

CURRICULUM VITAE

Saifur Rahaman

Saifur Rahaman, Ph.D.

Visiting Professor, Civil and Environmental Engineering, University of Massachusetts Lowell
200 Shah Hall, One University Avenue
Lowell, MA 01854

Phone: (978) 941-1024 (C)

Email: saifur_rahaman@uml.edu; saifur.rahaman@polymtl.ca

Current Positions

- Visiting Professor, Civil and Environmental Engineering, UMass Lowell, MA, USA
- Adjunct Professor, Department of Civil, Geological and Mining Engineering, École Polytechnique de Montréal, QC, Canada
- Adjunct Professor, Department of Chemistry, University of Quebec in Montreal, QC, Canada

Education

- Postdoctoral Fellow (2012), Chemical and Environmental Engineering, Yale University, New Haven, CT, USA
Project: Environmental applications and implications of engineered nanomaterials
Advisor: Professor Menachem Elimelech
- Ph.D. (2010), Civil Engineering, University of British Columbia (UBC), Vancouver, Canada
Dissertation: Phosphorus recovery from wastewater through struvite crystallization in a fluidized bed reactor: Kinetics, hydrodynamics, and performance
Advisors: Professor Emeritus Donald S. Mavinic and Professor Naoko Ellis
- M.A.Sc. (2003), Civil Engineering, Dalhousie University, Halifax, NS, Canada
Dissertation: Experimental and numerical studies of arsenic adsorption on various natural adsorbents
Advisor: Professor M. Rafiqul Islam (Adjunct)
- B.Sc. (2000), Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Project: Characterization of waste generated from Dhaka export processing zone, Savar

Academic and Professional Experience

- Visiting Professor, Civil and Environmental Engineering, UMass Lowell, MA, USA, September 2024 – to date
- Adjunct Professor, Department of Chemistry, University of Quebec in Montreal, QC, Canada, December 2024 – to date
- Adjunct Professor, Department of Civil, Geological and Mining Engineering, École Polytechnique de Montréal, Montreal, QC, Canada, July 2021- to date
- Senior Technical Consultant, City of Shawinigan, QC, Canada, January 2024 – August 2024
- Principal Technical Consultant, ProOne Water Technologies, LLC, Fullerton, California, USA, May 2023 – August 2024
- Chief Technology Officer (CTO), Reveau Technologies & Solutions Inc., Montreal, QC, June 2020 – November 2022
- Technical Director, Reveau Technologies & Solutions Inc., Montreal, QC June 2020 – November 2022
- Associate Professor (tenured), Concordia University, Montreal, QC, June 2017- May, 2021
- Visiting Associate Professor, École Polytechnique de Montréal, Montreal, QC, July 2018- December 2018
- Assistant Professor, Concordia University, Montreal, QC, June 2012- May 2017
- NSERC-Canada Postdoctoral Fellow, Yale University, New Haven, CT, USA, April 2010 – May 2012

Honors & Awards

- Finalist for Mining Association of BC (MABC) Innovation grant2022
- Finalist for Canadian DND’s popup city contest.....2021
- NSERC Discovery Accelerator Supplements (DAS) Award.....2019
- Gina Cody School of Engineering and Computer Science Research Award (Mid-career) ...2019
- Gina Cody School of Engineering and Computer Science Accelerator Research Award...2019
- Concordia University Research Fellow (Early-career faculty category)2017
- MWH/AEESP Best Master’s Thesis Advisor Award2016
- Petro-Canada Young Innovators Award, Concordia University2015
- Travel Awards, Gordon Research Conference2011 – 2012
- NSERC Postdoctoral Fellowship2010 – 2012
- BC Water & Waste Association Student Achievement Award2009

- PhD Tuition Award at UBC2003 – 2007
- Graduate Travel Award at UBC2007
- Graduate Entrance Scholarship at UBC2003
- Duncan and Urlla Carmichael Fellowship, Queen’s University (declined)2003
- Faculty of Engineering Scholarship, Dalhousie University2002
- NORAD Scholarships, AIT, Bangkok, Thailand (Declined)2002

Professional Society Memberships

1. American Chemical Society (ACS)
2. Association of Environmental Engineering and Science Professors (AEESP)
3. International Water Association (IWA)
4. Water Environment Federation (WEF)
5. American Society for Civil Engineering (ASCE)

Research Interests and Activities

- Advanced membrane technologies for water, energy, and environment
- Functional materials for removing emerging contaminants
- Electrochemical processes for water and energy
- Resource recovery (i.e., water, nutrients, metals, and energy) from unconventional sources
- Integration of data science and artificial intelligence in environmental engineering

External Grants & Projects

Total funding: **\$8,144,995** [as **PI: \$ 1,759,999**; as **Co-PI/Co-I: \$6,384,996**]

The total amount does not include overhead, which is provided directly to the institution by the funding agencies in Canada.

Grants and Contracts for Applied Industrial Research & Development:

5. Title: Expert analysis and reporting for underperforming Ville de Shawinigan’s water treatment plant
Agency/Program: **City of Shawinigan/Contract**, Dates: January 2024 - December 2024
Funding: **\$122,272**; PI: **Saifur Rahaman**
4. Title: SNC-Lavalin Integrated Utility Management System (IUMS) for Relocatable Temporary Camps (RTCs)
Agency/Program: **Department of National Defense, Canada/Innovation for Defense Excellence and Security (IDEaS)/ Pop up City Contest, round 3 winner**; Dates: 08/2021-03/2023
Funding: **\$2,500,000** [Reveau’s Portion : **\$701,354**]; PI: SNC Lavalin; CoPI: **Reveau Technologies & Solution Inc. (Saifur Rahaman)**

3. Title: Design and simulation of a small-scale membrane-based hybrid system for water recycling and reuse in remote areas
Agency/Program: **Ministère de l'Économie et de l'Innovation (MEI) - Québec/ Programme de soutien aux organismes de recherche et d'innovation (PSO)**; Dates: 01/2021-06/2021
Funding: **\$25,000**; PI: **Reveau Technologies & Solution Inc. (Saifur Rahaman)**
2. Title: SNC-Lavalin Integrated Utility Management System (IUMS) for Relocatable Temporary Camps (RTCs)
Agency/Program: **Department of National Defense, Canada/Innovation for Defense Excellence and Security (IDEaS)/ Pop up City Contest, round 2 winner**; Dates: 10/2020-03/2021
Funding: **\$50,000** [Reveau's Portion : **\$7,143**]; PI: SNC Lavalin CoPI: **Reveau Technologies & Solution Inc. (Saifur Rahaman)**
1. Title: Hybrid solar-thermal membrane distillation process for water recycling and reuse for Relocatable Temporary Camps (RTCs)
Agency/Program: **Department of National Defense, Canada/Innovation for Defense Excellence and Security (IDEaS)/ Pop up City Contest, round 1 winner**; Dates: 03/2020-09/2020
Funding: **\$10,000**; PI: **Saifur Rahaman**

Grants for Academic Research

19. Title: Investigating PFAS and fluoropolymer-based microplastics release from PVDF membranes in water treatment applications
Agency/Program: **UMass Lowell Internal Seed Grants**, Dates: May 2025 - April 2027
Funding: **\$14,500**; PI: Weile Yan; Co-PI: **Saifur Rahaman**
18. Title: Advanced materials and emerging technologies for water recycling, reuse, and desalination
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Discovery Grant**; Dates: 04/2019-03/2026
Funding: **\$258,000 (\$43,000/year)**; PI: **Saifur Rahaman**
17. Title: Advanced materials and emerging technologies for water recycling, reuse and desalination
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Discovery Accelerator Supplementary Award**; Dates: 04/2019-03/2025
Funding: **\$120,000**; PI: **Saifur Rahaman**
16. Title: Electrochemical – membrane distillation processes for producing high-quality recyclable water from mining wastewater
Agency/Program: **Fonds de Recherche du Québec – Nature et technologies (FRQNT)/ Mining Research**; Dates: 04/2020-03/2024
Funding: **\$300,000**; PI: **Saifur Rahaman**; Co-investigators: Jocelyn Veilleux (University of Sherbrooke) & Benoit Barbeau (Polytechnic Montreal)

15. Title: Streaming potential analyzer (SurPASS 3) for surface characterization of advanced functional materials for water, energy and health
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/ Research Tools and Instruments (RTI) Grant**; Dates: 04/2020-03/2021
Funding: **\$100,155**; PI: **Saifur Rahaman**; Co-investigators: Zhibin Ye & Sana Anbuhi (Concordia); Benoit Barbeau (Polytechnique Montreal)
14. Title: Fouling resistant nanocomposite membranes for energy-efficient desalination and water reuse
Agency/Program: **Fonds de Recherche du Québec – Nature et technologies (FRQNT)/ Team Grant**; Dates: 04/2018-03/2021
Funding: **\$162,000**; PI: **Saifur Rahaman**; Co-investigators: Zhibin Ye (Concordia) & Benoit Barbeau (Polytechnic Montreal)
13. Title: QCM-D for investigating membrane fouling and its control
Agency/Program: **Fonds de Recherche du Québec – Nature et technologies (FRQNT)/ Equipment**; Dates: 04/2018-03/2021
Funding: **\$50,000**; PI: **Saifur Rahaman**; Co-investigators: Zhibin Ye (Concordia) & Benoit Barbeau (Polytechnique Montreal)
12. Title: Feasibility of a pressure retarded osmosis process for Quebec electricity generation
Agency/Program: **Fonds de Recherche du Québec – Nature et technologies (FRQNT)/ Team Grant**; Dates: 04/2018-03/2021
Funding: **\$162,000**; PI: Catherine Mulligan; Co-investigators: **Saifur Rahaman** (Concordia) & Ambrish Chandra (ETS Montreal)
11. Title: Green surface engineering for advanced manufacturing (SEAM)
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/ Strategic Network**; Dates: 04/2020-03/2023
Funding: **\$5,500,000**; PI: Christian Moreau; Co-investigators: **Saifur Rahaman** (with 27 others)
10. Title: Treatment and recovery of high-strength wastewater using an integrated electrocoagulation and membrane distillation process
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Engage**; Dates: 04/2019-09/2019
Funding: \$25,000; PI: **Saifur Rahaman**
9. Title: Development of advanced high rate AnMBR and RO system for food processing wastewater treatment, water reuse and resource recovery
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/ Quebec-Ontario cooperation for agri-food research**; Dates: 06/2015-05/2018
Funding: **\$247,000**; PI: **Saifur Rahaman**; Co-PI: Sheng Chang (Guelph)
8. Title: Development of nanocomposite membranes and sustainable processes for water treatment and nutrient reclamation
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Discovery Grant**; Dates: 04/2013-03/2019
Funding: **\$132,000**; PI: **Saifur Rahaman**

7. Title: Ammonia removal from high strength wastewater using a hybrid electro-oxidation and electro-coagulation process
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Engage**;
Dates: 03/2018-08/2018
Funding: **\$25,000**; PI: **Saifur Rahaman**
6. Title: Performance evaluation of scale-up combined psychrophilic anaerobic digestion-reverse osmosis processes for the valorization of organic municipal solid waste
Agency/Program: **Natural Sciences and Engineering Research Council /Engage Plus**;
Dates: 03/2017-08/2017
Funding: **\$25,000**; PI: **Saifur Rahaman**
5. Title: Combined psychrophilic dry/wet anaerobic digestion – reverse osmosis processes for the valorization of organic municipal solid waste
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Engage**;
Dates: 10/2015-03/2016
Funding: **\$25,000**; PI: **Saifur Rahaman**
4. Title: Application of nanomaterials to membrane-based osmotic processes for sustainable water and energy production from wastewater
Agency/Program: **Fonds de Recherche du Québec – Nature et technologies (FRQNT)/ New Researchers Start-up Grant**; Dates: 04/2014-03/2016
Funding: **\$40,000**; PI: **Saifur Rahaman**
3. Title: Fluorescence microscopy for membrane fouling investigation
Agency/Program: **Fonds de Recherche du Québec – Nature et technologies (FRQNT)/ Equipment**; Dates: 04/2014-03/2016
Funding: **\$43,572**; PI: **Saifur Rahaman**
2. Title: Developing an electrofiltration technology for brewery process water reuse
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Engage**;
Dates: 03/2015-08/2015
Funding: **\$25,000**; PI: **Saifur Rahaman**
1. Title: Development of an electrooxidation process for treating industrial wastewater
Agency/Program: **Natural Sciences and Engineering Research Council (NSERC)/Engage**;
Dates: 12/2013-05/2014
Funding: **\$25,000**; PI: **Saifur Rahaman**

Internal Grants & Projects at Concordia University

14. Title: Converting low-grade heat waste and wastewater effluents to electricity via membrane technologies
Agency/Program: **Concordia University/ Horizon PDF Grant**; Dates: 05/2019-04/2021
Funding: **\$70,000**; PI: **Saifur Rahaman**; Co-Investigator: Catherine Mulligan
13. Title: QCM-D for investigating membrane fouling and control
Agency/Program: **Concordia University/ Facility Optimization Grant**; Dates: 05/2019-04/2020
Funding: **\$35,000**; PI: **Saifur Rahaman**

12. Title: ARRE project on speaker series and workshops in environmental science and engineering
Agency/Program: **Concordia University/Aid to Research Related Events Grant**; Dates: 04/2018-12/2020
Funding: **\$7,500**; PI: **Saifur Rahaman**
11. Title: Electro-catalytic nanocomposite membranes for the removal and degradation of organic contaminants
Agency/Program: **Concordia University/ Seed Funding**; Dates: 04/2018-03/2020
Funding: **\$7,000**; PI: **Saifur Rahaman**
10. Title: Advanced analytical equipment for environmental research labs
Agency/Program: **Concordia University/ Capital Innovation Research Fund**; Dates: 05/2018-04/2019
Funding: **\$100,000**; PI: Catherine Mulligan; Co-PIs: **Saifur Rahaman** (with 4 others)
9. Title: Advanced materials and membrane-based processes for environmental applications
Agency/Program: **Concordia University/ Concordia University Research Award**; Dates: 05/2017-04/2018
Funding: **\$5,000**; PI: **Saifur Rahaman**
8. Title: ARRE project on speaker series and workshops in environmental science and engineering
Agency/Program: **Concordia University/ Aid to Research Related Events Grant**; Dates: 05/2016-04/2017
Funding: **\$7,500**; PI: **Saifur Rahaman**
7. Title: Novel inorganic/organic hybrid advanced materials for thin-film composite reverse osmosis membranes
Agency/Program: **Concordia University/ Petro Canada Young Innovators Award**; Dates: 04/2015-03/2016
Funding: **\$10,000**; PI: **Saifur Rahaman**
6. Title: Hybrid electrocoagulation-forward osmosis (EC-FO) processes for treating oil sands process water
Agency/Program: **Concordia University/ Seed Funding**; Dates: 05/2015-04/2015
Funding: **\$7,000**; PI: **Saifur Rahaman**
5. Title: Zero emission oriented solid waste removal and waste to energy conversion
Agency/Program: **Concordia University/ Capital Innovation Research Fund**; Dates: 05/2015-04/2016
Funding: **\$200,000**; PI: Zhi Chen; Co-PIs: **Saifur Rahaman** (with 3 others)
4. Title: Electrospinning machine for fabrication of organic-inorganic nanofiber composite
Agency/Program: **Concordia University/Facility Optimization Grant**; Dates: 07/2014-06/2015
Funding: **\$30,841**; PI: **Saifur Rahaman**
3. Title: Automated (robotic) multilayering system for later-by-layer self-assembly of nano-composite thin films
Agency/Program: **Concordia Univ./ Facility Optimization Grant**; Dates: 07/2013-06/2014
Funding: **\$19,878**; PI: **Saifur Rahaman**

2. Title: Removal of emerging contaminants from wastewater effluents by using nano-composite electrochemical filter
Agency/Program: **Concordia University/ Seed Funding**; Dates: 04/2013-03/2014
Funding: **\$13,500**; PI: **Saifur Rahaman**; Co-Investigator: Maria Elektorowicz
1. Title: Advanced membrane technologies for water and wastewater treatment
Agency/Program: **Concordia University/ Start-up Grant**; Dates: 06/2012-05/2014
Funding: **\$50,000**; PI: **Saifur Rahaman**

Editorial

- Guest Editor, Special Issue, Membranes (October 2020 – October 2021)
- Academic Editor, PLoS ONE (Sept 2018- May 2021)
- Editorial board member, Frontiers in Environmental Science (June 2018- May 2021)

Patents

[*Underline denotes my postdocs, and graduate and undergraduate students*]

- [P2] Ebrahim A.E., Moreau C., Dolatabadi A., **Rahaman M.S.**, Tarasi, F. “Filtration membrane and methods of use and manufacture thereof”, *US patent # US11673097B2*, **2023**.
- [P1] **Rahaman, M.S.**, Islam, M.S., Chen, T., Ma, W. “Membranes for forward osmosis and membrane distillation and process for treating fracking wastewater”, *Patent applications, CA-3112943, WO-2020056508*, **2022**

Publications [[Google Scholar](#)]

Journal Publications (*Underline denotes my Postdocs, and graduate and undergraduate students*)

[*Google citations: 4907; h-index: 38; i10-index: 63, January 15, 2026*]

- [J65] Islam, M.S., Alam, M.N., van de Ven, T.G.M., Barbeau, B., **Rahaman, M.S.** (2024) “Antibacterial and UV protection properties of textile filaments fabricated from kraft pulp-based carboxymethylated cellulose covalently cross-linked with carbon nanotubes”. *Polymer Bulletin*, 81, 6785–6800.
- [J64] Islam, M.S., **Rahaman, M.S.**, Barbeau, B. (2023) “Removal of Pb (II), Zn (II), Cu (II), and As (III) ions from water using kraft pulp-based carboxymethylated cellulose in a fixed-bed column adsorption process” *Journal of Environmental Chemical Engineering*, 11(6), 111181.
- [J63] Alebrahim, E., **Rahaman, M.S.**, Moreau, C. (2022) “TiO₂ Photocatalytic ultrafiltration membrane developed with suspension plasma spray process. *Coatings*, 12, 1764.
- [J62] Zadeh, A.E., Touati, K., Mulligan, C.N., McCutcheon, J.R., **Rahaman, M.S.** (2022) “Closed-loop pressure retarded osmosis draw solutions and their regeneration processes: A review”, *Renewable & Sustainable Energy Reviews*, 159, 112191.

- [J61] Touati, K., Dudchenko, A.V., Mauter, M.S., **Rahaman, M.S.** (2022) “A hybrid membrane-based process (SWRO-PRO-NF) for energy-efficient and high-water recovery desalination system”, *ACS Sustainable Chemistry & Engineering*, 10 (7), 2409-2419.
- [J60] Yue, R., **Rahaman, M.S.** (2022) “Hydrophilic and underwater superoleophobic porous graphitic carbon nitride (g-C₃N₄) membranes with photo-Fenton self-cleaning ability for efficient oil/water separation”, *Journal of Colloid and Interface Science*, 608, 1960-1972.
- [J59] Choudhury, M.R., Meertens, W., Rajagopal, R., **Rahaman, M.S.** (2022) “Nitrogen and organic load removal from anaerobically digested leachates using a hybrid electro-oxidation and electro-coagulation process”, *Journal of Environmental Management*, 311, 114761.
- [J58] Yang, L., Liu, X., Zhang, X., Chen, T., Ye, Z., **Rahaman, M.S.** (2022) “High performance nanocomposite nanofiltration membranes with polydopamine-modified cellulose nanocrystals for efficient dye/salt separation”, *Desalination*, 521, 115385.
- [J57] Yue, R., Chen, T., Ye, Z., Barbeau, B., **Rahaman, M.S.** (2021) “A photo-Fenton graphene oxide membrane with improved perm-selectivity and self-cleaning ability for efficient dye removal under visible light irradiation”, *Journal of Water Process Engineering*, 44, 102443.
- [J56] Chen, T., Ma, W., Lee, J., Jassby, D., **Rahaman, M.S.** (2021) “Development of robust and superamphiphobic membranes using reduced graphene oxide (rGO)/PVDF-HFP nanocomposite mats for membrane distillation”, *Environmental Science: Nano*, 8, 2883-2893.
- [J55] Innes, P., Chang, S. **Rahaman, M.S.** (2021) “Treatment of effluent of upflow anaerobic sludge blanket bioreactor for water reuse”, *Water*, 13(15), 2123.
- [J54] Yue, R., Raisi, B., Rahatinejad, J., Ye, Z., Barbeau, B., **Rahaman, M.S.** (2021) “A photo-Fenton nanocomposite ultrafiltration membrane for enhanced dye removal with self-cleaning properties”, *Journal of Colloid and Interface Science*, 604, 458-468.
- [J53] Islam, M.S., Touati, K., **Rahaman, M.S.** (2021) “High flux and antifouling thin-film nanocomposite forward osmosis membrane with ingrained silica nanoparticles”, *ACS ES&T Engineering*, 1(3), 467–477.
- [J52] Usman, M.S., Touati, K., **Rahaman, M.S.** (2021) “An economic evaluation of renewable energy-powered membrane distillation for desalination of brackish water”, *Renewable Energy*, 169, 1294-1304.
- [J51] Ma, W., Yang, L., Chen, T., Ye, Z., Tufenkji, N., **Rahaman, M.S.** (2020) “Engineering polymer forest on membranes: Tuning density, thickness, and architecture for biofouling control”, *ACS Applied Polymer Materials*, 2 (11), 4592–4603.
- [J50] Touati, K., **Rahaman, M.S.** (2020) “Viability of pressure retarded osmosis to harvest energy from salinity gradients”, *Renewable & Sustainable Energy Reviews*, 131, 109999.

- [J49] Anwar, N., **Rahaman, M.S.** (2020) “Membrane desalination processes for water recovery from pre-treated brewery wastewater: Performance and fouling”, *Separation and Purification Technology*, 252, 117420.
- [J48] Mahato, P., Goyette, B., **Rahaman, M.S.**, Rajagopal, R. (2020) “Processing high-solid and high-ammonia rich manures in a two-stage (liquid-solid) low temperature anaerobic digestion process: Start-up and operating strategies”, *Bioengineering*, 7(3), 20.
- [J47] Touati, K., Usman, H.S., Mulligan, C., **Rahaman, M.S.** (2020) “Energetic and economic feasibility of a combined membrane-based process for sustainable water and energy systems”, *Applied Energy*, 264, 114699.
- [J46] Adhikary, S., Islam, M.S., Touati, K., Sultana, S., Ramamurthy, A.S., **Rahaman, M.S.** (2020) “Increased power density with low salt flux using organic draw solutions for pressure-retarded osmosis at elevated temperatures”, *Desalination*, 484, 114420.
- [J45] Alebrahim, E., Tarasi, F, **Rahaman, M.S.**, Dolatabadi, A, Moreau, C. (2019). Fabrication of titanium dioxide filtration membrane using suspension plasma spray process, *Surface and Coatings Technology*, 378, 124927.
- [J44] Choudhury, M.R., Anwar, N., Jassby, D., **Rahaman, M.S.** (2019) “Fouling and wetting in the membrane distillation driven wastewater reclamation process – A review”, *Advances in Colloid and Interface Science*, 269, 370-399.
- [J43] Islam, M.S., Touati, K., **Rahaman, M.S.** (2019) “Feasibility of a hybrid membrane-based process (MF-FO-MD) for fracking wastewater treatment”, *Separation and Purification Technology*, 229, 115802.
- [J42] Rajagopal, R., Choudhury, M.R., Anwar, N., Goyette, B., **Rahaman, M.S.** (2019) “Influence of pre-hydrolysis on sewage treatment in an up-flow anaerobic sludge blanket (UASB) reactor: A critical review, *Water*, 11 (2), 372.
- [J41] Mousavi, S.E., Choudhury, M.R., **Rahaman, M.S.** (2019) “3-D CFD-PBM coupled modeling and experimental investigation of struvite precipitation in a batch stirred reactor”, *Chemical Engineering Journal*, 361, 690-702.
- [J40] Islam, M.S., Sultana, S., McCutcheon, J.R., **Rahaman, M.S.** (2019) “Treatment of fracking wastewaters via forward osmosis: Evaluation of suitable organic draw solutions”, *Desalination*, 452, 149-158.
- [J39] Bakr, A. R., **Rahaman, M.S.** (2019) “Crossflow electrochemical filtration for elimination of ibuprofen and bisphenol A from pure and competing electrolytic solution conditions”, *Journal of Hazardous Materials*. 365, 615-621.
- [J38] Ma, W., Chen, T., Nanni, S., Yang, L., Ye, Z., **Rahaman, M.S.** (2019) “Zwitterion-functionalized graphene oxide incorporated polyamide membranes with improved antifouling properties”, *Langmuir*, 35 (5), 1513-1525.

- [J37] Tabrizian, P., Ma, W., Bakr, A., Rahaman, M.S. (2019) “pH-sensitive and magnetically separable Fe/Cu bimetallic nanoparticles supported by graphene oxide (GO) for high-efficiency removal of tetracyclines”, *Journal of Colloid and Interface Science*, 534, 549-562.
- [J36] Chen, T., Soroush, A., Rahaman, M.S. (2018) “Highly hydrophobic electrospun reduced graphene oxide/poly(vinylidene fluoride-co-hexafluoropropylene) membranes for use in membrane distillation”, *Industrial & Engineering Chemistry Research*. 57(43), 14535-14543.
- [J35] Islam, M.S., Sultana, S., Adhikary, S., Rahaman, M.S. (2018) “Highly effective organic draw solutions for renewable power generation by closed-loop pressure retarded osmosis”, *Energy Conversion and Management*, 171, 1226-1236.
- [J34] Ma, W., Panecka, M., Tufenkji, N., Rahaman, M.S. (2018) “Bacteriophage-based strategies for biofouling control in ultrafiltration: In situ biofouling mitigation, biocidal additives and biofilm cleanser”, *Journal of Colloid and Interface Science*, 523, 254-265.
- [J33] Sultana, S., Choudhury, M.R., Anwar, N., Bakr, A.R., Rahaman, M.S. (2018) “Effectiveness of electro-oxidation and electro-Fenton processes in removal of organic matter from high strength brewery wastewater”, *Journal of Applied Electrochemistry*, 48 (5), 519-528.
- [J32] Babae, Y., Mulligan, C. N., Rahaman, M.S. (2018) “Removal of arsenic (III) and arsenic (V) from aqueous solutions through adsorption by Fe/Cu nanoparticles” *Journal of Chemical Technology & Biotechnology*, 93, 63–71.
- [J31] **Rahaman, M.S., Choudhury, M.R., Ramamurthy, A.S., Mavinic, D.S., Ellis, N., Taghipour, F.** (2018) “CFD modelling of liquid-solid fluidized beds of polydisperse struvite crystals”, *International Journal of Multiphase Flow*, 99, 48-61.
- [J30] Babae, Y., Mulligan, C. N., Rahaman, M.S. (2018) “Arsenic immobilization in soil using starch-stabilized Fe/Cu nanoparticles: a case study in treatment of a chromated copper arsenate (CCA)-contaminated soil at lab scale”, *Journal of Soils and Sediments*, 18 (4), 1610-1619.
- [J29] Babae, Y., Mulligan, C. N., Rahaman, M.S. (2017) “Stabilization of Fe/Cu nanoparticles by starch and efficiency of arsenic adsorption from aqueous solutions”, *Environmental Earth Sciences*, 76, 650-661.
- [J28] Bakr, A.R., Rahaman, M.S. (2017) “Removal of bisphenol A by electrochemical carbon-nanotube filter: Influential factors and degradation pathway”, *Chemosphere*, 185, 879-887.
- [J27] Rahman, F.O., Choudhury, M.R., Anwar, N., Bakr, A.R., Rahaman, M.S. (2017) “Highly conductive ultrafiltration membrane via vacuum filtration assisted layer-by-layer deposition of functionalized carbon nanotubes”, *Industrial & Engineering Chemistry Research*, 56 (30), 8474–8484.

- [J26] Islam, M.S., McCutcheon, J. R., **Rahaman, M.S.** (2017) “A high flux polyvinyl acetate-coated electrospun nylon 6/SiO₂ composite microfiltration membrane for the separation of oil-in-water emulsion with improved antifouling performance”, *Journal of Membrane Science*, 537 (1), 297–309.
- [J25] Ma, W., Soroush, A., Tran, V.A.L., **Rahaman, M.S.** (2017) “Cysteamine- and graphene oxide-mediated copper nanoparticle decoration on reverse osmosis membrane for enhanced anti-microbial performance”, *Journal of Colloid and Interface Science*, 501 (1), 330-340.
- [J24] Rajagopal, R., Bellavance, D., **Rahaman, M.S.** (2017) “Psychrophilic anaerobic digestion of semi-dry mixed municipal food waste: For North American context”, *Process Safety and Environmental Protection*, 105, 101–108.
- [J23] Ma, W., Soroush, A., Tran, V.A.L., Brennan, G., **Rahaman, M.S.**, Asadishad, B., Tufenkji, N. (2016) “Spray- and spin-assisted layer-by-layer assembly of copper nanoparticles on thin-film composite reverse osmosis membrane for biofouling mitigation”, *Water Research*, 99, 188-199.
- [J22] Wilcox, J., **Nasiri, F.**, Bell, S., Rahaman, M.S. (2016) “Urban water reuse: A triple bottom line assessment framework and review”, *Sustainable Cities and Society*, 27, 448-456.
- [J21] Bakr, A.R., **Rahaman, M.S.** (2016) “Electrochemical efficacy of a carboxylated multiwalled carbon nanotube filter for the removal of ibuprofen from aqueous solutions under acidic conditions”. *Chemosphere*, 153, 508-520.
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- [J19] Islam, M.S., **Rahaman, M.S.**, and Yeum, J.H. (2015) “Phosphine-functionalized electrospun poly(vinyl alcohol)/silica nanofibers as highly effective adsorbent for removal of aqueous manganese and nickel ions”, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 484, 9-18.
- [J18] Rahaman, M.S., *Omi, F.R., and **Basu, A.** (2015) “Experimental and numerical modelling of arsenic adsorption in fixed-bed dynamic columns packed with Atlantic cod fish scales”, *Canadian Journal of Chemical Engineering*, 93 (11), 2024-2030.
- [J17] Soroush, A., Ma, W., Silvino, Y., **Rahaman, M.S.** (2015) “Surface modification of thin film composite forward osmosis membrane by silver-decorated graphene-oxide nanosheets”, *Environmental Science: Nano*, 2, 395-405.
- [J16] Ma, W., **Rahaman, M.S.**, Therien-Aubin, H. (2015) “Controlling biofouling of reverse osmosis membranes through surface modification via grafting patterned polymer brushes”, *Journal of Water Reuse and Desalination*, 5 (3), 326-334.

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- [J14] **Rahaman, M.S.,** Mavinic, D.S., Ellis, N. (2014) "Fluidization behavior of struvite recovered from wastewater", *Journal of Environmental Engineering and Science*, 9 (2), 137-149.
- [J13] **Rahaman, M.S.,** Therien-Aubin, H., Ben-sasson, M., Ober, C.K., **Nielsen, M.,** Elimelech, M. (2014) "Control of biofouling on reverse osmosis polyamide membranes modified with biocidal nanoparticles and antifouling polymer brushes", *Journal of Materials Chemistry B*, 2, 1724-1732.
- [J12] **Rahaman, M.S.,** Mavinic, D.S., **Meikleham, A.,** Ellis, N. (2014) "Modeling phosphorus removal and recovery from anaerobic digester supernatant through struvite crystallization in a fluidized bed reactor", *Water Research*, 51, 1–10.
- [J11] **Rahaman, M.S.,** Vecitis, C.D., Elimelech, M. (2012) "Electrochemical carbon-nanotube filter performance towards virus removal and inactivation in the presence of natural organic matter". *Environmental Science & Technology*, 46 (3), 1556–1564.
- [J10] **Vecitis, C.D.,** Schnoor, M.H., **Rahaman, M.S.,** Schiffman, J.D., Elimelech, M. (2011) "Electrochemical multiwalled carbon nanotube filter for viral and bacterial removal and inactivation". *Environmental Science & Technology*, 45 (8), 3672-3679.
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- [J8] **Rahaman, M.S.,** Mavinic, D.S. (2009) "Recovering nutrients from wastewater treatment plants through struvite crystallization: CFD modeling of the hydrodynamics of UBC MAP fluidized-bed crystallizer". *Water Science & Technology*, 59 (10), 1887-1892.
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- [J4] Basu, A., **Rahaman, M.S.,** Mustafiz, S, Islam, M.R. (2007) "Batch studies of lead adsorption from a multi-component aqueous solution onto Atlantic-Cod fish scale (Gadus Morhua) substrate". *Journal of Environmental Engineering and Science*, 6(4). 455-462.

- [J3] **Rahaman, M.S.**, Mavinic, D.S., Bhuiyan, M.I.H., Koch, F.A. (2006) “Exploring the determination of struvite solubility product from analytical results”. *Environmental Technology*, 27, 951-961.
- [J2] Basu, A., Mustafiz, S., Bjorndalen, N., **Rahaman, M.S.**, Chaalal, O., Islam, M.R. (2006) “A comprehensive approach for modeling sorption of lead and cobalt ions through fish scales as an adsorbent”. *Chemical Engineering Communications*, 193 (5): 580-605.
- [J1] Mustafiz, S., **Rahaman, M.S.**, Kelly, D., Tango, M., Islam, M.R. (2002) “The application of fish scale in removing heavy metal from energy produced waste streams; The role of microbes”. *Energy Sources*, 25(9): 905-916.

Book Chapters (Underline denotes my Postdocs, and graduate and undergraduate students)

- [B4] Touati, K., Usman, H.S., Chen, T., Anwar, N., Choudhury, M.R., **Rahaman, M.S.** (2020) “Inorganic scaling in desalination systems”. In: Saji V., Meroufel A., Sorour A. (eds) *Corrosion and Fouling Control in Desalination Industry* (pp. 251-268). Springer, Cham.
- [B3] Anwar, N., Yang, L., Ma, W., Usman, H.S., **Rahaman, M.S.** (2020) “Biofouling in RO desalination membranes”. In: Saji V., Meroufel A., Sorour A. (eds) *Corrosion and Fouling Control in Desalination Industry* (pp. 269-283). Springer, Cham.
- [B2] Choudhury, M.R., Meertens, W., Yang, L., Touati, K., **Rahaman, M.S.** (2020) “Corrosion monitoring in desalination plants”. In: Saji V., Meroufel A., Sorour A. (eds) *Corrosion and Fouling Control in Desalination Industry* (pp. 175-189). Springer, Cham.
- [B1] Soroush, A., Rice, D., **Rahaman, M.S.**, Perreault, F. (2016) “Antimicrobial properties of graphene nanomaterials: mechanisms and applications, Invited Book Chapter In: *The Graphene-based Materials in Health and Environment* (pp. 285-320). Springer publishing company.

Technical Reports (Underline denotes my Postdocs, and graduate and undergraduate students)

- [T3] Bakr, A., **Rahaman, M.S.** (2015) “Developing an electrofiltration technology for brewery process water reuse”. Final report submitted to Labatt Brewing Company.
- [T2] Bakr, A., **Rahaman, M.S.** (2014) “Development of an electrooxidation process for treating municipal and industrial wastewater”. Final report submitted to PLT Environment.
- [T1] Ahmed, M.F., and **Rahaman, M.S.** (2002) “Technical appraisal and social acceptability of rainwater harvesting in Bangladesh”. Final report submitted to International Training Network (ITN-Bangladesh), Center for Water Supply and Waste Management.

Conference Proceedings and Abstracts (Underline denotes my Postdocs, and graduate and undergraduate students)

- [C65] Bisio, A., **Rahaman, M.S.**, Perreault, F. “Developpement of novel membranes with enhanced ammonia permeability for separation by membrane distillation”, 27th Chemistry and Biochemistry Graduate Research Conference, November 21, 2025, Concordia University, Montreal, QC, Canada.
- [C64] Smith, A., **Rahaman, M.S.** “Dewatering of brewery sludge through the use of biopolymers”, ACS Fall Meeting, August 17 – 20, 2020, Virtual Conference.
- [C63] Usman, H.S., Touati, K., **Rahaman, M.S.** “Economic evaluation of membrane distillation as a competitive brackish water desalination technology”, North American Membrane Society (NAMS) Meeting, May 18-21, 2020, Virtual Conference.
- [C62] Alebrahim, E., **Rahaman, M.S.**, Moreau, C. “Optimization of TiO₂ filtration membranes fabricated by SPS process”, North American Membrane Society (NAMS) Meeting, May 18-21, 2020, Virtual Conference.
- [C61] Adhikary, S., Khalil, M., Dorval, D., Goyette, B., Dubreuil, J., **Rahaman, M.S.**, Rajagopal, R. “Performance assessment of low-temperature anaerobic digestion biotechnology for treating poultry manure”, CSCE Annual Conference, June 12 - June 15, 2019, Laval (Greater Montreal), QC, Canada.
- [C60] Anwar, N., Choudhury, M.R., **Rahaman, M.S.** “Membrane distillation (MD) and reverse osmosis (RO) processes for water recovery from pre-treated high strength brewery wastewater”, North American Membrane Society (NAMS) Meeting, May 11-15, 2019, Pittsburgh, PA, USA.
- [C59] Usman, H.S., Touati, K., **Rahaman, M.S.** “Techno-economic comparison of RO and MD for small-scale brackish water desalination”, North American Membrane Society (NAMS) Meeting, May 11-15, 2019, Pittsburgh, PA, USA.
- [C58] Chen, T., Yang, L., **Rahaman, M. S.** “Facile fabrication of amphiphobic nanocomposite membranes for application in membrane distillation”, North American Membrane Society (NAMS) Meeting, May 11-15, 2019, Pittsburgh, PA, USA.
- [C57] Yang, L., Chen, T., Ye, Z., Barbeau, B., **Rahaman, M. S.** “High flux and anti-fouling electrospun nylon 6 ultrafiltration membrane coated with GO/Ncarboxyethylchitosan (NCECS) functionalized polyvinyl alcohol hydrogel”, North American Membrane Society (NAMS) Meeting, May 11-15, 2019, Pittsburgh, PA, USA.
- [C56] Ma, W., Yang, L., **Rahaman, M. S.** “Grafting zwitterionic polymer and poly (amino acid) on polyamide membranes: ‘defending and attacking’ strategies for biofouling control”, North American Membrane Society (NAMS) Meeting, May 11-15, 2019, Pittsburgh, PA, USA.
- [C55] Chen, T., Ma, W., Anwar, N., Adhikary, S., **Rahaman, M.S.** “Electrospun superhydrophobic and amphiphobic nanocomposite membranes with reduced graphene oxide in poly(vinylidene fluoride-co-hexafluoropropylene) for membrane distillation”, ACS Spring National Meeting & Exposition, Orlando, FL, March 31 – April 4, 2019.

- [C54] **Rahaman, M.S.** “Zwitterion functionalized graphene oxide nanocomposite nanofiltration membrane with improved water flux and antifouling properties”, ACS Fall Meeting, August 19-23, 2018, Boston, MA. (**Invited Talk**)
- [C53] Anwar, N., Choudhury, M.R., Chen, T., **Rahaman, M.S.** "Water recovery from high strength brewery wastewater via a membrane distillation process" 256th ACS National Meeting, August 19-23, 2018, Boston, MA, USA.
- [C52] Ma, W., Chen, T., Nanni, S., **Rahaman, M.S.** “GO mediated surface modification of polyamide membrane with zwitterionic polymer and poly (amino acid) to control the biofouling via bacteria/biofilm-“defending and attacking” strategies”, GRC 2018 Membranes: Materials and Processes, August 12 - 17, 2018, New London, NH.
- [C51] Chen, T., Ma, W., Anwar, N., Adhikary, S., **Rahaman, M.S.** “Highly hydrophobic, electrospun, reduced graphene oxide (rGO)/PVDF-HFP membranes for use in membrane distillation”, North American Membrane Society (NAMS) Meeting, June 9-13, 2018, Lexington, KY, USA.
- [C50] Adhikary, S., Islam, M.S., Sultana, S., Ramamurthy, A.S., **Rahaman, M.S.** “Effect of temperature on electricity production in a closed-loop pressure retarded osmosis process”, CSCE Annual Conference, June 13-16, 2018, Fredericton, NB, Canada.
- [C49] Anwar, N., Sultana, S., Choudhury, M.R., Chen, T., **Rahaman, M.S.** “Evaluation of electrocoagulation as a method of pre-treatment for highly concentrated brewery wastewater”, CSCE Annual Conference, June 13-16, 2018, Fredericton, NB, Canada.
- [C48] Choudhury, M.R., Anwar, N., Rajagopal, R., **Rahaman, M.S.** “Application of electrochemical advanced oxidation processes (EAOPs) for treatment of concentrate from psychrophilic anaerobic digester units”, CSCE Annual Conference, June 13-16, 2018, Fredericton, NB, Canada.
- [C47] Chen, T., Soroush, A., Islam, M.S., Ma, W., **Rahaman, M.S.** Highly hydrophobic electrospun reduced-graphene oxide/polyvinylidene fluoride-co-hexafluoropropylene membrane for membrane distillation”, International Congress for Membrane and Membrane processes (ICOM), July 29 – August 4, 2017, San Francisco, CA, USA.
- [C46] Ma, W., Nanni, S., Tiraferri, A., **Rahaman, M.S.** “Improving the anti-biofouling properties of reverse osmosis membranes via “defending” and “attacking” strategies by applying fouling-resistant polymer brush and graphene oxide”, The Association of Environmental Engineering & Science Professors (AEESP) Conference, June 21-22, 2017, Ann Arbor, MI, USA.
- [C45] Okoro, O., Adhikary, S., Islam, M.S., **Rahaman, M.S.** “Hybrid electrocoagulation-forward osmosis system for the treatment of hydraulic fracturing (fracking) wastewater”, The Association of Environmental Engineering & Science Professors (AEESP) Conference, June 21-22, 2017, Ann Arbor, MI, USA.

- [C44] Sultana, S., Anwar, N., Okoro, O., Rahaman, M.S. “Evaluation of electrocoagulation as a method of pre-treatment for highly concentrated brewery wastewater”, CSCE Annual Conference, May 31 - June 3, 2017, Vancouver, BC, Canada.
- [C43] Mousavi, S.E., Rahaman, M.S. “Modeling struvite crystallization in a batch reactor using population balance module coupled with 3-D CFD model”, CSCE Annual Conference, May 31 - June 3, 2017, Vancouver, BC, Canada.
- [C42] Islam, M. S., Sultana, S. Rahaman, M. S. “Renewable Energy Generation through Osmotic Heat Engine”, 9th International Conference on Electrical and Computer Engineering (ICECE), December 20-22, 2016, BUET, Dhaka, Bangladesh.
- [C41] Babae, Y., Mulligan, C. N., Rahaman, M.S. “Immobilization of arsenic by starch-stabilized Fe/Cu nanoparticles in a chromated copper arsenate (CCA) contaminated soil”, GeoVancouver 2016, October 2 – 5, 2016, Vancouver, BC, Canada.
- [C40] Islam, M.S., Sultana, S., Rahaman, M.S. “Highly effective microfiltration membrane based on electrospun nylon 6/SiO₂ composite”. Gordon Research Conference on Membranes: Materials & Processes, July 31 - August 5, 2016, New London, NH, USA. **(Selected as one of the late-breaking topic speakers)**
- [C39] Ma, W., Panecka, M., Tran, V.A.L., Wong, K., Tufenkji, N., Rahaman, M.S. “Biofouling mitigation of UF membrane by using bacteriophage”. Gordon Research Conference on Membranes: Materials & Processes, July 31 - August 5, 2016, New London, NH, USA.
- [C38] Sultana, S., Baltodano, A., Rahaman, M.S. “Highly effective electro-fenton oxidation treatment for concentrated brewery wastewater”, CSCE Annual Conference, June 1-4, 2016, London, ON, Canada.
- [C37] Ma, W., Soroush, A., Tran, V.A.L., Rahaman, M.S. “Improving anti-biofouling property of the thin-film composite (TFC) reverse osmosis (RO) membrane by copper nanoparticles (CuNPs)”, 251st ACS National Meeting & Exposition, March 13-17, 2016. San Diego, CA, USA.
- [C36] Soroush, A., Ma, W., Rahaman, M.S. “Biofouling control of thin film composite forward osmosis membranes by using silver decorated graphene oxide nanocomposites”, International Conference on Climate Change and Water Security (ICCWS), 27 December, 2015, Dhaka, Bangladesh. **(Keynote Speech)**
- [C35] Islam, S., Sultana, S. Rahaman, M.S. “Electrospun nylon 6 microfiltration membrane for treatment of brewery wastewater”, 11th International Conference on Mechanical Engineering (ICME 2015), 18-20 December, 2015, Dhaka, Bangladesh.
- [C34] Ma, W., Soroush, A., Tran, V.A.L., Rahaman, M.S. “Comparison of the effectiveness of silver nanoparticles (AgNPs) and copper nanoparticles (CuNPs) for thin-film composite (TFC) reverse osmosis (RO) membrane biofouling control”, 4th Annual Conference Sustainable Nanotechnology Organization, November 8-10, 2015, Portland, OR, USA.

- [C33] Babae, Y., Mulligan, C.N., **Rahaman, M.S.** “Removal of arsenic from contaminated water and its stabilization in soil using iron/copper nanoparticles”, GeoQuebec 2015, September 20–23, 2015, Quebec City, QC, Canada.
- [C32] Islam, M.S., **Rahaman, M.S.** “Effective organic draw solutions for engineered osmosis processes”, 250th ACS National Meeting, August 16-20, 2015, Boston, MA, USA.
- [C31] Ma, W., Soroush, A., Tran, V.A.L., Brennan, G., **Rahaman, M.S.** “Spin- and spray-assisted layer-by-layer assembly as a highly effective method for incorporating biocidal nanoparticles onto TFC polyamide membrane”, The Association of Environmental Engineering & Science Professors (AEESP) Conference, June 13-16, 2015, New Haven, CT, USA.
- [C30] Soroush, A., Ma, W., **Rahaman, M.S.** “Effective silver nanoparticles loading method for developing antifouling thin film composite forward osmosis membranes with silver decorated graphene oxide nanosheets”, The Association of Environmental Engineering & Science Professors (AEESP) Conference, June 13-16, 2015, New Haven, CT, USA.
- [C29] Islam, M.S., **Rahaman, M.S.** “Highly porous superhydrophilic ultra-filtration membrane based on electrospun nylon 6/SiO₂ composite”, North American Membrane Society (NAMS) 25th Annual Meeting, May 30 - June 3, 2015, Boston, MA, USA.
- [C28] Ma, W., Soroush, A., Tran, V.A.L., Brennan, G., **Rahaman, M.S.** “Functionalization of TFC polyamide membrane with copper nanoparticles using spray- and spin-assisted layer-by-layer assembly”, North American Membrane Society (NAMS) 25th Annual Meeting, May 30 - June 3, 2015, Boston, MA, USA.
- [C27] Babae, Y., Mulligan, C.N., **Rahaman, M.S.** “Arsenic removal from the leachate of a chromated copper arsenate (CCA) contaminated soil using iron-copper oxide nanoparticles”, GeoRegina 2014, September 28 – October 1, 2014, Regina, SK, Canada.
- [C26] Ma, W., Tran, V.A.L., **Rahaman, M.S.** “Layer-by-layer self-assembly of copper nanoparticles for biofouling control of RO membrane”. Gordon Research Conference on Membranes: Materials & Processes, July 6-11, 2014, New London, NH, USA.
- [C25] Babae, Y., Mulligan, C.N., **Rahaman, M.S.** “Arsenic removal from groundwater using iron-copper oxide nanocomposites”. 88th ACS Colloid & Surface Science Symposium, June 22-25, 2014, Philadelphia, PA, USA.
- [C24] Ma, W., **Rahaman, M.S.**, Therien-Aubin, H. “Surface modification of reverse osmosis membranes via grafting patterned polymer brushes” CSCE Annual Conference, May 28-31, 2014, Halifax, NS, Canada.
- [C23] Meikleham, A., Islam, M.S., **Rahaman, M.S.**, Elektorowicz, M. ”Removal of emerging contaminants from wastewater effluents by using nano-composite electrochemical filters”. CSCE Annual Conference, May 28-31, 2014, Halifax, NS, Canada.

- [C22] Islam, M.S., Yeum, J.H., **Rahaman, M.S.** “Preparation and characterization of polymer/carbon nanotube (CNT) composite nanoparticles and nanofibers through electrospinning”. CSCE Annual Conference, May 28-31, 2014, Halifax, NS, Canada.
- [C21] **Rahaman, M.S.**, Therien-Aubin, H. “Biofouling control of reverse osmosis membranes through surface modification via grafting patterned polymer brushes”. International Water Association – Membrane Technology Conference, August 25-29, 2013, Toronto, ON, Canada.
- [C20] **Rahaman, M.S.** and Therien-Aubin, H. “Novel antifouling reverse osmosis membranes grafted with biocidal silver nanoparticles and antifouling polymer brushes”. CSCE Annual Conference, May 29 – June 01, 2013, Montreal, QC, Canada.
- [C19] **Rahaman, M.S.**, Therien-Aubin, H., Ben-Sasson, M., Ober C.K., Elimelech, M. “Surface modification of reverse osmosis polyamide membranes with silver nanoparticles and antifouling/fouling release polymer brushes”. Gordon Research Conference on Environmental Nanotechnology, June 2-7, 2013, Stowe, VT, USA.
- [C18] **Rahaman, M.S.**, Mavinic, D.S. “Modeling nutrient recovery from wastewater through struvite crystallization in a fluidized bed reactor”. 1st Waterloo international conference of sustainable wastewater treatment: The recovery of value-added products, August 8-9, 2012, University of Waterloo, ON, Canada.
- [C17] **Rahaman, M.S.**, Therien-Aubin, H., Ben-Sasson, M., Ober C.K., Elimelech, M. “Surface modification of thin film composite (TFC) reverse osmosis membranes with biocidal nanoparticles and antifouling polymer brushes”. Gordon Research Conference on Membranes: Materials & Processes, July 29 - August 3, 2012, New London, NH, USA.
- [C16] **Rahaman, M.S.**, Elimelech, M. “Effect of natural organic matter on the performance of electrochemical multiwalled carbon nanotube filter towards viral removal and inactivation”. Division of Environmental Chemistry for the 243rd ACS National Meeting, March 25–29, 2012, San Diego, CA, USA.
- [C15] **Rahaman, M.S.**, Vecitis, C.D., Elimelech, M. “Performance of an electrochemical (EC) multiwalled carbon nanotube (MWNT) filter: Viral removal and inactivation in the presence of natural organic matter”. Gordon Research Conference on Environmental Nanotechnology, May 29 - June 3, 2011, Waterville Valley, NH, USA.
- [C14] **Rahaman, M.S.**, Mavinic, D.S., Ellis, N. “Phosphorus recovery from anaerobic digester supernatant by struvite crystallization: Modeling of a fluidized bed reactor incorporating thermodynamics, kinetics and reactor hydrodynamics”. WEF-IWA Nutrient Recovery and Management Conference, January 09-12, 2011, Miami, FL, USA.
- [C13] **Rahaman, M.S.**, Mavinic, D.S., Ellis, N., Briton, A. T., Zhang, M., Fattah, K. P., Koch, F.A. “Numerical investigations of the hydrodynamics of the UBC MAP fluidized bed crystallizer”. International Conference on Nutrient Recovery from Wastewater Streams, May 10-13, 2009, Vancouver, B.C., Canada.

- [C12] Fattah, K.P., Mavinic, D.S., **Rahaman, M.S.**, Koch, F.A. “Development of a process control system for online monitoring and control of a struvite crystallization process”. International Conference on Nutrient Recovery from Wastewater Streams, May 10-13, 2009, Vancouver, B.C., Canada.
- [C11] **Rahaman, M.S.**, Mavinic, D.S., Ellis, N. “Recovering phosphorus from anaerobic digester supernatant: Model-based evaluation of the fluidized bed UBC MAP crystallizer, Proceedings of the IWA 6th World Water Congress Conference, Sept 7–12, 2008, Vienna, Austria.
- [C10] Qu, X., **Rahaman, M.S.**, Mavinic, D.S. Koch, F.A. “Recovering phosphorus from wastewater through struvite crystallization: Hydrodynamics of a 2-dimensional fluidized-bed UBC MAP crystallizer”. Proceedings of the IWA 6th World Water Congress Conference, Sept 7–12, 2008, Vienna, Austria.
- [C9] **Rahaman, M.S.**, Mavinic, D.S. “Recovering nutrients from wastewater treatment plants through struvite crystallization: CFD modelling of the hydrodynamics of UBC MAP fluidized-bed crystallizer”. Proceedings of the IWA 4th Young Water Professional Conference, July 16-18, 2008, Berkley, CA, USA.
- [C8] **Rahaman, M.S.**, Mavinic, D.S. “Recovering phosphorus from anaerobic digester supernatant: Model-based evaluation of the fluidized bed UBC MAP crystallizer”. BCWWA 36th Annual Conference and Exhibition, April 27-29, 2008, Whistler, BC, Canada.
- [C7] **Rahaman, M.S.**, Ellis, N., Mavinic, D.S. “Effects of various process parameters on struvite precipitation kinetics and subsequent determination of rate constants”. Proceedings of the IWA Specialist Conference: Moving Forward Wastewater Biosolids Sustainability: Technical, Managerial, and Public Synergy, June 24-27, 2007, Moncton, NB, Canada.
- [C6] **Rahaman, M.S.**, Ellis, N., Mavinic, D.S. “Modeling of struvite crystallization from anaerobic digester supernatant in a liquid-solid fluidized bed reactor”. Proceedings of the IWA Specialist Conference: Moving Forward Wastewater Biosolids Sustainability: Technical, Managerial, and Public Synergy, June 24-27, 2007, Moncton, NB, Canada.
- [C5] **Rahaman, M.S.**, Ellis, N., Koch, F.A., Mavinic, D.S. “A CFD simulation of hydrodynamic behaviour of UBC MAP crystallizer”. BCWWA 33rd Annual Conference and Exhibition, April 16-21, 2005, Penticton, BC, Canada.
- [C4] **Rahaman, M.S.**, Basu, A., Islam, M.R. “Comparative studies of arsenic adsorption on natural materials”. Proceedings of the Canadian Society for Civil Engineers 31st Annual Conference, June 4-7, 2003, Moncton, N.B., Canada.
- [C3] **Rahaman, M.S.**, Basu, A., Islam, M.R. “Comparative adsorption studies of arsenic on biomaterials”. Proceedings of the International Conference on Bangladesh Environment, 2002 (ICBEN-2002), December 19-21, 2002, Dhaka, Bangladesh.

- [C2] Mortula, M.M., **Rahaman, M.S.**, Rahman, M.M. “Studies on waste disposal at Dhaka Export Processing Zone (DEPZ), Savar”. Proceedings of the International Conference on Bangladesh Environment, 2002 (ICBEN-2002), Dhaka, December 19-21, 2002, Bangladesh.
- [C1] **Rahaman, M.S.**, Mortula, M.M., Ahmed, M.F. “A computer based design of rainwater harvesting system (RWHS)”. Proceedings of the 28th WEDC Conference; Sustainable Environmental Sanitation and Water Services, November 18-22, 2002, Kolkata (Calcutta), India.

Invited Talks, Invited Lectures

- [T20] **Rahaman, M.S.** “PFAS and fluoropolymer-based microplastics release from PVDF membranes in water treatment applications”, Lightning Talk Session for the 2025 Faculty Symposium, UMass Lowell, December 02, 2025.
- [T19] **Rahaman, M.S.** “Membrane distillation for water reclamation and reuse: Opportunities and challenges”, Seminar Series, Department of Chemistry, University of Quebec in Montreal, QC, Canada, November 7, 2024
- [T18] **Rahaman, M.S.** “Energy conversion processes: Principles, efficiency, and technologies”, Department of civil & environmental engineering, University of Massachusetts Lowell, MA, USA, July 25, 2024
- [T17] **Rahaman, M.S.** “Membrane-based technologies for water recycling and reuse”, Department of Civil Engineering, Military Institute of Science and Technology (MIST), Dhaka, Bangladesh, December 22, 2019.
- [T16] **Rahaman, M.S.** “Membrane distillation for water reclamation and reuse: Opportunities and challenges”, BWRC and Leaders Seminar Series, Beaty Water Research Centre, Queen's University, Kingston, ON, September 18, 2019.
- [T15] **Rahaman, M.S.** “Graphene-based nanocomposite membranes for seawater desalination and water reuse”, School of Environmental Science and Engineering, Shandong University, Qingdao, China, July 19, 2019.
- [T14] **Rahaman, M.S.** “Graphene-based nanocomposite membranes for fouling control in desalination”, Water and Environment Student Talks (WEST), UBC Vancouver Campus, BC, June 13-14, 2019.
- [T13] **Rahaman, M.S.** “Membrane distillation for water reclamation and reuse: Opportunities and challenges”, 11th Western Canadian Symposium on Water Quality Research, Edmonton, AB, May 10, 2019.
- [T12] **Rahaman, M.S.** “Graphene-based nanocomposite membranes for energy-efficient desalination, and water reclamation and reuse”, Beaty Water Research Centre, Department of Civil Engineering, Queen's University, Kingston, ON, March 12, 2019.

- [T11] **Rahaman, M.S.** “Graphene-based nanocomposite membranes for energy-efficient desalination, and water reclamation and reuse”, Department of Civil, Geological and Mining Engineering, École Polytechnique de Montréal, December 15, 2018.
- [T10] **Rahaman, M.S.** “Advanced membrane-based technologies for water reclamation from brewery wastewater” School of Engineering, University of Guelph, ON, November 27, 2018.
- [T9] **Rahaman, M.S.** “Graphene-based nanocomposite membranes for energy-efficient desalination, and water reclamation and reuse”, Department of Chemistry and Biochemistry, Concordia University, September 21, 2018.
- [T8] **Rahaman, M.S.** “Zwitterion functionalized graphene oxide nanocomposite nanofiltration membrane with improved water flux and antifouling properties”, ACS Fall meeting, Boston, MA, August 19-23, 2018.
- [T7] **Rahaman, M.S.** “Environmental applications of nanotechnology: Electrochemical carbon-nanotube filter for removal and inactivation of viruses and bacteria”, Seminar in Department of Civil & Environmental Engineering at North South University, Dhaka, Bangladesh, July 20, 2017.
- [T6] **Rahaman, M.S.** “Advanced membrane technologies for water treatment”, Department of Civil Engineering, McGill University, March 9, 2016.
- [T5] **Rahaman, M.S.** “Biofouling control of thin film composite forward osmosis membranes by using silver decorated graphene oxide nanocomposites” International Conference on Climate Change and Water Security (ICCWS), 27 December 2015, Dhaka, Bangladesh. [Keynote Speech]
- [T4] **Rahaman, M.S.** “Applications of nanoparticles for water treatment”, Department of Civil Engineering, McGill University, October 29, 2014.
- [T3] **Rahaman, M.S.** “Surface modification of reverse osmosis polyamide membranes with silver nanoparticles and antifouling/fouling release polymer brushes”, 3rd Symposium Canada-Brazil: Nanomaterials and the Environment, UQAM, August 19-21, 2013.
- [T2] **Rahaman, M.S.** “Nutrient recovery from wastewater”, Department of Civil Engineering, McGill University, October 19, 2012.
- [T1] **Rahaman, M.S.** “Environmental applications of nanotechnology: Electrochemical carbon-nanotube filter for removal and inactivation of viruses and bacteria”, Department of Building, Civil and Environmental Engineering, Concordia University, January 23, 2012.

Student Supervision

Current Undergrad Students at UMass Lowell, Massachusetts

1. Derek Bush (co-supervised with Weile Yan)

Project Title: PFAS and fluoropolymer-based microplastics release from PVDF membranes

Current Ph.D. Students at University of Quebec, Montreal

1. Anna Bisio (co-supervised with François Perreault)
Dissertation Title: Membrane-based processes for resource recovery from waste

Current Ph.D. Students at Polytechnique Montreal

1. Hamidreza Farimaniraad (co-supervised with Dr. Benoit Barbeau)
Dissertation Title: Fluidized bed reactor for PFAS adsorption

Past Post-Doctoral Fellows and Research Associate at Polytechnique Montreal

1. Dr. Md. Shahidul Islam (co-supervised with Benoit Barbeau) [Ph.D., Concordia University, Montreal, QC, Canada]
2. Thanh Loan Nguyen (co-supervised with Benoit Barbeau) [MAsc, University of Technology, Ho Chi Minh City, Viet Nam]
3. Dr. Oluchi Okoro (co-supervised with Benoit Barbeau) [Ph.D., Polytechnique Montreal, QC]

Past Post-Doctoral Researchers at Concordia

1. Dr. Khaled Touati (co-supervised with Dr. Mulligan) (2021)
Title and Affiliation: Research Engineer, Reveau, Montreal, QC
2. Dr. Mahbuboor Rahman Choudhury (2019)
Title and Affiliation: Assistant Professor, Manhattan College, Bronx, NY, USA
3. Dr. Rajinikanth Rajagopal (2018)
Title and Affiliation: Research Scientist, Agriculture and Agri-Food Canada, Sherbrooke, QC,

Past Ph.D. Students at Concordia

- Tiantian Chen [co-advised with Dr. Zhi Chen] (November 2021)
Dissertation Title: Robust anti-wetting and anti-fouling membranes for membrane distillation
Title and Affiliation: Postdoctoral Fellow, Concordia University
- Nawrin Anwar [co-advised with Dr. Mulligan] (November 2021)
Dissertation Title: Membrane-based desalination processes for energy-efficient water recycling
Title and Affiliation: Senior Engineer, Westchester County, NY, USA
- Wen Ma (November 2018)
Dissertation Title: Biofouling mitigation of reverse osmosis (RO) membranes via surface modification with nanoparticles and polymer brushes
Title and Affiliation: Assistant Professor, Université de Sherbrooke, QC, Canada
- Md. Shahidul Islam (November 2018)
Dissertation Title: Emerging materials and membrane-based processes for recycling hydraulic fracturing wastewater
Title and Affiliation: Research Associate, Polytechnique Montreal, QC, Canada
- Ahmed Refaat (November 2017)
Dissertation Title: Electrochemical filtration technology for the removal and degradation of ibuprofen and bisphenol A from aqueous solutions
Title and Affiliation: Postdoctoral Fellow, Georgia Southern University, Statesboro, GA, USA

- Fatemeh Yassaman Babae [co-advised with Dr. Mulligan] (November 2016)
Dissertation Title: Removal of arsenic from water and immobilization in soil using iron/copper nanoparticle
Title and Affiliation: Assistant Professor, Chemical and Environmental Technology, British Columbia Institute of Technology (BCIT), Vancouver, BC, Canada

Past MASc Students at Concordia

9. Wesley Meertens (November 2020)
Dissertation Title: Combined electrooxidation, electrocoagulation, and electrofiltration processes for wastewater treatment
Title and Affiliation: Junior Engineer, GHD, Montreal, QC, Canada
8. Suman Adhikary (November 2019)
Dissertation Title: Closed-loop pressure retarded osmosis (PRO) for electricity production
Title and Affiliation: Research Engineer, Point 3 Biotech Corp., Abbotsford, BC, Canada
7. Elnaz Alebrahim [co-advised with Drs. Moreau and Dolatabadi] (November 2018)
Dissertation Title: Thermal spray coating of ceramic water-filtration membrane
Title and Affiliation: PhD student, Concordia University, Montreal, QC, Canada
6. Oluchi Okoro (November 2017)
Dissertation Title: Hybrid EC-FO processes for treating fracking wastewater
Title and Affiliation: PhD student, Polytechnique Montréal, QC, Canada
5. Parnaz Tabrizian (November 2017)
Dissertation Title: Cu-GO-nZVI composite for tetracycline removal from aqueous solution
Title and Affiliation: Senior Artificial Intelligence Consultant, IVADO Labs, Montreal, QC, Canada
4. Ebrahim Mousavi (November 2017)
Dissertation Title: CFD modeling of a fluidized bed struvite crystallization
Title and Affiliation: Consultant, Soquelec, Montreal, QC, Canada
3. Sharmin Sultana (November 2017)
Dissertation Title: Treatment of high strength brewery wastewater using combined electro-oxidation and electro-Fenton processes
Title and Affiliation: Junior Engineer, GHD, Waterloo, ON, Canada
2. Adel Soroush (June 2017)
Dissertation Title: Development of antimicrobial thin-film composite FO membranes by using AgNPs and GO nanosheets
Title and Affiliation: PhD student, University of Minnesota, Twin Cities, MN, USA
1. Farah Rahman Omi (June 2015)
Dissertation Title: Conductive ultrafiltration membrane fabrication via a novel vacuum-assisted layer-by-layer assembly
Title and Affiliation: Assistant Professor, Chittagong University of Eng. & Tech., Bangladesh

Past Visiting Scholars and Graduate Students at Concordia

3. Dr. Parvez Fattah (December 2019)
Title and Affiliation: Associate Professor, American University of Sharjah, UAE
2. Santino Nanni (December 2016)
Title and Affiliation: MAsc student, Politecnico di Torino, Italy
1. Magdalena Panecka (July 2016)
Title and Affiliation: MAsc student, University of Montpellier, France

Past Undergraduate Students at Concordia

	Student Name	Scholarship	Duration	Current Status/Position
13.	Luciano Lunetta	NSERC-USRA	01/2017- 04/2017	Environmental Technician NouvLR, Montreal, QC
12.	Myriam Cyr	NSERC-USRA	05/2015- 08/2016	Project Manager, Groupe ADE, QC
11.	Van Anh Luong	NSERC-USRA	05/2014- 08/2016	-
10.	Paul Rozehnal	NSERC-USRA	05/2016-08/2016	Undergraduate student, Concordia
9.	Charlotte Gubert- Clement	NSERC-USRA	05/2013- 08/2015	Field Engineer, Kiewit/Ganotec, Montreal, QC
8.	Gregory Brennan	NSERC-USRA	05/2013-08/2015	PhD Student, University of New Brunswick, Fredericton, NB
7.	Luca Malaguti	NSERC-USRA	01/2015- 04/2015	Geo-Environmental Engineer, Thurber Engineering Ltd.
6.	Michael Lemieux	NSERC-USRA	05/2014- 08/2014	Junior Engineer, WSP Canada, Cranbrook, BC
5.	Emad Haneef	NSERC-USRA	05/2014- 08/2014	Project Coordinator, Pomerleau, Montreal, QC
4.	Yule Silvino	SWB-Brazil Fellow	05/2014- 08/2014	Team leader, Mercado Livre Brasil, São Paulo, Brazil
3.	Natalia Toriello	Exchange Student	05/2014- 07/2014	-
2.	Alexandra Meikleham	NSERC-USRA	05/2013-03/2014	MSc Student, University of Calgary
1.	Melissa Nielsen	NSERC-USRA	05/2013-12/2013	Junior Engineer, Tetra Tech Canada

Scholarships/Fellowships Awarded to Past Graduate Students

- Nawrin Anwar
 - FRQNT Doctoral Merit Scholarship (\$42,000; 2020-2022)
 - NSERC Alexander Graham Bell Canada Graduate Scholarship-Doctoral (CGS D) (\$105,000; 2017-2020)
 - Concordia Accelerator Award (\$5000; 2021)
 - Concordia University Graduate Doctoral Fellowship (\$32,400; 2016-2019)
- Tiantian Chen
 - FRQNT Doctoral Merit Scholarship (\$42,000; 2020-2022)
 - Concordia International Tuition Award of Excellence (\$34,494.; 2016-2019)
- Elnazsadat Ale Ebrahim
 - FRQNT Doctoral Merit Scholarship (\$70,000; 2020-2023)
 - Concordia University Graduate Doctoral Fellowship (\$30,000; 2018-2021)

- Haamid Sani Usman
 - Petroleum Technology Development Fund (PTDF) Scholarship, Nigeria (\$100,000; 2018-2021)
- Liuqing Yang
 - Concordia International Tuition Award of Excellence (\$34,494.; 2016-2019)
- Rengyu Yue
 - Concordia University Graduate Doctoral Fellowship (\$21,506.; 2020-2023)
 - Concordia International Tuition Award of Excellence (\$34,494.; 2020-2023)
- Wen Ma
 - NSERC Postdoctoral Fellowship (\$90,000; 2020-2022)
 - FRQNT Postdoctoral Fellowship (\$110,000; 2018-2020)
 - Concordia Accelerator Award (\$5000; 2018)
 - Helene Linder Doctoral Fellowship (\$60,000; 2013-2016)
- Md. Shahidul Islam
 - FRQNT Doctoral Merit Scholarship for Foreign Students (\$60,000; 2014-2016)
 - Concordia Accelerator Award (\$5000; 2017)
 - Concordia University Graduate Doctoral Fellowship (\$32,400; 2013-2016)
 - Selected as one of the late-breaking topic speakers for Gordon Research Conference on Membrane materials and processes (US\$400; 2016)
- Ahmed Refaat Farag Bakr
 - Concordia Accelerator Award (\$5000; 2017)
- Wesley Meertens
 - Hydro-Quebec Graduate Award (\$5,000, 2020)
- Suman Adhikary
 - Concordia Merit Scholarship (20,000; 2017-2019)
- Oluchi Okoro
 - Power Corporation of Canada Graduate Fellowship (\$5000, 2017)
- Adel Soroush
 - MWH/AEESP (Association of Environmental Engineering and Science Professors) Master's Thesis Award First Place (US\$1,500; 2016).
 - Concordia Tuition Remission Scholarship (\$10,000; 2014)

Courses Taught at University of Massachusetts Lowell

- CIVE 5780: Biological Wastewater Treatment [2026]
- ENVE 2010: Environmental Engineering Chemistry [2026]
- CIVE 3620: Environmental Engineering (Undergraduate) [2026, 2025]
- CIVE 3320: Environmental Engineering Laboratory (Undergraduate) [2025]
- ENVE 3640: Energy & Sustainable Environment (Undergraduate) [2025, 2024]
- ENVE 3020: Fluid Mechanics Laboratory (Undergraduate) [2025, 2024]
- CIVE 3010: Fluid Mechanics (Undergraduate) [2024]

Courses Taught at Concordia University

- **CIVI 6681:** Environmental Nanotechnology (Graduate) [2020, 2018, 2015, 2014]
- **CIVI 6641:** Unit Operations in Environmental Engineering (Graduate) [2019]
- **CIVI 466:** Engineering Aspects of Chemical and Biological Processes (Undergraduate) [2019, 2017, 2015, 2013]
- **CIVI 361:** Introduction to Environmental Engineering (Undergraduate) [2020, 2018, 2017, 2016, 2015, 2014, 2013]
- **ENGR 202:** Sustainable Development and Environmental Stewardship (Undergraduate) [2012]

Services at UMass Lowell

- Faculty Advisor, New England Water Environment Association (NEWEA) Student club, Civil & Environmental Engineering, UMass Lowell (September 2025 to date)

Services at Concordia University

- Member, Natural Sciences and Engineering Research Council (NSERC) of Canada Doctoral/Vanier Scholarship Committee, Concordia University (October 2017 to May 2020)
- Member, Biosafety Committee, Concordia University (September 2014 to July 2016)
- Member, Graduate Program Development on Nanotechnology & Nanoscience Committee (September 2014 to August 2016)
- Member, Thermal Spray and Surface Engineering Research Centre, Concordia University (April 2020)
- Member, Concordia Institute for Water, Energy and Sustainable Systems (April 2020)
- Member, Health Safety Committee, Gina Cody School of Engineering and Computer Science (September 2013 to August 2016)
- Member, Faculty Search Committee, Chemical and Materials Engineering (June 2016-Oct. 2016)
- Member, Graduate Studies and Awards Committee, Department of Building, Civil & Environmental Engineering (July 2019 to May 2021)
- Member, Search Committee, Faculty Position on Sustainable Design of Infrastructure Systems, Department of Building, Civil & Environmental Engineering (Feb. 2018 to Dec. 2018)
- Member, Recruitment Committee, Department of Building, Civil & Environmental Engineering (November 2012- July 2017)
- Member, Undergraduate laboratory committee, Department of Building, Civil & Environmental Engineering (December 2017 to May 2021)
- Member, Search Committee, Environmental Engineering Position on Waste Management, Department of Building, Civil & Environmental Engineering (Dec. 2016 to Dec. 2017)
- Member, Online Department Promotion Committee, Department of Building, Civil & Environmental Engineering (March 2013-December 2014)
- Volunteer for the open houses, Department of Building, Civil & Environmental Engineering (2013-2019)

- **Ph.D. Comprehensive Examination Committees:**
Esteban Castillo (2019); Warda Ahmed Ohaida (2019); Mohamed Aldabibi (2019); Ali Zaker (2018); Srinivas Bathini (2016); Duraichelvan Raju (2016); Alexandre Nascimento (2016); Salman Moazzem Arnab (2016); Mohamed Aldabibi (2016); Dulani Kodippili (2016); Dulani Kodippili (2016); Xiaoning Ren (2015); Mostapha Marzban (2014); Esmaeel Kariminezhad (2014); Abdullahi Kachalla Gujba (2013); Devi Ram Thapa (2013); Azita Najati Nejad Nasser (2012)
- **Ph.D. Dissertation Committees (Departmental and SGS Examinations):**
Salman Moazzem Arnab (2020); Mohammad Farshidy (2019); Alexandre Romão Costa Nascimento (2019); Devi Ram Thapa (2017); Elham Abbasi-Garravand (2016); Abdullahi Kachalla Gujba (2016); Azita Najati Nejad Nasser (2016); Stefan Stoenescu (2014)
- **M.A.Sc. Dissertation Committees:**
Bana Hamzé (2018); Somayyeh Hazeri (2017); Shrabani Sarma (2016); Xin Zhang (2015); Linda El Farra (2015); Mehdi Sharifi-Nistanak (2014); Safayat-Al Imam (2013); Jiang Xue Jiao (2013); Elham Abbasi-Garravand (2012); Zohrab Keropian (2012)
- **Ph.D. External Examiner of Other University Students:**
 - Leynard Natividad Marin (2019). Ph.D. Thesis “Nutrient recovery from source separated urine — Modelling and experimental study”. Department of Chemical Engineering. James Cook University, Australia
 - Mohammad T. Alresheedi (2018) Ph.D. Thesis “Fouling Indices for Quantification of Natural Organic Matter Fouling and Cleaning in Ceramic and Polymeric Membrane Systems”. Department of Civil and Environmental Engineering, Carleton University, Ottawa, Ontario
 - Mehdi Zolfaghari (2017). Ph.D. Thesis “Degradation and fate of emerging contaminants in a membrane bioreactor and an electro-oxidation process suitable for the treatment of leachate from sanitary landfill sites”. INRS, Quebec City, QC
 - Sharmin Sultana (2016) Ph.D. Thesis “Deposition of colloids to oil-water interfaces under different environmental conditions”. McGill University, Montreal, QC
 - Jing Li (2014) Ph.D. Thesis “Multi-scale investigations of carboxymethyl cellulose-coated nanoscale zero valent iron particle transport in porous media”. McGill University, Montreal, QC

Reviewer for Scholarly Journals

- Nature Sustainability
- Environmental Science & Technology
- Environmental Science & Technology Letters
- ACS Nano
- ACS Sustainable Chemistry & Engineering
- ACS Applied Materials & Interface
- ACS Applied Nano Materials
- Advanced Functional Materials
- Water Research
- Journal of Membrane Science
- Journal of Hazardous Materials

- Chemical Engineering Journal
- Chemosphere
- Industrial & Engineering Chemistry Research
- Science of the Total Environment
- Environmental Science: Water Research & Technology
- Colloids and Surfaces A: Physicochemical and Engineering Aspects
- RSC Advances
- Environmental Engineering Science
- Water Environment Research
- Separation and Purification Technology
- Environmental Earth Sciences
- Environmental Science and Pollution Research
- Journal of Environmental Engineering and Science
- Desalination and Water Treatment
- Journal of Environmental Sciences
- Journal of Environmental Chemical Engineering
- Carbohydrate Polymer
- Journal of Water Process Engineering
- Acta Biomaterialia

Peer Reviewing Competitive Grants and Scholarships Applications

- NSERC-Discovery (2025, 2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017, 2015, 2013)
- NSERC CRD (2020, 2019, 2018, 2017, 2016, 2015)
- CFI-John R. Evans Leaders Fund (2020, 2018, 2017, 2016, 2014)
- US-Israel Binational Science Foundation (BSF) Research Grant (2025, 2021, 2014)
- IC-IMPACTS DBT Proposal (2019)
- Alberta Innovates Lignin Pursuit Funding (2019)
- Khalifa University - Competitive Internal Research Award (CIRA) (2019)
- Binational Agricultural Research and Development Fund US-Israel (2015, 2018)
- NSERC-Strategic (2018, 2015)
- ACS Petroleum Research Fund (2014, 2018)
- Mitacs Elevate Postdoctoral Fellowship Program, (2019, 2015, 2014, 2013)
- Ontario-Quebec research collaboration for agri-food industries (2018)
- Environmental Research and Education Foundation (EREF) (2018)

Conference/Workshop Organization

- **Co-chair**, Symposium on advanced & additive manufacturing materials & technologies for environmental applications, ACS Spring National Meeting & Exposition, Virtual, April 5-30, 2021
- **Co-chair**, Fundamentals of predicting and preventing membrane fouling session, North American Membrane Society (NAMS) Meeting, Tempe, Arizona, USA, May 16-20, 2020

- **Co-chair**, Symposium on advanced & additive manufacturing materials & technologies for environmental applications, 259 ACS National Meeting & Exposition, Philadelphia, PA, March 22-26, 2020
- **Co-chair**, Fundamentals of predicting and preventing membrane fouling session, North American Membrane Society (NAMS) Meeting, Pittsburgh, PA, USA, May 11-15, 2019
- **Co-chair**, Symposium on additive manufacturing for energy and environment, ACS Spring meeting, Orlando, FL, Mar 31, 2019 - Apr 04, 2019
- **Member, Scientific Committee**, Nutrient Symposium 2017 - Water Environment Federation, Fort Lauderdale, Florida, June 12-14, 2017
- **Member, Scientific Committee**, WEF/IWA Nutrient Removal and Recovery 2016 Conference, Denver, Colorado, July 10-13, 2016
- **Session chair**, 11th International Conference on Mechanical Engineering (ICME2015), Dhaka, Bangladesh, December 18-20, 2015
- **Session chair**, 7th IWA Specialized Membrane Technology Conference and Exhibition for Water and Wastewater Treatment and Reuse, Toronto, ON, August 25-29, 2013.
- **Session chair**, Canadian Society of Civil Engineering Conference, Montreal, QC, May 29-June 01, 2013
- **Session co-chaired**, International Conference on Nutrient Recovery from Wastewater Streams, Vancouver, BC, May 2009
- **Member**, Scientific Committee, 5th IWA Young Water Professional Conference, Sydney, Australia, July 2010
- **Session co-chaired**, 4th IWA Young Water Professional Conference, University of California, Berkeley, USA, July 2008
- **Chair**, Organizing Committee, Canadian Water Network (CWN) Student and Young Professional (SYP) Lunch n' Learn workshop for Pacific region, Vancouver, BC, Canada, June, 2007
- Member of paper review committee (reviewed 3 papers) of Canadian Society for Civil Engineering (CSCE) conference, Montreal, QC, 2019
- Member of paper review committee (reviewed 4 papers) of Canadian Society for Civil Engineering (CSCE) conference, Fredericton, NB, June 13-16, 2018
- Member of paper review committee (reviewed 4 papers) of Canadian Society for Civil Engineering (CSCE) conference, Vancouver, BC, May 31-June 3, 2017
- Member of paper review committee (reviewed 10 abstracts) of Nutrient Symposium 2017 - Water Environment Federation, Fort Lauderdale, Florida, June 12-14, 2017
- Member of paper review committee (reviewed 16 abstracts) of Water Environment Federation/International Water Association (WEF/IWA) Nutrient Removal and Recovery Conference, Denver, CO, 2016
- Member of paper review committee (reviewed 4 papers) of Canadian Society for Civil Engineering (CSCE) conference, Montreal, QC, 2013
- Member of paper review committee (reviewed 3 papers) of International Water Association-Membrane Technology Conference (IWA-MTC), Toronto, ON, 2013
- Member of paper review committee (reviewed 16 abstracts) of Water Environment Federation/International Water Association (WEF/IWA) Nutrient Removal and Recovery Conference, Vancouver, BC, 2013