

CURRICULUM VITAE

NAME: Mohammed Salah El-Din HASSOUNA, Ph.D.

PRESENT POSITION:

- Professor Emeritus of Environmental & Industrial Microbiology, Environmental Studies Dept., Institute of Graduate Studies and Research, Alexandria University; Egypt
- Executive Director of IGSR Quality Assurance Unit.

WORK ADDRESS: 163 Horrya Ave. El-Shatby, P.O. Box 832, Alexandria, Egypt 21526.

WORK TEL. #: (03) 424 3135, **FAX #:** (03) 428 5792 **COUNTRY TEL. CODE #:** 20

Cell Phone #: 0122 3333 188

EMAIL ADDRESSES: s_hassouna@link.net & s_hassouna@alexu.edu.eg

DATE & PLACE OF BIRTH: December 2, 1945, Alexandria, Egypt.

EDUCATION: B.Sc. (Agric.) 1967 Cairo University; M.Sc. (Agric. Plant Pathology), 1971, Alexandria University; Ph.D. (Agric. Plant Pathology), 1978, Alexandria University.

APPOINTMENTS:

- 1967-1973: Research Assistant, Microbiology, Alexandria University, Alex., Egypt.
- 1973-1978: Teaching Assistant, Agric. Botany Dept., Mansoura University, Mansoura, Egypt.
- 1978-1986: Lecturer of Microbiology, Agric. Botany Dept., Mansoura University, Mansoura, Egypt (Leave of absence 1979-1984).
- 1979-1982: Post Doctorate, Nitrogen Fixation Group, BTI, Cornell University, Ithaca, NY, USA.
- 1982-1984: Research Fellow, Environmental Stress Group, BTI, Cornell University, Ithaca, NY, USA.
- 1986-1988: Lecturer of Microbiology, Environmental Studies Dept., IGSR, Alexandria University.
- 1988-1997: Associate Professor of Microbiology, Environmental Studies Dept., IGSR, Alexandria University.
- 1997-2006: Professor of Industrial & Environmental Microbiology, Environmental Studies Dept., IGSR, Alexandria University.
- 2004-2006: Vice-Dean of Environmental Affairs & Community Services.
- 2006-now: Professor Emeritus of Environmental Microbiology, Environmental Studies Dept., IGSR, Alexandria University.
- 2007-now: Executive Director of IGSR Quality Assurance Unit.

SPECIAL SCIENTIFIC AWARDS:

"Alexandria University Award for Scientific Encouragement", 1987. Alexandria University, Alexandria, Egypt.

SCIENTIFIC SABBATICAL LEAVES

- 1978 - 1979 Member of the Biology Group, UNARC, Alexandria University
- 1979 -1982 Post-Doctoral Fellow, Nitrogen Fixation Group, Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, NY, USA.
- 1982 -1984 Research Fellow, Environmental Stress Program, Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, NY, USA.
- 1991 Biology and Civil Engineering Depts., Imperial College of Science, Technology and Medicine, University of London, UK (Six months study leave working on pollution monitoring and effect on vegetation).
- 1994 Cornell Center for the Environment, Cornell University, Ithaca, NY, USA (Two months study leave working on waste management).
- 1996 Chemical Engineering and Chemical Technology Dept., Imperial College of Science, Technology and Medicine, University of London, UK (Four month study-leave working on anaerobic wastewater treatment).
- 1997 Chemical Engineering and Chemical Technology Dept., Imperial College of Science, Technology and Medicine, University of London, UK (One month study-leave working on anaerobic wastewater treatment).
- 1998 Chemical Engineering and Chemical Technology Dept., Imperial College of Science, Technology and Medicine, University of London, UK (One month study-leave working on anaerobic wastewater treatment).
- 1999 Chemical Engineering and Chemical Technology Dept., Imperial College of Science, Technology and Medicine, University of London, UK (One month study-leave working on anaerobic wastewater treatment).
- 2000 School of Civil & Environmental Engineering, Cornell University, USA (8 months Senior Researchers Scholarship from the **Fulbright Foundation**, working on bioremediation of water streams contaminated with recalcitrant compounds).
- 2001 Civil & Environmental Engineering Dept., Imperial College of Science, Technology and Medicine, University of London, UK (One month study leave working on wastewater treatments and sludge reuse).
- 2002 Civil & Environmental Engineering Dept., Imperial College of Science, Technology and Medicine, University of London, UK (One month study leave working on wastewater treatments and sludge reuse).
- 2003 Civil & Environmental Engineering Dept., Imperial College of Science, Technology and Medicine, University of London, UK (One month study leave working on wastewater treatments and sludge reuse).

SCIENTIFIC SOCIETIES MEMBERSHIPS:

1. The Egyptian Microbiological Society, Cairo, Egypt.
2. Air and Waste Management Association, Pennsylvania, USA.

CURRENT RESEARCH INTERESTS:

1. Biofuels: Bioethanol, biomethane and biodiesel.
2. Water treatments for human and industrial usages.
3. Biological wastewater treatments.
4. Solid waste management and recycling
5. Environmental Impact Assessment.
6. Environmental Management Systems.

SUPERVISION OF GRADUATE STUDENTS:

No. of Ph.D. degrees conferred: 10

No. of M.Sc. degrees conferred: 52

No. of "Energy Conservation Diploma" degrees conferred: 16

No. of Environmental Studies Diploma degrees conferred: 15

No. of Bioscience & Technology Diploma degrees conferred: 8

No. of current Ph.D. students: 2

No. of current M.Sc. students: 15

FUNDED PROJECTS:

1. **1978-1979:** Member of the research team working on soil-borne diseases of cotton (National Academy of Science).
2. **1979-1982:** Member of the research team working on selection of potent cowpea rhizobial strains (UNDP).
3. **1993-1995:** Member of the team working on the MED-CAMPUS Environmental training program (European Union)
4. **1994-1996:** Member of the team working on biomonitoring of air pollution in Egypt (National Agriculture Research Projects [NARP]).
5. **1996-1999:** Member of the team working on water management in petroleum refineries in Alexandria. (National Academy of Science)
6. **2001-2002:** Principal Investigator of the project "Restoration and rehabilitation of Lake Maryout" in collaboration with Wright University, USA (Universities Supreme Council-Universities Linkage Projects II)
7. **2000-2003:** Coordinator of the link program "Alleviating the impacts of industrial wastewater on water streams" in collaboration with Imperial College, UK (British Council and ODA, UK)
8. **2004-2008:** Principal Investigator of the project "Bioremediation of water Streams Contaminated with PCBs"; (Academy of Scientific Research & Technology, "Egypt : US Joint Research Fund")
9. **2008-2009:** Director of the project "Establishing an Accreditation and Quality Assurance System in IGSR", Alexandria University & PCIQA (Ministry of Higher Education).
10. **2010-2013:** Director of the project: "Continuous Improvement and Qualification for Accreditation", Alexandria University & PCIQA (Ministry of Higher Education).

PARTICIPATION IN MEETINGS AND CONFERENCES:

1. Organization of the 'Environmental Studies Conference', IGSR, June 1988, Alexandria University.
2. Secretary of the 'Regional Symposium of Environmental Studies', IGSR,

- Alex. Univ., May 15-17, 1990.
3. Organization of the '1st. Anglo-Egyptian Conference on Bioscience & Technology', IGSR, Alex. Univ. Nov. 10-15, 1990.
 4. 'Industrial Anaerobic Wastewater Treatment' meeting. Society of Chemical Industry, London, UK, September 1996.
 5. 6th European Biosolids meeting. Wakefield, UK, November 2001.
 6. 12th Water Technology Conference, Alexandria, Egypt April 2008.
 7. Biovision08, Bibliotheca Alexandrina, Alexandria, Egypt, May 2008.
 8. Biovision12, Bibliotheca Alexandrina, Alexandria, Egypt, April 2012.
 9. Biovision14, Bibliotheca Alexandrina, Alexandria, Egypt, April 2014.
 10. Environmental Impact Assessment for Development Projects, King Saud University, KSA, February 2013.
 11. Environmental Applications of Nanotechnology , King Saud University, KSA, April 2015.

Participation in teaching courses:

1. Applications of Biochemical Engineering. Faculty of Biotechnology, MSA University, 6th October, Giza, Egypt.
2. Applications of Biotechnology: M.Sc. of Biotechnology, IGSR, Alexandria University.
3. Applied Microbiology: M.Sc. of Environmental Studies, IGSR, Alexandria University.
4. Biochemical Engineering: M.Sc. of Biotechnology, IGSR, Alexandria University.
5. Biological Energy Resources: M.Sc. of Environmental Studies, IGSR, Alexandria University.
6. Bioremediation: M.Sc. of Biotechnology, IGSR, Alexandria University.
7. Environmental Biotechnology, M.Sc. Environmental Studies, IGSR, Alexandria University.
8. Environmental Measurements: M.Sc. of Environmental Studies. IGSR, Alexandria University.
9. Environmental Water Management (M.Sc. IGSR, Alexandria University.
10. Fermentation Technology: Diploma and M.Sc. of Biotechnology, IGSR, Alexandria University.
11. Industrial Enzymes: M.Sc. of Biotechnology, IGSR, Alexandria University.
12. Industrial Microbiology & Fermentation Technology. Faculty of Biotechnology, MSA University, 6th October, Giza, Egypt.
13. Natural Resources: M.Sc. of Environmental Studies, IGSR, Alexandria University.
14. Standard Methods of Water Analysis: Ph.D. Program, Environmental Studies

Dept., IGSR, Alexandria University.

15. Technology of Energy Conservation: Diploma of Energy Conservation, IGSR, Alexandria University.
16. Wastewater Treatments: M.Sc. of Biotechnology and Environmental Studies, IGSR, Alexandria University.
17. Water Treatment Technologies: Ph.D. Program, Environmental Studies Dept., IGSR, Alexandria University.
18. Quality & the Environment Module D-6 (Productivity and Quality Institute) Arab Academy for Science, Technology & Maritime Transport.
19. Quality Assurance in Education, Sadat University, Sadat City, Menoufia
20. Academic Standards in Higher Education, Sadat University, Sadat City, Menoufia.

Recent Consultancy WORK:

1. Monitoring water quality for SUMED.
2. "Environmental Impact Assessment" for the new solid waste composting plant at Abbis, Alexandria.
3. Water quality assessment for EP3 project, Cairo.
4. Lead pollution in major cities of Egypt, Ministry of Petroleum.
5. Solid waste management in Alexandria, Egypt. EPIQ, IP3 & USAID, Cairo.
6. Monitoring water quality at Ameryia Petroleum Refinery Co.
7. Monitoring water quality at Misr Petroleum Company
8. Leachate testing for Onyx, Alexandria.
9. Stocktaking Analysis, Background Materials, "Alexandria Lake Mariuot Integrated Management" ALAMIM project, CEDARE, Egypt.
10. Monitoring wastewater effluents of Alexandria Co for Fertilizers.
11. Monitoring wastewater of the Ein Sohkna Fertilizers Co.
12. Examining wastewater treatment efficiency of Alexandria Petroleum Co.
13. Monitoring water quality opposite Rashpetco Co for LNG, Edco, Egypt.
14. Examining bilge water leaks to Alexandria Port, EIDibPandi for Marine Services.
15. Lake Maryout and El-Mex Bay rehabilitation projects, the World Bank, Alexandria Growth Pole Project.
16. Consultant to the project "Conversion of some wastes into charcoal and determination of its efficiency in environmental applications", National Plan for Science and Technology, King Saud University, KSA.
17. External Audit of MSc and PhD programs in Sadat University, Environmental Biotechnology Program.

Tutoring Activities in Specialized Intensive Training Courses

1. Municipal and Industrial Wastewater Treatment. MED-CAMPUS Course held in collaboration with AGOSD, 1994.
2. 'Waste Management', MED-CAMPUS training course, Ankara University, Turkey, May 1994.
3. 'Waste Management', Intensive course organized by 'Center of Industrial Leaders', State Ministry of Administration Development, June 1994.
4. 'Novel Trends in Bacterial Identification and Characterization'. IGSR. March 1995.
5. 'Waste Management', Intensive course organized by 'Center of Industrial Leaders', State Ministry of Administration Development, June 1995.
6. 'Wastewater Treatment', intensive training course, IGSR, December 1996.
7. 'New Technologies of Industrial Wastewater Management', AGOSD & Alexandria University, March 1998.
8. 'Molecular Biology Techniques'. IGSR, 1994-1998.
9. 'Environmental Awareness Program' (Waste Management & Pollution Problems), Alexandria Local Council & Social Fund for Development, November 1997 – March 1998.
10. Private-Public Partnership in Solid Waste Management. Four training programs were held in Cairo, Alexandria, Ismailia, and Luxor for all governorates of Egypt, organized by IP3, Washington D.C, USA and USAID, Egypt. January-October 1999.
11. "Novel Trends in Industrial Wastewater Treatments". IGSR in collaboration with Imperial College, UK, April 2001.
12. "Regional Workshop on Urban Wastewater: Problems, Treatment and Recycling" in collaboration with Imperial College, UK, April 2002. [<http://www.wastewater-workshop.net>].
13. "Urban & Industrial Wastewater Treatments" in collaboration with Imperial College, UK, January 2004. [<http://www.wastewater-workshop.net>].
14. "Novel Trends in Industrial Wastewater Treatments" : intensive training course given yearly (2004-2008)
15. "Methods of Water Analysis": intensive training course (2006 and 2008).
16. Environmental Impact Assessment.
17. Quality assurance in Higher Education.

Publications

1. **Abdel-Rehim, M.A.; H. El-Arosi and M.S. Hassouna. 1974.** "The role of asparagine in infection of tomato fruits by *Geotrichum candidum* and *Alternaria alternata*". *Phytopath. Z.*, 81: 72-77.
2. **Abdel-Rehim, M.A.; I.A. Ibrahim, E. Wasfi and M.S. Hassouna. 1973.** "Some changes in tomato fruits due to infection by *Alternaria alternata* and *Geotrichum candidum*". *Egypt. J. Phytopathol.*, 5: 55-64.
3. **Abdel-Rehim, M.A.; M.S. Hassouna and H.M. El-Badry. 1994.** "Serological relations between virulent and avirulent mutants of *Pseudomonas solanacearum*". *J. Agric. Sci. Mansoura Univ.*, 20:5073-5090.
4. **Abdel-Rehim, M.A.; M.S. Hassouna, M. Attala and M.A. Hassan. 1990.** "Detection of *Fusarium* susceptible varieties of leguminous plants through their seed proteins using ELISA and isoelectric focusing". First Anglo-Egyptian Conference on Bioscience & Technology, IGSR, Alex. Univ. Nov. 10-15, 1990.
5. **Abdulla, A, M, and Hussonam, M. S. E. 2013.** Predictive Model for Disinfection By-Product in Alexandria Drinking Water, Northern West of Egypt, *Environmental Science and Pollution Research*, 20:7152-7166.
6. **Abdullah A, M, and Hussona, M. S. E. 2014.** Water Quality Assessment of Mahmoudia Canal in Northern West of Egypt. *J. Pollut. Eff. Cont.*2 (2):121.
7. **Abdullah, A., M., and S.E. Hassouna.2012.** Ammonical Nitrogen Removal from Alexandria Drinking Water by Treatment with Zeolites. WT-13. 2nd International Conference & Exhibition on Sustainable Water Supply & Sanitation, December 3-5th, 2012, Cairo, Egypt.
8. **Abdullah, A., M., and S.E. Hassouna.2012.** Reducing the Formation of Disinfection By-Products in El-Alameein Drinking Water using Chloroamination. WT-2. 2nd International Conference & Exhibition on Sustainable Water Supply & Sanitation, December 3-5th, 2012, Cairo, Egypt.
9. **Abdullah, A.M., N. El-Rackshy, H. El-Masry, S. Hassouna.2010.** New trend in drinking water treatment for reducing trihalomethanes in decanted water. 1st International Conference & Exhibition on Sustainable Water Supply and Sanitation. SWSSC, Cairo International Conference Center, 25-27 July 2010, Cairo, Egypt.
10. **Abdullah, A.M., N. El-Rackshy, S. Hassouna.2010.** Minimizing the formation of Disinfection by-products in drinking water. 1st International Conference & Exhibition on Sustainable Water Supply and Sanitation. SWSSC, Cairo International Conference Center, 25-27 July 2010, Cairo, Egypt.
11. **Abou-Talib, E.M.; F.M. Raffat; M.S. Hassouna and A. Tohamy. 1985.** "Effect of herbicides on controlling damping-off of soybean". *J. Agric. Sci. Mansoura Univ.*, 10: 104-108.
12. **Ahmed, M.A.; A. Ayanaba; A.R.J. Eaglesham; M.S. Hassouna; K. Mulongy; E.L. Pulver and B. Seaman. 1981.** "Examining the potential for inoculant use with cowpeas in West African soils". *Tropical Agric.*, 58: 325-335.
13. **Ahmed, M.H.; A.R.J. Eaglesham and S. Hassouna. 1981.** "Examining serological diversity of "cowpea" rhizobia by the ELISA technique". *Arch. Microbiol.*, 130: 281-287.
14. **Al-Othman, Z.A., Habila, M.A., Ali, R. and Hassouna, M.S.E. 2013.** Kinetic and Thermodynamic Studies for Methylene Blue Adsorption using Activated Carbon Prepared from Agricultural and Municipal Solid Wastes. *Asian Journal of Chemistry*, 25 (15), 8301-8306.
15. **AlOthman, Z.A., Habila, M.A., Ali, R., Ghafar, A.A. and Hassouna, M.S.E.D. 2014.** Valorization of two waste streams into activated carbon and studying its adsorption kinetics, equilibrium isotherms and thermodynamics for methylene blue removal. *Arabian Journal of Chemistry*, 7 (6), 1148-1158.
16. **Al-Othman, Z.A., M. A. Habila, R. Ali and M.S. E. Hassouna.2012.** Conversion of some solid waste into activated carbon for water and wastewater treatments. "TWAS-ARO 8th Annual Meeting", "The Role of Science, Engineering and Technology in Achieving Sustainable Human Development in the Arab Region"; 30-31 December 2012, Bibliotheca Alexandrina, Alexandria, Egypt.

17. **Eaglesham, A.; B. Seaman; H. Ahmed; S. Hassouna; A. Ayanaba and K. Mulongy.** 1980. "High-temperature tolerant cowpea rhizobia". Proc. IV Internat. Sympos. N-Fixation, Canberra, Australia, 1-5 December, 1980. p. 436.
18. **Eaglesham, A.; M.H. Ahmed; S. Hassouna and B. Goldman.** 1982. "Cowpea rhizobia producing dark colored nodules: use in competition studies". Appl. Environ. Microbiol., 44: 611-618.
19. **Eaglesham, A.; S. Hassouna and R. Seegres.** 1983. "Fertilizer N effects on N₂-fixation by cowpea and soybean". Jour. Agronomy, 75: 61-66.
20. **Eaglesham, A.R.J. and S. Hassouna.** 1982. "Foliar chlorosis in legumes induced by cowpea rhizobia". Plant and Soil, 65: 425-428.
21. **El-Aassar, I.A.; M.N. Mahmoud; M.S. Hassouna; H.Z. Ibrahim, and R. Moletta.** 1999. "Effect of thermal pre-treatment of secondary treatment sewage sludge on repeated fed-batch anaerobic digestion process". International Conference on Environmental Management, Health and Sustainable Development, 22-25 March, Alexandria, Egypt.
22. **El-Bestawy E., E. Abou El-Kheir, H.I. Abd El-Fatah and M. S. Hassouna.** 1998. Enhancement of bacterial efficiency for metal removal using mutation techniques. World Journal of Microbiology and Biotechnology 14 (6): 853-856.
23. **El-Bestawy, Ebtessam. M. Salah Hassouna, M. Hisham El-Masry and Emad K. Abou El-Kheir.** 2000. Bioaccumulation enhancement of heavy metals removal by mutant bacteria. Az. J. Microbiology 47: 135-151.
24. **El-Demerdash, F.M.; S. Hassouna and N.A. Mansour.**1999." *In vitro* effect of ammonium acetate on liver glycogen phosphorylase enzyme of a freshwater fish, *Tilapia nilotica*". International Conference on Environmental Management, Health and Sustainable Development, 22-25 March, Alexandria, Egypt.
25. **El-Kholey, S.S., Hassouna M.S. and Abd El-ghaffar, W.** 2013. Algal lipids for different applications. ASMS conference. Materials for Biomedical Applications. 1-3 December 2013. IGSR, Alexandria University, Egypt.
26. **El-Kholey, Shahira S., Walid Abdelghaffar and Mohamed Salah El-Din Hassouna.** 2013. Biodiesel as a Substitute for Diesel Fuel. The 13th International Conference on Materials Science and its Applications in Oil and Gas Industries. The Arab Society of Materials Science – Libyan Branch, 26-27 August 2013, Benghazi, Libya.
27. **El-Masry, H.; N. El-Rakshy; M.S. Hassouna and I. Mousa.** 1995. "Bacterial populations in the biofilm and non-biofilm components of a sand filter used in water treatment". FEMS Microb. Letters, 131:263-269.
28. **El-Masry, M.H., A.I. Khalil, M.S. Hassouna and H.A.H. Ibrahim.** 2002. *In situ* and *in vitro* suppressive effects of agricultural composts and their water extracts on some phytopathogenic fungi. World Journal of Microbiology and Biotechnology, 18 (6): 551-558.
29. **Gad, R., Abd Allah, AM, and Hassouna, MS.** 2014. Operation optimization and membrane performance of a hybrid RO plant. Materials for Water Applications Conference, The 15th Arab International Conference of Materials Science, 2-4 December 2014, The Arab Society of Materials Science, Alexandria, Egypt.
30. **Gad, S., Abd Allah, AM, and Hassouna MS.** 2014. Hydraulic Clari-flocculation for Alum enhanced treatment of drinking water. Materials for Water Applications Conference, The 15th Arab International Conference of Materials Science, 2-4 December 2014, The Arab Society of Materials Science, Alexandria, Egypt.
31. **Habila, M.A., Alothman, Z.A., Ali, R., Ghafar, A.A. and Hassouna, M.S.E.** 2014. Removal of Tartrazine Dye onto Mixed-Waste Activated Carbon: Kinetic and Thermodynamic Studies. Clean-Soil Air Water, 42 (12), 1824-1831.
32. **Hassanain, E. M., Yacout, D. M. M., Metwally, M. A., and Hassouna, M. S.** 2016. Life cycle assessment of waste strategies for used lubricating oil. Int. J Life Cycle Assess, DOI 10.1007/s11367-016-1255-x
33. **Hassanain, Eslam Metwally, Mohamed Abdel Aziz Metwally Mohamed Salah El-Din Hassouna.** 2012. Used Lubricating Oils in Wastewater: Sources, Effects, Treatment and Recovery. International Conference of Water and Wastewater Treatment Technologies, Cairo,

22-25 July 2012.

34. **Hassanain, Eslam Metwally, Nihal Ali El-Rakshy and Mohamed Salah El-Din Hassouna. 2012.** The Drinking Water Quality Management: The Egyptian Water Quality Index. International Conference of Water and Wastewater Treatment Technologies, Cairo, 22-25 July 2012
35. **Hassouna, M. S. 1994.** "An assessment of fresh water quality parameters and the distribution of bacterial populations in some irrigation canals around Alexandria". Tanta Medical J., 22:1513-1530.
36. **Hassouna, M. S. 1996.** "Enhancing salt tolerance of some free-living diazotrophs by mutation and proline application". Egyptian J. Appl. Sci., 10:615-630.
37. **Hassouna, M.S.; H.Z. Ibrahim and S. Bassiouny. 1990.** "The potential use of industrial food processing waste as a source of biological energy". Regional Symp. Environ. Studies, IGSR, Alex. Univ., May 15-17, 1990. Abst. No. 74.
38. **Hassouna, M.S.; M.A. Madkour; S. Helmi and S. Yakout. 1990.** Salinity tolerance of some free-living diazotrophs. First Anglo-Egypt. Conf. Bioscience. & Tech., IGSR, Alex. Univ. Nov. 10-15, 1990.
39. **Hassouna, M.S.; M.A. Madkour; S. Helmi and S. Yakout. 1994.** "Salt tolerance of some free living nitrogen fixers". Alex. J. Agric. Res., 40:389-413.
40. **Hassouna, M.S.; M.A. Madkour; S. Helmi and S. Yakout. 1994.** "Distribution of diazotrophs in relation to soil salinity in the Northern West Coast of Egypt". Alex. Jour. Agric. Res., 40:365-388.
41. **Hassouna, M.S.; M.M. Ismail and A.S. Helmi. 1990.** "The use of plant residues as a source of energy". Regional Symp. Environ. Studies, IGSR, Alex. Univ., May 15-17, 1990. Abst. No. 7.
42. **Hassouna, MS, Abdullah, A, M, and Abd El Azim, R. 2014.** Removal of ammonia from drinking water using chemical and adsorption techniques. Materials for Water Applications Conference, The 15th Arab International Conference of Materials Science, 2-4 December 2014, The Arab Society of Materials Science, Alexandria, Egypt.
43. **Hassouna, MS. 2014.** Carbon Dioxide Sequestration by Algae. The International Conference Towards Sustainable Environment. 11-14 August, 2014, IGSR, Alexandria University, Egypt.
44. **Hassouna, Salah E. 2002.** Plastic recycling as part of integrated SWM in urban areas. Normen fur Plastikrecycling. 13-14 October 2001, pp 57-65, Alexandria, Egypt.
45. **Hassouna, Salah E. 2002.** Recycling of MSW in Alexandria (an overview). 7th International Conference on Material Science: Recycling and Use of Materials. Arab Society of Material Science; Alexandria, Egypt, 17-20 March 2002.
46. **Hassouna, Salah E. and Ahmed El-Okazy. 2002.** Enhancing dissolved oxygen levels in drainage water for the reuse in fish farms. 7th International Conference on Material Science: Recycling and Use of Materials. Arab Society of Material Science; Alexandria, Egypt, 17-20 March, 2002.
47. **Hassouna. M.S.; El-Masry, M.H.; N. El-Rakshy and I.E. Mousa. 2000.** "Effect of chlorination, clarification and sand filtration on the bacterial content of raw water". Tanta Medical Jour., 22:1479-1491.
48. **Ismail, M.M.; M.S. Hassouna and A.S. Helmi. 1990.** "Economic analysis of the use of plant residues as a source of energy (biogas) or as an animal feed". Regional Sympos. Environ. Studies, IGSR, Alex. Univ., May 15-17, 1990. Abst. No. 66.
49. **Khalil Al, Hassouna MS, and El-Ashqar HMA. 2011.** Changes in physical, chemical and microbial parameters during the composting of municipal sewage sludge. World Journal of Microbiology and Biotechnology, 27:2359-2369.
50. **Khalil Al, Hassouna MSE, Shaheen MM, Abou Bakr MA and Mashaly AMA. 2014.** Monitoring of Physical, Chemical, Microbial and Enzymatic Parameters During Composting of Municipal Solid Wastes: A Comparative Study. Journal of Pure And Applied Microbiology, 8 (1): 211-224
51. **Khalil, A.I., M.S. Hassouna, M.M. Shaheen and M.A. Abou Bakr. 2013** Evaluation of the composting process through the changes in physical, chemical, microbial and enzymatic parameters. Asian Jr. of Microbiol. Biotech. Env. Sc. 15, (1): 25-42
52. **Khalil, A.I.; M.S. Hassouna and S.H. Elsaid. 1999.** "Suppression of plant pathogenic fungi by compost application". International Conference on Environmental Management, Health and

Sustainable Development, 22-25 March, Alexandria, Egypt.

53. **Khalil, N., Amin, MA, and Hassouna MS. 2014.** Decolourization in textile dyeing industry using polymer treatment. Materials for Water Applications Conference, The 15th Arab International Conference of Materials Science, 2-4 December 2014, The Arab Society of Materials Science, Alexandria, Egypt.
54. **Mady, R., Abd Allah, Masry, H., and Hassouna, MS. 2014.** A study on electrocoagulation of water in comparison to chemical coagulation. Materials for Water Applications Conference, The 15th Arab International Conference of Materials Science, 2-4 December 2014, The Arab Society of Materials Science, Alexandria, Egypt.
55. **Masoud, M.S., M.S. Hassouna, E.A. Shalaby, E.I. El Bestawy and K.M. El-Tayeb. 2000.** Chemical treatment of chromium in the industrial effluents around Alexandria. Role of Engineering towards a Better Environment, 3rd International Conference of Environmental Integration for a New Millennium. Helnan Palestine Hotel, 18-20 Nov, 2000, Alexandria, Egypt.
56. **Mewally, H.E. MA Metwally and MS Hassouna. 2012.** Used Lubricating Oils in Wastewater: sources: Effects, Treatment and Recovery. 1st conference for Modern Nano-Technology in Water and Wastewater Projects. September 15th, pp42 Cairo Egypt.
57. **Mewally, H.E. N. El Rakshy, and MS. Hassouna. 2012.** The Drinking Water Quality Management: The Egyptian Water Quality Index 1st conference for Modern Nano-Technology in Water and Wastewater Projects. September 15th, pp43, Cairo Egypt.
58. **Mohamed, Essam Kabary, and Hassouna, Salah Eldien. 2015.** A study on bicarbonate production by boilers' flue gases CO₂ condensation for algae culturing and biofuels production. 175394-MS SPE Conference, Kuwait Oil & Gas Show & Conference, 11-14 October 2015, Mishref, Kuwait.
59. **Said, Shahira, Walid Abdelghaffar, Mohamed Salah El-Din Hassouna, Tsuyoshi Imai. 2015.** "Optimization of *Chlorella fusca* Lipid Production for Biodiesel Production" Water and Environment Technology Conference" (WET), 5-6 August 2015, Nihon University, Tokyo, Japan.
60. **Salem, S.F.E.; I.A., El-Aassar H.Z. Ibrahim and M.S. Hassouna, M.S.E. 1999.** Biogas production from agro-industrial waste. International Conference on Environmental Management, Health and Sustainable Development, 22-25 March, Alexandria, Egypt.
61. **Staples, R.C.; D. Gross; R. Tiburzy; H.C. Hock; S. Hassouna and W. Webb. 1984.** Changes in DNA content of nuclei in rust uredospore germlings during the start of differentiation. *Exp. Mycology*, 8: 245-255.
62. **Staples, R.C.; H.C. Hoch; L. Epstein; L. Laccetti and S. Hassouna. 1985.** "Recognition of host morphology by rust fungi: Responses and mechanisms". *J. Canad. Plant Path.*, 7: 314-322.
63. **Staples, R.C.; S. Hassouna and H.C. Hoch. 1984.** Thigmodifferentiation and chemodifferentiation may be different processes in rust fungi. APS-CPS Annual Meeting. August 12-16, 1984. University of Guelph, Ontario, Canada, Abst. # A-340.
64. **Staples, R.C.; S. Hassouna; L. Laccetti and H.C. Hoch. 1984.** "Metabolic alterations in bean rust germlings during differentiation induced by the potassium ion". *Exp. Mycology*, 8: 183-192.
65. **Yacout D. M. M. and M. S. Hassouna. 2016.** Identifying potential environmental impacts of waste handling strategies in textile industry. *Environ. Monit. Assess.* (2016) 188: 445
66. **Yacout Dalia M. M., Mervat A. Abd El-Kawi, and Mohamed Salah Hassouna. 2013.** Energy Management in Synthetic Fiber Industry "Case Study: Alexandria Fiber Co." *Journal of American Science*; 9(2) 410-415.
67. **Yacout, D. M. M., M. A. Abd El-Kawi, and M. S. Hassouna. 2016.** Cradle to gate environmental impact assessment of acrylic fiber manufacturing. *Int J Life Cycle Assess.*, 21:326–336
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