

CURRICULUM VITAE

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PERSONAL INFORMATION:

Place of Birth: Nablus
Nationality: Palestine
Marital Status: Married

EDUCATION:

1990-1995 The University of Oklahoma at Norman, Oklahoma
Doctor of Philosophy in Chemistry.

1984 – 1986 Southern Illinois University at Carbondale, Illinois
Master of Science in Chemistry

1978 –1982 An-Najah N. University, Nablus
Bachelor of Science in Chemistry

OCCUPATIONS:

2009-2011 Head of Chemistry department

1995-Present An-Najah N. University
Assistant Professor

March- Sept. 1995 The University of Oklahoma at Norman, Oklahoma
General Postdoctoral Research Assistant.

1990- Jan.1995 The University of Oklahoma at Norman, Oklahoma
General Chemistry Teaching Assistant / Research Assistant

1987 – 1989 An-Najah N. University
Lecturer

Aug- Dec. 1986 Southern Illinois University at Carbondale, Illinois
General Chemistry Teaching Assistant

1982-1984 An-Najah N. University
Teaching and Research Assistant

RESEARCH INTERESTS:

1. Synthesis of fire-retardant compounds based on organoalkylsilane compounds.
Structural and conformational studies using spectroscopic techniques.
2. Homogeneous catalysis with organometallics.
3. Photoelectrochemistry.
4. Speciation and removal of metal ions from water.
5. Water treatment by metal oxides nano-particles and direct solar light.

RESEARCH SKILLS:

Ability in performing chemical synthesis and reactions by employing Bench and Vacuum Line methods and techniques.

Experience in operating multinuclear NMR (Varian XR-300 S), Infrared, (Perkin Elmer 283B, IBM32 FTIR).

Mass Spectrometry (Hewlett Packard 5890 Series II) & HPLC Instruments.

COMPUTER AND SOFTWARE SKILL:

1. Basic knowledge of Windows, Dos, Graphics, MS word 7, Excel 7, power point, etc...
2. Internet and online skills.

THESIS CO-SUPERVISION:

1. M.Sc student thesis 1999-2000, Moayyad Masoud.
2. M.Sc student thesis 2013 Jumana Ishtewie.
3. M.Sc student thesis 2018 Wala A. Droube.
And others.

THESIS EXAMINATION:

1. Moayyad Masoud, M.Sc. Thesis in Chemistry (2000)
2. Ghazi Nour, M.Sc. Thesis in chemistry (2009)
3. Maisaa Ateeq, M.Sc. Thesis in chemistry (2012)
4. Waseem Mansour, M.Sc. Thesis in chemistry (2013)
And others.

ADMINISTRATION

1. Chairman, Chemistry Department at An-Najah N. University (2009-2011).
2. Coordinator for the Graduate Studies School for Chemistry Department at An-Najah N. University (2009-2011).
3. Coordinator for Gaza Initiative for the Science College at An Najah National University, 2024.

COMMITTEE MEMBERSHIP:

1. Member of the Science Faculty Council (several times) .
2. Graduate studies committee.
3. Social activity committee of the chemistry department and the College of Science.
4. Graduate student admissions.
5. Study plan evaluation committee.
6. Fact finding committee.
7. General chemistry and practical general chemistry evaluation committee.
8. Member of committee for quality assurance in the College of Science and in the Chemistry Department.
9. Registration & student supervision.
10. Pure chemistry plan committee.
11. Audit grades committee.
12. The Guidance Committee in the College of Science.
13. Chemistry Promotion Committee.
14. Recruitment Committee in the Department of Chemistry.
15. Member of committee for the Industrial Chemistry program.

TEACHING:

1. Advanced Inorganic Chemistry (senior level Chem. 23421)
2. Advanced Inorganic Chemistry (M.Sc. Chem. 423521)
3. Instrumental Analysis Laboratory (M. Sc. Chem.423515)
4. Inorganic Chemistry I and II and Inorg. Chem. Laboratory (Chem. 23321, 23322, 23325).
5. General Chemistry Lecture and Laboratory.
6. Analytical Chemistry Laboratory (Chem. 23215, 23216).
7. General chemistry for medicine students (Chem. 10231114).
8. Special topics inorganic chemistry (M. Sc. Chem. 423582).
9. Chemical Applications of Group Theory (M.Sc. Chem. 423522)
10. Applied chemical catalysis (senior level Chem. 10236465).

OTHER ACTIVITIES:

1. Tennis, Volleyball, Walking
2. Travel
3. Reading
4. Embroidery

MEMBERSHIPS:

American Chemical Society

AWARDS:

AMIDEAST Scholarship (1984 – 1986).

CONFERENCES AND WORKSHOPS:

1. 2nd International Conference of Pure, Applied and Environmental Chemistry, Yarmouk University, Irbid, Jordan. April 17-21, 2000.
2. Second conference on Biotechnology Research and Application In Palestine. An Najah N. University, Nablus, Palestine. Sep. 26, 2010.
3. Palestinian Conference on Modern Trends in Mathematics and Physics II. An Najah N. University, Nablus, Palestine. Aug. 2nd, 2010.
4. Palestinian International Chemistry Conference. Birzeit University, March 23-24, 2013.
5. The first International Palestinian Conference on nanotechnology for advanced material and devices. An Najah N. University, 26-3-2012.
6. The fifth Palestinian international chemistry conference. An Najah N. University, 1-6-2011.
7. Renewable energy and material science. An Najah N. University, 30-3-2013.
8. The science day on theoretical and applied physics. An Najah N. University, 23-11- 2013.
9. Renewable energy and material science. An Najah N. University, Sat, 30-03-2013.
10. The science day on theoretical and applied physics. An Najah N. University, Sat, 23-11-2013.
11. The second international Palestinian conference on olive in Palestine. Mon, 25-11-2013.
12. The eighth Palestinian international chemistry conference. An Najah N. University, Tue, 21-04-2015.
13. The second International Palestinian Conference on nanotechnology for advanced material and devices. An Najah N. University, Wed, 23-03-2016.
14. The third International Conference on Advances in Mechanical Engineering Istanbul, 19-21 Dec., 2017.

VISITS:

Dr. Francois Cansell, ICMCB, Bordeaux University, France, (Summer, 2004)

IGC lab at Paris Saclay university attending the Palestinian day. (France, Paris Summer, 2022).

Arab American University labs. (July 2020).

PUBLICATIONS:

1. “Speciation of Charged Complexes by Donnan Dialysis”. James A. Cox and Samar Al-Shakshir, *Anal. Lett.* **21(9)**, 1787-1769 (1988)

2. Proceedings of the Oak Model conference on Waste Management: Volume1. Part 3, Pages 89-110, Oct. 1987. James A. Cox. Atul Bhatanger & Samar Al-Shakshir, Membrane- based Methods for speciation and removal of Metals from Waste Water.
3. Metalloporphyrin/polysiloxane modified n-GaAs surfaces: effect on photoelectrochemical efficiency and surface stability, Hikmat S. Hilal, Moayad Masoud, Samar Shakshir, Najeh Jisrawi: *J. Electroanal. Chem.*, **527**, (2002), 47-55
4. Surface modification of n-GaAs semiconductor with metalloporphyrin/polysiloxane matrices. Hikmat S. Hilal, Moayad Masoud, Samar Shakshir: 2nd International conference of pure, applied and environmental chemistry, Yarmouk University, Irbid- Jordan. April 17-21,2000
5. Repositioning of n-GaAs band edges by modification with metalloporphyrin/polysiloxane matrices. Hikmat S. Hilal, Moayad Masoud, Samar Shakshir: *Active and Passive Electronic Components*, **26**(2003)11.
6. Surface modified n-GaAs semiconductor with metalloporphyrinatomanganese (III) encapsulated in polysiloxane matrices: effect of modification on the semiconductor characteristics at the solid/liquid junction, H.S. Hilal S. Shakshir, and Moayyad Massoud, (Sharjah International Solar Energy Conference, Sharjah University, Sharjah, UAE, Feb. 2001).
7. n-GaAs Band-dege repositioning by modification with etallopypyrin/polysiloxane matrices, H.S. Hilal, M. Masoud, S. Shakshir, N. Jisrawi, (proc. Sharjah Solar Energy, Conf., 2001).
8. Stability and Cell Efficiency Enhancement of n-GaAs electrodes by Metalloporphyrin Complexes Embedded inside Polysiloxane Matrices, H.S. Hilal, M. Masoud, S. Shakshir, N. Jisrawi, World Renewable Energy Congress VII, June 29th – July 5th, 2002 Cologne, Germany.
9. Preparation, characterization, modification and application of thin-film cadmium chalcogenide semiconductors: enhancement of solar conversion efficiency and stability. Hikmat S. Hilal, Iyad Sadeddin, Rania Ismail, Amer El-Hamouz, Huda Sabri, Subhi Saleh, Maysaa Atatri, Ahed Zyoud, Mosa El-Hasan, Israa hamdan, Samar Al-Shakshir, Moayyad Masoud. 2nd International Conference on Energy and Environmental Protection in Sustainable Development (ICEEP' 2009). Palestine Polytechnic University. Hebron, Palestine, November 10-12, 2009.

10. Understanding the Mode of Action of ZnO Nano-Particles as Photocatalysts in Water Disinfection: Bacteria Killing vs. Complete Photo-degradation. Jumana Ishtaiwa, Majdi Dwikat, Samar Shakhshir, Ahed Zyoud and Hikmat Hilal. Palestinian International Chemistry Conference. Birzeit University, Birzeit, Palestine, March 23 - 24, 2013.
11. Quality Assesment of Oil from Olive Trees Irrigated by Waste Water Using Fluorescence Spectroscopy. W. A. Droubi, S. Alshakshir, I. R. Abdelraziq. Second Palestinian International Conference on Material Science and Nanotechnology (PICNM2016). An Najah N. University New Campus, Nablus, Palestine, March 23-24, 2016.
12. Natural dye-sensitized ZnO nano-particles as photo-catalysts in complete degradation of *E. coli* bacteria and their organic content A. Zyoud, M. Dwikat, S. Al-Shakhshir, S. Ateeqa, J. Shteiwia, A. Zu’bi, M. H.S. Helal, G. Campet, D.H. Park, H. Kwon, Tae Woo Kim, M. Kharoof, R. Shawahnai, H. S. Hilal. *Journal of Photochemistry and Photobiology A: Chemistry* 328 (2016) 207–216.
13. ZnO nanoparticles in complete photo-mineralization of aqueous gram-negative bacteria and their organic content with direct solar light A. Zyoud, M. Dwikat, S. Al-Shakhshir, S. Ateeqa, J. Shteiwia, M. H.S. Helal, M. Kharoof, S. Alami, H. Kelani, G. Campete, H. S. Hilal. *Solar Energy Materials and Solar Cells*, 168 (2017) 30-37.
14. Complete mineralization of aqueous gram-negative bacteria and their organic content with direct solar light using naked and natural dye-sensitized ZnO nanoparticles. S. Al-Shakhshir, A. H. Zyoud, M. Dwikat, S. Ateeq, J. Ishtaiwa, M. H.S. Helal, A. Zu’bi, H. S. Hilal. The third International Conference on Advances in Mechanical Engineering Istanbul (ICAME 2017), 19-21 Dec., 2017.