CURRICLUM VITA

## PERSONAL DATA

Name: Tamer Samir Mohamed Mohamed Sayed Ahmed

Present Position: Assistant Professor

Affiliation: Chemical Engineering Dept., Faculty of Engineering, Cairo University

Field of Specialization: Chemical Engineering

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Date of Birth: 21/6/1976

Nationality: Egypt

## ACADEMIC QUALIFICATIONS

1. B. Sc. (1999) Cairo University
2. M.Sc (2001) Cairo University

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Thesis Title: “Simulation and Optimization of the Propane-Precooled Mixed Refrigerant Cycle for Liquefaction of Natural Gas

1. Ph.D. (2007) North Carolina State University, USA

Thesis Title: “Copolymerization of Vinylidene Fluoride with Hexafluoropropylene in Supercritical Carbon Dioxide”

#### PROFESSIONAL EXPERIENCE

Name of Employer Duration Position Held

##### M.Sc and PH.D SUPERVISED

##### 1 awarded M. Sc and 1 Ph. D; 6 M. Sc and 1Ph. D under supervision.

##### TEACHING EXPERIENCE

1. Undergraduate Courses

- Polymer Science and Engineering

- Advances in Polymer Engineering

- Cryogenic Processes

- Advances in Cryogenics

- Chemical Engineering Lab

1. Postgraduate Courses

- Polymerization Reaction Engineering

- Natural Gas Processing

1. B.Sc. PROJECTS SUPERVISED

- Production of Vinyl Chloride

- Production of Ethylene Glycol

- Production of Ethylene Oxide

- Production of Dimethyl Ether

- Production of Polyethylene Terephthalate

- Enhanced NGL Recovery Di-mixed Refrigerant Liquefied Natural Gas Process

- Production of Toluene Diisocyanate

- Production of 2-Ethyl Hexanol

**Patents and Publications**

# JOURNALS

* Said M. M.; Ahmed, T.S; Moustafa, T. M. “Predictive Modeling and Optimization for an Industrial Penex Isomerization Unit - A Case Study” *Energy & Fuels* **28,** No. 12 (2014): 7726–7741
* Mohammed, A. A.; Fateen, S-E K.; Ahmed, T.S.; Moustafa, T. M. “A Kinetic Model for Ethylene Oligomerization Using Zirconium/Aluminum- and Nickel/Zinc-Based Catalyst Systems in a Batch Reactor” *Applied Petrochemical Research* **4**, No. 3 (2014): 287-295
* Khatita, M.; Ahmed, T. S; Ashour, F.; Ismail, I. “Power Generation Using Waste Heat Recovery by Organic Rankine Cycle in Oil and Gas Sector in Egypt: A Case Study”, *Energy* **64** (2014): 462-472
* Ismail, I. M.; Abdel-Salam, O. E.; Ahmed, T. S.; Soliman, A.; Al-Ebrahim, M. F.; Khattab, I. A. “Investigation of the Anodic Dissolution of Zinc in Sodium Chloride Electrolyte – A Green Process” *Portugaliae Electrochimica Acta* **31**, No. 4 (2013): 207-219
* Khatita, M.; Ashour, F.; Ismail, I.; Ahmed, T. S. “Working Fluid Selection for Waste Heat Recovery using Organic Rankine Cycle – A Review”, *Transactions of the Egyptian Society of Chemical Engineers* **27,** No. 2 (2011): 38-53
* Kim, J.; Kim, Y. J.; Kim, J. D.; Ahmed, T. S.; Dong, L. B.; Roberts, G. W.; Oh, S. G. “The Effect of Prepolymer Crystallinity on Solid-State Polymerization of Poly(bisphenol A carbonate)”, *Polymer* **51** (2010): 2520-2526
* Ahmed, T. S.; DeSimone, J. M.; Roberts, G. W., "Continuous Precipitation Polymerization of Vinylidene Fluoride in Supercritical Carbon Dioxide: A Model for Understanding the Molecular-Weight Distribution", *Chemical Engineering Science* ***65***, No. 2 (2010): 651--659
* Ahmed, T. S.; DeSimone, J. M.; Roberts, G. W., “Kinetics of the Homopolymerization of Vinylidene Fluoride and its Copolymerization with Hexafluoropropylene in Supercritical Carbon Dioxide: The Locus of Polymerization”, *Macromolecules* **42**, No. 1 (2009): 148-155
* Ahmed, T. S.; DeSimone, J. M.; Roberts, G. W., “Continuous Copolymerization of Vinylidene Fluoride with Hexafluoropropylene in Supercritical Carbon Dioxide: High Hexafluoropropylene-Content Amorphous Copolymers”, *Macromolecules* **41**, No. 9 (2008): 3086-3097.
* Ahmed, T. S.; DeSimone, J. M.; Roberts, G. W., “Continuous Copolymerization of Vinylidene Fluoride with Hexafluoropropylene in Supercritical Carbon Dioxide: Low Hexafluoropropylene-Content Semicrystalline Copolymers”, *Macromolecules* **40**, No. 26 (2007): 9322-9331
* Ahmed, T. S.; DeSimone, J. M.; Roberts, G. W., "Copolymerization of Vinylidene Fluoride with Hexafluoropropylene in Supercritical Carbon Dioxide." *Macromolecules* **39**, No. 1 (2006): 15-18
* Ahmed, T. S.; DeSimone, J. M.; Roberts, G. W., "Continuous Precipitation Polymerization of Vinylidene Fluoride in Supercritical Carbon Dioxide: Modeling the Molecular Weight Distribution" *Chemical Engineering Science* **59**, No. 22-23 (2004): 5139-5144

# CONFERENCES

* Ahmed, T. S., “Promotion of Green Industry: Case Studies”, *Horizon 2020: Green Growth & Green Economy in Egypt*, Cairo, Egypt. June 2013
* Ahmed, T. S., “Water-Savings in Beverages Industries in Egypt – A Case Study”, *United Nation Environmental Program Regional Workshop on the African Beverage Industries Water Saving Initiative (ABIWSI), Nairobi, Kenya,* March, 2010
* Roberts, G. W.; Liu, T.; Ahmed, T. S.; DeSimone, J. M., “Continuous Polymerization in Supercritical Carbon Dioxide” *9th International Symposium on Supercritical Fluids, Arachon, France, May 18-20, 2009*
* Ahmed, T. S.; DeSimone, J. M; Roberts G. W., ”Continuous Precipitation Polymerization of Vinylidene Fluoride In Supercritical Carbon Dioxide: Understanding and Controlling the Molecular Weight Distribution”, *2008 AIChE Annual Meeting, Philadelphia, PA, November 16-21, 2008*
* Roberts, G. W.; Liu, T.; Ahmed, T. S.; DeSimone, J. M., “Continuous Polymerization in Supercritical Carbon Dioxide” *235th ACS National Meeting, New Orleans, LA, April 6-10, 2008*
* Ahmed, T. S.; DeSimone, J. M; Roberts G. W., “Copolymerization of Vinylidene Fluoride with Hexafluoropropylene in Supercritical Carbon Dioxide”, *234th ACS National Meeting, Boston, MA, August 19-23, 2007*
* Roberts, G. W.; Liu, T.; Ahmed, T. S.; DeSimone, J. M., “Continuous Polymerization in Supercritical Carbon Dioxide”, *5th International Symposium on High Pressure Processes Technology and Chemical Engineering, Segovia, Spain, June 24-27, 2007*
* Ahmed, T. S.; DeSimone, J. M.; Roberts G. W., “Batch Copolymerization of Vinylidene Fluoride with Hexafluoropropylene in Supercritical Carbon Dioxide”, *7th International Symposium on Supercritical Fluids, Orlando, Fl, May 1-4, 2005*
* Ahmed, T. S.; DeSimone, J. M; Roberts G. W., “Continuous Precipitation Polymerization of Vinylidene Fluoride in Supercritical Carbon Dioxide: Modeling the Molecular Weight Distribution”, *18th**International Symposium of Chemical Reaction Engineering, Chicago, IL, June 6-9, 2004*
* Ahmed, T. S.; DeSimone, J. M; Roberts G. W., “Modeling the Molecular Weight Distribution of Poly(vinylidene fluoride) Synthesized Continuously in Supercritical Carbon Dioxide”, *227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004*
* Ashour, I.; Ahmed, T. S., “Energy Conservation for Natural Gas Liquefaction Process*”, International Conference on Vehicle Alternative Fuel Systems & Environmental Protection 2004, Dublin, Ireland, July 6-9, 2004*
* Ashour, I.; Ahmed, T. S., “Modeling and Simulation of a Liquefied Natural Gas Plant”, *The 4th Annual Research Conference United Arab Emirates University, Al-Ain, United Arab Emirates, April, 27-29, 2003*
* Ahmed, T. S.; Ashour, I.; Fahmy, M., “Simulation and Optimization of Natural Gas Liquefaction Process”, *2001 Annual AIChE Meeting, Reno-Nevada, November 4-9, 2001* (Poster)
* Ahmed, T. S.; Ashour I.; Fahmy, M., “Evaluation of Equations of State at the Cryogenic Conditions for Natural Gas”, *6th Congress of Chemical Engineering, Cairo, Egypt, October 16-19, 2001*

###### PROFESSIONAL ACTIVITIES

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**AWARDS**

* List of honor of best Instructors among Faulty of Engineering in teaching (2010)
* Graduate fellowship 2002-2007 from North Carolina State University, USA
* Winner of “Prof. F. Asal’s Award” for the First Ranked Student on the Chemical Engineering Department, Chemical Engineering Department, Cairo University, Cairo, Egypt (1999)
* Cairo University, Graduation Honor, BS with Honor Degree for Overall Undergraduate Excellence (1999)
* Student Union Award for Distinguished Students, Cairo University, Cairo, Egypt (1995, 1996, 1998, 1999)

**Area of Research:**

Polymerization, Reaction Engineering, Waste Valorization, Applied Modeling, Process Simulation and Optimization...