregon State University

- M.Sc. Thesis of Yi-Min Tang, 2000, "Itraconazole formation using supercritical carbon dioxide", main supervisor, Chemical Engineering, Oregon State University, U.S.A.
- M.Sc. Thesis of Brian Rhee, 1998, "Enhancement of Mass Transfer Coefficient in three-phase Magnetically Stabilized Fluidized Bed", co-supervisor, Chemical Engineering, Oregon State University, U.S.A.

Awards & Honors

- Prime Minister's Medal for the Distinguished Innovator, Mohammed bin Rashid Government Excellence Award, March 3, 2022, Dubai, UAE.
- Chancellor's Innovation Award, for the project titled "Cloudseeding nanocellulose crystals from date palm waste for rain enhancement", Haris, S., Al-Marzouqi, A.H., February 10, 2022, UAEU, Al-Ain, UAE.
- 3rd Place for the Desalination Editors Award Best Poster, "Optimization and statistical modeling of electrodialysis for combined removal of sodium chloride from saline water and carbon dioxide capture using response surface methodology", Mustafa, J., Membrane Desalination 2021 (5th International Conference on Desalination using Membrane Technology), November 14-17, 2021.
- 1st Place Award (Noran Mousa), 4th Place Award (Ahmed Elsayed) and 5th Place Award (Sidra Siraj) in the Falling Walls Lab UAE Competition, June 8, 2020 and opportunity for the first winner to participate at the global Falling Walls Lab finale in Berlin during November 1-10, 2020.
- The 2020 UAE Student Awards for the Advancement of Post-Graduate Education (Masters Category), Abdelrahman, N.Sh., The 10th Gulf Intelligence UAE Energy Forum, January 8, 2020, Abu Dhabi, UAE.
- Best Presentation Award, "Mechanical and Wettability Performance of Sand/HDPE Composite Sheets", Siraj, S., Al-Marzouqi, A.H., The 8th Asia Conference on Mechanical and Materials Engineering (ACMME), June 11-14, 2020, Singapore.
- Best Presentation Award, "Green and Sustainable Antioxidant Polymer from Plant", Abdelrahman, N.Sh., Al-Marzouqi, A.H., 4th Asia Conference on Environment and Sustainable Development (ACESD2019), November 9-11, 2019, The JICA Yokohama Center, Japan.
- Certificate of Achievement from Acting Vice Chancellor and Associate Provost for Research for my contributions to research at UAEU in 2019, Al-Ain, UAE.
- Chancellor's Innovation Award, for the project titled "Simultaneous conversion of industrial wastes and carbon dioxide in a sustainable and energy efficient way into value added products", Mohammad, A.F., Galiwango, E., Mustafa, J., Al-Marzouqi, A.H., February 2019, UAEU, Al-Ain, UAE.
- Chancellor's Innovation Award, for the project titled "Inexpensive, environmentally-friendly cellulose hydroxy-derived from date palm waste in the UAE and used for desalination, carbon dioxide capture and improved oil extraction", Mohammad, A.F., Galiwango, E., Mustafa, J., Lwisa, E., Al-Marzouqi, A.H., February 2019, UAEU, Al-Ain, UAE.
- 3rd Place in the Best Presentation category for the project titled "Stop wasting waste-UAE date palm waste for high value chemicals", Galiwango E., Al-Marzouqi, A.H., Graduate Student Research and Innovation Competition, March 2019, UAEU, Al-Ain, UAE.
- 1st Place in the Best Presentation category for the project titled "Unexploited Gold in UAE date Palm tree: Pretreatment for Production of High Value Chemicals

from Palm Biomass" 3rd UAEU College of Engineering Innovation and Creativity Competition, February 5-6, 2018, Al-Ain, UAE.

- 3rd Place in the Most Innovative Idea category for the project titled "The Future in Palm Biomass: Characterization of Leaflet, Rachis and Fibers of UAE Date Palm Tree Biomass to produce High Value Chemicals", Galiwango, E., Al-Marzouqi, A.H., 3rd UAEU College of Engineering Innovation and Creativity Competition February 5-6, 2018, Al-Ain, UAE.
- 2nd Place in Graduate Student Project category for the project titled "From UAE date palm biomass to corrosion inhibitors" from Emirates Center for Energy and Environment, January 11, 2018, Al-Ain, UAE.
- 3rd Place Award at the 2017 Think Science Competition, April 16-18, 2017, Dubai, UAE.
- Best Project Award and the Best Overall Award at the 2016 Think Science Competition, April 17-19, 2016, Dubai, UAE.
- Best Project Award and the Best Overall Award at the 2014 Think Science Competition, April 20-22, 2014, Dubai, UAE.
- Certificate of Recognition from Research Affairs at UAE University for my contribution as a guest speaker in the UAEU Specialty Symposium on Carbon Management, UAE University, April 2009, Al-Ain, UAE.
- Research Project Award for my interdisciplinary project titled "Anti-cancer Activities of Indigenous UAE Herbs Extracted by Supercritical Carbon Dioxide: From Identification to Mechanisms of Action" at the Eighth Annual UAE University Research Conference, April 2007, Al-Ain, UAE.
- Member of the Organizing Committee for UAE University's participation at the 8th International Defense Exhibition & Conference (IDEX 2007), February 18-22, 2007, Abu Dhabi, UAE in which UAE University received the "Excellent Display Award".
- Merit Award from Associate Provost for Academic Affairs at UAE University, June 2006, Al-Ain, UAE.
- Research Project Award for my non-funded project titled "A Comparative evaluation of SFE and steam distillation methods on the yield and composition of essential oil extracted from Spearmint (*Mentha spicata*)" at the Seventh Annual UAE University Research Conference, April 2006, Al-Ain, UAE.
- First Place Award at the 2006 Environmental Design Contest directed by College of Engineering at UAE University, Al-Ain, U.A.E.
- Certificate of Recognition from General Exhibition Corporation for my contribution to the success of the Environment 2005 Exhibition and Conference, January 30-February 2, 2005, Abu Dhabi, UAE.
- Certificate of Recognition from Vice Chancellor of UAE University for my contribution to the success of UAE University at the Environment 2005 Exhibition and Conference, January 30-February 2, 2005, Abu Dhabi, UAE.
- Certificate of Recognition from Vice Chancellor of UAE University for my contribution to the success of UAE University at the 7th International Defense Exhibition & Conference (IDEX 2005), February 12-17, 2005, Abu Dhabi, UAE.
- First Place Award and the Best Bench-Scale Award at the 2004 Environmental Design Contest directed by College of Engineering at UAE University, Al-Ain, U.A.E.
- Certificate of Appreciation from College of Engineering for my contribution to the success of ENGEX 2004 Exhibition, UAE University, May 2004, Al-Ain, UAE.

- Certificate of Appreciation from College of Engineering for my contribution to the success of the 19th Female Engineering Exhibition: ENGEX 2004, UAE University, May 2004, Al-Ain, UAE.
- Best Interdisciplinary Project Award for my Interdisciplinary project titled "Enhancement of solubility, stability, dissolution rate, and bioavailability of poorly water-soluble antifungal and antiviral drugs by complexation with cyclodextrins" at the Fourth Annual UAE University Research Conference, April 2003, Al-Ain, U.A.E.
- Faculty advisor for female students who received the Best Student Project Award at the Fourth Annual UAE University Research Conference, April 2003, Al-Ain, UAE.
- First Place Award at the 2002 Environmental Design Contest directed by College of Engineering at UAE University, Al-Ain, U.A.E.
- Faculty advisor for the students from Oregon State University who received the Second Place Award, the Best Bench-Scale Award and the Best International Team Award at the 2000 Environmental Design Contest directed by College of Engineering at UAE University, Al-Ain, U.A.E.