C.V. Resume

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Academic Qualifications:

PhD, 1973, Chemical Engineering, University of Manchester for Science and Technology (UMIST) , England.

MSc, 1970, Theory and Practice of Automatic Control, University of Manchester for Science and Technology (UMIST) , England.

BSc, 1969, Chemical Engineering, University of Manchester for Science and Technology (UMIST) , England.

Positions held:

2015 _ NOW: Dean Faculty of Engineering, International University of Africa, Sudan, Khartoum.

2012 – NOW: Professor, Department of Chemical Engineering, University of Khartoum.

2014 – NOW: Dean High Level Academy for Aviation

1992 – 2012: Professor, Department of Chemical Engineering, King Saud University.

1984 – 1992: Associate Professor, Department of Chemical Engineering, King Saud University.

1981 – 1984: Assistant Professor, Department of Chemical Engineering, King Saud University.

1979 – 1981: Senior Specialist, Gulf Organization for Industrial Consulting, Doha (Qatar).
1976 – 1979: Chemical Engineer, Saudi House for Industrial Consulting, Riyadh (Kingdom of Saudi Arabia).
1973 – 1976: Lecturer, Department of Chemical Engineering, Faculty of Engineering, University of Khartoum Sudan.
1970 – 1973: Demonstrator, Department of Chemical Engineering, UMIST (England).

Scholarships and Prizes:

1. President Aboud Prize for the top result in Sudan School Certificate (1963).
2. Shell Company Prize for best result in First year Examinations at the Faculty of Engineering, University of Khartoum(1966).
3. University of Khartoum Prize for best result in First year Examinations at the Faculty of Engineering, University of Khartoum(1966).
4. University of Khartoum Scholarship for undergraduate and post graduate studies at UNIST (England), 1966 – 1973.

Industrial Consulting Experience

Preparation and appraisal of several preliminary feasibility and techno-economic feasibility studies in chemical and petrochemical investment projects while employed in the Gulf Organization for Industrial Consulting (GOIC), (Doha, Qatar) and Saudi House for Industrial Consulting, Riyadh (Kingdom of Saudi Arabia).

Academic Experience

Academic Courses Taught at King Saud University (Riyadh) and University of Khartoum (Sudan):

1. Process Synthesis and Integration
2. Process Design and Economics
3. Process Control
4. Process Optimization
5. Computer-Aided Material and Energy Balances
6. Fluidization Engineering
7. Biochemical Engineering
8. Reactor Engineering
9. Chemical Engineering Principles
10. Chemical Industries

11. Chemical Engineering Applications in Waste Treatment
12. Chemistry of Engineering Materials
13. Numerical Methods using MATLAB
14. Process simulation using HYSYS and SuperPro Designer
15. Plant Design
16. Production Management
17. Process Equipment Design

Membership of Committees at Department of Chemical Engineering, King Saud University and University of Khartoum:

1. Demonstrators and Postgraduate Scholarship Students Committee.
2. Summer Training Committee.
3. Seminars and Social Activities Committee.
4. Laboratories and Experimental Equipment Committee.
5. Academic Plan Committee.
6. Member of College of Engineering Research Centre Administration Board.
7. Academic Committee of Department of Chemical Engineering.
8. Postgraduate Committee of Department of Chemical Engineering.
9. Deputy President of Examinations Committee for College of Engineering, King Saud University.
10. Membership of Consultative Editorial Board of Process Economics International Journal, England.
11. Chairman of Promotions Committee.
12. External Examiner to University of Science and Technology, Department of Chemical Engineering (for three periods 2013-2015).
13. Supervisor of Quran Committee at Faculty of Engineering, University of Khartoum.

Publications:

1. K.M.Wagialla,"Resource Conservation, the Roe of the Chemical Engineer", The First Chemical Engineering Meeting, The University of Sudan for Science and Technology, June, 2016.
2. Tasneem A.A. Muhammed, Kamil M. Wagialla,"A Novel Software Application in Water Pinch Analysis for Water and Wastewater Minimization in Petroleum Refinery and Sugar Plants", Proceedings of the 7th Annual Conference of Postgraduate Studies and Scientific Research (Vol 1: ENGINEERING), University of Khartoum, 2016, URL: ejournals.uofk.edu

3. Mohammed A. Babikir and Kamil M. Wagialla, ‘ Effect of In-situ Membrane Removal of H2O on Methanol Conversion during Dimethyl Ether Synthesis Reaction”, Accepted for publication in International Journal of Sciences: Basic and Applied Research (IJSBAR), 2015.
4. Zainab Omer Hamid Zain Elabdin, and Kamil M. Wagialla, “ Styrene from Ethyl Benzene: Simulation of Fixed Bed Reactor Using Matalb and Hysys”, Accepted for publication in the The Special Jubilee Issue of the International University of Africa, 2015.
5. Solafa E. Mohammed, Ala M. Hussin, Areej A. Alameen, Rayan A. Mohammed, and Kamil M.Wagialla, “Production of Hydrogen through Methane Steam Reforming in a Fixed Bed Reactor Using MATLAB Simulation’, University of Khartoum Enginering Journal (UofKEJ), Vol. 4 Issue 2 pp. 7-12, August-2014.

6. Wagialla KM, ”Synthesis of Mass Integration Networks: Integrated Approach to Optimization of Stream Matching for a Metal Pickling Process”, Computers and Chemical Engineering 44, 11-19, 2012.
7. Wagialla, K.M.,”Economics of Petrochemical Industry”, Saudi Society of Chemical Engineering, April 2012, Riyadh, Kingdom of Saudi Arabia.
8. Wagialla KM, El-Halwagi MM, Ponce-Ortega JM ,”An Integrated Approach to the Optimization of In Plant Wastewater Interception with Mass and Property Constraints”, Clean Technologies and Environmental Policy 14, 2, 257-265, 2012.
9. Wagialla KM,” Pinch-Based and Disjunctive Optimization for Process Integration of Wastewater”, Clean Technologies and Environmental Policy 14, 4, 597-608, 2012.

10. K.M.Wagialla, F.A.Al-Jamaan, and M.M.Al-Dehani,”Mass Conservation in Chemical Process Plants Using Process Integration”, Proceedings of the Third International Conference on Modeling, Simulation, and Applied Optimization (ICMSAO’09), Sharjah,UAE, January 20-22, 2009.

11. K.M.Wagialla,”Process Integration as a Tool for Wastewater Minimization in a Chemical Process: Direct Recycle Approach”, Proceedings of the Third International Conference on Modeling, Simulation, and Applied Optimization (ICMSAO’09), Sharjah, UAE, January 20-22, 2009.

12. K.M.Wagialla,” Process Integration as a Tool for Wastewater Minimization in a Chemical Process: a Mathematical Programming Approach”, Proceedings of the Third International Conference on Modeling, Simulation, and Applied Optimization (ICMSAO’09), Sharjah, UAE, January 20-22, 2009.

13. Wagialla KM,"Petrochemical Aromatics From Liquid Hydrocarbons – A Techno-economic Assessment", Proceedings of the seventh Saudi Engineering Conference, November 2007, Riyadh, Kingdom of Saudi Arabia.

14. S.M.Al-Zahrani, A.M. Aljodai and K.M.Wagialla, 'Modeling and Simulation of 1,2-dichloroethane production by ethylene oxychlorination in fluidized-bed reactor', Chem Engng Sci, Vol 56, pp. 621-626, 2001.

15. Wagialla, K.M. and Elnashaie, S.S.E.H,' Bifurcation Behavior of Industrial Fixed Bed Catalytic Reactors for the Production of Phthalic Anhydride', Proceedings of the International CFIC 96 Conference, Fractals and Chaos in Chemical Engineering, Editors, Giona, M. and Biardi, G., World Scientific, pp. 688-699, 1997.

16. A.H.Fakeeha, K.M.Wagialla and M.E.El-Dahshan,'Techno-Economic Assessment of Petroleum Coke Production for Carbon and Graphite Electrodes Manufacturing', Journal of King Abdulaziz University:Eng. Sci, vol 9, pp. 109-123 (1997).

17. Wagialla, K.M. and Elnashaie, S.S.E.H,' Bifurcation of Complex Dynamix in Fixed Bed Catalytic Reactors', Chem Engng Sci, Vol 50, no, 17, pp. 2813-2832, 1995.

18. Elnashaie, S.S.E.H., Wagialla K.M. and Helal A..,' Applicability of Fluidized Bed Technology to Highly Exothermic Reactors', Presented at the 4th Canadian Chem Engng Conference, Halifax, Canada, Paper 1175, July 1990.

19. Wagialla, K.M. and Elnashaie, S.S.E.H. and Helal, 'Preliminary Investigation of Stability and Optimum Operation of Fluidized Bed Catalytic Reactors for the Production of Some Natural Gas Derivatives', Symposium on the Production and Processing of Natural Gas, Chem Engng Department, King Saud University, March 1992.

20. K.M.Wagialla, I.S. Al-Mutaz and M.E,Eldahshan, "The Manufacture of Soda Ash in the Arabian Gulf", International Journal of Production Economics, England.

21. K.M.Wagialla and M.A. Soliman, 'Distillation Column Simulation by Orthogonal Collocation', Journal of King Saud University, Engineering Science.

22. K.M.Wagialla and S.S.E. Elnashaie, 'A Fluidized Bed Reactor for Methanol Synthesis. A Theoretical Investigation'. Industrial Engineering Chemistry Research, 30, 2298-2308 (1991).

23. S.S.E. Elnashaie, K.M.Wagialla and M.E.E.Abashar, 'The Use of Mathematical and Computer Models to Explore the Advantages of Fluidized Bed Technology for Catalytic Reactions with Equilibrium/Diffusional Limitations. Ammonia Synthesis', Mathematical and Computer Modeling Journal.

24. K.M. Wagialla, A.M.Helal and S.S.E.H Elnashaie, 'The Use of Mathematical and Computer Models to Explore the Applicability of Fluidized Bed Technology for Highly Exothermic Reactions. I. Oxidative Dehydrogenation of Butene', Mathematical and Computer Modeling Journal, 15, 1, 17-31 (1991).

25. S.S.E.H Elnashaie, K.M. Wagialla, and A.M.Helal, 'The Use of Mathematical and Computer Models to Explore the Applicability of Fluidized Bed Technology for Highly Exothermic Reactions. II. Oxidative Dehydrogenation of Ethyl Benzene to Styrene', Mathematical and Computer Modeling Journal, 15, 7, 43-54 (1991).

26. K.M. Wagialla, A.H.Fakeeha, S.S.E.H Elnashaie and A.Y.Almaktary, 'Modeling and Simulation of Energy Storage in Fluidized Beds using the Two Phase Model', Energy Sources, 13, 189-201 (1991).

27. S.S.E.H Elnashaie, K.M. Wagialla, 'Preliminary Investigation of the Fluidized Configurations of Ammonia Synthesis. A Mathematical Modeling Guided Approach', Chemical Industry (Journal of the Federation of Chemists and Technologists of Yugoslavia), 44,324-329 (1990).

28. I.S.Al-Mutaz and K.M.Wagialla, 'Production of Magnesium from Desalination Brines', Resources, Conservation and Recycling, 3, 231-239 (1990).

29. K.M.Wagialla, F.M.Ahabdan, S.S.E.Elnashaie and I.M.Mudalal, 'Evaluation of Alternative Unstructured Dynamics of Activated Sludge Process', Journal of King Saud University, Vol 1, Engineering Sciences (1,2), 1-25 (1989).

30. A.M.AL-Fadli, M.A. Soliman, K.M. Wagialla and I.S.Al-Mutaz, 'A Network Model for the Optimal Planning of the Saudi Petrochemical Industry', Journal of Engineering Sciences, King Saud University, Vol. 14, Number 2, 295-309 (1988).

31. K.M.Wagialla, 'Petrochemical Feedstocks and Downstream Industrialization', Process Economics International, 7, 74-91, (1988).

32. I.S.Al-Mutaz and K.M.Wagialla, 'Techno economic Feasibility of Extracting Minerals from Desalination Brines', Desalination, 69, 297-307 (1998).

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39. M.M.Sayar, M.A.Soliman, K.M.Wagialla and C. McGreavy,' Profit Maximization for the Petrochemical Industry in GCC', International Conference on New Developments in the Oil Industry, Bahrain, 12-14 November, 1990.

40. K.M. Wagialla, M.E.El-Dahshan and I.S.Mutaz,' Techno economic Feasibility of a Modified Bayer Hydrochloric Acid Leaching method for Extraction of Alumina from Saudi Bauxite Ores', Chemical Review and Production Economics (Japan).

41. M.I.Eldahshan and .Wagialla,' Hydrometallurgy for Extraction of Metals', Journal of Industrial Co-operation, 27, January (1987).

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45. K.M.Wagialla, 'A Comparison of Aromatics Processing Costs in Middle East and Europe Part I', Process Economics International, Vol III, No. 3 (1982).

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48. K.M.Wagialla,' Production of Benzene in the Arabian Gulf', The Bahrain Society of Engineers Seminar, Bahrain, 3-4 Nov., 1980.

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50. A.H.Ayish and K.M.Wagialla,'Soap Manufacture in Saudi Arabia', First Arab Seminar on Soap and Detergents, Baghdad (1978).

51. K.M.Wagialla and C.G.Sinclair, 'Modeling of Effluent Disposal Plant Involving Micro-organisms', Sudan Engineering Society Journal, No. 22, January, 1976.

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57. Fakeeha, A.H., K.M. Wagialla and F.A. Al-Shrialy, "Modeling and Simulation of Acrylonitrile Synthesis from Propylene Using Fluidized Bed Technology", Journal of King Saud University, Vol. 4, Eng. Sci. (2), 127-142 (1992).

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Books

K.M.Wagialla, I.M.Ahumaizy and S.Alzahrani, 'Chemical Engineering Principles', Arab Home for Encyclopedia, Lebanon, 2003

K.M.Wagialla,'Computer-Aided Material and Energy Balances for Chemical Engineering Students', Arab Scientific Publishers, Lebanon, 2005.

A. Jabir, O. Sabak and K.M.Wagialla,'Applied Chemistry', Ministry of Education Kingdom of Saudi Arabia, 1986