





CURRICULUM VITAE

Name: Mohammed J. Al-Marri
Position: Professor and Head
Department of Chemical Engineering
College of Engineering
Qatar University



Date: September 1st, 2025

PERSONAL INFORMATION

Name: Mohammed J. Al-Marri
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EDUCATION

- ❖ **PhD in Chemical Engineering**, University of Leeds, **2009**, U.K.
Thesis Title: Modelling the solution crystallization of L-Glutamic acid as prepared via reactive and cooling crystallization.
- ❖ **M.Sc. in Chemical Engineering**, Texas A & M University, **2000**, USA.
Thesis Title: Analysis of a direct methane conversion to high molecular weight hydrocarbons
- ❖ **B.Sc. in Chemical Engineering**, Qatar University, **1995**, Qatar.
Final year project: Removal of organic pollutants from Water by adsorption on polymeric resins

Continuing Education (Workshops, Short Courses, etc.):

- ABET Program Assessment Workshop, 2012, Qatar.
- Middle Manager Development Programme, 2013, Qatar.
- BHR group pre-symposium workshop, 2014, Qatar.
- Emergency First Aid including CPR & AED, 2014, Qatar.
- Technology Entrepreneurship: Lab to Market, Online Harvard University.

EMPLOYMENT HISTORY

DATE	DESCRIPTION
2024-Present	Professor , Department of Chemical Engineering, Qatar University, Qatar
2023-Present	Head of Chemical Engineering Department , Qatar University, Qatar
2017-2024	Associate Professor , Department of Chemical Engineering, Qatar University, Qatar
2013-2017	Director of the Gas Processing Center , Qatar University, Qatar.
2012-2013	Manager of Industrial Relations Office , College of Engineering, Qatar University, Qatar.
2009-2017	Assistant Professor , Department of Chemical Engineering, Qatar University, Qatar
2000-2009	Lecturer , Chemical Engineering Department, Qatar University, Qatar.
1996-2000	Teaching Assistant , Chemical Engineering Department, Qatar University, Qatar

Leadership Roles Highlights:

Throughout my career, I have had the privilege to serve in various leadership roles as follow:

- Head of Chemical Engineering Department, Qatar University, Qatar, 2023-Present.
- Director of the Gas Processing Center, Qatar University, Qatar, 2013-2017.
- Manager of Industrial Relations Office, College of Engineering, Qatar University, Qatar, 2012-2013.
- Chair of the 5th International Gas Processing Symposium organizing committee, GPC, Qatar University, Qatar, 2016
- Chair of the 4th International Gas Processing Symposium organizing committee, GPC, Qatar University, Qatar, 2014
- Chair of Intellectual Property Advisory Committee, Qatar University, Qatar, 2016-2017.
- Chair of Intellectual Property Advisory Committee, Qatar University, Qatar, 2018-2019.
- Member of Strategic Plan Committee KPA1, Teaching and Learning, Qatar University, Qatar, 2010-2012.
- Member of Strategic Plan Committee KPA2, Research, Qatar University, Qatar, 2013-2015.
- Member of Qatar National Committee of World Petroleum Council (WPC), WPC with QE, 2010-2015.
- Program Advisory Committee for Chemical Engineering, The College of North Atlantic in Qatar (CNAQ) (became University of Doha for Science and Technology), Qatar, 2017-2018

RESEARCH INTERESTS

My research areas are categorized into the following main areas:

- **MODELING AND SIMULATION OF CHEMICAL PROCESSES:** Simulations emphasizing Molecular Simulation as Applied to Carbon Capture, Solar energy, and Oil & Gas Production.

- **CATALYSIS:** synthesis and characterization of new catalysts, performance evaluation of catalyst activity, and reaction kinetics.
- **GAS PROCESSING:** CO₂ Capture and Utilization, produced and processed wastewater treatment and management.

TEACHING AND POSTGRADUATE THESIS SUPERVISION

With respect to teaching, I have observed that encouraging and fostering a supportive learning environment are key elements for students' success. Passive lecturing typically results in poor student learning experience. On the other hand, promoting and encouraging student-centered teaching approaches helps students learn and retain the taught materials. One example of such student-centered learning approaches is allowing students to solve problems independently rather than furnish solutions without allowing them to engage in critical thinking about the solutions.

COURSES TAUGHT

Course Code	Title of Course	Credit-Hours	# of Semesters Taught
CHME 201	Introduction to Chemical Engineering I	3	4
CHME 202	Introduction to Chemical Engineering II	3	4
CHME 212	Chemical Engineering Thermodynamics I	3	2
CHME 313	Mass Transfer I	3	1
CHME 314	Chemical Reaction Engineering	3	8
CHME 325	Chemical Engineering Laboratory II	1	1
CHME 399	Summer Training	3	2
CHME 421	Plant Design I	3	9
CHME 422	Plant Design II	3	9
CHME 495	Graduation Project I	1	2
CHME 496	Graduation Project II	3	2
GENG 300	Numerical Methods	3	15
EEMP 595	Master Thesis I	1	1

GRADUATE STUDENT SUPERVISION

No	Academic Year	Type of Supervision	Project Title
1.	2017	Thesis Committee Member	Emergent Phenomena during Gas Production from Hydrate-bearing Sediments by Depressurization and CH ₄ -CO ₂ Exchange (PhD student)
2.	2019	Dissertation Committee Member	Bifacial Solar Technology: A multi-scale study from design of solar cells to performance evaluation of photovoltaics in-field.

3.	2022-2023	Main Supervisor	Walnut shell based adsorbents (Graduate Assistant)
4.	2022-Present	Main Supervisor	Development of an advanced produced water treatment for possible recycling and reuse: coupled electrocoagulation- Membrane technologies (PhD student)
5.	2023-Present	Main Supervisor	Role of transition metals single atoms on oxygen storage property of CeO ₂ to modulate catalytic performance for CO ₂ conversion (PhD student)
6.	2024-Present	Main Supervisor	Metal-free carbon catalysts for Hydrogen Evolution Reaction (MSc student)

UNDERGRADUATE SUPERVISION

No	Academic Session	Number of students	Project Title
1.	2011-2012	4	Hydrocarbons Vapour-Liquid Equilibrium
2.	2015-2016	4	Experimental determination of the kinetics of CO ₂ reaction with a mixture of amine solvents using stopped flow technique

RESEARCH GRANTS

PROJECT TITLE	SPONSOR	DURATION	ROLE	AMOUNT (U.S. \$)
Gas to liquid (GTL) catalysis study	Qatar University	October 2011-May 2012	LPI	\$ 10,000.00
GTL catalysis study project	Qatar University	May 2012	LPI	\$ 450,000.00
De-watering of water-in-oil emulsions by electrocoalescence and development of compact electro-coalescers	Qatar National Research Foundation (QNRF), NPRP5-366-2-143	April 2013-September 2016	P.I.	\$ 1,028,122.00
Advanced Produced Water Treatment	Maersk Qatar	December 2013-June 2016	P.I.	\$ 1,000,000.00
Learning from Nature: Coherence for Novel Solar Applications	QNRF, NPRP7-227-1-034	January 2015-January 2018	LPI	\$ 899,923.20
CO ₂ Conversion to Value-added Chemical	Shell Qatar	February 2018-February 2021	P.I.	\$ 300,000.00
Enhancing Natural Gas Recovery by CO ₂ Injection and Storage in Qatar's Reservoirs: From Molecular Modeling to Core-Scale Flooding.	QNRF, NPRP10-0125-170235	April 2018-April 2021	LPI	\$ 541,690.00
Determining the OGIP for the Qatari Shale Reservoirs: Pore to Core Scale Investigation	QNRF, NPRP12S-0130-190023	April 2020-April 2023	P.I.	\$ 598,824.00
Thermo-neutral Tri-reforming of Methane - Catalysis and Reactor Design	QNRF, NPRP14S-0302-210011	March 2023-March 2027	P.I.	\$ 623,700.00

SCHOLARLY ACHIEVEMENTS

My goals are to conduct research in areas of great interest to Qatar and the region and to develop new knowledge in areas of my expertise for applied research.

PATENTS (P)

- P1** Aboubakr M. ABDULLAH, Vincenzino VIVACQUA, **Mohammed J. AL-MARRI**, Barry AZZOPARDI, Bijan KERMANI, Ali HASSANPOUR, Buddhika HEWAKANDAMBY, Mojtaba Ghadiri, COMPACT ELECTROCOALESCER WITH CONICAL FRUSTUM ELECTRODES, Patent No.: **US 10,786,757 B2**.
- P2** **Mohammed J. Al-Marri**, Mohammed A. Saad, Mahmoud M. Khader, Sardar Ali, Ahmed G. Abdelmoneim, NICKEL CATALYST FOR DRY AND LOW TEMPERATURE STEAM REFORMING OF METHANE, Pub. No.: **US 11,311,860 B2**.
- P3** Mahmoud M. Khader, **Mohammed J. Al-Marri**, Sardar Ali, Ahmed G. Abdelmoneim, Anand Kumar, PALLADIUM CATALYST FOR OXIDATION OF METHANE AND METHOD OF PREPARATION AND USE THEREOF, Pub. No.: **US 11,458,457 B2**.
- P4** Renju Zacharia, **Mohammed J. Al-Marri**, NANOPOROUS CERIUM OXIDE WITH INTERCONNECTED PORES FOR CATALYSIS AND A COST – EFFECTIVE METHOD OF PREPARING THEREOF, Patent No. : **US 10,639,621 B2**.

Books and/or Book Chapters (B)

- B1.** **Mohammed J. Al-Marri**, and Fadwa T. Eljack. Advances in Gas Processing, Proceeding of the 4th International Gas Processing Symposium, 2014.
- B2.** Benamor, A., Nasser, M., **Al-Marri, Mohammed J.**, Encyclopedia of Sustainable Technologies by Abraham, M.: Gas Processing Technology-Treatment and Utilization, 2017.
- B3.** Renju Zacharia, Muftah H El-Naas, **Mohammed J. Al-Marri**, Water Management, CRC Press, 2018.

REFEREED JOURNAL PAPERS (J.P.)

- JP01.** **Al Marri MJ**, Fayyad EM, Hassan A, Khader MM. Mechanism of GaAs surface sulfidation. International Journal of Electrochemical Science. **2014**; 9(12):7287-99. (IF=1.33) , <http://www.electrochemsci.org/papers/vol9/91207287.pdf>.
- JP02.** **Al-Marri MJ**, Khader MM, Giannelis EP, Shibl MF. Optimization of selection of chain amine scrubbers for CO2 capture. Journal of molecular modeling. **2014**; 20(12):2518. (IF=1.438), doi.org/10.1007/s00894-014-2518-8.
- JP03.** Judd S, Qiblawey H, **Al-Marri M**, Clarkin C, Watson S, Ahmed A, et al. The size and performance of offshore produced water oil-removal technologies for reinjection. Separation and Purification Technology. **2014**; 134:241-6. (IF=3.299), doi.org/10.1016/j.seppur.2014.07.037.
- JP04.** Almarouf HS, Nasser MS, **Al-Marri MJ**, Khraisheh M, Onaizi SA. Demulsification of stable emulsions from produced water using a phase separator with inclined

parallel arc coalescing plates. *Journal of Petroleum Science and Engineering*. **2015**; 135:16-21. (IF=1.655), doi.org/10.1016/j.petrol.2015.08.005.

- JP05.** **Al-Marri MJ**, Khader MM, Tawfik M, Qi G, Giannelis EP. CO₂ sorption kinetics of scaled-up polyethylenimine-functionalized mesoporous silica sorbent. *Langmuir*. **2015**; 31(12):3569-76. (IF=3.993), doi.org/10.1021/acs.langmuir.5b00189.
- JP06.** **Al-Marri MJ**, Masoud MS, Nassar AMG, Zagho MM, Khader MM. Synthesis and characterization of poly(vinyl alcohol): Cloisite® 20A nanocomposites. *Journal of Vinyl and Additive Technology*. **2015**. (IF=1.55), <http://onlinelibrary.wiley.com/doi/10.1002/vnl.21496/pdf>.
- JP07.** Atilhan M, Aparicio S, Ejaz S, Zhou J, **Al-Marri M**, Holste JJ, et al. Thermodynamic characterization of deepwater natural gas mixtures with heavy hydrocarbon content at high pressures. *Journal of Chemical Thermodynamics*. **2015**; 82:134-42. (IF=2.196), doi.org/10.1016/j.jct.2014.10.018.
- JP08.** Benamor A, **Al-Marri MJ**, Hawari A. Experimental determination of carbamate formation and amine protonation constants in 3-amino-1-propanol-CO₂-H₂O system and their temperature dependency. *International Journal of Greenhouse Gas Control*. **2015**; 37:237-42. (IF=4.064),.
- JP09.** Liang Z, Rongwong W, Liu H, Fu K, Gao H, Cao F, Zhang R, Sema T, Henni A, Sumon K, Nath D., Gelowitz D., Srisang W, Saiwan C, Benamor A, **Al-Marri MJ**, Shi H, Supap T, Chan C, Zhou Q, Abu-Zahra M, Wilson M, Olson W, Idem R, Tontiwachwuthikul P. Recent progress and new developments in post-combustion carbon-capture technology with amine based solvents, *International Journal of Greenhouse Gas Control*, **2015**, 40, 26-54. (IF=4.064) , dx.doi.org/10.1016/j.ijggc.2015.06.017
- JP10.** Mhatre S, Vivacqua V, Ghadiri M, Abdullah AM, **Al-Marri MJ**, Hassanpour A, Hewakandamby B, Azzopardi B, Kermani B. Electrostatic phase separation: A review, *Chemical Engineering Research and Design* **2015**, 96, 177-195. (IF=2.525), doi.org/10.1016/j.cherd.2015.02.012.
- JP11.** Vivacqua V, Mhatre S, Ghadiri M, Abdullah AM, Hassanpour A, **Al-Marri MJ**, Azzopardi B, Hewakandamby B, Kermani B. Electrocoalescence of water drop trains in oil under constant and pulsatile electric fields, *Chemical Engineering Research and Design* **2015**, 104, 658-668. (IF=2.525), doi.org/10.1016/j.cherd.2015.10.006.
- JP12.** Ali S, **Al-Marri MJ**, Abdelmoneim AG, Kumar A, Khader MM. Catalytic evaluation of nickel nanoparticles in methane steam reforming. *International Journal of Hydrogen Energy*. **2016**; 41(48):22876-85. (IF=3.582)
- JP13.** Ashok A, Kumar A, Bhosale RR, Saleh MAH, Ghosh UK, Al-Marri M, Almomani FA, Khader MM, Tarlochan F. Cobalt oxide nanopowder synthesis using cellulose assisted combustion technique, *Ceramics International* **2016**. (IF=2.758), doi.org/10.1016/j.ceramint.2016.05.035.
- JP14.** Benamor A, **Al-Marri MJ**, Khraisheh M, Nasser MS, Tontiwachwuthikul P. Reaction kinetics of carbon dioxide in aqueous blends of N-

methyldiethanolamine and glycine using the stopped flow technique. Journal of Natural Gas Science and Engineering. **2016**; 33:186-95. (IF=2.045), doi.org/10.1016/j.jngse.2016.04.063.

- JP15.** Chen J, Liu D, **Al-Marri MJ**, Nuuttila L, Lehtivuori H, Zheng K. Photo-stability of CsPbBr₃ perovskite quantum dots for optoelectronic application. Science China Materials. **2016**; 59(9):719-27
- JP16.** Ihsanullah, Abbas A, Al-Amer AM, Laoui T, **Al-Marri MJ**, Nasser MS, Khraisheh M, Atieh MA. Heavy metal removal from aqueous solution by advanced carbon nanotubes: Critical review of adsorption applications. Separation and Purification Technology. **2016**; 157:141-61. (IF=3.299), doi.org/10.1016/j.seppur.2015.11.039.
- JP17.** Junsheng C, Karel Ž, Mohamed A, **Al-Marri MJ**, Kaibo Z, Tõnu P. Surface plasmon inhibited photo-luminescence activation in CdSe/ZnS core-shell quantum dots. Journal of Physics: Condensed Matter. **2016**; 28(25):254001. (IF=2.649), <http://iopscience.iop.org/article/10.1088/0953-8984/28/25/254001/meta>.
- JP18.** Kayvani Fard A, Rhadfi T, McKay G, **Al-Marri MJ**, Abdala A, Hilal N, Hussien MA. Enhancing oil removal from water using ferric oxide nanoparticles doped carbon nanotubes adsorbents. Chemical Engineering Journal. **2016**; 293:90-101. (IF=5.310), doi.org/10.1016/j.cej.2016.02.040.
- JP19.** Kumar A, Ashok A, Bhosale RR, Saleh MAH, Almomani FA, Al-Marri MJ, Khader MM, Tarlochan F. In situ DRIFTS Studies on Cu, Ni and CuNi catalysts for Ethanol Decomposition Reaction. Catalysis Letters. **2016**; 146(4):778-87. (IF=2.307), doi.org/10.1007/s10562-016-1706-9.
- JP20.** Kumar A, Bhosale RR, Malik SS, Abusrafa AE, Saleh MAH, Ghosh UK, **Al-Marri MJ**, Almomani FA, Khader MM, Abu-Reesh IM. Thermodynamic investigation of hydrogen enrichment and carbon suppression using chemical additives in ethanol dry reforming. International Journal of Hydrogen Energy. **2016**; 41(34):15149-57. (IF=3.205), doi.org/10.1016/j.ijhydene.2016.06.157.
- JP21.** Lenngren N, Abdellah MA, Zheng K, **Al-Marri MJ**, Zigmantas D, Zidek K, Pullerits T. Hot electron and hole dynamics in thiol-capped CdSe quantum dots revealed by 2D electronic spectroscopy. Physical Chemistry Chemical Physics. **2016**; 18(37):26199-204. (IF=4.449), [doi. 10.1039/C6CP04190F](https://doi.org/10.1039/C6CP04190F).
- JP22.** Manasrah AD, Al-Mubaiyeh UA, Laui T, Ben-Mansour R, **Al-Marri MJ**, Almanassra IW, Abdala A, Atieh MA. Heat transfer enhancement of nanofluids using iron nanoparticles decorated carbon nanotubes. Applied Thermal Engineering. **2016**; 107(Supplement C):1008-18. (IF=3.043), doi.org/10.1016/j.applthermaleng.2016.07.026.
- JP23.** Nasser MS, **Al-Marri MJ**, Benamor A, Onaizi SA, Khraisheh M, Saad MA. Flocculation and viscoelastic behavior of industrial papermaking suspensions. Korean Journal of Chemical Engineering. **2016**; 33(2):448-55. (IF=1.166), doi.org/10.1007/s11814-015-0167-y.

- JP24.** Nasser MS, Onaizi SA, Hussein IA, Saad MA, **Al-Marri MJ**, Benamor A. Intercalation of ionic liquids into bentonite: Swelling and rheological behaviors. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. **2016**; 507(Supplement C):141-51. (IF=2.760), doi.org/10.1016/j.colsurfa.2016.08.006.
- JP25.** Nwaoha C, Saiwan C, Supap T, Idem R, Tontiwachwuthikul P, Rongwong W, **Al-Marri MJ**, Benamor A. Carbon dioxide (CO₂) capture performance of aqueous tri-solvent blends containing 2-amino-2-methyl-1-propanol (AMP) and methyldiethanolamine (MDEA) promoted by diethylenetriamine (DETA). *International Journal of Greenhouse Gas Control*. **2016**; 53(Supplement C):292-304. (IF=4.064), doi.org/10.1016/j.ijggc.2016.08.012.
- JP26.** Nwaoha C, Saiwan C, Tontiwachwuthikul P, Supap T, Rongwong W, Idem R, **Al-Marri MJ**, Benamor A. Carbon dioxide (CO₂) capture: Absorption-desorption capabilities of 2-amino-2-methyl-1-propanol (AMP), piperazine (PZ) and monoethanolamine (MEA) tri-solvent blends. *Journal of Natural Gas Science and Engineering*. **2016**; 33(Supplement C):742-50. (IF=2.045), doi.org/10.1016/j.jngse.2016.06.002.
- JP27.** Saad MA, Al-Marri MJ, Yaumi AL, Hussein IA, Shawabkeh R. An Experimental and Kinetic Study of the Sorption of Carbon Dioxide onto Amine-Treated Oil Fly Ash. *Journal of Chemistry*. **2016**; 2016. (IF=0.996), doi.org/10.1155/2016/6021798.
- JP28.** Schulze J, Shibl MF, **Al-Marri MJ**, Kühn O. Multi-layer multi-configuration time-dependent Hartree (ML-MCTDH) approach to the correlated exciton-vibrational dynamics in the FMO complex. *The Journal of Chemical Physics*. **2016**; 144(18):185101. (IF=1.758), doi.org/10.1063/1.4948563.
- JP29.** Singto S, Supap T, Idem R, Tontiwachwuthikul P, Tantayanon S, Al-Marri MJ, Benamor A. Synthesis of new amines for enhanced carbon dioxide (CO₂) capture performance: The effect of chemical structure on equilibrium solubility, cyclic capacity, kinetics of absorption and regeneration, and heats of absorption and regeneration. *Separation and Purification Technology*. **2016**; 167:97-107. (IF=3.299), doi.org/10.1016/j.seppur.2016.05.002.
- JP30.** Vivacqua V, Ghadiri M, Abdullah AM, Hassanpour A, **Al-Marri MJ**, Azzopardi B, Hewakandamby B, Kermani B. Analysis of partial electrocoalescence by Level-Set and finite element methods. *Chemical Engineering Research and Design*. **2016**; 114(Supplement C):180-9. (IF=2.525), doi.org/10.1016/j.cherd.2016.08.019.
- JP31.** Vivacqua V, Ghadiri M, Abdullah AM, Hassanpour A, **Al-Marri MJ**, Azzopardi B, Hewakandamby B, Kermani B. Linear dynamics modelling of droplet deformation in a pulsatile electric field. *Chemical Engineering Research and Design*. **2016**; 114(Supplement C):162-70. (IF=2.525), doi.org/10.1016/j.cherd.2016.08.015.
- JP32.** Zheng K, Abdellah M, Zhu Q, Kong Q, Jennings G, Kurtz CA, Messing ME, Niu Y, Gosztola DJ, **Al-Marri MJ**, Zhang X, Pullerits T, Canton, SE. Direct Experimental Evidence for Photoinduced Strong-Coupling Polarons in Organolead Halide

Perovskite Nanoparticles. The Journal of Physical Chemistry Letters. **2016**; 7(22):4535-9.

- JP33.** Zheng K, Žídek K, Abdellah M, Chen J, Chábera P, Zhang W, **Al-Marri MJ**, Pullerits T. High Excitation Intensity Opens a New Trapping Channel in Organic-Inorganic Hybrid Perovskite Nanoparticles. ACS Energy Letters. **2016**; 1(6):1154-61.
- JP34.** Zheng K, Žídek K, Abdellah M, Messing ME, **Al-Marri MJ**, Pullerits T. Trap States and Their Dynamics in Organometal Halide Perovskite Nanoparticles and Bulk Crystals. Journal of Physical Chemistry C. **2016**; 120(5):3077-84. (IF=4.509), doi.org/10.1021/acs.jpcc.6b00612.
- JP35.** Zhong N, Liu H, Luo X, **Al-Marri MJ**, Benamor A, Idem R, Tontiwachwuthikul P, Liang Z. Reaction Kinetics of Carbon Dioxide (CO₂) with Diethylenetriamine and 1-Amino-2-propanol in Nonaqueous Solvents Using Stopped-Flow Technique. Industrial & Engineering Chemistry Research. **2016**; 55(27):7307-17. (IF=2.567), doi.org/10.1021/acs.iecr.6b00981.
- JP36.** Zsirai T, Al-Jaml AK, Qiblawey H, **Al-Marri MJ**, Ahmed A, Bach S, Watson S, Judd S. Ceramic membrane filtration of produced water: Impact of membrane module. Separation and Purification Technology. **2016**; 165:214-21. (IF=3.299), doi.org/10.1016/j.seppur.2016.04.001.
- JP37.** Ali S, Zabidi NAM, **Al-Marri MJ**, Khader MM. Effect of the support on physicochemical properties and catalytic performance of cobalt based nano-catalysts in Fischer-Tropsch reaction. Materials Today Communications. **2017**; 10(Supplement C):67-71.
- JP38.** **Al-Marri MJ**, Kuti YO, Khraisheh M, Kumar A, Khader MM. Kinetics of CO₂ Adsorption/Desorption of Polyethyleneimine-Mesoporous Silica. Chemical Engineering & Technology. **2017**; 40(10):1802-9.
- JP39.** Bokareva OS, Shibl MF, **Al-Marri MJ**, Pullerits T, Kühn O. Optimized Long-Range Corrected Density Functionals for Electronic and Optical Properties of Bare and Ligated CdSe Quantum Dots. Journal of Chemical Theory and Computation. **2017**; 13(1):110-6.
- JP40.** Chen J, Žídek K, Chábera P, Liu D, Cheng P, Nuuttila L, **Al-Marri MJ**, Lehtivuori H, Messing ME, Han K, Zheng K, Pullerits T. Size- and Wavelength-Dependent Two-Photon Absorption Cross-Section of CsPbBr₃ Perovskite Quantum Dots. The Journal of Physical Chemistry Letters. **2017**; 8(10):2316-21.
- JP41.** Hossain MA, Al-Gaashani R, Hamoudi H, **Al-Marri MJ**, Hussein IA, Belaidi A, Merzougui BA, Alharbi FH, Tabet N. Controlled growth of Cu₂O thin films by electrodeposition approach. Materials Science in Semiconductor Processing. **2017**; 63(Supplement C):203-11.
- JP42.** Liu H, Idem R, PaitoonTontiwachwuthikul, Liang Z, Rongwong W, **Al-Marri MJ**, Benamor A. Analysis of CO₂ Solubility and Absorption Heat into Aqueous 1-Diethylamino-2-propanol. Energy Procedia. **2017**; 114(Supplement C):873-9.

- JP43.** Mahmud N, Benamor A, Nasser MS, **Al-Marri MJ**, Qiblawey H, Tontiwachwuthikul P. Reaction kinetics of carbon dioxide with aqueous solutions of L-Arginine, Glycine & Sarcosine using the stopped flow technique. *International Journal of Greenhouse Gas Control*. **2017**; 63(Supplement C):47-58.
- JP44.** Matin MA, Kumar A, Bhosale RR, Saleh Saad MAH, Almomani FA, **Al-Marri MJ**. PdZn nanoparticle electrocatalysts synthesized by solution combustion for methanol oxidation reaction in an alkaline medium. *RSC Advances*. **2017**; 7(68):42709-17.
- JP45.** Mohamed FS, Jan S, **Al-Marri MJ**, Oliver K. Multilayer-MCTDH approach to the energy transfer dynamics in the LH2 antenna complex. *Journal of Physics B: Atomic, Molecular and Optical Physics*. **2017**; 50(18):184001.
- JP46.** Moussa DT, El-Naas MH, Nasser M, **Al-Marri MJ**. A comprehensive review of electrocoagulation for water treatment: Potentials and challenges. *Journal of Environmental Management*. **2017**; 186(Part 1):24-41.
- JP47.** N SB, Nemec H, Zidek K, Abdellah M, **Al-Marri MJ**, Chabera P, Ponseca C, Zheng K, Pullerits T. Time-resolved terahertz spectroscopy reveals the influence of charged sensitizing quantum dots on the electron dynamics in ZnO. *Physical Chemistry Chemical Physics*. **2017**; 19(8):6006-12.
- JP48.** Nwaoha C, Idem R, Supap T, Saiwan C, Tontiwachwuthikul P, Rongwong W, **Al-Marri MJ**, Benamor A. Heat duty, heat of absorption, sensible heat and heat of vaporization of 2-Amino-2-Methyl-1-Propanol (AMP), Piperazine (PZ) and Monoethanolamine (MEA) tri-solvent blend for carbon dioxide (CO₂) capture. *Chemical Engineering Science*. **2017**; 170(Supplement C):26-35.
- JP49.** Nwaoha C, Saiwan C, Supap T, Idem R, Tontiwachwuthikul P, **Al-Marri MJ**, Benamor A. Regeneration Energy Analysis of Aqueous Tri-Solvent Blends Containing 2-Amino-2-Methyl-1-Propanol (AMP), Methyldiethanolamine (MDEA) and Diethylenetriamine (DETA) for Carbon Dioxide (CO₂) Capture. *Energy Procedia*. **2017**; 114(Supplement C):2039-46.
- JP50.** Nwaoha C, Supap T, Idem R, Saiwan C, Tontiwachwuthikul P, **Al-Marri MJ**, Benamor A. Advancement and new perspectives of using formulated reactive amine blends for post-combustion carbon dioxide (CO₂) capture technologies. *Petroleum*. **2017**; 3(1):10-36.
- JP51.** Okonkwo P, Shakoor R, Benamor A, Amer Mohamed A, **Al-Marri MJ**. Corrosion Behavior of API X100 Steel Material in a Hydrogen Sulfide Environment. *Metals*. **2017**; 7(4):109.
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- CP02** **Mohammed J. Al-Marri**, T Mahmud, and K. J. Roberts. Wall Temperature Effect and Scale-up on Cooling Crystallization, 8th World Congress of Chemical Engineering, **2009**.
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- CP04** Sardar Ali, Moustafa.M. Zhago, **Mohammed J. Al-Marri**, Yara I. Arafat, Mahmoud M. Khader, "Development of Nickel-based Catalysts for Methane Steam Reforming", the 4th International Gas Processing Symposium, October 26–27, Doha, Qatar, **2014**.
- CP05** Sardar Ali, **Mohammed J. Al-Marri**, Ahmed Gamal Abdul Monem, Yara Ibrahim Arafat, , Mahmoud M. Khader, "The Development of Core-Shell, Methane-Oxidation Catalysts", the 4th International Gas Processing Symposium, October 26–27, Doha, Qatar, **2014**.
- CP06** **Mohammed J. Al-Marri**, Sardar Ali, Ahmad Gamal, Yara Arafat and Mahmoud Khader, "Development of Methane Oxidation Catalysts", 198th ACS Meeting, San Francisco, Ca , USA, 14 -18 Augut **2014**.
- CP07** **Mohammed J. Al-Marri**, M. M. Khader, M. Tawfik, G. Qi and E.P. Giannelis. "Enhancing CO₂ adsorption on Polyethyleneimine - mesoporous silica by treatment with a nonionic surfactant", the 4th International Gas Processing Symposium, October 26–27, Doha, Qatar, **2014**.
- CP08** **Mohammed J. Al-Marri**, S. Ali, M.M. Zhago, M. M. Khader, "Synthesis, Characterization and Catalytic Performance of Supported Nickel Nanoparticles in Methane Steam Reforming", NanoTech France **2015**.
- CP09** Abdelbaki Benamor and **Mohammed J. Al-Marri**, "Studying The Promoting Effect of Glycine on The Kinetics of Carbon Dioxide Reaction with Methyldiethanolamine Using Stopped Flow Technique", International Conference on Engineering and Natural Science (ICENS), Kuala Lumpur, Malaysia, 14 March **2015**.
- CP10** Abdelbaki Benamor and **Mohammed J. Al-Marri**, "Reactive Absorption of Carbon Dioxide into Piperazine Activated Diethanolamine Solutions", International Conference on Chemical, Industry and Science (ICCIS 2015). February 27-28, Kuching, Malaysia, **2015**.
- CP11** Abdelbaki Benamor, **Mohammed J. Al-Marri**, Wichitpan Rongwong and Paitoon Tontiwachwuthikul, kinetics of co₂ reaction with solutions of N-methyldiethanolamine mixed with selected amino acids using stopped flow technique, 2015 AIChE Annual Meeting, November 8-13, Salt Lake City, Utah, USA, **2015**.
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using stopped flow technique, 2015 AIChE Annual Meeting, November 8-13, Salt Lake City, Utah, USA, **2015**.

- CP13** **Al-Marri, Mohammed J.**, Umer Mehmood, Ibbelwaleed A. Hussein, "Enhancement of power conversion efficiency of dyesensitized solar cells using nanocomposites of carbonaceous materials with TiO₂", European Advanced Materials Congress, Stockholm, Sweden, August 23-25, **2016**.
- CP14** Benamor, A., Ahmed Gomaa Talkhan and **Mohammed J. Al-Marri**, Corrosion Study of Carbon Steel in CO₂ Loaded Amine-Amino Acid Solutions- Case of N-Methyldiethanolamine and Arginine, Global Conference on Engineering & Technology, Kuala Lumpur, June 1-2, **2016**.
- CP15** Mahmoud M. Khader, Sardar Ali, **Mohammed J. Al-Marri**, Ahmed G. Abdelmoneim "Methane oxidation Pd/CeO₂ robust catalyst", The 5th International Gas Processing Symposium, Doha, Nov 27-29, **2016**.
- CP16** Sardar Ali, **Mohammed J. Al-Marri**, Ahmed G. Abdelmoneim, Mahmoud M. Khader "Effects of Shell Composition on the Catalytic Performances of Pd-Based Core-Shell, Methane-Oxidation Catalysts" The 5th International Gas Processing Symposium, Doha, Nov 27-29, **2016**.
- CP17** Abdelbaki Benamor, M. N. Nasser, **Mohammed J. Al-Marri**, Kinetics of Carbon Dioxide Reaction with Aqueous Solution of N-Methyldiethanolamine in the Presence Alkaline Amino Acid Salts Using Stopped Flow Technique. 2016 AIChE Annual Meeting, November 13-18, San Francisco, USA, **2016**.
- CP18** Abdelbaki Benamor, Ahmed Gomaa Talkhan and **Mohammed J. Al-Marri**, Experimental solubility and modelling of CO₂ absorption into aqueous blends of Amine-amino acid system, The 5th International Gas Processing Symposium, Nov 27-28, Doha Qatar, **2016**.
- CP19** M. M. Khader, **Mohammed J. Al-Marri**, Sardar Ali, Ahmed G. Abdelmoneim, Anand Kumar, Mohd Ali H. Saleh, Ahmed Soliman, "Catalytic evaluation of Ni-based nano-catalysts in dry reformation of methane," IEEE 17th International Conference on Nanotechnology (IEEE-NANO), Pittsburgh, PA, **2017**, pp. 1051-1055, doi: 10.1109/NANO.2017.8117488.
- CP20** Chikezie Nwaoha, Paatoon Tontiwachwuthikul, Raphael Idem, **Mohammed J. Al-Marri**, Abdelbaki Benamor, Pilot Plant Study of Novel AMP-Based Amine Solvent Blend for CO₂ Capture: Rich Amine Loading, Absorption Rate, Absorber Overall Volumetric Mass Transfer Coefficient and Amine Cost, 14th Greenhouse Gas Control Technologies Conference, Melbourne, Australia, 21-26 October **2018** (GHGT-14)
- CP21** Jan Schulze, Mohamed F. Shibl, **Mohammed J. Al-Marri**, Oliver Kuhn, High-dimensional exciton-vibrational wave-packet dynamics in the FMO complex. influence of site-specific spectral densities, EPJ Web Conf. 205 10010, XXI International Conference on Ultrafast Phenomena, Hamburg, Germany, **2018**.
- CP22** G. Carchini, I. Hussein, **Mohammed J. Al-Marri**, S. Aparicio, A Theoretical Study of Gas Adsorption on Calcite for CO₂ Enhanced Natural Gas Recovery, Third EAGE WIPIC Workshop: Reservoir Management in Carbonates, Doha, Qatar, Nov **2019**.
- CP23** F. Al-Ajmi, **Mohammed J. Al-Marri**, F. Almomani, Development of an advanced produced water treatment for possible recycling and reuse, International

Conference on Challenges in Environmental Science & Engineering (CESE), Perth, Australia, 5-9 November **2023**.

CP24 Easwari Padma Kumari, Anand Kumar, Faris Tarlochan, **Mohammed J. Al-Marri**, Synthesis and Evaluation of Nickel Catalysts for Oxygen Evolution Reaction–Impact of Electrolyte Temperature, 247th ECS Meeting, Montreal, Canada, May 18-22, **2025**

NON-TECHNICAL PRESENTATIONS:

Al-Marri, Mohammed J. (Presenter), ITF GCC Meeting, "Current R & D capabilities and Future Work," Qatar. **2013**.

Al-Marri, Mohammed J. (Coordinator/Organizer/Presenter), Technical Advisory Committee (TAC), "TAC Meetings," Q.U., Qatar. **2014, 2015, 2016, 2017**.

Al-Marri, Mohammed J. (Speaker), Organization of Arab Petroleum Exporting Countries (OAPEC), "Energy research efforts and achievements Strength and weakness in R & D," Kuwait. **2017**.

AWARDS AND RECOGNITION

- Academic Standing honors during B.S. studies **1991, 1992-93, 1993, 1994-1995**.
- A Scholarship by SPE (Society of Petroleum Engineers) during B.S. studies, **1995**.
- Received a shield from the English Language Institute for being an outstanding full-time student at Texas A&M University in **1997**.
- Received High Annual Performance Evaluation Scores (Exceeded Expectations) at Q.U., **2012-2021**.
- College of Engineering Top 20 highly cited authors (**2014-2020**).
- Won 3rd place in the Senior Design Project Competition, **2022**.

LEADERSHIP & SERVICES

In terms of my service contributions, I have actively participated in various departmental, college, and university-level committees. Additionally, I have held several administrative positions and served on committees beyond Qatar University. Specifically, I served as the Industrial Relations Office Manager at the College of Engineering, Qatar University, during the period 2012-2013. Subsequently, I assumed the role of Director of the Gas Processing Center (GPC) from 2013 to 2017. Additionally, I am currently serving as the Head of the Chemical Engineering Department.

COMMITTEES (AT QATAR UNIVERSITY)

AT UNIVERSITY LEVEL

Committee Name	Standing/Ad hoc	Applicant Role	Dates
Strategic Plan Committee KPA1, Teaching and Learning	Standing	Member	2010-2012
Strategic Plan Committee KPA2, Research	Standing	Member	2013-2015
Procurement Committee	Standing	Member	2016-2017
Qatar University & Qatar Shell Joint Steering Committee	Ad hoc	Member	2013-2014
Executive Committee for Environmental Studies Center (ESC)	Ad hoc	Member	2013-2015
Intellectual Property Advisory Committee	Standing	Chair	2016-2017
Intellectual Property Advisory Committee	Standing	member	2017-2018
Intellectual Property Advisory Committee	Standing	Chair	2018-2019

AT COLLEGE LEVEL

Committee Name	Standing/Ad hoc	Applicant Role	Dates
5 th International Gas Processing Symposium organizing committee	Standing	Chair	2016
Department Center Integration Committee	Ad hoc	Member	2016
4 th International Gas Processing Symposium organizing committee	Standing	Chair	2014
Out-reach Committee	Standing	Chair	2012-2013
Research Committee	Standing	Member	2014-2017
KPA 3 Working Group	Ad hoc	Member	2013-2014

AT Department LEVEL

Committee Name	Standing/Ad hoc	Applicant Role	Dates
Students Activities Committee, Chemical Engineering	Standing	Member	2011-2013
Recruitment Committee, CHME	Standing	Member	2012-2013

GPC strategic planning committee	Ad hoc	Member	2013- 2017
GPC Annual Report Committee	Ad hoc	Chair	2013- 2017
GPC Budgeting Committee	Ad hoc	Chair	2013- 2017
GPC Equipment committee	Ad hoc	Chair	2013- 2017
GPC- Non-Academic Review Committee	Ad hoc	Chair	2013-2014
Research and Graduate Studies Committee, Chemical Engineering	Standing	Member	2013-2023

COMMITTEES (OUTSIDE QATAR UNIVERSITY):

Committee Name	Standing/ Ad hoc	Applicant Role	Dates	Remarks
Qatar National Committee of World Petroleum Council (WPC)	Standing	Member	2010-2015	WPC
Doha Carbon and Energy Forum (DCEF) Technical Committee	Standing	Member	2013-2014	Q.F.
Program Advisory Committee in The College of North Atlantic in Qatar (CNAQ) (became University of Doha for Science and Technology)	Standing	Member	2017-2018	CNAQ
Ministry of Defence (MoD) Task force for Laboratory Establishment.	Standing	member	2019-Present	MoD