

CURRICULUM VITAE

AMJAD EL-QANNI

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[LinkedIn](#), [Google Scholar](#), [ResearchGate](#)

EDUCATION

2013 – 2018: *PhD*, Chemical and Petroleum Engineering (first class academic standing), Specialty of Energy and Environment, University of Calgary, Schulich School of Engineering, Calgary, Canada.

Thesis: Development of Sustainable Nanosorbents Based Technology for Hydrocarbons and Organic Pollutants Recovery from Industrial Wastewater.

2010 – 2012: *MSc*, Sciences and Techniques of Urban Environments (first class academic standing), specialty of Atmosphere, Water and Urban Environments, École Centrale de Nantes, Faculty of Engineering, Nantes, France.

Thesis: Utilization of Metal Oxide Nanoparticles for Adsorptive Removal and Subsequent Oxidation of Different Organic Pollutants from Wastewater.

2004 – 2009: *BSc*, Chemical Engineering (first class academic standing), An-Najah National University, Faculty of Engineering, Nablus, Palestine.

Graduation project: Powder Detergent Production by Spray Dryer Process.

ACADEMIC & PRACTICAL EXPERIENCES

September 2019 – Present: Scholarships Coordinator – An-Najah National University – Nablus, Palestine

2018 – Present: Assistant Professor – Department of Chemical Engineering – An-Najah National University – Nablus, Palestine

- SC 236302: Industrial Plant Economics & Production Management.
- EN 626202: Principles of Chemical Engineering Calculations.
- EN 626584: Industrial Wastewater Treatment Processes.
- EN 64452: Process Modeling in Chemical Engineering.
- EN 469691: Introduction to Scientific Research.
- EN 64251: Engineering Numerical Analysis.
- EN 626339: Unit Operations (I) Lab.
- EN 61315: Composite Materials.
- EN 626231: Fluid Mechanics.

June 2014 – December 2017: Chematics User and Lab Safety Leader - University of Calgary - Calgary, Canada

- Providing regular and ongoing feedback to the lab supervisors regarding safety performance.
- Participating in a preventive maintenance program and a process for not using defective equipment.
- Reporting unsafe or unhealthy conditions and/ or practices in the workplace.
- Submitting direct notifications with resources such as equipment, personal protective equipment, etc., to ensure a safe workplace environment.
- Helping in preparation of standard operating procedures (SOPs) for the instruments.

2013 – 2018: Lab Instructor and/or Teaching Assistant – University of Calgary – Calgary, Canada

- INTE 513 (01, 02, and 03): Internship in Engineering (I, II, and III).
- ENGG 201: Behavior of Liquids, Gases and Solids.
- ENER 480: Energy Engineering Fluid Mechanics.
- ENCH 607: Natural Gas Processing Principles.
- ENGG 311: Engineering Thermodynamics.
- ENCH 331: Process Fluid Dynamics.
- ENCH 403: Heat Transfer.

The duties in these two positions include:

- Supervising and conducting all assigned laboratory sessions.
- Delivering a brief overview of the theoretical background related to the experiments.
- Interacting with the students during the experimental work.
- Marking quizzes, selected or all lab reports, invigilation and delivering tutorial sessions.

May – September 2012: Internship – University of Calgary – Calgary, Canada

- Joined the catalysis for bitumen upgrading (CBUG) research group.
- Worked on the master thesis under the supervision of Prof. Pedro Pereira Almao, University of Calgary, and Jean-Francois Sini, École Centrale de Nantes.

February – September 2010: Staff Environmental Engineer – Universal Group for Engineering and Consulting – Nablus, Palestine

- Participated in preparing many environmental impact assessment technical reports and presentations, including:
 1. Feasibility study for Ramallah and Betunia wastewater treatment plants, Ramallah, West Bank.
 2. The new city of Rawabi, Ramallah, West Bank.
 3. Beneficiary assessment study for Zahret Al Finjan landfill, Jenin, West Bank.
 4. Environmental assessment of the Tulkarem municipal light industrial area, Tulkarem, West Bank.

2009 – 2010: Full Time Research Assistant – An-Najah National University – Nablus, Palestine

- Developed novel fouling resistance membranes for seawater desalination.
- Testing the performance of the developed membranes in a pilot-scale Reverse Osmosis Unit, using real seawater samples.

June – September 2008: Internship – Arab Pharmaceutical Manufacturing Co. Ltd (Hikma Group) – Salt, Jordan

- Obtained practical trainings in the most production units, quality control and quality assurance, validation departments and water treatment units.
- Performed the specifications and placing orders for equipment and machines for both liquid and air filtration systems.

AFFILIATIONS

- Associate Member: Institution of Chemical Engineers (AMIChemE), November 2015.
- Member: Chemical Institute of Canada and Constituent Societies (MCIC), September 2014.
- Research Assistant in CBUG, University of Calgary, 2012 – 2018.
- Scholar of An-Najah National University, 2010 – 2018.

PROFESSIONAL CERTIFICATIONS & DEVELOPMENTS

- Instructor - TA workshop: How to make the teamwork work, April 2015.
- Instructional skills workshop for faculty members and graduate students, April 2015.
- Graduate student teaching workshop: What makes a great TA? What is great about being a TA?, March 2015.

- Writing course learning outcomes and planning student assessment, December 2014.
- Overview of the National Instrument LabVIEW Environment, April 2014.
- VMGSim Training Course, March 2014.
- Valve Tube Bending Training Course, February 2014.
- SSE's training workshop for continuing TAs, September 2013.
- H₂S Alive, February 2013.
- SSE's training workshop for first-time TAs, January 2013.
- Workplace Hazardous Materials Information systems (WHMIS), May 2012.
- A1 - B1 levels in French Language, École Centrale de Nantes and Université de Nantes, department of Foreign Languages and Cultures, Nantes, Franc, 2010-2011.
- Maintenance and computer programming "A+" and Financial Excel, January 2009.
- International Computer Driving License (ICDL), December 2008.
- Intensive course (40 hour) on Water Chemistry in Reverse Osmosis and Nanofiltration, April 2009.

PUBLICATIONS

• ***Journal Papers (Peer Reviewed):***

1. Abuhatab, S., **A. El-Qanni**, H. Al-Qalaq, M. Hmoudah, and W. Al-Zerei, [Effective adsorptive removal of Zn²⁺, Cu²⁺, and Cr³⁺ heavy metals from aqueous solutions using silica-based embedded with NiO and MgO nanoparticles](#), Journal of Environmental Management, 268 (2020) 110713. (**IF: 4.87**).
2. Abuhatab, S., **A. El-Qanni**, N. N. Marei, M. Hmoudah, and A. El-Hamouz, [Sustainable competitive adsorption of methylene blue and acid red 88 from synthetic wastewater using NiO and/or MgO silicate based nanosorbents: experimental and computational modeling studies](#), RSC Advances, 9 (2019) 35483 – 35498. (**IF: 3.05, Gold Open Access**).
3. **El-Qanni, A.** (2017), [Development of sustainable nanosorbents based technology for hydrocarbons and organic pollutants recovery from industrial wastewater](#), Ph.D. Thesis, Schulich School of Engineering, University of Calgary, Calgary, AB.
4. Manasrah, A.D., **A. El-Qanni**, I. Badran, L.C. Ortega, M.J. Perez-Zurita, and N. N. Nassar, [Experimental and theoretical studies on oxy-cracking of Quinolin-65 as a model molecule for residual feedstocks](#), Reaction Chemistry & Engineering, 2 (5) (2017) 703–719. (**IF: 3.94**).
5. **El-Qanni, A.**, N. N. Nassar, and G. Vitale, [A combined experimental and computational modeling study on adsorption of propionic acid onto silica-embedded NiO/MgO nanoparticles](#), Chemical Engineering Journal, 327 (2017) 666–677. (**IF: 8.36**).
6. Marei, N. N., N. N. Nassar, M. Hmoudah, **A. El-Qanni**, G. Vitale, and A. Hassan, [Nanosize effects of NiO nanosorbents on adsorption and catalytic thermo-oxidative decomposition of vacuum residue asphaltenes](#), The Canadian Journal of Chemical Engineering, 95 (2017) 1864–1874. (**IF: 1.61, Invited paper for a special issue**).
7. **El-Qanni, A.**, N. N. Nassar, and G. Vitale, [Experimental and computational modeling studies on silica-embedded NiO/MgO nanoparticles for adsorptive removal of organic pollutants from wastewater](#), RSC Advances, 7 (2017) 14021–14038. (**IF: 3.05, Gold Open Access**).
8. Hmoudah, M., N. N. Nassar, G. Vitale, and **A. El-Qanni**, [Effect of nanosized and surface-structural modified nano-pyroxene on adsorption of violanthrone-79](#), RSC Advances, 6 (2016) 64482–64493. (**IF: 3.05**).

9. **El-Qanni, A.**, N. N. Nassar, G. Vitale, and A. Hassan, [Maghemite nanosorbcat for methylene blue adsorption and subsequent catalytic thermo-oxidative decomposition: Computational modeling and thermodynamics studies](#), Journal of Colloid and Interface Science, 461 (2016) 396–408. **(IF: 6.36)**.
- **Conference and Symposium Presentations (Peer Reviewed Abstracts):**
10. Shahin, A., H. Al-Qalaq, **A. El-Qanni**, M. Hmoudah, A. El-Hamouz, and M. Fuqha, [Nickel oxide silica based and commercial nickel oxide nanosorbcat for adsorption of cationic and anionic dyes followed by thermo-oxidative decomposition](#), 2019 AIChE Annual Meeting, Hyatt Regency, Orlando, U.S., November 10-15, 2019.
11. Baniowda, H., M. Hmoudah, **A. El-Qanni**, S. Abuhatab, A. El-Hamouz, and N. N. Marei, [Competitive adsorption and photocatalytic degradation of alizarin red s and bromocresol green anionic dyes using TiO₂ nanoparticles](#), 2019 AIChE Annual Meeting, Hyatt Regency, Orlando, U.S., November 10-15, 2019. **(Awarded as the Best 3rd Poster Presentation)**.
12. Abuhatab, S., **A. El-Qanni**, A. EL-Hamouz, M. Hmoudah, [Competitive adsorption study of cationic and anionic compounds over in-house prepared silicate based nanosorbcat](#), 2018 AIChE Annual Meeting, Pittsburgh, PA, U.S., October 28 - November 2, 2018. **(Awarded as the Best 1st Poster Presentation)**.
13. **El-Qanni, A.**, N.N. Nassar, G. Vitale, T. Wang, M. Hmoudah, and A. Hethnawi, [Batch and packed-bed adsorption study for the removal of dye from textile wastewater using in-house prepared silica-based nanosorbcat: Kinetics and computational modeling](#), 2016 AIChE Annual Meeting (ISBN: 978-0-8169-1097-7), San Francisco, U.S., November 13-18, 2016.
14. Hethnawi, A., N.N. Nassar, M. Shamel, G. Vitale, **A. El-Qanni**, and S. Gurung, [Influence of silica-based nanoparticles amendment in sand bed filtration for cleaning-up industrial wastewater](#), 2016 AIChE Annual Meeting (ISBN: 978-0-8169-1097-7), San Francisco, U.S., November 13-18, 2016.
15. Manasrah, A.D., N.N. Nassar, **A. El-Qanni**, and I. Badran, [An innovative technique for oxy-cracking of Quinolin-65 as a model heavy hydrocarbon compound](#), 2016 AIChE Annual Meeting (ISBN: 978 0-8169-1097-7), San Francisco, U.S., November 13-18, 2016.
16. Hmoudah, M., N.N. Nassar, **A. El-Qanni**, N.N. Marei, G. Vitale, and A. Hassan, [Surface and structural-modified pyroxene nanoparticles for adsorption and catalytic thermal decomposition of visbroken residue asphaltenes](#), 2016 AIChE Annual Meeting (ISBN: 978-0-8169-1097-7), San Francisco, U.S., November 13-18, 2016.
17. **El-Qanni, A.**, A.D. Manasrah, T. Wang, and N.N. Nassar, [Enhancing water recyclability of oxy-cracked SAGD produced water using in-house prepared silica-based nanosorbcat](#), 3rd Annual Alberta Nano Research Symposium at University of Alberta, Edmonton, AB, May 26-27, 2016.
18. **El-Qanni, A.**, N.N. Nassar, G. Vitale, A. Hassan, T. Wang, and K. Behairy, [In-house prepared silicate-based nanosorbcat for recovering organic pollutants from wastewater and turning them into fuel: Experimental and computational approaches](#), 2016 WCW Conference, Calgary, AB, October 4-6, 2016. **(Top 10 Fresh Ideas Poster Contest)**.
19. **El-Qanni, A.**, [Development of silicate-based nanosorbcat for recovering organic pollutants from synthetic and real produced water effluents](#), 2nd Chemical and Petroleum Engineering (CPE) Graduate Student Conference, Department of Chemical and Petroleum Engineering, University of Calgary, Calgary, AB, April 15, 2016. **(Awarded as the Best Sessional Presentation)**.
20. **El-Qanni, A.**, N.N. Nassar, and G. Vitale, [Development of supported solid nanoparticles and process for hydrocarbon recovery and enhancing water recyclability from SAGD wastewater](#), 2015 AIChE Annual Meeting (ISBN: 978-0-8169-1094-6), Utah, U.S., November 8-13, 2015.

21. **El-Qanni, A.**, N.N. Nassar, G. Vitale, and M. Hmoudah, [Development of an integrated process targeting treatment of dissolved organics and inorganics dispersed particles in SAGD produced water](#), 65th Canadian Chemical Engineering Conference (CSCHE), Calgary, AB, October 4-7, 2015.
 22. Hmoudah, M., N.N. Nassar, G. Vitale, and **A. El-Qanni**, [Adsorptive removal of visbroken n-C₅ asphaltenes from heavy oil by silica-based nanoparticles](#), 65th Canadian Chemical Engineering Conference (CSCHE), Calgary, AB, October 4-7, 2015.
 23. **El-Qanni, A.**, N.N. Nassar, E. U. Ehrmann, M. Hmoudah, and N.N. Marei, [Hydrocarbons recovery and water recycling from SAGD produced water using metal oxide nanoparticles](#), 2nd Alberta Nano Research Symposium, Banff, AB, May 30-31, 2015.
 24. Marei, N.N., N.N. Nassar, G. Vitale, **A. El-Qanni**, and M. Hmoudah, [Size effects on adsorptive and catalytic properties of NiO nanoparticles towards Quinolin-65](#), to be presented in 2nd Alberta Nano Research Symposium, Banff, AB, May 30-31, 2015, (**Awarded as an Outstanding Poster Presentation**).
 25. Hmoudah, M., N.N. Nassar, G. Vitale, **A. El-Qanni**, and N.N. Marei, [Development of new iron silicate-based nanoparticles for adsorptive removal of polar heavy hydrocarbons from Athabasca bitumen](#), 2nd Alberta Nano Research Symposium, Banff, AB, May 30-31, 2015.
 26. **El-Qanni, A.** and N.N. Nassar, [Hydrocarbons recovery from mature fine tailings \(MFTs\): Characterizations and mechanistic insights](#), 64th Canadian Chemical Engineering Conference (CSCHE), Niagara Falls, ON, October 19-22, 2014. (**Awarded as the Best 2nd Poster Presentation**).
 27. Nassar, N.N. and **A. El-Qanni**, [Iron oxide nanoparticles for adsorption and subsequent catalytic steam gasification of ionic organic pollutants from produced water](#), 62nd Canadian Chemical Engineering Conference (CSCHE), Vancouver, BC, October 14-17, 2012.
 - **Conference Paper (Full Paper):**
 28. H.A. Arafat and **A. El-Qanni**, [Can religion serve as a catalyst for sustainable waste management? Islam as a case study](#), Proceedings of the 11th Mediterranean Research Meeting, Florence, Italy, March 24-27, 2010.
 - **Seminar Presentations**
1. **Amjad El-Qanni**, Silica-embedded NiO/MgO nanosorbents: Successful wastewater treatment application, Catalysts and Adsorbents for Fuels and Energy, University of Calgary, April 25th, 2017.
 2. **Amjad El-Qanni**, Enhancing water recyclability of wastewater effluents using oxy-cracking technique as a pre-treatment step followed by packed-bed adsorption, Catalysis for Bitumen Upgrading Research Group Seminar, University of Calgary, June 14th, 2016.
 3. **Amjad El-Qanni**, Development of nanocatalysts and process for hydrocarbon recovery from SAGD wastewater and mature fine tailings (MFTs), Catalysis for Bitumen Upgrading Research Group Seminar, University of Calgary, May 11th, 2015.
 4. **Amjad El-Qanni**, New nanoadsorbents-catalysts (nanosorbents) for hydrocarbons recovery from Nexen's produced waters, 4th Chair Meeting, University of Calgary, March 10th, 2015.
 5. **Amjad El-Qanni**, Alberta innovates technology future's mature fine tailings and Nexen's produced water characterization: Preliminary results, Catalysis for Bitumen Upgrading Research Group Seminar, University of Calgary, June 6th, 2014.
 6. **Amjad El-Qanni**, Removal of hydrocarbons from produced water "exemplified by methylene blue" via adsorption and subsequent catalytic oxidation on the surface of metal oxide nanoparticles, 3rd Chair Meeting, University of Calgary, March 13th, 2014.

7. **Amjad El-Qanni**, Metal oxide nanoparticles as adsorbents and catalysts for tailings ponds water treatment, Catalysis for Bitumen Upgrading Research Group Seminar, University of Calgary, September 13th, 2013.
8. **Amjad El-Qanni**, Utilization of iron oxide nanoparticles for adsorptive removal and subsequent oxidation of cationic and anionic dyes from wastewater, Catalysis for Bitumen Upgrading Research Group Seminar, University of Calgary, August 24th, 2012.

HONORS, AWARDS & SCHOLARSHIPS

1. **The Engineer Zuhair Hijawi Award for Scientific Research for the year 2019**, Scientific Council, Arab American University, July 2019.
2. **Silver Medal Award and the Global Invention Forum (GIF) 2019 Special Award**, Second GIF, , Limassol, Republic of Cyprus, May 2019.
3. **IF Research Excellence Award**, Deanship of Scientific Research, An-Najah National University, June 2017 – 2020.
4. **Schulich School of Engineering Teaching Assistant Excellence Award**, Schulich School of Engineering, University of Calgary, December 2016.
5. **Honors with Distinction**, rewarded by the President of the University of Calgary; Dr. Elizabeth Cannon via an official letter from her office, Calgary, AB, April 22nd, 2016.
6. **Best Presentation at the 2nd CPE Graduate Students Conference**, Department of Chemical and Petroleum Engineering, University of Calgary, Calgary, AB, April 15th, 2016.
7. **Graduate Assistant Excellence Award Nominee**, Graduate Students' Association (GSA), University of Calgary, Calgary, AB, April 7th, 2016.
8. **Top 10 Finalists in the 3 Minutes Thesis Competition (3MT)**, University of Calgary, Calgary, AB, March 29th, 2016.
9. **Top 10 Finalists in the 3 Minutes Poster Competition (3MPC)**, 65th CSChE 2015 Conference, Calgary, AB, October 5th, 2015.
10. **Werner Graupe International PhD Fellowship in Engineering**, Faculty of Graduate Studies, University of Calgary, September 2015 – 2018.
11. **Engineering Graduate Excellence Scholarship Award (for the second time)**, Department of Chemical and Petroleum Engineering at the University of Calgary, January – April 2015.
12. **Shulich Student Activity Fund (SSAF)**, University of Calgary, October 2014 (64th CSChE Conference, Niagara Falls, ON, October 19-22, 2014).
13. **Faculty of Graduate Studies, Graduate Travel Award**, University of Calgary, December 2014 (64th CSChE Conference, Niagara Falls, ON, October 19-22, 2014).
14. **Best CSChE Graduate Students Poster Award - 2nd Place**, 64th CSChE Conference, Niagara Falls, ON, October 21st, 2014.
15. **Engineering Graduate Excellence Scholarship Award**, Department of Chemical and Petroleum Engineering at the University of Calgary, January – April 2014.
16. **Graduate Research Scholarship (PhD)**, Department of Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary, January 2013 – September 2015.
17. **Summer Graduate Intern Fellowship**, CBUG, Department of Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary, April – September 2012.

18. **Graduate Research Scholarship (MSc)**, French Government (BGF) and An-Najah National University, 2010 – 2012.

19. **Dean's List of Honor**, An-Najah National University, Nablus, Palestine, 2007 – 2009.

MEDIA COVERAGE

1. Achievements accomplished by An-Najah students and staff in the AIChE annual meeting. November 17th, 2019. [Direct Link](#).
2. Dr. Amjad El-Qanni, awarded two awards at global invention forum (GIF) held in Cyprus. May 28th, 2019. [Direct Link](#).
3. Student Saqr Abu Hatab awarded the best poster presentation at 2018 AIChE annual meeting in the U.S. November 21st, 2018. [Direct Link](#).
4. Celebrating the winners of An-Najah research awards for the year 2016. June 1st, 2017. [Direct Link](#).
5. Schulich honors faculty and staff success, December 19th, 2016. [Direct Link](#).
6. Student's quest to generate energy from wastewater earns international fellowship, May 4th, 2016. [Direct Link](#).
7. The clock is ticking, now tell us about your research, March 28th, 2016. [Direct Link](#).

SPOKEN LANGUAGES

- Arabic: Native, English: Fluent, and French: Good.

VOLUNTEERISM

- Judge: University of Calgary 3 Minute Thesis (UCalgary3MT) Competition, University of Calgary, Calgary, AB, March 29th, 2017.
Three Minute Thesis (3MT™) is an internationally recognized research communication competition. 3MT™ was developed by The University of Queensland in 2008 to challenge thesis-based graduate students to deliver a compelling presentation on their research and its significance in three minutes or less. As one of the top 10 finalists in the UCalgary3MT (2016), I had a chance to help in:
 - Judging the presenters on their communication style, comprehension, and engagement.
 - Writing comments and giving a score out of 10 for each aforementioned category.
 - Reviewing the final rankings with other judges.
- Chairing the technical program committee (TPC) for the professional development course (ENEL 607), Departments of Chemical and Electrical Engineering, University of Calgary, Calgary, AB, April 1st, 2016. **Duties** included the followings:
 - Forming groups and ensuring students are in the correct session.
 - Setting ground rules for discussing the submitted term papers.
 - Assigning one person as note taker and another one as time keeper.
 - Reviewing the term papers (each person in the group was given a copy of the paper).
 - Discussing the term papers with the groups.
 - Making decision on the best paper nominee based on the discussions.
 - Reporting to the super chair.
- Mentoring and sub-leading national and international undergraduate students and interns, University of Calgary, September 2015 - Present. **Duties** include the followings:
 - Setting a road map and time-line for the students with the PI/supervisor.

- Orienting the students with the labs safety rules and ensuring having WHMIS and/or H₂S Alive trainings.
- Working with the students, side by side, in the lab in the very first three weeks.
- Once students master the safety rules and the experimental techniques, I assign the students to do further experimental tasks solely to progress their work in a timely manner.
- Helping the students in interpreting their own results and do some analysis together.
- Revising their technical reports before sending it to the PI/supervisor.

REFERENCES

- **Pedro Pereira Almaso**, PhD, Professor, Department of Chemical and Petroleum Engineering, University of Calgary, 2500 University Street NW, Calgary, Alberta, Canada T2N 1N4, Tel: +1 403-220-4799, E-mail: ppereira@ucalgary.ca
- **Alex De Visscher**, PhD, Professor, Department of Chemical and Materials Engineering, Concordia University, 1455 De Maisonneuve Blvd. W., Montreal, Quebec, Canada, H3G 1M8, E-mail: alex.devisscher@concordia.ca
- **Amer El-Hamouz**, PhD, Professor, Department of Chemical Engineering, An-Najah National University, P.O. Box 7, Nablus, Palestine, Tel: +97 059-955-7056, Email: elhamouz@najah.edu