

# CURRICULUM VITAE

**Name**                      **Dr. Mohamed Ali El-Behlil**

**Date of Birth**              January 28, 1954

**Material Status**          Married

**Children**                  Four

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## Specialty

- Physical, chemical, and biological treatment of water, and wastewater.
- Pollution prevention technologies for water land and air.
- Treatment of groundwater for the removal of petroleum products.
- Bioremediation of soil contaminated by petroleum hydrocarbons using specifically isolated grown microorganisms.
- Design of treatment facilities for the treatment of industrial effluent and influent water.

## Education

**1977 B.Sc.** in Chemical Engineering, Tripoli University  
Tripoli - Libya

**1982 M.Sc** in Chemical Engineering  
Colorado School of Mines, Golden Colorado USA

**1990 ph.D** in environmental engineering, Michigan Technological  
University Houghton, Michigan USA

## Research Interest

The following are the main research topics interested in:

- Mass transfer operations
- Physical, chemical treatment of water and industrial wastewater.
- Biological treatment of wastewater.
- Pollution prevention technologies.
- Environmental and risk assessment studies.
- Design water desalination systems

## Experience

**1977 – 1987** Teaching assistant in chemical engineering at  
Tripoli University Tripoli - Libya

**1980 – 1982** Research program towards M.Sc at Colorado School  
of Mines Golden Colorado USA

1985 – 1990

• Research program towards Ph.D Michigan Technological  
University (MTU) Houghton Michigan. Also, in the same period  
taught environmental engineering courses for undergraduate  
students at the same university.

• Member of research team who did investigate the problem of  
groundwater contamination by volatile organic chemicals of the  
city of Wausau Wisconsin.

## **Experience (continue)**

- Member of a research team who worked in the design of fixed bed adsorbers and packed tower aeration systems that was later applied for the groundwater of the city of Wausau Wisconsin.

### **1990 - 1991**

Appointed as a research director for an environmental engineering company called Environmental Engineering Services (EES), this company is based in the city of Grand Rapids Michigan USA. This company is specialized in providing wide range of environmental engineering services to the US industries.

### **1991 – 2017**

- Assistant professor at the chemical engineering department, Tripoli University, Tripoli – Libya.
- 1995 -1997 worked as a part time consultant, at the Office of Data and Energy Studies (ODES), this office makes strategic decisions regarding the country's energy demands and consumption as well as the predictions of future energy demands.

### **2016 – Present**

- Associate professor and department head of chemical engineering department, Tripoli University, Tripoli – Libya.
  - Committee member of the studies and examinations at the Tripoli University, faculty of engineering Tripoli – Libya.
  - Part time consultant at the Agip oil company at the office of Health, Safety and Environmental (HSE) engineering department. Tripoli – Libya.
  - Active member in the environmental engineering research group (EERG) at the chemical engineering department at the Tripoli University.
  - An active member of the Great Man Made River (GMMR) consultation committee assigned to investigate: The impact of

the presence of the iron, manganese and carbon dioxide in Tazerbo ground water aquifer on the collection.

**2017 – 2018**

Head of the Chemical Engineering Department at University of Tripoli - Faculty of Engineering.

### **Experience (continue)**

And pumping stations and pipelines of the GMMR project. Also, determine and evaluate the best treatment technology for the removal of iron, manganese, and carbon dioxide from Tazerbo ground water aquifer.

- Part time consultant with the National Oil Corporation (NOC) at the department Health Safety and Environment (HSE). The main job of this office is monitoring and passing environmental legislations and regulations to all companies working in the oil sector.
- Part time consultant with the Petroleum Research Centre (PRC) , Tripoli – Libya . At this research Centre joint research projects were conducted with oil companies aiming in providing clean working environment free from contamination of land , air and water from petroleum products. During this period, several research programs were initiated with PRC such as the using bioremediation technologies in the cleanup of contaminated soil by petroleum products and using the isolated microorganisms in treatment and biodegradation of organic petroleum products.
- During the past 15 years while I am a full time professor of the chemical engineering department I was involved in teaching the following courses for both levels graduate and undergraduate education:

- ❖ Basic principles and calculations in chemical engineering.
- ❖ Mass transfer I
- ❖ Mass transfer II (design of mass transfer equipment)
- ❖ water treatment
- ❖ Wastewater treatment
- ❖ Pollution prevention technology
- ❖ Laboratory unit operations I &II
- ❖ Laboratory Unit Processes I &II
- ❖ Water chemistry
- ❖ Solid waste
- ❖ Intensive courses and training programs in water treatment processes and air pollution treatment at the power generating plants.

## Accomplishments

Since 2003, **El-Behlil M. A** had founded a small environmental engineering company under the name of Al-Nakha for water, environment and laboratory technology (NWELT). This company is based in Tripoli Libya, it's main activities are:

- providing customers with water treatment equipment's starting from residential levels up to large scale levels.
- Conducting environmental impact studies.
- Conducting laboratory physical, chemical and biological analysis for water and wastewater.

## Publications

- 1) **El-Behlil M. A**, .and Crittenden J.C, "Prediction of GAC process performance using mass transfer models" AWWA July (1989).

- 2) **El-Behlil M. A.** Crittenden J. C., Hand D. W., and Katherine Alben, "Impact of Background Organic Matter on the design of GAC Fixed- Bed Adsorbers" Submitted to the Journal of American water works Association, December 1991.
- 3) **El-Behlil Mohamed Ali**, "Activated carbon Adsorption of Synthetic Organic Chemicals in the presence of Natural Organic Matter" Report submitted to the department of civil and Environmental Engineering. Michigan Technological University, Houghton, Michigan (1988).
- 4) **El-Behlil M. A.**, Crittenden J. C., Hand D.W., Arora H. Sawang N., "Modeling Homogeneous surface diffusion model (HSDM) for fixed bed Adsorbers" submitted to the Journal of American Water Works Association, September (1989).
- 5) **El-Behlil M. A.**, and Crittenden J.C "Impact of the Natural Organic Matter on the design and performance of the full scale Adsorbers" A paper that is accepted for presentation i the second Maghrebian conference on process engineering. Tunisia April 22 to 25, 1996.
- 6) Abushareb Fowzia, Safa A , and **El-Behlil M. A.** " Design of Packed Tower Aeration System for the removal of Volatile and Synthetic Organic Chemicals from groundwater" A project was submitted to the chemical engineering department in partial fulfillment of the degree in B. Sc. In chemical engineering, Spring (1993).
- 7) Abu- Elgopain Tasha, and **El-Behlil M. A.**" Design and performance evaluation of a biological wastewater treatment plant facility for the treatment of a municipal wastewater" A project was submitted to the chemical engineering department in partial fulfillment of the degree in B. Sc. In chemical engineering, Spring 1996.

- 1) Dayna Al-Ali Zineb Essa, and **El-Behlil M. A**" Design and evaluation of a groundwater treatment unit for the production of drinking, cooling, and boiler feed water systems" A project was submitted to the chemical engineering department in partial fulfillment of the degree in B. Sc. In chemical engineering, spring 2000.
- 2) Wadi Nagat and **El-Behlil M. A.** "Natural gas sweetening at Melittah gas plant" A project was submitted to the chemical engineering department in partial fulfillment of the degree in B. Sc. in chemical engineering, Spring 2006.
- 3) Gabali F., Raghia Bakoush, Stoukha F. and **El-Behlil M. A.** " Natural gas processing for the removal of carbon dioxide and hydrogen sulfide at Al-Wafa oil and gas field" A project was submitted to the chemical engineering department in partial fulfillment of the degree in B. Sc. In chemical engineering, Spring 2004
- 4) Ketouni Gawhara, and **El-Behlil M.A.**" Environmental assessment and treatment of soil and groundwater contaminated from gasoline distribution stations", A project was submitted to the chemical engineering department in partial fulfillment of the degree in B. Sc. In chemical engineering, Fall 2003.
- 5) Nadera Farougi. Musrati Euzuldeen, and **El-Behlil M. A.**" Bioremediation of soil and groundwater contaminated by petroleum hydrocarbons", A paper presented at the environmental workshop sponsored by PRC " Tripoli – Libya ( 2003)
- 6) Jamal Idris, Nuri Ben Hamida , and **El-Behlil M. A.**" The environmental Impact assessment of produced water contamination from the operation of Intisar oil field on groundwater" A project

was submitted to the engineering Management department of the Al-Fateh University in partial fulfillment of the Master's degree in Engineering Management" Fall 1998.

- 7) Asma Assed Etumi, and **El-Behlil M, A.** "Microbial prevention of wax deposition during transportation and production of crude oil" A project was submitted to the chemical engineering department of the Tripoli University in partial fulfillment of the Master's degree in Chemical engineering" February 2005.
- 8) **El-Behlil Mohamed** Ali "Critical Review of water treatment operations involves chemical coagulation and hardness removal" presented at the first chemical engineering conference Tripoli – Libya. May (2009).
- 9) **El-Behlil M. A,** Adma Sabri A. " Absorption of carbon dioxide present at Attahady natural gas field" A paper presented at the first chemistry conference held at Sebha university 14-16 November 2006.
- 10) **Mohamed Ali El-Behlil1,** and Sabri A. Adma "Simplified packed tower design calculations for the removal of VOC'S from contaminated water " Chemical Engineering department – Tripoli University. Presented in IWTC 16 Istanbul, Turkey (2012).
- 11) **Mohamed Ali El-Behlil,** and Sabri A. Adma Chemical Engineering department – Tripoli University " Volatile Organic Chemicals Removal from Contaminated Water using Air Stripping Low Profile Sieve Tray Towers Chemical Engineering department – Tripoli University. Presented in IWTC 16 Istanbul, Turkey (2012).
- 12) **Mohamed A. El-Behlil & Eng. Said Trouq** " Marine Pollution Control and Prevention" Second International Petroleum



Environmental Conference and Exhibition” IPEC2014 June 17<sup>th</sup>-19<sup>th</sup>.2014 Dhat El-Emad – Tripoli – Libya

- 13) **Mohamed A. El-Behlil**, Abu-Jadid Abdu-Raouf, and Ibrahiem Abdul-Hadi “ Water quality investigation of bottled water in Tripoli Area” Joint graduate student study with the chemical Engineering Department and the Libyan Petroleum Institute. February (2017).
- 14) **Mohamed A. El-Behlil** and Mohamed Abdul- Majeed “Experimental study of Diesel Biodegradation of contaminated soil using Endogenous Microorganisms” Research for B.sc project will be submitted to the chemical engineering department. Spring (2017) University Tripoli.
- 15) Ali Youssef Turki, Ahmed Idrease Bumadass, and **Mohamed A. El-Behlil** “Design calculations and ROSA model simulations for brackish water Reverse Osmosis System” Research for B. sc project will be submitted to the chemical engineering department. Spring (2018) Tripoli University.
- 16) Massoud Dango and **Mohamed A. El-Behlil** “Treatment of groundwater for the removal of iron and manganese from groundwater wells of southern towns of Libya “A paper presented to the first international Libyan water conference April 21- 23 (2008).
- 17) Sabri A. Athmah, Miloud A. Arabi, and **Mohamed Ali El-Behlil**” Using Empirical correlations and Equations of State to Estimate Minimum miscibility pressure in Libyan Mature Oil Fields” A paper presented to the International Petroleum conference October 24-26 (2018) Benghazi Libya.
- 18) Sabri A. Athmah, Miloud A. Arabi, and **Mohamed Ali El-Behlil**” Screening Criteria for Gas Flooding Injection for Enhanced Oil

Recovery in Libyan Oil Reservoirs” A paper presented to the International Petroleum conference October 24-26 (2018) Benghazi Libya.

- 19) Marram Shebani, and **Mohamed A. El-Behlil** “Design calculations for a petroleum refinery wastewater treatment system” Research for B. Sc project is submitted to the chemical engineering department. Fall (2018) Tripoli University.
- 20) Sufjan Saleh Rashid **and Mohamed A. El-Behlil** “BTEx Removal from Contaminated Groundwater and Excel model Simulation of the Air Stripping Column Design” Research for B. Sc project is submitted to the chemical engineering department. Spring (2021) University Tripoli.