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## Prof. Hisham Ettouney

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### 1. Name and contact information

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### 2. Education

Degree	Field	Institution	Year
PhD.	Chemical Engineering	M.I.T., Cambridge, Massachusetts, USA	1978-1983
B.Sc.	Chemical Engineering	Cairo University, Cairo, Egypt.	1970-1975

### 3. Academic Experience

Institution	Designation	Year/period
Kuwait university	Professor	July 1996 - Present
Kuwait university	Associate Professor	Sep 1992 - July 1996
King Saud University, KSA	Associate Professor	Sep 1990 - Aug 1992
University of New Hampshire, USA	Assistant Professor	Sep 1985 – Aug 1987

### 4. Non-academic experience

Organization	Designation	Year
Mobil Solar Energy Corporation, Waltham, Massachusetts, USA,	Research Engineer.	Aug 1984-Sep 1983

### 5. Membership in professional organization

- Egyptian syndicate for engineers, 1975 – present

### 6. Honors and awards

- The 2015 Kuwait prize in Water Research, Kuwait Foundation for Advancement of Science, Kuwait.
- Prince Sultan Bin AbdulAziz International Prize for Water, 2004, received the prize on research in “Alternative (non-traditional) Water Resources”.
- Research Award, Kuwait University, Kuwait, 2000/2001.

### 7. Service activities:

- Chaired and participated in the following departmental committees: Promotion, Annual report, Students affairs, ABET, Undergraduate Program Curriculum, Graduate Program, Research, Computers, Equipment, Budget, Safety, and Course Schedule.

- Chaired and participated in the following college committees: Promotion and Appointment, Research Award, ABET, Annual report, Research, Graduate Studies, Undergraduate Program Curriculum, Safety, and Budget.

## **8. Publications and Presentations**

- Al-Fadhli, F., Alhajeri, N., Sholapurmath, R., Ettouney, H., Sengupta, D., Holtzapple, M., El-Halwagi, M.M., Optimal Capacity Planning for Power Cogeneration and Desalination Plants with Renewable Energy Integration, Clean Technologies and Environmental Policy, under review, 2024.
- Al-Fadhli, F., Alhajeri, N., Sholapurmath, R., Ettouney, H., Sengupta, D., Holtzapple, M., El-Halwagi, M.M., Optimizing Cogeneration and Desalination Plants by Incorporating Solar Energy Desalination, 549 (2023) 116320.
- Al-Fadhli, F., Alhajeri, N., Ettouney, H., Sengupta, D., Holtzapple, M., El-Halwagi, M.M., Simultaneous optimization of power generation and desalination systems: a general approach with applications to Kuwait, to be submitted Atmospheric Research, Clean Technologies and Environmental Policy, 24(2022)2129-2141.
- Ettouney, H. and Aldaihani, R., Analysis of Model Parameters for the Prediction of Mass Transfer Resistance for Forward Osmosis and Pressure-Retarded Osmosis Configurations, Desalination, 114641, 2020.
- Ettouney, H., and Al-Hajri, K., Modeling and Performance Analysis of Forward and Pressure-Retarded Osmosis, Desalination and Water Treatment, 154 (2019) 1-13.

## **9. Funded Research**

- Assessment and measurements of attendant exposure to VOC's in fueling stations in Kuwait, sponsored by Kuwait University, budget KD 19,900. Duration 24 months, under review.
- Optimization of water-energy-food nexus in Kuwait via an integrated system of solar-assisted desalination and farming, sponsored by KFAS, budget KD 34,750. Project # CN19-35EM-01, Duration 24 months, Nov 2020 to October 2022.

## **10. Supervised Thesis**

- Ghazal Suleiman, Attendant Exposure to VOCs in Gas Stations: Study of seasonal variations, Advisor: Dr. Fahad Al-Fadhli, Co-Advisor: Hisham Ettouney, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.
- Chaza Darwich, Scenarios of Planning and Optimization of Energy and Water Resources in Kuwait, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.
- Rukia Masarani, Attendant Exposure to VOCs in Gas Stations: Study of daily and weekly variations, Advisor: Dr. Fahad Al-Fadhli, Co-Advisor: Hisham Ettouney, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.
- Hessah Alrashed, Effects of Gas Stations Locations on Attendant Exposure to VOCs, Advisor: Dr. Fahad Al-Fadhli, Co-Advisor: Hisham Ettouney, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.
- Fatmah Hafez, Planning and Optimization of Energy and Water Resources in Kuwait: Sensitivity Analysis, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.

- Noor Kanbaz, Planning and Optimization of Energy and Water Resources in Kuwait: Sensitivity Analysis: Renewables versus fossil fuel power plants, Advisor: Dr. Fahad Al-Fadhli, Co-Advisor: Hisham Ettouney, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.
- Maram Ghaban, Agro Farming in Kuwait Modeling and Analysis, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2024.
- Manayer Alnahbaha, Costing of wastewater treatment plants, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed January 2024.
- Abdullah Al-Salal, Techno-economic Analysis of PEGylated Bio-pharmaceutical Recombinant Protein Production: Alpha Antitrypsin Model Case, Advisor: Prof. Hisham Ettouney, Co-Advisor: Dr. Salem Alkanamish, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2023.
- Hessah Alajmi, Design and Costing of a combined CSP and MSF Desalination, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2023.
- Afraa Al-Mutairi, Modeling and analysis of Direct Contact and Sweeping Gas Membrane distillation configurations integrated with Parabolic Trough Concentrated Solar Power for desalination of seawater, M.Sc. Thesis, Department of Chemical Engineering, Kuwait University, to be completed May 2023.
- Bader Buhamad, Modeling and Costing of Membrane Desalination System Powered by Renewable Energy, M.Sc. thesis, Department of Chemical Engineering, Kuwait University, September 2022.