



CURRICULUM VITAE

FATMA EL ZAHRAA HANAFY ASHOUR

Current positions

- Director, Cairo University Center for Hazard Mitigation, Environmental Studies & Research
- Professor of Chemical Engineering Faculty of Engineering, Cairo University, Egypt

Education

- Ph.D., Chemical Engineering Department, Faculty of Engineering, Cairo University, 1994
- M.Sc., Chemical Engineering Department, Faculty of Engineering, Cairo University, 1987
- B.Sc. Chemical Engineering Department, Faculty of Engineering- Cairo University, 1980, Very Good (83.9 %) with honors

Professional:

Participated in projects as a member of the working team such as:

- The Engineering Education Development Project (EEDP) 1996, to help the faculties of Engineering to upgrade their laboratories and facilities. The EEDP project was sponsored by the World Bank in conjunction with the Ministry of High Education.
- The Egyptian Environmental Information System (EEIS) sponsored by CIDA with the Egyptian Environmental Affairs Agency (1996-1999), to ensure the participation of women in project activities and to incorporate measures for gender-differentiation impact of environmental problems in the decision making.
- Enhancing Risk Perception in Engineering Education (RISK–Tempus III) 2002-2006, to help the students adapt to new ways of thinking, to raise the awareness of the undergraduate and post-graduate students of the risk encountered in nature and various industrial activities.
- Participated in the upgrading of the Technical Guidelines on the various uses of used oils and their re-refining processes for the Basel convention (2006-2007).
- Participating in the Egyptian Academy of Scientific Research and Technology technical study entitled "The Manufacture of Biodiesel from Non - Edible Vegetable Oils".
- Participated in the "Energy Conservation" Project between the Chemical Engineering Department, in Cairo University and its counterpart at Rovira Virgili I University, in Spain, since March 2009.
- Participated in the EIA study for spent oil collection, storage and transfer, the Petroleum Arrows Company, 2017.

- Participated in operating the Egyptian National Air Pollution Monitoring Network for the Egyptian Environmental Affairs Agency (EEAA) since 2017.
- Participated in the Technical Report regarding the measurements of the emission effluent in work environment at Alexandria Petroleum Company 2018.
- Participated in the EIA Study for the Disposal of Tetraethyl Lead and its sludge within Cairo Petroleum Refineries at Mostorod and Tanta, 2019.
- Participated in the project “Sustainable Production of Biodiesel from Waste Cooking Oil in Egypt” hosted by The British University in Egypt (BUE) and London South Bank University 2018-2019.

Membership of Professional Associations:

- Member, the **Egyptian Engineers Syndicate**
- Member, **the Research Council for Petroleum & Mineral Wealth**
- **(Petroleum Committee)**- The Egyptian Academy of Scientific Research and Technology (April 2006 to date)
- Member of the board of the Association of the French-speaking Egyptian Engineers “**L’Association des Ingénieurs Francophones d’Egypte**” **AIFE**.
- Member, **the College of Experts of the Mediterranean Office of Youth MOY** (2012- 2014)
- Président of the “**Réseau Méditerranéen des Ecoles d’Ingénieurs RMEI**”, Novembre 2020 to date.

Research and Teaching Experience

December 2017 to date

Director of the Cairo University Center for Hazard Mitigation, Environmental Studies and Research

September 2014 to date

Coordinator of the Green Process Engineering Masters Program (Cairo University and Rovira I Virgili Universitat –Tarrogon, Spain)

September 2011 to September 2017

Chairperson of the Chemical Engineering Department, Faculty of Engineering, Cairo University

2007 to date

Professor of Chemical Engineering (Petroleum Processing and Petrochemicals), Chemical Engineering Department, Faculty of Engineering, Cairo University

Workshops

- The Arab Regional Workshop on the Sound Management of Used Oils and the Management of Waste from the Oil /Gas sectors, 11 – 13 December 2006, Aden, Yemen.
- The 5th annual CIDA-Egypt Program Facilitation Training and Capacity Building Workshop (FTCB 2008), 21- 26 June 2008, Cairo, Egypt.
- Séminaire Régional “ Environnement et gestion durable des écosystèmes naturels au Moyen-Orient”, 18-20th of April, 2011, Beyrouth, Lebanon.
- Renewable Energies and Energy Efficiency Conference, (organizer), 5-6th of March 2012, Cairo, Egypt
- The 1st International Workshop on the Socio-economic Development in the Era of Renewable Energies, 3-4th of September 2012, Tunisia.

- Waste Management and Sustainable Development Conference, (organizer), 5-6th of March 2013, Cairo, Egypt
- The Mediterranean is facing major challenges through its Youth For a smart Mediterranean, 3rd Michelangelo Workshops, 9 -11 April 2015, Rome, Italy.
- Réseaux Méditerranéen des Ecoles d'Ingénieurs, RMEI, General Assembly Meeting, (organiser) 14-16 Mars, 2016, Cairo, Egypt.
- "Mediterranean Bridging and Changing: the role of students, schools and professionals", IV-V Michelangelo Workshop, 13-15 October 2016, Rome, Italy
- TARGET workshop and working group, TAKing a Reflexive approach to Gender Equality for RMEI Transformation, Marseille, 23 January 2018, Ecole Centrale de Marseille.

Selection of Publications

- 1- K. R. Beshai, I. F. Abadir and F. H. Ashour, "Performance of a Fuel Manufactured from a Thermally Decomposed Vegetable Oils and Diesel Oil", the Fourteenth Petroleum Conference, vol.1, October, 1998, Cairo, Egypt.
- 2- S. Desouki, F. H. Ashour and S.T. El Sheltawi, "Recycled Plastics as New Trend in Building Units", the Fifteenth International conference on Solid Waste Technology and Management, December, 1999, Philadelphia, PA, USA.
- 3- S.M.El Marsafy, F.H. Ashour and R.I. Abdallah, " Cracking of Contaminated Fuel Oil", The Seventeenth International Conference on Solid Waste Technology and Management, October, 2001, Philadelphia, PA, USA.
- 4- F.H. Ashour, A.M.M. Saleh and H. Nour el Din, " Manufacture of New Asphaltic Coating From Used Lube Oil", the Transactions of the Egyptian Society of Chemical Engineers, TESCE, vol.31, No.4, October 2005, Cairo, Egypt.
- 5- A.M.M. Saleh, F.H. Ashour and Y.M. Moustafa, "Assessment of The Air Quality in Some Egyptian Asphalt Laboratories", Current World Environment, vol.1, No.2, pp. 117-124, 2006, India.
- 6- F.H. Ashour, " Toxic Release of Emissions Produced During the Combustion Of Spent Lube Oils", the Transactions of the Egyptian Society of Chemical Engineers, TESCE, vol.32, No.3, July 2006, Cairo, Egypt.
- 7- F.H. Ashour, " Furfural Production from Agricultural Residues", Journal of Engineering and Applied Science, Faculty of Engineering, Cairo University, vol. 53, No.5, pp. 689-697, October 2006, Egypt.
- 8- F.H. Ashour, S.M. El Marsafy and H. Nour El Din, "Maximum Utilization of Used Oils For Cleaner Environment", The Twenty Second International Conference on Solid Waste Technology and Management, March 2007, Philadelphia, USA.
- 9- A.M.M. Saleh, F.H. Ashour and S.M. El Sabagh, "Solid Waste Management during the Crude Oil Production", Under Publication in Petroleum Science and Technology, USA, accepted on January 31, 2007.

- 10- S.Sherif, M.A.Sadek, F.H. Ashour and M.Bassyouni, "Effects of Surface Treatment of Ground Rice Husk on the Polyurethane Based on Castor Oil", *Polymer and Polymer Composites*, vol. 9, No.8, 2009
- 11- M. Bassyouni, S.A. Sherif, M.A. Sadek, F.H.Ashour, Synthesis and characterization of polyurethane–Treated waste milled light bulbs composites, *Composites Part B: Engineering* vol. 43 No.3, 1439-1444, 2012
- 12- D. Kamel, M. Gadalla and F.H.Ashour, “New Retrofit Approach for Optimization and Modification for a Crude Oil Distillation System” *Chemical Engineering Transactions*, vol.35, 2013, AIDIC Servizi S.r.l.,
- 13- M. Gadalla, D. Kamel, F.H.Ashour and H. Nour El Din, “A New Optimization Based Retrofit Approach for Revamping an Egyptian Crude Oil Distillation Unit”, *Energy Procedia*, vol.36, 454 – 46, 2013, ELSEVIER.
- 14- Mohammed A. Khatita, Tamer S. Ahmed, Fatma. H. Ashour, Ibrahim M. Ismail, “Power generation using waste heat recovery by organic Rankine cycle in oil and gas sector in Egypt: A case study”, *Energy*, Volume 64, 1 January 2014, Pages 462–472, ELSEVIER
- 15- M Ibrahim, A.Y., Ashour, F.H., Ghallab, A.O., Ali, Effects of piperazine on carbon dioxide removal from natural gas using aqueous methyl diethanol amine, *Journal of Natural Gas Science and Engineering* 21, 894-899, 2014
- 16- Omar Y. Abdelaziz, Mamdouh A. Gadalla and Fatma H. Ashour, Simulation of Biomethanol Production from Green Syngas Through Sustainable Process Design, *Proceedings of the 4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH-2014)*, pages 677-684, August 2014.
- 17- Fatma H Ashour, Mamdouh A. Gadalla, Omar Y. Abdelaziz, Dina A. Kamel, A rigorous simulation-based procedure for retrofitting an existing Egyptian refinery distillation unit, *Energy* 83, 756 – 765, 2015
- 18- OY Abdelaziz, MA Gadalla, MM El-Halwagi, FH Ashour, A hierarchical approach for the design improvements of an Organocat biorefinery, *Bioresource Technology* 181 (2015, 4), 321–329, 2015
- 19- Amer, D., Gadalla, M., Ashour, F., Gasification of coal and Heat Integration modification for IGCC - Integrated gasification combined cycle, *Chemical Engineering Transactions*, 2015
- 20- DA Kamel, MA Gadalla, FH Ashour, A New Graphical Technique for Energy Efficient Design of Heat Recovery System in Chemical/Refining Industries, *International Journal of Recent Contributions from Engineering, Science & IT*, 2016
- 21- MA Gadalla, OY Abdelaziz, FH Ashour, Conceptual insights to debottleneck the Network Pinch in heat-integrated crude oil distillation systems without topology modifications, *Energy Conversion and Management* 126, 329-341, 2016
- 22- DA Ali, MA Gadalla, OY Abdelaziz, CP Hulteberg, FH Ashour, Co-gasification of coal and biomass wastes in an entrained flow gasifier: Modelling, simulation and integration opportunities, *Journal of Natural Gas Science and Engineering*, pp. 126-137, volume 37, January 2017, ELSEVIER.

23- OY Abdelaziz, WM Hosny, MA Gadalla, FH Ashour, IA Ashour, Novel process technologies for conversion of carbon dioxide from industrial flue gas streams into methanol, *Journal of CO₂ Utilization* 21, 52-63, 2017.

24- A Hegazy, AO Ghallab, FH Ashour, Integrated gasification combined cycle using Egyptian Maghara coal–rice straw feedstock, *Waste Management & Research*, pp 656-668, volume 35, issue 6, June 2017

25- DA Kamel, MA Gadalla, OY Abdelaziz, MA Labib, FH Ashour, Temperature driving force (TDF) curves for heat exchanger network retrofit–A case study and implications, *Energy*, pp 283-295, volume 123, March 2017, ELSEVIER.

26- Ibrahim, A.Y., Ghallab, A.O., Gadalla, M.A., Makary, S.S., Ashour, F.H., Technical and economical/financial feasibility analyses of flared gas recovery in Egypt from oil and gas industry from international/national oil companies' perspectives , *Clean Technologies and Environmental Policy*, pp 1423–1436 , Volume 19, Issue 5, July 2017, Springer

27- Kamel, D.A., Gadalla, M.A., Ashour, F.H., Analysis and revamping of heat exchanger networks for crude oil refineries using temperature driving force graphical technique, *Clean Technologies and Environmental Policy*, Volume 20, issue 2, pp 243–258, 2018, Springer

28- Omar Aboelazayem, Nour El-Gendy, Ahmed A Abdel-Rehim, Fatma Ashour, Mohamed A Sadek, Biodiesel production from castor oil in Egypt: process optimisation, kinetic study, diesel engine performance and exhaust emissions analysis, *Energy*, 2018, Elsevier

Academic Activates:

- Petroleum Refining, bio Energy and waste management specialist
- Teaching and research supervision of undergraduate and Post-graduate students. More than 40 MSc and 12 PhDs

Languages: Excellent French and Arabic both written and spoken
Very good knowledge of the English language

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