

CURRICULUM VITAE

Name : **Farag Abd El-Salam Abd El-Aleem**

Date of Birth : 1946

- Ph.D., Chemical Engineering (1983).
"Mass Transfer Enhancement by Vibration".
Cairo University, Egypt.
- M.Sc., Chemical Engineering (1977).
"Refining of Nuclear Materials by Mechanical Contractors"
Cairo University, Egypt.
- B.Sc. Chemical Engineering (1967), "With Honours degree".
Cairo University, Egypt.
- Member of American Institute of Chemical Engineering since (1986).
- Member of the Electrochemical Society, U.S.A. since (1989).
- Attended a short course on : Nuclear materials in the international
Atomic Energy Agency, Vienna, Austria (1976).

Academic Employment career :

1. From 1967 - 1972 as Chemical Engineer in the Atomic Energy Authority of Egypt.
2. From 1972 - 1977 as demonstrator in the refining and extraction of nuclear materials in the nuclear department of the Atomic Energy Establishment of Egypt.
3. During 1976, attended a special course in Vienna, Austria at the International Atomic Energy Agency for Intensive Course on Nuclear materials.
4. From 1977-1978 as a research staff member in the extraction group for nuclear materials in the Nuclear Chemistry Department in the Atomic Energy Establishment of Egypt.
5. From 1978-1982 as a demonstrator in the Chemical Engineering Department in College of Engineering, Riyadh University.
6. At 1983 submitted my Ph.D. in mass Transfer and defended it at college of Engineering, Cairo University, Egypt.
7. From 1983 until now as a staff member in the Chemical Engineering department, King Saud University, Riyadh.

LIST OF PUBLICATIONS

1. El Yamani, S. and El-Aleem. F.A., "Nuclear zirconium by primene JMT from sulphuric acid solutions', 7th Egyptian Chem. Conf. Cairo (1974).
2. El Yamani, I.S. and El-Aleem. F.A., "Extraction and separation of Zr and Hf using halides of hyamine 1622", First Conf. on Nuclear Sciences and Applications, Cairo, (1975).
3. El Yamani, I.S. and El-Aleem. F.A., "Extraction and separation of Zr and Hf by long chain quaternary ammonium halides from HCl media", Talanta (April, 1978).
4. El-Aleem. F.A. et al., "Extraction of Zr and Hf by Tri lauryl amine solutions", J. Radional, Chem. 45, 125 (1978).
5. El Yamani, I.S. and El-Aleem. F.A., "Synergism in extraction by TBP in pulsed packed columns", 2nd Nucl. Conf. Cairo (April, 1978) P. 184.
6. El-Aleem. F. A. et al., "Co-extraction and separation of Zr and Hf by long chain amines from sulphate media", Talanta (April, 1978).
7. El Yamani, I.S. and El-Aleem. F.A., "Refining of zirconium by TBP in pulsed packed columns", 2nd Nucl. Conf. Cairo (April, 1978).
8. Mandil, El-Taweel and El-Aleem. F.A., "Reciprocating plate reactors for water reuse", Desalination (1983).
9. El-Aleem. F.A. "Intensification of water treatment and reuse", project No.AR-1-69, final report to Saudi Arabian Center for Science and technology (SANCST) June 1982).
10. El-Aleem. F.A. et al., "Electrochemical mass transfer in flow system", J. Engineering sciences, Vol. 11 No. 1 (1985) P. 39.

11. El Yamani, I.S. and Abd El-Aleem. F.A. "Studies on co-extraction and separation on zirconium and hafnium", Radiochem. Radio Analy. Letters, 33 (5-6) (1978) P. 345-352.
12. El Yamani, I.S. and Abd El-Aleem. F.A., "Refining of zirconium by tributyl phosphate in pulsed packed columns", Hydrometallurgy J., Vol. 13 (1984) 213-220.
13. El Yamani, I.S. and Abd El-Aleem, F.A., "Adogen amines as extractant for zirconium", J. of Radio Analytical and Nuclear Chemistry, 88/2 (1985). P. 201-208.
14. Abdul Aleem, F.A., Al-Habdan, F.M. and El-Dahshan, M.E., 'Mass transfer aspects of electrochemical corrosion", the 10th International conference on Corrosion, Madras, India (Nov. 1987).
15. El-Dahshan, M.E., Al-Habdan, F.M. and Abdul Aleem, F.A., "Corrosion in desalination plants, case study", the 10th International Conference on Corrosion, Madras, India (Nov., 1987).
16. Abdul Aleem, F.A., mandil, M.A., Mostafa, H.A. and Al-Taweel, A.M., "mass transfer enhancement by longitudinal vibration of smooth electrodes", Indian Chemical Engineering Congress, India (Dec., 1987).
17. Abd El-Aleem. F.A. and El-Dahshan, M.E., "A method for hafnium separation", the second National Meeting of Chemists, Riyadh (march, 1987).
18. Abd El Aleem. F.A. and Mandil M.A., "Mass transfer enhancement by vibrating plates in flow systems", 3rd congress of Chemical Engineers, Cairo (March, 1988).
19. Abd El-Aleem. F.A. et al. "hydrogen production status and development of Saudi Arabia in view of the energy problem", 3rd Congress of Chemical Engineers, Cairo (march, 1988).

20. Farag, A.O. and Abd El-Aleem. F.A., "Air pollution control by active foam", Final report to the Research Center of the College of Engineering, King Saud University, Project No. 2/403/1986.
21. Fakeeha, A.H. and Abd El-Aleem. F.A. "Flue Gas Desulphurization by the Electrochemical Approach", bulletin of Applied Electrochemistry, Jan., 1991.
22. Abd El Aleem. F.A. et al., "Mass transfer enhancement by the longitudinal vibration of smooth electrodes", Ind. Chem. Engineer, Vol. 32, N.3, 1990.
23. Abd El Aleem F.A. et al., "Electrochemical enhancement of mass transfer by vibrating electrodes and its application in wastewater treatment", Int. Meeting on Chem. Eng. and Biotechnology, ACHEMA, 1991, Frankfurt, Germany.
24. Al-Ahmad, M.I. and Abd El-Aleem. F.A. "Fouling problems in thermal processes". The 3rd Saudi Engineering Conference, College of Engineering, King Saud university, Riyadh, 1992.
25. Al-Fariss, T.F. , Ozbelge, H.O., Abd El-Aleem. F.A. and Abd El-Razik, S.M. "Evaluation of Saudi phosphate rock for wet process phosphoric acid production", J. King Saud University, vol. 4, No. (1) pp 33-45 (1992).
26. Al-Farriss, T.F., El-Nashaie, S.S.E.H. ; Abdel Aleem. F.A., et al., "Comparison between the acidulation by sulphuric acid and phosphoric acid for Saudi phosphate rock", Fertilizer Res. Vol. 29, pp. 209-227, 1991.
27. Al-Ahmad, M. and Abd El-Aleem, F.A. "Scale formation and fouling problems and their reflection on the performance of desalination plants", Presented in the Arab Gulf Regional Water Desalination Symposium. United Arab Emarate, Nov. 1992.
28. Al-Ahmad, M. and Abdul Aleem. F.A. "Scale formation and fouling problems effect on the performance of MSF and RO desalination plants in Saudi Arabia." Desalination, vol. 93, pp. 287-310. (1993).

29. Abd El-Aleem. F.A., Fakeeha, A.H., et al., "Electrochemical characterization and performance of porous nickel electrodes for hydrogen evolution presented in the 182th Electrochemical Society Meeting in Toronto, Canada Nov. 1992.
30. Fakeeha, A.H., Abd El-Aleem F.A., et al. "The application of electrochemical impedance spectroscopy in porous electrode studies for hydrogen evolution presented in the 182th meeting of the Electrochemical Society, Toronto, Canada, Nov. (1992).
31. Abd El-Aleem. F.A. et al., "Mass transfer enhancement by Rough vibrating electrodes in electrochemical system" accepted for presentation at the AIChE Meeting in St. Louis, U.S.A., Nov. 1993.
32. Al-Fariss, T.F.; Abdulaleem, F.A. ; et al., "Acidulation of Saudi phosphate rock in a micro pilot plant continuous unit", "I-Technical aspects of the process". Presented at the 1st int. Conference in Chemistry and its Applications. Qatar University, Doha, Dec. 1993.
33. El-Nashaie, S.S.E.H.; Al-Fariss, T.F. Abdulaleem. F.A. and Gaseem, N., "Acidulation of Saudi phosphate rock in a micro pilot plant continuous unit". II-mathematical modelling of the Process. The 1st Int. Conference on Chemistry and its Applications, Doha, Qatar, Dec. (1993).
34. Al-Mutaz, I.S.; Al-Fariss, T.F. Abd El-Aleem, F.A., et al., "The performance of flow electrolyzer system for hydrogen production" Proceedings of the 44th International Society of Electrochem. (ISE) Berlin, Germany, 5-10 Sept. (1993).
35. Farag. A. Abd El Aleem and Malik Alahmad, "Fouling problems in reverse osmosis membranes applied in waste-water treatment and desalination plants in Saudi Arabia", Proceedings of the 7th Int. membranes in Science and Technology : Tubingen, Germany 29 Aug-1 Sept. (1994).
36. Malik , Alahmad and F.A. Aleem. "Scale formation and fouling problems and their predicted reflections on the performance of desalinations plants in Saudi Arabia", Desalination, Vol. 96, P. 409-419, (1994).

37. El-Nashaie, S.S.E.H.; Al-Fariss T.F.; Farag A. Aleem, et al., "investigation of acidulation and coating of Saudi phosphate rocks continuous acidulation", Accepted for publication in Ind. Eng. Chem. Res in June (1995).
38. M. Hazzaa and Abd El-Aleem. F.A. "Fuel cell utilization in sodium chlorate Industry" Bulletin of Electrochemistry, vol. 6, No. (1) , Jan. 1990; P. 74-78.
39. Fakeeha, A.H., Abdel Aleem. F.A. and Inamah, I., "mass transfer at vibrating electrodes in continuous flowing electrolyte systems" presented at the 4th Engineering conference, Saudi Arabia, Jeddah Nov. 1995.
40. El-Rehaili, A.M.; Abdelaleem. F.A. and Al-Jadhah, IS., "Techno-Economic evaluation of activated carbon absorption as a pretreatment for reverse-osmosis systems in wastewater reuse", proceedings of the Int. Desalination Association. (I.D.A.) World Congress in Abu-Dhabi, U.A.E. vol. 4, p. 433 Nov., 1995.
41. Malik Al-Ahmad and Farag , Al-El-Aleem. "problems and Models of membrane Fouling in R.O. Desalination plants and waste water treatment processes", I.D.A. Congress Abu-Dhabi, U.A.E., Nov. 1995, vol. 4, p. 73.
42. Malik Al Ahmed and Farag Abd El-Aleem. The application of air stripping technology in wastewater treatment and water reuse. I.D.A. Congress, Abu-Dhabi, U.A.E., Nov. 1995, vol. 7 p. 293.
43. Abd Al-Aleem, F.A., Al-Hazaa, M. and El Dahshan, M.E., "The effect of hydrodynamic conditions on the corrosion of mild steel and stainless steel alloys containing molybdenum in sea water desalination processes', I.D.A. World Congress, Abu Dhabi, U.A.E., Nov.. (1995) Vol. 5 p. 149.
44. Soliman, M.S., Abdel-Aleem, F.A. and El-Dahshan, M.E. "Evaluation of the corrosion behaviour of nodular cast iron for its application in sea water desalination plants", I.D.A. World Congress, Abu-Dhabi, U.A.E. Nov. (1995) Vol. 7 p. 397.

45. M.S. Soliman M.E. El-Dahshan and F.A. Abdel Aleem. "Corrosion resistance of an austempered ductile iron in aqueous environments", I.D.A. World Congress, Abu Dhabi, U.A.E., Nov. (1995), Vol. 7, P. 431.
46. Abdul Aleem, F.; Al-Sugair, K.A. and Al-Ahmad, M. "Biofouling Problems in membrane Processes and their Reflections on Water Desalination and Water Reuse in Saudi Arabia. Paper presented in the 10th Int. biodeterioration and Biodegradation Symposium, Hamburg, 15-18, Sept. 1996.
47. El-Dahshan, M.E.; Hazaa, M.I. and F.A. Abd El-Aleem "The Role of Sodium Chloride Crystals in the Pitting Corrosion in Desalination System" 13th Int. Conference on Corrosion and Protection" 25-29 Nov. 1996 Melbourne, Australia.
48. Abd El-Aleem, F.A. and Al-Ahmad M.I. "The Application of heat Pipes in High Temperature natural Gas Fuel Cells" Journal of Engineering Sciences, King Saud University, Vol. 7, special Issue PP. 135-150 (1995).
49. Fakeeha, A.H.; Abd El-Aleem, F.A. Ettouney, H.M. "The internal Reforming Fuel Cells as a Clean Energy System for natural Gas Utilization in the Kingdom, Journal of Engineering Sciences, King Saud University, Vol. 7, Special Issue, pp. 171-190 (1995).
50. Al-Fariss, T.F. ; Fakeeha, A.H.; Abd El-Aleem, F.A.; Al-Mutaz I.S., and Idriss, A. "The Performance and Characteristics of a flow Electrolyzer System for Solar Hydrogen Production in Riyadh City", proceedings of the 11th World Hydrogen Energy Conference, Stuttgart, Germany, June 1996.
51. Fakeeha, A.H. : Abd El-Aleem; F.A.; Al-Farris, T.F., Al-Mutaz, I.S. and Idriss, A. "The Application of Electrochemical Impedance spectroscopy in Hydrogen Evolution Electrodes", Proceedings of the 11th World Hydrogen Energy conference Stuttgart, Germany, June (1996).
52. Fakeeha, A.H., and Abd El-Aleem. F.A. "The Interaction between corrosion processes and mass transfer at rough surfaces", J.King Saud University, Eng. Scie. "Special issue" 1996, Vol. 8, PP. 51-70.

53. Al-Ahmad, M.I. : Abd El-Aleem, F.A. and Al-Juliel, S. "Factors affecting scale formation in sea water environment, Experimental approach". The Proceedings of Int. Desalination Association "IDA" and water Reuse, Madrid, Spain, Oct. 1997, P. 363.
54. Fakeeha, A.H. : Abd El-Aleem, F.A. and Inamah, I. "The Application of vibrating electrodes and channel roughness for mass transfer enhancement in electrochemical systems" Inter. Meeting of Electrochemical society, Paris, Sept. 1977 vol. 97-2, P. 72.
55. Fakeeha, A.H.; Abd El-Aleem. F.A. and Inamah, I. "Evaluation of nickel Molybdenum Electrodes for hydrogen evolution in Alkaline systems", int. Meeting of Electrochemical Society Paris, Sept. 1997, Vol. 92-2, p. 725.
56. Fakeeha, A.H.; Abd El-Aleem. F.A.; et al "Evaluation of plasma sprayed cathodes for hydrogen production" the 12th Int. conference for Hydrogen Energy, 21-25 June 1988, Argentine.
57. Abd El-Aleem, F.A. ; Al-Sugair, K.A. and Al-Ahmad, M.I. "biofouling problems in membrane processes for water desalination and Reuse in Saudi Arabia' inter. biodeterioration and Biodergradation, Vol. 41 (1998), PP. 19-23.
58. Al-Zahrani, S.; Abdul Aleem. F. and Al Humaizi;, K. 'Recovery of water from Exhaust Air of the Drying Process in Red Bricks Factories", The 5th Saudi Engineering conference, Makkah, Saudi Arabia, March 1999.
59. Abdul-Aleem. F.A.; Al-Sugair, K. and Al Ahmad, M.I. "The Removal of Ammonia and volatile organic compounds from waste water by Air Stripping". The 5th Saudi Engineering conference, Makkah, Saudi Arabia, March 1999.
60. Al-Fariss, T.F.; Abd El-Aleem. F.A. and Ghasem, N.M. "Pollution problems and solutions for phosphoric Acid production form Saudi Phosphate ores". The 5th Saudi Engineering conference, Makkah, Saudi Arabia, March 1999.

61. Al-Ahmad, M. ; Abdul Aleem, F. and Al-Humaizi, K. and Al-Khodair, A. "Water Treatment strategy for wastewater and water Reuse". Accepted for presentation in the IDA world conference on desalination and water Reuse, San Diego, California, Aug. 29, Sept. 3, 1999.
62. Al-Ahmad, M. : Abdul Aleem, F. and Al-Juliel, S. "Factors Affecting scale Formation due to magnesium Hydroxide system". accepted for presentation in the IDA world congress on desalination and water Reuse, San Diego, California, Aug. 29-Sept. 3. 1999.
63. Al-Ahmad, M.I. ; Abdul Aleem, F.A. Al-Humaizi, K. and Al-Khodair "the Application of flow sheeting Approach in waste water Reuse", The Fourth Gulf water conference, state of Bahrain, Feb. 1999.
64. Fakeeha, A.H.; Al-Fariss; Al-Mutaz, I.S. Abdel Aleem, F.A. and Idriss, A.I. "performance of A continuous laboratory Scale Electrolysis System". Jour of Engineering, No. 3, Vol. 10 PP. 77-83 (2000).
65. Al-Ahmad , M. ; Abdul Aleem, F.A. ; Mutiri, A. and Ubaisy, A. "biofouling in RO Membrane systems", Part. I : Fundamentals and Control". Desalination, Vol. 132, pp. 173-179, (2000).
66. Al-Ahmad, M.I. and Abd El Aleem "heat Transfer challenges in Semiconductors processing and the Applications of Heat Pipes for Efficient Heat Removal". 6th world congress of chemical Engineering, Melborn Australia, 2001.

Courses, which I taught in the Chemical Engineering Department :

1. Mass Transfer Operations, CHE, 314, three times.
2. Multistage Operations, CHE 411, three times.
3. Thermodynamics (I), CHE 307 more than 8 times.
4. Thermodynamics (II), CHE 308, more than 6 times.
5. Electrochemical Engineering. CHE 44, three times.
6. Unit Operations, CHE 309, two times.
7. Thermodynamics and heat Transfer for Agricultural Students, CHE 211, more than 10 times.
8. Engineering Chemistry, CHE 239, more than five times.
9. Design Projects for B.Sc. Students, CHE 400, Supervised more than (40) projects.
10. Extractive Metallurgy, CHE 331, four times.

For Post Graduate studies, I taught the following courses :

- 1 - Corrosion, CHE 532 for Master students.
- 2 - Properties of Gases and liquids and its predictions, CHE 605 for Ph.D. students.

Participated in the following Symposiums and Short Courses :

1. "Corrosion and Corrosion Protection Symposium", Chem. Eng. Dept, College of Engineering, King Saud University, 1412.
2. "Short Course on Materials", Mech. Eng. Dept, College of Engineering, King Saud University, 1413.
3. "Workshop on corrosion and fluid Flow' Invited speaker by King Fahd University of petroleum and Minerals KFUPM, Dhahran, 1410.
4. "Workshop on Wastewater Treatment and Industrial Liquid Water", Chem. Eng. Dept, College of Engineering, King Saud University (1413).
5. Short Course on High Temperature Corrosion, College of Engineering, King Saud University 1419 H.
6. Short course on "Materials Engineering", Chemical Engineering dept, college of Engineering, King Saud University, April, 2000.

7. Short course on "corrosion in Chemical Industries and structures", College of Engineering, KSU, Riyadh, October 2000.

Participated in the Following Research Projects :

1. "Intensification of wastewater Treatment and Reuse". Project No. AR-1-69, started in 1980 and completed in 1982, with king Abdulaziz city for Science & Technology.
2. "Air Pollution control with Foam bed Reactors", Project recorded in the Research Center of the College of Engineering, started in 1404 and Completed in 1406.
3. " Hysolar", Hydrogen Production by Solar Energy; the Fundamental Research Group of Alkaline water Electrolysis and Electrode Research [Project coordinated by KASCT and the German Team].
4. "Corrosion in Desalination Plants in Saudi Arabia, a research project granted by KACST which started in 1407 and ended at 1410 H.
5. "Production of Phosphoric Acid from Saudi Phosphate Rock", a research project granted by KACST started in 1988 and ended at 1992.

Co-operated in the supervision of the following master Thesis :

- (1) "Experimental Investigation of scale Formation and control In Desalination plants" Submitted to college of Engineering, King Saud University, Riyadh, By Saad A.M. Al-Jlil, Feb. 1998.
- (2) "The Application of Process synthesis in Industrial Waste water Treatment" Submitted to college of Engineering, King Saud University, Riyadh, By Abdul Aziz M.S. Al-Khedr, Oct. (1998).
- (3) "Column Flotation of Saudi Phosphate Ore".
Submitted to college of Engineering, King Saud University, Riyadh by Modawi S.Al-Qahtani, January 2001.