Chemical Engineering Department, College of Engineering, University of Diyala, Baqubah, Diyala, Iraq



**CURRICULUM VITE (CV)**

1. **Personal Particulars:**

|  |  |
| --- | --- |
| Name | Prof. Dr. Ahmed Daham Wiheeb |
| Gender | Male |
| Date and place of birth | 24. March. 1976 / Iraq – Diyala – Khalis – Al Mansouryah |
| Nationality | Iraqi |
| Marital Status | Married |
| Spoken languages | Arabic and English |
| Address | Chemical Engineering Department, College of Engineering, University of Diyala, 32001 Baqubah, Diyala, Iraq |
| E-mail | [chahmed@engineering.uodiyala.edu.iq](mailto:chahmed@engineering.uodiyala.edu.iq)  [chahmed@tu.edu.iq](mailto:ahmed_daham@tu.edu.iq)  [ahmed\_chem76@yahoo.com](mailto:ahmed_chem76@yahoo.com)  [ahmeddaham4@gmail.com](mailto:ahmeddaham4@gmail.com) |
| Google scholar | <https://scholar.google.com/citations?hl=en&user=iN0N8KkAAAAJ> |
| Hand phone | +9647721993645 |

1. **A. Academic and Professional Qualifications:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Qualification** | **Major** | **Institution** | **Country** | **Grade** | **Date earned** |
| Bachelors (BSc) | Chemical Engineering | Baghdad University | Iraq | Good | 1999 |
| Master (MSc) | Chemical Engineering | Baghdad University | Iraq | Very good | 2002 |
| Doctoral (PhD) | Chemical Engineering | Universiti Sains Malaysia | Malaysia | Excellence | 2013 |

**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.

1. **Academic rank:**

|  |  |  |
| --- | --- | --- |
| **Rank** | **Date of obtained** | **Place of Work** |
| Assistant Lecturer | 2002 | Chemical Engineering Department, College of Engineering, Tikrit University |
| Lecturer | 2005 | Chemical Engineering Department, College of Engineering, Tikrit University |
| Assistant Professor | 2009 | Chemical Engineering Department, College of Engineering, Tikrit University |
| Professor | 2017 | Chemical Engineering Department, College of Engineering, Tikrit University |

1. **Teaching Experience:**

|  |  |  |
| --- | --- | --- |
| Subject Title | Class | Year |
| Mass Transfer | Third | 2002-2009  2013-2019 |
| 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 |
| Principles of Chemical Engineering | First | 2013-2019 |
| Engineering Analysis | Third | 2014-2016 |
| Unit Operations | Fourth | 2015-2016 |
| Advanced Mass Transfer | MSc | 2015-2019 |

1. **Main Current Research Areas:**

**I.** Mass Transfer/ Separation processes/ Membrane Technology For gas Separation

**II.** Ceramic/Inorganic Material Engineering / Characterization / Sol-Gel Processing

Absorption / Adsorption.

**III.** Electrochemical Engineering / Electrodepositing.

1. **Administrative Posts:**

|  |  |  |
| --- | --- | --- |
| **Date held** | **Institution** | **Major** |
| 27/11/2016 until  4/8/2019 | Tikrit University | Head of Chemical Engineering Department |
|  |  |  |

1. **Committees:**

|  |  |
| --- | --- |
| **Position in committee** | **Committee Type** |
| Head | Higher studies committee |
| Head | Examination committee |
| Member | Scientific committee |
| Member | International Editorial Board of Journal of  Chemical Engineering and Industrial  Biotechnology (JCEIB) |
| Member | Quality insurance committee |
| Member | Engineering Advisory Bureau |

1. **Awards & certificates or letters of appreciation:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Reasons for Awarding** | **Date earned** | **Institution Awarded** | **No.** |
| High job performance | 6/2/2018 | President of Tikrit  University |  |
| Excellent grade in performance evaluation | 24/4/2018 | President of Tikrit  University |  |
| High job performance | 15/4/2018 | President of Tikrit  University |  |
| High job performance | 27/3/2018 | President of Tikrit  University |  |
| High job performance | 21/6/2018 | President of Tikrit  University |  |
| High job performance | 14/6/2018 | Dean of College of  Engineering |  |
| High job performance | 29/4/2018 | Dean of College of  Engineering |  |
| High job performance | 14/3/2018 | Dean of College of  Engineering |  |
| High job performance | 20/6/2018 | Dean of College of  Engineering |  |
| High job performance | 22/4/2018 | Dean of College of  Engineering |  |
| High job performance | 6/12/2017 | Dean of College of  Engineering |  |
| High job performance | 14/6/2017 | President of Salah  Addin Provincial  Council |  |
| Excellent performance in graduated project supervision | 12/6/2017 | Dean of College of  Engineering |  |
| Attendance to the 2nd impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum  Industries Horizons | 22/5/2017 | Dean of College of  Engineering |  |
| High job performance | 20/4/2017 | Dean of College of  Engineering |  |
| Attendance to workshop on  Safety | 17/4/2017 | President of Tikrit  University |  |
| Fairness | 24/1/2017 | President of Tikrit  University |  |
| Publishing electronic lectures | 16/1/2017 | Dean of College of  Engineering |  |
| Working as a member in  committee sent to Diyala  university | 25/10/2016 | President of Tikrit  University |  |
| Excellent grade in performance evaluation | 29/9/2016 | President of Tikrit  University |  |
| Publishing in international journal | 27/6/2016 | President of Tikrit  University |  |
| Attendance to the third student conference  for graduation project | 12/5/2016 | Dean of College of  Engineering |  |
| Fairness | 4/5/2016 | Minster of Higher  Education |  |
| The anniversary of the founding of the  Tikrit University | 26/4/2016 | President of Tikrit  University |  |
| Working as a member in higher studies  Committee | 23/3/2016 | Dean of College of  Engineering |  |
| High job performance | 11/2/2016 | Dean of College of  Engineering |  |
| Excellent grade in performance evaluation | 17/12/2015 | President of Tikrit  University |  |
| Attendance to the Second Scientific  Conference of Engineering Sciences | 15/12/2015 | Dean of College of  Engineering |  |
| High job performance for engineering  college staff | 9/12/2015 | President of Tikrit  University |  |
| Attendance to the 1st impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum  Industries Horizons | 23/6/2015 | Dean of College of  Engineering |  |
| The anniversary of the founding of the  Tikrit University | 12/5/2015 | President of Tikrit  University |  |
| Attendance to the workshop | 12/2/2015 | Dean of College of  Engineering |  |
| Working as a member in Tikrit  Journal of Engineering Sciences | 13/5/2014 | President of Tikrit  University |  |
| Fairness | 13/5/2014 | President of Tikrit  University |  |
| High job performance | 23/4/2014 | President of Tikrit  University |  |
| Getting high H-index | 4/3/2014 | President of Tikrit  University |  |
| Fairness | 22/1/2014 | President of Tikrit  University |  |
| High job performance | 8/1/2014 | President of Tikrit  University |  |
| Fairness | 16/6/2013 | Minster of Higher  Education |  |
| The anniversary of the founding of the  Tikrit University | 16/4/2012 | President of Tikrit  University |  |
| High job performance | 1/6/2010 | Dean of College of  Engineering |  |
| Excellent grade in performance evaluation | 7/12/2009 | President of Tikrit  University |  |
| High job performance | 6/11/2007 | Dean of College of  Engineering |  |
| High job performance | 12/7/2007 | Minster of Higher  Education |  |
| Very good grade in performance evaluation | 27/4/2005 | Dean of College of  Engineering |  |

1. **Post Graduate Supervision:**
2. Rana Isam Ahmed (MSc) (Completed in **2019**), ***Amino acid salt promoted aqueous potassium carbonate solution for carbon dioxide absorption from flue gas.***
3. Ramzia Majid Noori (MSc) (Completed in **2019**), ***Evaluation of activated carbons derived from waste polymers via microwave irradiated for medical dyes removal from synthetic wastewater.***
4. Sanaa Rabie Ali (MSc) (Completed in **2018**), ***Experimental investigation of carbon dioxide capture characteristics into binding organic liquids.***
5. Safa Waleed Shakir (MSc) (Completed in **2017**), ***Experimental study of carbon dioxide removal from flue gas using aqueous solutions of amine blends in a packed column***.
6. Taif Emad Mohammed (MSc) (Completed in **2016**), ***Mathematical Modeling of the Carbon Dioxide Separation from Binary Gas Mixtures through Hydrotalcite-Silica Membrane***.
7. Marwa Majeed Jumaa (MSc) (Completed in **2016**), ***Parametric Experimental Study of Biodiesel Production from Vegetable Oils***.
8. **Thesis Examiner:**
9. Sarmad Kamel Mohammed (**2019**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Improving of Light Fuel Quality by Air in a Batch Reactor based on a Synthetic Composite Nano Catalyst***
10. Safe Salah Hussian (**2018**), MSc, Chemical Engineering Department, University of Technology, ***Desalting high saline oilfield produced water using membrane distillation.***
11. Ahmed Mohammed Ahmed (**2017**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Optimal design and operation of isomerization process.***
12. Haneen Thamer Shatab (**2017**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***CFD analysis of circulating Fluidized bed.***
13. Sanarya Kamel Kamal (**2016**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Simulation model for improving cooling tower performance***.
14. Ewad Esa Mohamed (**2016**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Optimal design of trickle bed reactor for phenol oxidation***.
15. Sahar Adnan Ahmed (**2016**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***The Dynamic Behavior and Control of Absorption*** ***column***.
16. Amer Talal Nawaf (**2015**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Experimental and Modeling Study for Desulfurization of Light Gas Oil by Catalytic Wet Air Oxidation Process***.
17. Sarah Talib Tawfeeq (**2014**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Mathematical Modeling of Polymeric membrane for CO2 Separation from Natural Gas***.
18. Hiba Alaa Abdulkareem (**2014**), MSc, Chemical Engineering Department, College of Engineering, Tikrit University, ***Effect of Distributor Design on Hydrodynamics and Mass Transfer Coefficient of Slurry Bubble Column***.
19. **Publications:**
20. **Published Papers in International Journals:**
21. A. D. Wiheeb, S. W. Shakir, M. R. Othman. **(2018)**. Synthesis and Characterization of Mesoporous Hydrotalcite-Alumina Membrane for Carbon Dioxide Enrichment. ***IOP Conference Series: Materials Science and Engineering.*** 454 (1), 012107.
22. A. D. Wiheeb, S. W. Shakir, M. A. Ahmed, E. A. Rajab. **(2018)**.Experimental Investigation of Carbon Dioxide Capturing into Aqueous Carbonate Solution Promoted by Alkanolamine in a Packed Absorber**. *IEEE, Engineering Sciences,*** DOI10.1109./ISCES.2018.8340545**.**
23. A. D. Wiheeb, T.E. Mohammed, Z.A. Abdel-Rahman, M.R. Othman. **(2017)**. Flow dynamics of gases inside hydrotalcite-silica micropores. ***Microporous and Mesoporous Materials***, 264, 37-42.
24. 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.
25. 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.
26. 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.
27. 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: CO2 Interdiffusion inside HT− Si Micropores. ***Journal of Porous Media***. 18(4), 379-388.
28. 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.
29. 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.
30. 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.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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.
36. 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.
37. 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.
38. 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.
39. 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.
40. **Published Papers in Local Journals:**
41. Sanaa Rabie Saleh, Ahmed Daham Wiheeb. **(2019)**. Kinetic Study of Carbon Dioxide Reaction with Binding Organic Liquids. ***Tikrit Journal of Eng. Sciences***. 26(1), 26-32. DOI: <http://dx.doi.org/10.25130/tjes.26.1.04>
42. Ahmed Daham Wiheeb. **(2018)**. Modeling and Optimization on the Carbon Dioxide Separation from Natural Gas Using Hydrotalcite-Silica Membrane. ***Diyala Journal of Engineering Sciences***, 21(3), 39-46.
43. Zaid Adnan Abdel-Rahman, Ahmed Daham Wiheeb, Marwa Majeed Jumaa. **(2017)**. Commercial CaO Catalyzed Biodiesel Production Process. ***Al-Nahrain Journal for Engineering Sciences***, 20(4), 846-852.
44. 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.
45. 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.
46. 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.
47. 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.
48. Ahmed D. Wiheeb, Muayad A. Shehab and Maha I. Salih. **(2008)**. Estimating of CO2 Conversion in Falling Film Reactor Using Artificial Neural Network. ***Diyala Journal of Engineering Sciences***, 1(1), 86-100.
49. Saba A. Ghani, Ahmed Daham Wiheeb, Mahera R. Qasem. **(2008)**. Mathematical Modeling of the Instantaneous Reaction of H2S MEA in a Falling Film Reactor. ***Tikrit Journal of Eng. Sciences***. 15(1), 64-79.
50. Saba A.Ghani and Ahmed Daham Wiheeb. **(2006)**. Wastewater Treatment Using Modified Alumina. ***Tikrit Journal of Eng. Sciences***. 15(1), 63-81.
51. 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.
52. 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*.**
53. **Conference Proceedings:**
54. Ramzia Majed Noori, Ahmed Daham Wiheeb, Ahmed Saed Othman. Adsorption of Dye Yellow No.6 from Synthetic Wastewater by Activated Carbon Derived from Waste Polymer via Microwave Irradiated. ***The 2nd International Conference on Materials Engineering and Science***. 25/09/2019. University of Technology-Baghdad-Iraq.
55. Rana Esam Ahmed, Ahmed Daham Wiheeb. Enhancement of Carbon Dioxide Absorption into Aqueous Potassium Carbonate by Adding Amino Acid Salts. ***The 2nd International Conference on Materials Engineering and Science***. 25/09/2019. University of Technology-Baghdad-Iraq.
56. Ahmed Daham Wiheeb, Safa Waleed Shakir, M.R. Othman. Synthesis and Characterization of Mesoporous Hydrotalcite-Alumina Membrane for Carbon Dioxide Enrichment**. *1st International Conference on Materials Engineering and Science (IConMEAS) Sciences,*** 8-9/Aug/**2018**, Aydin University, Istanbul – Turkey
57. Ahmed Daham Wiheeb, Safa Waleed Shakir, Mustafa Abd Elbari Ahmed, Essa Arkan Rajab. Experimental Investigation of Carbon Dioxide Capturing into Aqueous Carbonate Solution Promoted by Alkanolamine in a Packed Absorber**. *1st International Scientific Conference of Engineering Sciences (ISCES) 3rd Scientific Conference of Engineering Sciences,*** 10-11/Jan/**2018**, College of Engineering, University of Diyala, Iraq.
58. Ahmed Daham Wiheeb, Safa Waleed Shakir. Experimental study of mass transfer and carbon dioxide removal from flue gas into aqueous solutions of blended solvents in a packed column**. 2nd *Impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum Industries Horizons***, 10-11/May/**2017**, University of Technology, Iraq.
59. 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.
60. Ahmed Daham Wiheeb, Taif Emad Mohammed, Zaid Adnan Abdel-Rahman. Adsorption Properties of Different Gases in Microporous Hydrotalcite-Silica Composite Membrane**. *1st Impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum Industries Horizons***, 18-19/May/**2015**, University of Technology, Iraq.
61. Zaid Adnan Abdel-Rahman, Ahmed Daham Wiheeb, Marwa Majeed Jumaa. Parametric Experimental Study of Biodiesel Production from Vegetable Oil Using Heterogeneous CaO catalyst. ***1st Impacts of Postgraduate Researches in Chemical Engineering on the Developing of Chemical and Petroleum Industries Horizons***, 18-19/May/**2015**, University of Technology, Iraq.
62. 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**.
63. 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**.
64. 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*.
65. A.D. Wiheeb, I.K. Shamsudin, Z. Helwani, M.R. Othman, Methanol and ammonia production: an overview. ***International Conference on Environment****,* **2012** *(ICENV 2012)*.
66. 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**.
67. 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**.
68. 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**.
69. Martunus, Helwani, Z., Wiheeb, A.D., Othman, M.R., Carbon dioxide sequestration at elevated temperature by pressure swing adsorption. ***3rd ISESEE, 2011 - International Symposium and Exhibition in Sustainable Energy and Environment****,* art. No. 5977082, pp. 125-129.