# Curriculum Vitae

Prof. Muthanna Al-Omar, Ph. D.

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Name: Muthanna Abdulrazzaq Abdul Wahab

Surname: Al-Omar

Place and Date of Birth: Baghdad, 11 June 1947

Nationality: Iraqi

Degree: Ph. D. Environmental Sciences/University of Bucharest/Romania

Current Position: Manager of Environmental Studies Department

National Energy and Water Research Center

Abu Dhabi Water and Electricity Authority-UAE.

Marital Status: Married (three children over18)

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**Education** 

Ph.D. Biology/Environmental Sciences-1981./University of Bucharest/Romania.

B. Sc. Zoology & Microbiology-1970/College of Science/University of Baghdad/Iraq

## **Brief Biography**

- Dr. Muthanna Al-Omar: is Manager of Environmental Studies Department at the National Energy & Water Research Center/Abu Dhabi Water and Electricity Authority (ADWEA)-UAE since 2007 to date. During 2006, he was the Executive Director of the Arab Science and Technology Foundation in Sharjah-UAE.
- Prior to 2006 he worked and lived in Iraq-Baghdad having the following major activities, skills and experience:
- Managerial, high ranking positions in environmental management (Deputy Minister of Environment and Director of Environmental Protection Center)
- Senior Research Scientists at the Scientific Research Council-Baghdad for 20 years (1970-1990)
- University Professor, (full Professorship) teaching undergraduate and post-graduate studies in Environmental Sciences, Environmental Chemistry, Ecology and Ecotoxicology at the University of Baghdad for 13 years (1992-2004).
- He published 68 scientific articles (Annex-1) on pesticide residues in water, wastewater, , air quality and environmental management. Vast majority are published in peer reviewed journals.
- In the last five years after joining ADWEA (2007-2012) he had submitted 51 Technical Reports on Air Quality (37 report), Seawater (4 reports), Environmental Impact Assessment (5 Reports) Electromagnetic Fields (4 reports) and one report on environmental management. Titles are listed in Annex 2.
- He also has one PATENT/1990/Iraq on modification of the injector of Gas Chromatography Instrument and five published books in Arabic, Three of which published in Amman-Jordan.

## **Expertise and Additional Qualifications**

- Ambient Air Quality Monitoring and Risk Assessment
- Seawater, fresh water & wastewater analysis
- Environmental Impact Assessment (Air quality & Terrestrial Ecology)
- Electromagnetic fields monitoring & risk assessment
- Ecotoxicology and Environmental Chemistry
- Impact of Pollution on Public Health
- Environmental Legislation

### **Additional Qualifications**

- Certified Auditor for ISO 14001:2004, Environmental Management System. Bureau Veritas. Certificate serial No. EA/07/AB/6685, IRCA, Dec. 2007, Course No. A 14478.
- OSHAS 18001:2007, Occupational health and Safety Management System, Bureau Veritas Certificate serial No. 4099, Course No. A 16830.
- EIA specialist; United Nations University-INWEH and UNEP-ROWA
- Council Member at GersonLehrman Group Councils (Natural Resources), Austin, TX,
- ISO 9001/2008 Series Foundation Training Course 16-17 Nov. 2009 Abu Dhabi-UAE.

#### **Latest Training**

- Environmental Impact Assessment; 20-23 Jan. 2008-Dubai organized by United Nations Environmental Program (UNEP) in cooperation with United Nations University (UNU)-Dubai.
- Advanced Business Writing; 25-29 May 2008. Meirc Training and Consulting-Dubai.
- Modelling and simulation of Electromagnetic Fields- 7-8 July 2009, Berlin-Germany.
   Institute for Research on Energy and Environmental Technology
   (Forschungsgesellschaft Fur Energie und Umwelttechnologie-Gmbh)
- Seminar on Balanced Scorecard Practioner's Guidebook. Abu Dhabi 21-25 Feb. 2010. Organized by Palladium Executing Strategy.
- Creative Thinking for Managers Course, ADWEA Academy 14 -18 April 2010.
- Handling Difficult Situations and Managing Conflict, ADWEA Academy 20-22 Jun 2010
- Integrated Management System Internal Auditor, ADWEA Academy 20-23 Sep. 2010.

## Latest conferences and papers presented

(Chronological arrangement from the newest)

4.1	Advances in Science and Engineering for Brackish Water and Seawater Desalination II: An
	ACI Conference Series. Sept. 29-Oct.3, 2013 Cetraro(Calabria) Italy (attendance only)
4.2	International Conference of Environment (ICENV) 11-13 Dec. 2012, Penang, Malaysia.
	School of Chemical Engineering, University Sains Malaysia (USM)paper presented: Diurnal
	Trends of Air Pollutants in Fujairah City-UAE,
	Paper was published in the proceeding
4.3	The UAE-Swiss Research Day 11-12 Nov. 2012. Zayed University-UAE and Ecole
	polytechnique/Federal de Lausanne. Paper presented: Desalinated water in Abu Dhabi:
	production, demand forecast and environmental concern
4.4	International Conference of Environmental Science and Technology, Houston, Texas-USA.
	25-29 June 2012. American Academy of Sciences. Two papers were presented:
	<ul> <li>Impact of Fujairah power plant-UAE on air quality</li> </ul>
	<ul> <li>Comparison of seawater in Arabian Gulf and Gulf of Oman</li> </ul>
4.5	International Science and Technology Conference, University of Istanbul, 7-9 Dec. 2011
	<ul> <li>Paper presented: The role of desalinated water in integrated water</li> </ul>
	resources management in Abu Dhabi Emirate-UAE.
4.6	Sixth Annual International Symposium on Environment. Athens, Greece 16-19 May 2011.
	Athens Institute for Education and Research (ATNIR). Paper accepted but attendance by the
	2 <sup>nd</sup> author.
	<ul> <li>Paper presented: Electromagnetic Fields generated by Power</li> </ul>
	Transmission Lines in Abu Dhabi Emirate-UAE
4.7	First International Conference on Desalination and Environment. 29 Oct. – 1 Nov. 2011.
	Beach Rotana Hotel/Abu Dhabi Al Sevier Publishers. Two papers were presented:
	• Fluctuation of Nitrates and Phosphates as triggering factors of HAB in
	Fujairah Coastline-UAE
	• Factors affecting the proliferation of jellyfish in the eastern coast of
	Arabian Gulf-Abu Dhabi
4.8	Fourth International Symposium on Environment. Athens, Greece 21-24 May 2009, Athens
	Institute for Education and Research (ATNIR)
	Paper presented : Impact of Shuweihat Cogeneration Plant-UAE on
	Ambient Air Quality,
4.9	International Seminar on River Basin Management. International Network of Basin
	Organizations (INBO) in Cooperation in the Euro-Mediterranean Region. Beirut (Lebanon
	6-9 October 2009.
	<ul> <li>Paper presented: Harmful Algal Bloom in the Arabian Gulf 2008</li> </ul>
4.10	International Conference on Environmental Health. 16-19 March, 2009 Environmental
	Agency of Abu Dhabi. Abu Dhabi - UAE
	Paper presented : Impact of Power Plants of Abu Dhabi Emirate on Air
	Quality

- 4.11 Environment 2009 Sustainable Management for Coastal Zones Conference, Jan. 20-21, 2009, Abu Dhabi-UAE
- Paper presented: Seawater Quality along Abu Dhabi Coastline-UAE,
  4.12 International Conference on Environmental Health, 2009. Environmental Agency Abu Dhabi in cooperation with World Health Organisation 16-19 March 2009. Abu Dhabi -UAE
  - Paper presented: Impact of Power Plants of Abu Dhabi Emirate on Air Quality,
- 4.13 Middle East Waste & Water Conference; Dubai, May 4-5, 09 Two papers were presented:
  - Paper presented: The Role of ADWEA in Integrated Water Resources Management in Abu Dhabi Emirate.
  - NEWRC's Monitoring Plans and Activities for the conservation of Marine Ecosystem.

## Latest Publications: during the last two years

- The Role of Desalinated Water in Integrated Water Resource Management in Abu Dhabi Emirate-UAE. Published in the proceeding of the 1st International Conference on Science and Technology University of Istanbul-Turkey, Dec. 7-9, 2011-Available at (www.iste-c.net)
- Levels of Particulate Matter in Western UAE Desert and Factors Affecting their Distribution. 20th International Conference on Modeling, Monitoring and Management of Air Pollution, A Coru ña, Spain, 16-18 May 2012.
- Assessment of Ambient Air Quality in Mirfa City-United Arab Emirates. Journal of Environmental Protection, 2012, 3, 640-647
- Pollution Scenarios through Atmospheric Dispersion Modeling Based on Real Measurements of Selected Urban Areas in Abu Dhabi, UAE. Atmospheric and Climate Sciences, 2012, 2, 373-379
- Diurnal Trends of Air Pollutants in Fujairah City-UAE. Accepted in the International Conference on Environment 2012 (ICENV 2012), Penang, Malaysia, 11-13 December 2012.

# Annex-1 List of Publications

### **Analyses ofWater and Wastewater**

- 1. Al-Omar, M. A., Al-Ogaily N.H & Tawfiq, S.J (1985) Residue levels of organochlorine insecticides in sewage plant effluent Journal of Biological Sciences Research, 16:145-151.
- 2. Al-Omar., M.A., Al-Ogaily, N.H. &Shebl, D. (1989) Effect of a sewage plant in the distribution of organochlorine residues in Diyalariver, Iraq. Water, Air & Soil Pollution 44:1-7.
- 3. Al-Omar., M.A. (1993) Distribution and dispersion of organochlorine pollutants in aquatic environment in Iraq. Proceedings of the Regional Conference "On the Role of Scientific Research in the Protection of the Environment from Pollution Hazards. Damascus /Syria 26-28 Sept. 1993. pp 327-336. (In Arabic)
- 4. Al-Omar., M.A. (2001) Distribution and dispersion of organochlorine pollutants in aquatic environment in Iraq. J. Water Res. vol 20(1) (In Arabic)
- 5. Al-Omar, M. A., Al-Suhaily R. H. and Al-Ausi, Y. K. (2004) Distribution and Dissipation of Phenthoate Insecticide following Aerial Application. Bull Env. Contam. Toxicol 73:825-831.
- Al-Omar, M. A., Al-Malik, S. and Al-Yafai, A. (2009) Seawater Quality along Abu Dhabi Coastline. Environment 2009 conference and Exhibition, Pollutec, January 20, 2009, Abu Dhabi-UAE.
- 7. Al Omar, M.A. (2011) The role of desalinated water in integrated water resource management in Abu Dhabi Emirate-UAE. Published in the proceeding of the 1st International Conference on Science and Technology University of Istanbul-Turkey, Dec. 7-9, 2011-Available at (<a href="www.iste-c.net">www.iste-c.net</a>)
- 8. Al- Jallad, F. and Al Omar, M. (2012) Comparison of sea water parameters in the Arabian Gulf and the Gulf of Oman. The Sixth International Conference on Environmental Science and Technology, Houston-USA 25-29/06/2012

## **Monitoring of Ambient Air Quality**

- 9. Al-Omar, M.A. Faiq, S.Y., Kitto, A.N. Al-Taie, F.A. and Bader, N. (1987) Impact of sanitary landfill on air quality in Baghdad, Water, Air and Soil Pollution 32:55-61
- 10. Al-Omar., M.A., Faiq, S.Y., (1986) Proposal for the monitoring of gas emission from dumping sites: Proceedings of the Workshop on Industrial Pollution Control in Western Asia, 14-17 April,1986, Baghdad. Economic and Social Commission for Western Asia in Collaboration with Iraqi Scientific Research Council and UNEP, pp.173-180. (in Arabic)
- 11. Al-Omar, M. A. (1999) Rapid estimation of air pollutants resulting from transportation sector in Iraq. Bull. Environment and Sustainable Development Research. Vol.2 (2) .pp 44-53. (In Arabic).
- 12. Al-Omar, M. A. (2001) Principle pollutants in Baghdad air and their sources: Evaluation of the previous measurements and future plans. (In Arabic).
- 13. Sulaymon, A. H., Al-Omar, M. A., and Aqlan, M. H.(2001) Dust fall in Baghdad. Journal of Engineering. Vol. 7(4) pp 49-58.

- 14. Al-Omar, M. A., Al-Katheeri, E. S., Al-Jallad, F. and Santosh, K.(2009) Impact of power plants of Abu Dhabi Emirate on air quality. Accepted as a poster presentation in the International Conference on Environmental Health 2009, Abu Dhabi- 16-19 March 2009, WHO and EAD.
- 15. Al Omar, M. A. and Al Katheeri, E (2010) Impact of Shuweihat Power Cogeneration Plant-UAE on Ambient Air Quality. Biodiversity Science for Humanity. Part 1 Energy. vol. pp 9-18
- 16. Al Katheeri, E., Al Jallad, F. and Al Omar, M. (2012) Assessment of Ambient Air Quality in Mirfa City-United Arab Emirates. Journal of Environmental Protection, 2012, 3, 640-647
- 17. Al Katheeri, E., Al Jallad, F. and Al Omar, M. (2012) Pollution Scenarios through Atmospheric Dispersion Modelling Based on Real Measurements of Selected Urban Areas in Abu Dhabi, UAE. Atmospheric and Climate Sciences, 2012, 2, 373-379
- 18. Al Omar, M. and Al Jallad, F. (2012) Impact of Fujairah Power Plant-UAE on ambient air quality. The Sixth International Conference on Environmental Science and Technology, Houston-USA 25-29/06/ 2012
- Diurnal Trends of Air Pollutants in Fujairah City-UAE, International Conference of Environment (ICENV) 11-13 Dec. 2012, Penang, Malaysia . School of Chemical Engineering, University Sains Malaysia (USM)

### Gas Liquid Chromatographic Analyses of Biota and Human Tissues

- 20. Al-Omar, M.A.& Al-Bassomy, M.A (1984) Persistence of phosphine gas in fumigated Iraqi dates , J. Food Safety 6:235-260.
- 21. Al-Omar, M.A., Tameesh, A.H. & Al-Ogaily, N.H.(1985) Dairy product Contamination with organochlorine insecticide residues in Baghdad district. Journal of Biological Sciences Research 16:133-144.
- 22. Al-Omar, M.A., Al-Bassomy, M.A & Al-Ogaily, N. H., (1985) Residue levels of organochlorine insecticides in lamb and beef from Baghdad. Bull. Environ. Contam. &Toxicol. 34:509-512.
- 23. Al-Omar, M. A., Al-Ogaily N.H &Shebl, D. (1986) Residues of organochlorine insecticides in fish from polluted water. Bull. . Environ. Contam. &Toxicol. 36:109-113.
- 24. Al-Omar, M.A., Abdul-Jalil, F. H., Al-Ogaily ., N. H., Tawfiq, S. & Al-Bassomy, M.A. (1986) A follow-up study of maternal milk contamination with organochlorine insecticide residues, Environmental Pollution (series A) 42:79-91.
- 25. DouAbul, A.Z. Al-Omar, M.A. Al-Obaidy, S.Z. & Al-Ogaily, N.H.(1987) Organochlorine pesticide residues in fish from Shatt al-Arab river, Iraq. Bull. Environ. Contam. &Toxicol. 38:674-680.
- 26. Al-Omar., M.A., Tawfiq, S., & Al-Ogaily, N. H.(1989) Presence of organochlorine residues in imported canned food, Iraq 1985-1986. Proceedings of the 5<sup>th</sup> Scientific Conference of the Scientific Research Council/ Iraq, Baghdad 7-11Oct.1989. Vol. 5 part 2.
- 27. Al-Omar., M.A. (1997) Evaluation of environmental status of organochlorine residues in food and environment in Iraq. Bull. Environment and Sustainable Development Research. Vol.1. pp 53-60. (In Arabic)
- 28. Al-Omar, M. A., Tawfiq, S.J. & Al-Ogaily N.H. (1985) organochlorine residue levels in human milk from Baghdad. Bull. Environ. Contam. Toxicol. 35:65-67.

- 29. Al-Omar, M.A., Abdul-Jalil, F. H., Al-Ogaily ., N. H., Tawfiq, S. & Al-Bassomy, M.A. (1986) A follow-up study of maternal milk contamination with organochlorine insecticide residues, Environmental Pollution (series A) 42:79-91.
- 30. Al-Omar., M.A., Tawfiq, S., Majeed, K.A. &Shebl., D. (1986) Human placental tissue contents of organochlorine insecticide residues in Baghdad. Proceedings of the 4<sup>th</sup> Scientific Conference of the Scientific Research Council/ Iraq, Baghdad 23-28<sup>th</sup> Oct.1986. Vol. 5 part 6.

### **Ecotoxicology**

- 31. Balash, K. J. Al-Omar, M. A. & Abdul-Latif, B. (1987) Effect of chlordane on testicular tissues of Swiss mice, Bull. Environ. Contam. Toxicol. 39:434-442.
- 32. Al-Omar., M.A. (1998) Preliminary assessment of some environmental effects of the Chemicals discharged within the Muthana site. In: Preliminary report of Contamination, Transport Assessment of Al-Muthana Establishment Site, S. Al-Azzawi, Al-Omar, M.A. &Marouf, B.A. (ed.) Environmental Engineering Dept. College of Engineering, University of Baghdad. Nov. 1998. (Unpublished Work).
- 33. Al-Omar, M. A., Abbas, A. K. and Al-Obaidy, S. S. (2000) Combined effect of exposure to lead and chlordane on the testicular tissues of Swiss mice. Toxicology Letters, 115 (1): 1-8
- 34. Al-Omar, M. A. and Hassan, N. S. (2000) Simple and rapid method for the detection of early signs of toxicity in *Daphnia magna* Straus, Bull. Environ. Contam. Toxicol. Vol.65(5) pp 553-559.
- 35. Al-Omar, M. A. and Hasan, N. S. (2000) Effect of glyphosate herbicide on the reproductive parameters in water flea *Daphnia magna* Straus. under environmental hypoxia. Iraqi Journal of Agriculture vol.5 (part 6) pp 6-12. (In Arabic).
- 36. Al-Omar, M. A & Nada A. Al-Issawi (2001) Effect of suspended talc particles on some parameters of the respiratory system. Bull. Environment and Sustainable Development Research. Vol.4 (1).pp 5-17. (In Arabic).
- 37. Al-Omar, M. A. &Adil H. T Al-Zamily (2001) Effect of kerosene combustion gases on pulmonary tissue in mice. J. Vet college. Vol. 25(1) (in Arabic).

## **Impact of Pollution on Public Health**

- 38. Al-Omar, M. A. (2000) Status of food and nutrition: A comparative study of the effect of economic sanction on Iraq. Bull. of the Iraqi Ministry of Information Bull. vol 22:133-144 (In Arabic).
- 39. Al-Omar, M. A. (2002) Health Impact of pesticide use in Iraq. Journal of the Iraqi Scientific Assembly. Vol. 49 (3) pp. 165-184 (in Arabic).
- 40. Al-Omar, M, A., Al-Timimi, S, S. and Al-Timimi, B. M., (2004) Incidence of anemia among the residents of Baghdad and Baqouba cities, Umm Salema Journal of the College of Science for Women. (In Arabic).
- 41. Al-Omar, M, A., Al-Timimi, S, S. and Al-Timimi, B. M., (2004) Incidence of malnutrition among the residents of Baghdad and Baqouba cities, Umm Salema Journal of the College of Science for Women. (In Arabic).

42. M. Al Omar, F. Al Jallad, S. Al Yalyali and E. Al Katheeri (2012). Electromagnetic Fields Generated by Power Transmission Lines in Abu Dhabi Emirate - UAE, Essays on Environmental Studies, Athens Institute for Education and Research, pp. 44:52.

### **Research on Smoking**

- 43. Al-Omar, M. A (2000) Iraq: Hard works in difficult times: Bulletin of IATH (International Agency on Tobacco and Health) No 103: June 2000 p 10. (Short article).
- 44. Al-Omar, M. A. and Balash, K. J. (1999) Estimating Smoking predominance among students in Baghdad universities. Journal of the College of Education for Women/University of Baghdad vol.10 (1):pp119-133 (In Arabic)
- 45. Al-Omar, M. A (2000) History and the present status of smoking in Iraq: Base line report. Poster presentation at the 11<sup>th</sup> World Conference on Tobacco OR Health (WCTOH) Chicago, USA, 6-11 Aug 2000.

### **Environmental Management**

- 46. Al-Omar, M. A (2000). The problem of pesticides in eastern Arab countries and their effect on environmental quality. Pan-Arab environmental Security Conference, Al-Yarmouk University of Irbid, Jordan, 28-30 Aug 2000., (in Arabic)
- 47. Al-Omar, M.A.,(1985) Oil pollution in Arabian Gulf. J. Biol. Sci. Res. 16 (2): 65-88 (in Arabic).
- 48. Al-Omar, M. A. (1986) Environmental Pollution: Present and Forthcoming Problem. Science and Future Bulletin, Iraqi Ministry of Culture and Information, vol.2 pp 81-89. (in Arabic).
- 49. Al-Omar, M. A. (1987) Thermonuclear reactors and Chernobyl Disaster. Science and Future Bulletin, Iraqi Ministry of Culture and Information, vol.3 pp6-14. (in Arabic)
- 50. Al-Omar., M.A. (1997) Statistical evaluation of environmental awareness in Iraq during the years 1992-1994, using questionnaire method. Journal of the College of Education for Women/University of Baghdad vol.8(1):77-82. (In Arabic)
- 51. Al-Omar, M. A (2000) Environmentally sound technology in chemical industry and their impact on environmental protection. Bull. of the Iraqi Union of Chemists and Petrochemists. Vol.3, pp 56-57.(in Arabic)
- 52. Al-Omar, M. A. (2002) Priorities of environmental protection in developing countries as compared with developed world. Bull. Environment and Sustainable Development Research. Vol.5 (1). pp 5-19. (In Arabic).
- 53. Al-Omar, M. A. (2003) Struggle of man for environmental protection. Bulletin of the Iraqi Ministry of Education 86-92. (In Arabic).
- 54. Al-Omar, M. A (2000) The present environmental status in Iraq and the environmental protection constraints under the severe economic sanction conditions. Proceedings of Seminar on Environmental Protection, Baghdad, 15 May 2000. Iraqi Chemical Union, (in Arabic)
- 55. Al-Omar, M. A (2000) Demographic features among eastern Arab countries and their effect on environmental quality. Pan-Arab environmental Security Conference, Al-Yarmouk University of Irbid, Jordan, 28-30 Aug 2000.(in Arabic).

- 56. Al-Omar, M. A. (2001) Water resources in Iraq: Present status and Future Constraint, paper presented at the 7th Iraqi Technological Conference, University of Technology. Baghdad. 8-10 May, 2001. (in Arabic)
- 57. Al-Omar, M. A. (2001) Modern communication systems and their potential hazard to public health. Proceeding of the 4th Sci. Conference of the Ministry of Transportation and Communication. Baghdad, 15-16 Jan. 2001. (In Arabic).
- 58. Al-Omar, M. A (2001) Idioms and Expressions among Linguistics and Scientists. Accepted for publication in the Journal of the Iraqi Scientific Assembly (in Arabic).
- 59. Al-Omar, M. A. (2004) Patterns of scientific information obtained from Internet and their trust ability. Um Salma Journal of the College of Science for Women (Univ. Baghdad) vol 1, part 1. (In Arabic).
- 60. Al-Omar, M. A. (2004) Restoring marshland ecosystem in Iraq: Iraqi-German Symposium for Geographers, 16-23 Feb. 2004. University of Mainz, Mainz Germany.
- 61. Al-Omar, M. A. (2004) Aftermath environmental effects in Iraq: Iraqi-German Symposium for Geographers, 16-23 Feb. 2004. University of Mainz, Mainz, Germany.
- 62. Al-Omar, M. A. (2005) Local Climate Changes and Air Pollution in Iraq and its role in Sustainable Development. Paper presented at the Pan-Arab Conference on Energy for Sustainable Development. Organized by The League of Arab States, Cairo, Sept. 10-12, 2005. (in Arabic).
- 63. Al-Omar, M. A. (2005) Proposals to facilitate Environmental Works in Iraq. A The Scientific Conference on Science and Industry Organized by the Arab Foundation on Science and Technology
- 64. Al-Omar, M. A. (2006) Pollution in Mesopotamia: Causes and Hazards. Araa (Gulf Research Center) vol. 19, April, 2006.
- 65. Desalinated water in Abu Dhabi: production, demand forecast and environmental concern, The UAE-Swiss Research Day 11-12 Nov. 2012. Zayed University-UAE and Ecole polytechnique/Federal de Lausanne, pp. 80-85.

## **Environmental Legislations**

- 66. Al-Omar, M. A. (1998) Theoretical and practical basis for the selection of air quality criteria . Bull. Environment and Sustainable Development Research. Vol.1 (1) .pp 15-22. (In Arabic).
- 67. Al-Omar, M. A. (2005) Technical and legislative requirement for the protection of environment, Paper presented at the workshop entitled: The Role of Legislation in the Protection of Environment in Arab Countries. Organized by the Arab Organization for Administrative Development. UAE, Sharejah, May,7-11, 2005. (in Arabic).
- 68. Al-Omar, M. A. (2005) Cornerstones of Environmental Policy and their role in the Protection of the Environment. Paper presented at the workshop entitled: Legislative and administrative requirements of Environmental Protection in Arab Countries. Amman, 4-7 Sept. 2005 (in Arabic).

## **Books Published(all in Arabic)**

- 1. Scientific Methodology-University of Baghdad
- 2. Environmental and Health Impact of Economic Sanction on Iraq- Dar Al Hikma-University of Baghdad-2000
- 3. Environmental Pollution- Waael Publishing House/Amman-Jordan; First edition 2000 and Second edition 2010
- 4. Man and Tobacco Waael Publishing House-Amman/Jordan 2005
- 5. Man and Environmental Mysteries Waael Publishing House-Amman/Jordan- 2012