

## **Mehdi Amouei Torkmahalleh, PhD**

Division of Environmental and Occupation Health Sciences, School of Public Health, University of Illinois at Chicago (UIC)

### **Education**

1. **PhD** in Chemical Engineering (Aerosol Science), **Clarkson University** (2008-2013)

Thesis: Improved atmospheric sampling of hexavalent chromium (Funded by U.S. EPA)

Advisors: Professors **Philip K. Hopke** and **Thomas M. Holsen**

2. **M. Sc.** in Biochemical Engineering, **Amirkabir University of Technology** (2005-2008)

Thesis: Bioleaching of Zinc from Sphalerite using Mesophilic bacteria

3. **B. Sc.** in Chemical Engineering, **University of Tehran** (2000-2005)

### **Positions**

1. **Assistant Professor** (Tenure Track, year 4), Division of Environmental and Occupational Health Sciences, School of Public Health, University of Illinois at Chicago (August 2022-Present).

2. **Assistant Professor** in department of Chemical and Materials Engineering at Nazarbayev University (August 2015 to July 2022)

3. **Director** of Chemical and Aerosol Research Team (**CART**) at School of Engineering, Nazarbayev University (October 2015 to Present)

4. **Visiting Assistant Professor** (Full time appointment) in Chemical Engineering at Middle East Technical University Northern Cyprus Campus (**METU NCC**) (July 2013 to July 2015)

5. **Research Assistant** at Center for Air Resources Engineering and Science (CARES), Clarkson University (2008-2013)

### **Research Funding**

1. **PI- Collaborative Research Grant (CRP), Nazarbayev University**-Exposure To Cooking Ultrafine Particles and Neurodegenerative Diseases: Clinical Exposure Studies and Computer Modeling- (\$450000). **2022-2024**

2. **CoPI-Collaborative Research Grant (CRP), Nazarbayev University**-Ventilation system optimisation to reduce particulate matter (PM) and gas concentrations in Kazakhstan underground mines: simulation and experimental validations (\$316000). **2020-2022**

3. **PI- Faculty Development Fund (Small Grant), Nazarbayev University**- A novel analytical method to quantify Cr(VI) concentrations in atmospheric particulate matter using new highly functionalized nanodots-field measurements (Astana & Aktobe) and modeling ( \$150000). **2018-2021**

4. **PI- Social Policy Grant, Nazarbayev University**- Exposure to indoor particulate matter (PM) in different indoor environments in Nazarbayev University Campus (\$10000). **Completed 2016**

5. **PI- Campus Research Funding (BAP) Middle East Technical University Northern Cyprus Campus** (\$10000- Project Code: FEN14YG2)- Size-segregated mass concentration and elemental composition distributions of particles emitted during cooking activities. **Completed 2014**

1. Baeza\_Romero, M.T., Dudzinska, M.R., **Amouei Torkmahalleh, M.** et al., "A review of critical residential buildings parameters and activities when investigating indoor air quality and pollutants", Accepted for publication in *Indoor Air* (**Q1, current IF=5.7**)
2. Adotey, E., Burkutova, L., Tastanova, L., Bekeshev, A., Balany, M., Sabanov, S., Rule, A., Hopke, P., **Amouei Torkmahalleh, M,** **2022.** Quantification and the sources identification of total and insoluble hexavalent chromium in ambient PM: A case study of Aktobe, Kazakhstan. Accepted for publication in *Chemosphere* (**Q1, current IF=8.94**) <https://doi.org/10.1016/j.chemosphere.2022.136057>
3. Yazdipour, F., **Amouei Torkmahalleh, M.**, Kamyabi, M., Sotudeh, R., 2022. On Solvent Losses in Amine Absorption Columns. Accepted for publication in *American Chemical Chemistry; Sustainable Chemistry and Engineering* (**Q1, current IF=9.22**) <https://doi.org/10.1021/acssuschemeng.2c02179>
4. Sakaguchi, N., Kaumbekova, S., Itano, R., **Amouei Torkmahalleh, M.**, Shah, D., Umezawa, M., **2022.** Changes in the Secondary Structure and Assembly of Proteins on Fluoride Ceramic (CeF3) Nanoparticle Surfaces. Accepted for publication in *American Chemical Chemistry; Applied Bio Materials* (**Q1, current IF=3.25**) <https://doi.org/10.1021/acsabm.2c00239>
5. Oyola. P., Carbone, S., Timonen, H., **Amouei Torkmahalleh, M.**, Lindén J., **2022.** Editorial: Rise of Low-Cost Sensors and Citizen Science in Air Quality Studies. Accepted for publication in *frontiers in Environmental Science* (**Q1, 5-year IF=4.274, current IF=4.24**) <https://doi.org/10.3389/fenvs.2022.868543>
6. Kaumbekova, S., **Amouei Torkmahalleh, M.**, Shah, D., **2021.** Ammonium sulfate and ultrafine particles affect early onset of Alzheimer's Disease. *Chemical Engineering Transaction*, **85**, 187-192. <https://doi.org/10.3303/CET2185032>
7. Kaumbekova S., **Amouei Torkmahalleh, M.**, Sakaguchi, N., Umezawa, M., Shah, D. **2022.** Effect of ambient polycyclic aromatic hydrocarbons and nicotine on the structure of A $\beta$ 42 protein. Accepted to *Front Env Sci Eng*. <https://doi.org/10.1007/s11783-023-1615-2>.
8. **Amouei Torkmahalleh et al. 2022.** Autism-like symptoms by exposure to air pollution and valproic acid-induced in male rats, 2022. *Environmental Science and Pollution Research* (**Q2, current IF=4.33**), 29(39):59263-59286. doi: 10.1007/s11356-022-19865-w.
9. **Amouei Torkmahalleh, M., et al. 2022.** Human Exposure to Aerosol from Indoor Gas Stove Cooking and the Resulting Nervous System Responses. *Indoor Air* **32**(2): <https://doi.org/10.1111/ina.12983> (**Q1, current IF=5.7**)
10. **Amouei Torkmahalleh, M. et al. 2022.** Formation of cluster mode particles (1-3nm) in preschools. *Science of the Total Environment* (**Q1, 5-year IF=6.4, current IF=7.96**), [Volume 818](https://doi.org/10.1016/j.scitotenv.2021.151756), 151756. <https://doi.org/10.1016/j.scitotenv.2021.151756>
11. Morawska, L., Zhu, T., Liu, N., **Amouei Torkmahalleh, M., et al., 2021.** The state of science on the severe air pollution episodes: quantitative and qualitative analysis. *Environment International*, (**Q1, 5-year IF=8.56, current IF=9.69**) 156, 106732, 0160-4120.
12. Samal Kaumbekova, **Amouei Torkmahalleh, M.**, Shah, D., **2021.** Impact of ultrafine particles and secondary inorganic ions on early onset and progression of amyloid aggregation: Insights from molecular simulations. *Environmental Pollution*, (**Q1, 5-year IF=6.9, current IF=8.01**) 284, 1, 117147.
13. Mehdi Jafari, Tayyebeh Mesbahzadeh, Reyhaneh Masoudi, Gholamreza Zehtabian, **Amouei Torkmahalleh\*, M, 2021** Dust Storm surveying and Detection Using Remote Sensing Data, Wind

Tracing and Atmospheric Thermodynamic Conditions (Case Study: Isfahan Province, Iran). *Air Quality, Atmosphere & Health.* <https://doi.org/10.1007/s11869-021-01021-x>. (Q2, 5-year IF=3.65, current IF=3.8)

14. **Amouei Torkmahalleh\*, M. 2021.** Exposure to fine, ultrafine particles and black carbon in two preschools in Nur-Sultan city of Kazakhstan. *Indoor Air,* (Q1, current IF=5.7) 31, 4, 1178-1186. <https://doi.org/10.1111/ina.12799>
15. **Amouei Torkmahalleh\*, M. et al.,** (first author among 53 coauthors), **2021.** Global Air Quality and COVID-19 Pandemic: Do we breathe cleaner air? *Aerosol and Air Quality Research.* (Q1, 5-year IF=3.13, current IF=3.06) 21: 200567 <https://doi.org/10.4209/aaqr.200567>
16. **Amouei Torkmahalleh, M. et al.** (18 coauthors-5<sup>th</sup> author), **2021.** Daily submicron particle doses received by populations living in different low- and middle-income countries. *Environnemental Pollution.* (Q1, current IF=8.1), 269,116229, 0269-7491. 269:116229 <https://doi.org/10.1016/j.envpol.2020.116229>
17. Akhbarizadeh, R., Dobaradaran, S., **Amouei Torkmahalleh, M.**, Saeedi, R., Aibaghi, R., Faraji Ghasemi, F., **2021.** Suspended fine particulate matter (PM2.5), microplastics (MPs) and polycyclic aromatic hydrocarbons (PAHs) in air: Their possible relationships and health implications. *Environmental Research.* (Q1, current IF=6.49) 192,110339, 0013-9351. . <https://doi.org/10.1016/j.envres.2020.110339>
18. Shah, D., Karibayev, M., Adotey, E., **Amouei Torkmahalleh, M. 2020.** Impact of volatile organic compounds on chromium containing atmospheric particulate: insight from molecular dynamics simulation. *Scientific Reports* (Q1, 5-year IF=5.13, current IF=4.38), 10, 17387. <https://doi.org/10.1038/s41598-020-74522-x>
19. Adotey, E., **Amouei Torkmahalleh\*, M.**, Balanay, M. **2020.** Zinc metal-organic framework with 3-pyridinecarboxaldehyde and trimesic acid as co-ligands for selective detection of Cr (VI) ions in aqueous solution. *Methods and Application in Fluorescence,* (Q2, IF=3.0) 8 045007. <https://doi.org/10.1088/2050-6120/abb364>
20. Gabdrashova, R., Nurzhan, S., Naseri, M., Bekezhankzyz, Z., Gimnkhhan, A., Malekipirbazari, M., Tabesh, M., Khanbabaie, R., Crape, B., Buonanno, G., Hopke, P.K., Amouei Torkmahalleh, A., **Amouei Torkmahalleh\*, M. 2020.** The impact on heart rate and blood pressure following exposure to ultrafine particles from cooking using an electric stove. *Science of the Total Environment.* (Q1, 5-year IF=6.4, current IF=7.96) <https://doi.org/10.1016/j.scitotenv.2020.141334>
21. Darynova, Z., **Amouei Torkmahalleh\*, M.**, Abdakhmanov, T., Sabyrzhan, S., Sultan Sagynov, S., Hopke, P.K. Kushta, J. **2020.** SO<sub>2</sub> and HCHO over the major cities of Kazakhstan from 2005 to 2016: Influence of economic, political and industrial changes. *Scientific Reports,* (Q1, 5-year IF=5.13, current IF=4.38) 10, 12635. doi: [10.1038/s41598-020-69344-w](https://doi.org/10.1038/s41598-020-69344-w)
22. **Amouei Torkmahalleh\*, M.**, Hopke, P.K., Broomandi, P., Naseri, M., Abdakhmanov, T., Ishanov, A., Kim, J., Shah, D., Kumar, P. **2020.** Exposure to particulate matter and gaseous pollutants during cab commuting in Nur-Sultan city of Kazakhstan. *Atmospheric Pollution Research* (Q2, 5-year IF = 3.0, current IF=4.352), 11 (5): 880-885.
23. Broomandi, P., **Amouei Torkmahalleh\*, M.**, Akturk, M., Soulemane, H.N., Gorjinezhad, S., Ozturk, F., Kocak, M., Kim, J. **2020.** A new exposure route to trace elements in indoor particulate matter. *Indoor Air* (Q1, IF=5.7). 30(3): 492-499.
24. Shah, D., Saparov, A., Mansurov, U., **Amouei Torkmahalleh, M. 2020.** Molecular dynamics simulations to capture nucleation and growth of particulates in ethanolamine-based post-combustion CO<sub>2</sub> capture columns. *Industrial and Engineering Chemistry Research.* (Q1, IF=6.06) 59(7): 3213-3220.
25. Naseri, M., Jouzizadeh, M., Tabesh, M., Malekipirbazari, M., Gabdrashova, R., Nurzhan, S., Farrokhi, H., Khanbabaie, R., Mehri-Dehnavi, H., Bekezhankzyz, Z., Gimnkhhan, A., Dareini, M.,

- Kurmangaliyeva, A., Islam, N., Crape, B., Buonanno, G., Cassee, F., **Amouei Torkmahalleh\***, M. **2019.** The Impact of frying aerosol on human Brain activity. *NeuroToxicology* (**Q1, 5-year IF=3.55, current IF=4.29**), 74:149-161.
26. **Amouei Torkmahalleh, M.**, Konakbayeva, D., Fyrillas, M., Zinetullina, A., Rule A., Hopke, P. A conceptual model to understand the soluble and insoluble Cr species in deliquesced particles. *Air Quality, Atmosphere& Health* (**Q2, IF=3.76**)
27. Shah, D., Gapeyenko, D., Urakpayev, A., **Amouei Torkmahalleh, M.**. Jan 15, **2019.** Molecular dynamics simulations on extractive desulfurization of fuels by tetrabutylammonium chloride based Deep Eutectic Solvents. *Journal of Molecular Liquids* (**Q1, 5-year IF = 4.13, current IF=6.16**), 274: 254-260.
28. Kerimray, A., Suleimenov, B., De Miglio, R., Rojas Solorzano, L., **Amouei Torkmahalleh, M.** & Ó Gallachóir, B. P. Investigating the energy transition to a coal free residential sector in Kazakhstan using a regionally disaggregated energy systems model., **2018, Journal of Cleaner Production** (**Q1, 5-year IF=7.05, current IF=9.27**), 196: 1532-1548.
29. Mansurov, U., Shah, D Nardana Bazybek, **Amouei Torkmahalleh, M.** **2018** Particulate matter formation in post-combustion carbon dioxide capture columns: Insights from molecular dynamics simulations. *Energy & Fuels* (**Q1, current IF= 3.60**) 32 (12):12679-12688
30. Darynova, Z., **Amouei Torkmahalleh, M.\***, Maksot, A., Kulmukanova, L., Malekipirbazari, M., Sharifi, H., Holloway, T. **2018.** Evaluation of NO<sub>2</sub> column variations over the atmosphere of Kazakhstan using satellite data. *Journal of Applied Remote Sensing* (**Q2, current IF = 1.53**), 12(4) <https://doi.org/10.11117/JRS.12.042610>.
31. **Amouei Torkmahalleh, M.\***, Karibayev, M., Konakbayeva, D., Fyrillas, M., Rule, M. **2018.** Aqueous chemistry of airborne hexavalent chromium during sampling. *Air Quality, Atmosphere & health* (**Q2, 5-year IF=3.65, current IF=3.8**), 11(9):1059-1068.
32. **Amouei Torkmahalleh, M.\***, Ospanova, S., Baibatyrova, A., Nurbay, S., Zhanakhmet, G., Shah, D. **2018.** Contributions of burner, pan, meat and salt to PM emission during grilling. *Environmental Research* (**Q1, 5-year IF = 5.05, current IF=6.49**), 164:11-17.
33. **Amouei Torkmahalleh, M.\***, Kabay, K., Bazhanova, M., Mohiuddin, O., Obaidullah, M., Gojinezhad, S. **2018.** Investigating the impact of different sport trainings on particulate matter resuspension in a sport center using well-characterized reference instruments and a low-cost PM monitor. *Science of the Total Environment* (**Q1, 5-year IF = 5.72, current IF=7.96**), 612: 957-965.
34. **Amouei Torkmahalleh, M.\***, Assanova, Z., Baimaganbetova, M. **2018.** A study to reduce atmospheric emissions of an existing natural gas dehydration plant using multiple thermodynamic models. *International Journal of Environmental Science and Technology* (**Q2, IF= 2.86**), 16(3):1613-1624.
35. Shah, D., Aldamzharov, B., Bukayeva, A., **Amouei Torkmahalleh, M.\***, Ahmadi, G. **2017.** Intermolecular interactions and its effect within Cr<sup>+3</sup>-containing atmospheric particulate matter using molecular dynamics simulations. *Atmospheric Environment* (**Q1, 5-year IF = 4.45, current IF=4.79**), 166: 334-339.
36. Kerimray A., Rojas-Solórzano L., **Amouei Torkmahalleh M.**, Hopke P.H., Ó Gallachóir B.P. **2017.** Coal Use for Residential Heating: Patterns, Health Implications and Lessons Learned. *Energy for Sustainable Development* (**Q1, 5-year IF = 3.69, current IF=5.22**), 40: 19-30.
37. **Amouei Torkmahalleh, M.\***, Gorjinezhad, S., Hopke, P.K. **2017.** Review of factors impacting emissions/concentrations of cooking generated particulate matter. *Science of the Total Environment* (**Q1, 5-year IF = 5.72, current IF=7.96**), 586: 1046-1056

38. Gorjinezhad, S., Kerimray, A., **Amouei Torkmahalleh, M.**, Keles, M., Ozturk, F., Hopke, P.K. **2017**. Quantifying trace elements in the emitted particulate matter during cooking and health risk assessment. *Environmental Science and Pollution Research*(**Q2, IF = 4.22**), 24(10): 9515-9529.
39. **Amouei Torkmahalleh, M.**, Gorjinezhad, S., Kerimray, A., Keles, M., Ozturk, F., Hopke. P.K. **2017**. Size segregated PM and its chemical composition emitted from heated corn oil. *Environmental Research*(**Q1, 5-year IF = 5.05, current IF=6.49**), 154: 101-108.
40. **Amouei Torkmahalleh, M.**, Gorjinezhad, S., et al. **2017**. Key factors impacting the performance of a salinity gradient solar pond exposed to Mediterranean climate. *Solar Energy* (**Q1, 5-year IF = 4.80, current IF=5.74**), 142: 321-329.
41. **Amouei Torkmahalleh, M.**, Gorjinezhad, S., Keles, M., Unluvcek, S.H., Azgin, C., Cihan, E., Tanis, B., Soy, N., Ozaslan, N., Ozturk, F., Hopke, P.K. **2017**. A controlled study for the characterization of PM<sub>2.5</sub> emitted during grilling beef meet. *Journal of Aerosol Science* (**Q2, 5-year IF = 2.28, current IF=3.43**), 103C: 132-140.
42. **Amouei Torkmahalleh, M.**, Kaibaldiyeva, U. Kadyrbayeva, A. **2017**. Computer simulation of particulate matter formation during heating cooking oils using Aspen Plus. *Building Simulation*(**Q1, 5-year IF = 3.32, current IF=3.75**), 10 (4): 535-550.
43. **Amouei Torkmahalleh**<sup>\*</sup>, M., Magazova, G., Magazova, A., Hasani Rad, S.J. **2016**. Simulation of environmental impact of an existing natural gas dehydration plant using a combination of thermodynamic models. *Process Safety and Environmental Protection* (**Q1, 5-year IF = 4.21, current IF=6.15**), 104(A): 38-47.
44. Zuberi, M.J.S., **Amouei Torkmahalleh, M.**, Hassan Ali, S.M. **2015**. A comparative study of biomass resources utilization for power generation and transportation in Pakistan. *International Journal of Hydrogen Energy* (**Q1, 5-year IF = 4.08, current IF=5.81**), 40(34): 11154-11160.
45. Noori Felegari, Z., Nematdoust Haggi, B., Amoabediny, Gh., Mousavi, S.M., **Amouei Torkmahalleh, M.** **2014**. An optimized integrated process for the bioleaching of a spent refinery processing catalysts. *Int. J. Environ. Res* (**Q2, 5-year IF=2.47**), 8(3): 621-634.
46. **Amouei Torkmahalleh, M.**, Yu, C.H., Lin, L., Fan, Z., Swift, J.L., Bonanno, L., Holsen, T.M., Hopke, P.K. **2013**. Improved atmospheric sampling of hexavalent chromium. *Journal of Air & Waste Management Association* (**Q1, 5-year IF=2.24**) 63(11): 1313-1323.
47. **Amouei Torkmahalleh, M.**, Zhao, Y., Rossner, A., Hopke, P.K., Ferro, A.R. **2013**. Additive impact on particle emissions from heating low emitting cooking oils. *Atmospheric Environment* (**Q1, 5-year IF = 4.45, current IF=4.78**)74: 194-198.
48. **Amouei Torkmahalleh, M.**, Lin, L., Holsen, T.M., Rasmussen, D.H., Hopke, P.K. **2013**. Cr speciation changes in the presence of ozone and reactive oxygen species at low relative humidity. *Atmospheric Environment* (**Q1, 5-year IF = 4.45, current IF=4.79**), 71: 92-94.
49. Maleky-dozzadeh, M., Khadiv-Parsi, P., Rezazadeh, S., Firoozian, N., Sadraei, N., **Amouei Torkmahalleh, M.**, **2013**. Application of multistage steam distillation column for extraction of essential oil of *Valeriana officinalis L.* cultivated in Iran. *Iranian Journal of Chemical Engineering*, 10(4): 79-87.
50. **Amouei Torkmahalleh, M.**, Lin, L., Holsen, T.M., Rasmussen, D.H., Hopke, P.K. **2012**. The impact of deliquescence and pH on Cr speciation in ambient PM samples. *Aerosol Science and Technology* (**Q2, 5-year IF = 2.90**), 46(6): 690-696.
51. **Amouei Torkmahalleh, M.**, Goldasteh, I., Zhao, Y., Udochuk, N.M., Rossner, A., Hopke, P.K., Ferro, A. R., **2012**. PM<sub>2.5</sub> and ultrafine particles emitted during heating of commercial cooking oils. *Indoor Air* (**Q1, IF=5.7**), 22(6): 483-491.
52. Haghshenas, D.F., Keshavarz Alamdari, E., **Amouei Torkmahalleh M.**, Bonakdarpour, B., Nasernejad, B. **2009**. Adaptation of acidithiobacillus ferrooxidans to high grade sphalerite concentrate. *Minerals Engineering* (**Q1, 5-year IF=3.57, current IF=4.76**), 22 (15): 1299-1306.

## **Mehdi Amouei Torkmahalleh**

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53. Montazer-Rahmati, M. M., Rekabi-Zadeh, D., **Amouei Torkmahalleh M.**, 2007. Suitability of using brass Ferrules as packing in a glass distillation column and presenting a new relationship between HETP and pressure drop. *Iranian Journal of Chemistry and Chemical Engineering (Q4)*, 26 (2): 9-17.
54. **Amouei Torkmahalleh, M.**, Khadiv-Parsi, P., Moosavian, M.M., Hedayat N., Davoodi, A.A. 2008. Phase inversion in a batch liquid – liquid stirred system. *Iranian Journal of Chemical Engineering*, 5(2): 55-63.
55. **Amouei Torkmahalleh, M.** A., Rahmati, M. M. M. & Haghi, B. N. Experimental investigation of column efficiency for two ternary systems in a three-phase packed distillation column. Dec 2011, In: *Canadian Journal of Chemical Engineering*. 89, 6, p. 1473-1479 7

## **Book Chapter**

**Amouei Torkmahalleh, M.** (2022). Cooking Aerosol. In: Zhang, Y., Hopke, P.K., Mandin, C. (eds) Handbook of Indoor Air Quality. Springer, Singapore. [https://doi.org/10.1007/978-981-10-5155-5\\_13-1](https://doi.org/10.1007/978-981-10-5155-5_13-1)

## **Conference Presentations**

I have presented over 85 research topics to different conferences

## **Research Visits**

1. Visiting Research Professor at **Johns Hopkins University**, School of Public Health. Contact Professor: Dr. Anna Rule *Email: arule1@jhu.edu* July 2017 and July 2018

Exposure assessment of Baltimore population to airborne hexavalent chromium

2. Visiting Research Professor at **University of Wisconsin-Madison**, Center for Sustainability and Global Environment. Contact Professor: Prof. Tracey Holloway *Email: taholloway@wisc.edu*

*Analyzing pollutant concentration using Satellite data* June 16-July 1, 2017

3. Visiting Research Professor at **Ohio University**, Department of Chemical and Biomolecular Engineering. Contact Professor: Dr. Amir Farnoud *Email: farnoud@ohio.edu*

*Investigating the impact of particulate matter emitted from cooking and e-cigarette on lung surfactant* May 15-June 3, 2017

## **Research Interests**

1. Atmospheric Particulate Matter (PM)
2. Ultrafine Particles and Health

## **Graduate Thesis Supervision**

1. **Ongoing PhD thesis-** Exposure to ultrafine particles generated during cooking and its impact on human brain- **Supervisor**
2. **Ongoing PhD thesis-** A novel analytical method to quantify Cr(VI) concentrations in atmospheric particulate matter using new highly functionalized nanodots-field measurements (Astana & Aktobe)- **Supervisor**
3. **Ongoing PhD thesis-** Interactions of inhaled nanoparticles with human amyloid proteins, insights from Molecular Dynamics simulation- **Co-supervisor**
4. **Ongoing PhD thesis-** Effect of exposure to organic and inorganic extracts of ambient PM in selected urban and traffic stations of Tehran during pregnancy on autism-like disorders in male rate offspring: A behavioral-molecular study- **Co-supervisor**
5. **Completed 8 M.Sc. theses**

## **Manuscript Reviewer**

Atmospheric Environment, Building and Environment, Science of the Total Environment, Environmental Science and Technology, Environmental Chemical Engineering, Chemosphere, Atmospheric Research, Indoor Air

**Teaching Experiences**

Air Quality, Toxicity and Health (PhD), Atmospheric Chemistry and Physics (UG), Human Exposure Analysis (PhD), Computational Methods in Chemical Engineering I (UG), Process Engineering and Simulation (M.Sc), Advanced Process Simulation (UG), Applied Chemical Engineering Thermodynamics (M.Sc.), Capstone Project (UG), Safety Engineering and Risk Management (UG), Mass Transfer and Separation Processes (UG), Novel Topics in Separation Processes (UG), Chemical Engineering Laboratory (UG), Process Calculations (UG), Fluid Mechanics (UG), Chemical Processes Simulation (Using ASPEN Plus)

**Undergraduate Mentoring/Service Experiences**

1. Member of Nazarbayev University Institutional Research Ethics Committee **Aug. 2020 to present**
2. Faculty senate member at Nazarbayev University (university level) **Jan. 2017 to Present**
3. Curriculum committee member at school of Engineering- Nazarbayev University (school level)- Development of School of Engineering curriculum for ABET accreditation **Jan. 2017 to Present**
4. Academic Advisor for sophomore students, School of Engineering, Nazarbayev University (school level) **Nov. 2015 to Present**
5. Research committee member at school of Engineering-Nazarbayev University (school level) **Sep. 2016 to Aug. 2019**
6. Chair of the Department Research Committee, Department of Chemical and Materials Engineering, Nazarbayev University **Jan 2018-Jan 2019**
7. Faculty hiring committee member, department of Chemical and Materials Engineering, Nazarbayev University (department level) **Jan. 2017 to Jan. 2019**
8. Undergraduate Research (Advisor for over 30 Students)-Nazarbayev University