



Tikrit University

Chemical Engineering Department, Sallahaddin, Iraq



## CURRICULUM VITE (CV)

### 1. Personal Particulars:

Name	Asst. Prof. Dr. Ahmed Daham Wiheeb
Date of birth	24. March. 1976
Marital Status:	Married
Spoken Languages	Arabic and English
Address	Chemical Engineering Department, College of Engineering, Tikrit University, 34001 Tikrit, Sallahaddin, Iraq
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### 2. A. Academic and Professional Qualifications:

Year	Degree	Discipline	University
1999	BSc.	Chemical Engineering	Baghdad University, Iraq.
2002	MSc.	Chemical Engineering	Baghdad University, Iraq.
2013	PhD.	Chemical Engineering	Universiti Sains Malaysia (USM), Malaysia.

### B. Titles of Postgraduate Theses:

**MSc Thesis:** Study the Factors Affecting Cells of Sodium Perchlorate Production.

**PhD Thesis:** Development and Analysis of Hydrotalcite-Modified Porous Membranes for Carbon Dioxide Separation.

### 3. Work Experience:

Year	Position	Place of Work
2002-2005	Assistant Lecturer	Chemical Engineering Department, College of Engineering, Tikrit University
2005-2009	Lecturer	Chemical Engineering Department, College of Engineering, Tikrit University
2009- 2010	Assistant Professor	Chemical Engineering Department, College of Engineering, Tikrit University
2011-2012	Grant Assistant	School of Chemical Engineering, Universiti Sains Malaysia (USM)
2013- 2014	Assistant Professor	Chemical Engineering Department, College of Engineering, Tikrit University
2014- 2016	Assistant Professor	Chemical Engineering Department, College of Engineering, Diyala University

### 4. Teaching Experience:

Subject Title	Class	Year
Mass Transfer	Third	2002-2009 2013-2016
Numerical Methods	Fourth	2003-2009
Engineering Drawing	First	2002-2003
Mathematics	First	2002-2003
Mass Transfer Laboratory	Third	2003-2006 2014-2015
Unit Operations Laboratory	Year	2015-2016
Numerical Methods Laboratory	Fourth	2003-2009
Basic Principles and Calculations in Chemical Engineering	First	2013-2014
Engineering Analysis	Third	2014-2016
Unit Operations	Fourth	2015-2016
Advanced Mass Transfer	MSc	2015-2016

### 5. Main Current Research Areas:

- i. Membrane Technology For gas Separation/Enrichment
- ii. Ceramic/Inorganic Material Engineering / Characterization / Sol-Gel Processing  
Renewable energy / Sustainability / Separation processes.
- iii. Electrochemical Engineering / Electrodepositing.

## 6. Post Graduate Supervision:

1. Taif Emad Mohammed (MSc) (Completed in 2016), *Mathematical Modeling of the Carbon Dioxide Separation From Binary Gas Mixtures Through Hydrotalcite-Silica Membrane*.
2. Marwa Majeed Jumaa (MSc) (Completed in 2016), *Parametric Experimental Study of Biodiesel Production From Vegetable Oils*.

## 7. Thesis Examiner

1. Sanarya Kamel Kamal (2016). *Simulation model for improving cooling tower performance*.
2. Ewad Esa Mohamed (2016). *Optimal design of trickle bed reactor for phenol oxidation*.
3. Sahar Adnan Ahmed (2016). *The Dynamic Behavior and Control of Absorption column*.
4. Amer Talal Nawaf (2015). *Experimental and Modeling Study for Desulfurization of Light Gas Oil by Catalytic Wet Air Oxidation Process*.
5. Sarah Talib Tawfeeq (2014). *Mathematical Modeling of Polymeric membrane for CO<sub>2</sub> Separation From Natural Gas*.
6. Hiba Alaa Abdulkareem (2014). *Effect of Distributor Design on Hydrodynamics and Mass Transfer Coefficient of Slurry Bubble Column*.

## 8. Publications:

### A. Published Papers in International Journals:

1. A. D. Wiheeb, Z. Helwani, J. Kim, M. R. Othman. (2016). Pressure swing adsorption technologies for carbon dioxide capture. *Separation & Purification Reviews*. 45(2), 108-121.
2. Z. Helwani, A. D. Wiheeb, J. Kim, M. R. Othman. (2016). In-situ mineralization of carbon dioxide in a coal-fired power plant. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*. 38(4), 606–611.
3. H. T Tan, Z. Helwani, A. D. Wiheeb, J. Kim, M. R. Othman. (2015). Conversion of Saga Seeds into Adsorbent and Liquid Fuel from Pyrolysis and Solvent Extraction. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*. 37, 2437–2442.

4. **Ahmed Daham Wiheeb**, Mohd Azmier Ahmad, Muhamad Nazri Murat, Jin-Soo Kim, Mohd Roslee Othman. **(2015)**. Surface Affinity and Interdiffusivity of Carbon Dioxide Inside Hydrotalcite–Silica Micropores: CO<sub>2</sub> Interdiffusion Inside HT– Si Micropores. *Journal of Porous Media*. 18(4), 379-388.
5. **A. D. Wiheeb**, J. Kim, M. R. Othman. **(2015)**. Highly perm-selective micro-porous hydrotalcite-silica membrane for improved carbon dioxide-methane separation. *Separation Science and Technology*. 50, 1701-1708.
6. Z. Helwani, **A. D. Wiheeb**, I.K. Shamsudin, J. Kim, M. R. Othman. **(2014)**. The Effects of Fractality on Hydrogen Permeability Across Meso-Porous Membrane. *Heat and Mass Transfer*. 51(6), 751-758.
7. **A. D. Wiheeb**, M. A. Ahmad, M. N. Murat, J. Kim, M. R. Othman. **(2014)**. Identification of Molecular Transport Mechanisms in Micro-Porous Hydrotalcite–Silica Membrane. *Transp Porous Med*. 104(1), 133-144.
8. **A. D. Wiheeb**, M. A. Ahmad, M. N. Murat, J. Kim, M. R. Othman. **(2014)**. Predominant Gas Transport in Microporous Hydrotalcite–Silica Membrane. *Transp Porous Med*. 102(1), 59-70.
9. **A. D. Wiheeb**, M. A. Ahmad, M. N. Murat, J. Kim, M. R. Othman. **(2014)**. The effect of hydrotalcite content in microporous composite membrane on gas permeability and permselectivity. *Separation Science and Technology*. 49(9), 1309-1316.
10. **A. D. Wiheeb**, M. A. Ahmad, M. N. Murat, J. Kim, M. R. Othman. **(2014)**. The Declining Affinity of Microporous Hydrotalcite-Silica Membrane for Carbon Dioxide. *Journal of Porous Media*. 17(2), 159-167.
11. **Ahmed Daham Wiheeb**, Ili Khairunnisa Shamsudin, Mohd Azmier Ahmad, Muhamad Nazri Murat, Jinsoo Kim and Mohd Roslee Othman. **(2013)**. Present technologies for hydrogen sulfide removal from gaseous mixtures. *Reviews in Chemical Engineering*, 29(6), 449 – 470.
12. **A.D. Wiheeb**, Martunus, Z. Helwani, I.K. Shamsudin, J. Kim, M.R. Othman. **(2013)**. Pore morphological identification of hydrotalcite from nitrogen adsorption. *Chaos, Solitons & Fractals*, 49, 7-15.
13. Shamsudin I.K, Helwani Z, Abdullah A.Z, **Wiheeb A.D**, Othman M.R. **(2013)**. Glycine as Alternative Fuel in Making Hydrotalcite Compound by Means of Combustion Method. *The Malaysian Journal of Analytical Sciences*. 17(1), 171-175.
14. Martunus, Helwani Z., **Wiheeb A.D.**, Kim J., Othman M.R. **(2012)**. A flow through behavior of gas across meso-porous membranes. *Microporous and Mesoporous Materials*, 163, 115-121.

15. Martunus, Helwani, Z., **Wiheeb, A.D.**, Kim, J., Othman, M.R. **(2012)**. Improved carbon dioxide capture using metal reinforced hydrotalcite under wet conditions. *International Journal of Greenhouse Gas Control*, 7, 127-136.
16. Martunus, Helwani, Z., **Wiheeb, A.D.**, Kim, J., Othman, M.R. **(2012)**. In situ carbon dioxide capture and fixation from a hot flue gas. *International Journal of Greenhouse Gas Control*, 6, 179-188.

## **B. Published Papers in Local Journals:**

1. **Ahmed Daham Wiheeb**, Abdul Mun'em A. Karim, Taif Emad Mohammed, Mohd Roslee Othman. **(2015)**. Hydrogen Purification Using a Microporous Hydrotalcite-Silica Composite Membrane. *Diyala Journal of Engineering Sciences*, 8(4), 846-854.
2. **Ahmed D. Wiheeb**, Thaer A. Abdulla, Omar S. Lateef. **(2011)**. Process Simulation Study of Ethyl Acetate Reactive Distillation Column by Hysys® 3.2 Simulator. *Diyala Journal of Engineering Sciences*, 4(2), 39-56.
3. **Ahmed D. Wiheeb**, Muzher M. Ibrahim, Maha, I. Salih. **(2010)**. Estimating of Etchant Copper Concentration in The Electrolytic Cell Using Artificial Neural Networks. *Tikrit Journal of Eng. Sciences*. 17(2), 9-21.
4. **Ahmed D. Wiheeb**. **(2009)**. The Manufacture of Perchlorate by Direct Method Using Graphite Substrate Lead Dioxide (GSLD) Anode. *Diyala Journal of Engineering Sciences*, 2(1), 66-79.
5. **Ahmed D. Wiheeb**, Muayad A. Shehab and Maha I. Salih. **(2008)**. Estimating of CO<sub>2</sub> Conversion in Falling Film Reactor Using Artificial Neural Network. *Diyala Journal of Engineering Sciences*, 1(1), 86-100.
6. Saba A. Ghani, **Ahmed Daham Wiheeb**, Mahera R. Qasem. **(2008)**. Mathematical Modeling of The Instantaneous Reaction of H<sub>2</sub>S MEA in a Falling Film Reactor. *Tikrit Journal of Eng. Sciences*. 15(1), 64-79.
7. Saba A.Ghani and **Ahmed Daham Wiheeb**. **(2006)**. Wastewater Treatment Using Modified Alumina. *Tikrit Journal of Eng. Sciences*. 15(1), 63-81.
8. **Ahmed Daham Wiheeb**. **(2005)**. Electrolytic Production of Potassium Bromate Using Graphite Substrate Lead Dioxide (GSLD) Anode. *Tikrit Journal of Eng. Sciences*. 12(4), 124-142.

9. **Ahmed Daham Wiheeb** and Majid I. Abdulwahab. (2003). Study of the Factors Affecting Cells of Sodium Perchlorate Production. *Iraqi Journal of Chemical and Petroleum Engineering*.

### C. Conference Proceedings:

1. **Ahmed Daham Wiheeb**, Abdul Mun'em A. Karim, Taif Emad Mohammed, Mohd Roslee Othman. Hydrogen Purification Using a Microporous Hydrotalcite-Silica Composite Membrane. *The Second Scientific Conference of Engineering Sciences*, 16-17/Dec/2015, University of Diyala, Iraq.
2. **Ahmed Daham Wiheeb**, Taif Emad Mohammed, Zaid Adnan Abdel-Rahman. Adsorption Properties of Different Gases in Microporous Hydrotalcite-Silica Composite Membrane. *Impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum Industries Horizons*, 18-19/May/2015, University of Technology, Iraq.
3. Zaid Adnan Abdel-Rahman, **Ahmed Daham Wiheeb**, Marwa Majeed Jumaa. Parametric Experimental Study of Biodiesel Production from Vegetable Oil Using Heterogeneous CaO catalyst. *Impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum Industries Horizons*, 18-19/May/2015, University of Technology, Iraq.
4. **A.D. Wiheeb**, Z. Helwani, M.A. Ahmad, M.N. Murat, M.R. Othman. Recent absorption technologies for hydrogen sulfide removal: A review. *Nanomaterials Technology Specialized Conference, Universiti Teknologi Malaysia*, 2012.
5. **A.D. Wiheeb**, Z. Helwani, , M.A. Ahmad, M.N. Murat, M.R. Othman. Sol-gel synthesized hydrotalcite membrane supported on alpha alumina. *Nanomaterials Technology Specialized Conference, Universiti Teknologi Malaysia*, 2012.
6. **A.D. Wiheeb**, Z. Helwani, M.A. Ahmad, M.N. Murat, I.K. Shamsudin, M.R. Othman. Mesoporous alumina-iron dioxide membrane from sol-gel method. *International Conference on Nanotechnology*, 2012 (ICONT 2012), Kuantan, Malaysia.
7. **A.D. Wiheeb**, I.K. Shamsudin, Z. Helwani, M.R. Othman, Methanol and ammonia production: an overview. *International Conference on Environment*, 2012 (ICENV 2012).
8. I.K. Shamsudin, A.Z Abdullah, **A.D. Wiheeb**, M.R. Othman, Improved thermal stability of glycine fueled hydrotalcite prepared from combustion method. *AKEPT 2nd global annual young researchers conference and exhibition*, 2012.

9. I.K. Shamsudin, Z. Helwani, A.Z. Abdullah, **A.D. Wiheeb**, M.R. Othman, Glycine as alternative fuel in making hydrotalcite compound by means of combustion method. ***Seminar Lemak dan Minyak, Langkawi, Malaysia, 7-8 Jun 2012.***
10. Martunus, Z. Helwani, **A.D. Wiheeb**, M.R. Othman, Carbon dioxide fixation into soda ash utilizing continuous stirred tank reaction model. ***International conference of chemical engineering and industrial biotechnology in conjunction with 25th symposium of malaysian chemical engineer (icceib-somche), 2011.***
11. Martunus, Helwani, Z., **Wiheeb, A.D.**, Othman, M.R., Carbon dioxide sequestration at elevated temperature by pressure swing adsorption. ***3<sup>rd</sup> ISESEE, 2011 - International Symposium and Exhibition in Sustainable Energy and Environment***, art. no. 5977082, pp. 125-129.