

Curriculum Vitae of Dr. Mahmoud Ali Hussein

Personal Data

Name : Mahmoud Ali Hussein Abdo
Gender : Male
Nationality : Egyptian
Date of Birth : September 26, 1974.
Place of Birth : Behera / Egypt.
Marital Status : Married
Occupation : Associate Professor of Polymer Chemistry



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Academic Qualifications

1. University Degrees

- ✚ **B.Sc. in Chemistry (1996), Grade: Very Good with honor grade (Accumulative 82.94%)**
 - ♥ Place of Graduation: Chemistry Dept. Faculty of Science, Assiut University, Assiut, Egypt.
- ✚ **Pre-Master courses in Organic Chemistry "General Organic Chemistry courses " (1999)**
 - ♥ Place of Graduation: Chemistry Dept. Faculty of Science, Assiut University, Assiut, Egypt.
- ✚ **M.Sc. in Organic Chemistry “Organic Synthesis, Polymer Synthesis and Polymer Characterization” (2003)**
 - ♥ Thesis Title: “Synthetic and Polymeric Studies on Some New Diaryl Oxides,-Sulphides, -Sulphones and Diarylidencycloalkanones Compounds”. Chemistry Dept. Faculty of Science, Assiut University, Assiut 71516, Egypt.
- ✚ **Ph.D. in Organic Chemistry “Polymer Synthesis, Characterization and Application” (2007);**
 - ♥ Thesis Title: “Synthesis, Characterization and Application of Some New Polymers Containing Different Heterocycles, Ether and / or Diarylidencycloalkanone Moieties”. Chemistry Dept. Faculty of Science, Assiut University, Assiut 71516, Egypt.

Employment History

- ✚ Demonstrator at Chemistry Department, Assiut University (March, 1998 to December, 2003).
- ✚ Assistant Lecturer at Chemistry Department, Assiut University (December, 2003 to September, 2007).
- ✚ Lecturer of Polymer and Organic Chemistry at Chemistry Department, Assiut University (September, 2007 to June 2014).
- ✚ Assistant Professor at Chemistry Department, King Abdulaziz University, Kingdom Saudi Arabia (December, 2010 to September 2014).
- ✚ Associate professor of Polymer Chemistry at Chemistry Department, Assiut University (June, 2014 till now).
- ✚ Associate Professor at Chemistry Department, King Abdulaziz University, Kingdom Saudi Arabia (September 2014 till now).

Research Interest

My future research is designed to develop synthesized polymers for professional careers in polymer research as well as in the manufacturing industries. We try to covers the modern aspects of polymers, including: polymer synthesis, physics, properties, characterization and processing, with a number of up-dated facilities for modern research. Moreover, we try to enter the advanced technology related to



functional polymer, high performance polymer, engineering plastics, etc. to solve the industrial problems in numerous fields.

- 1- Synthesis, characterization and application of various types of organic heterocyclic polymers that can be applied in the industry.
- 2- Synthesis and structural elucidation of various types of organic polymers that can be used as surface coatings.
- 3- Liquid crystalline properties of polymers.
- 4- Composites and Nanocomposites for variable applications
- 5- Organic / Inorganic polymer composites such as zeolite / polymer composites etc.

Research Experiences

- Good theoretical background in Chemistry “Organic and Polymer Chemistry”.
- X-ray diffraction (XRD & WAX) using the powder technique.
- FT-IR Spectra, NMR (^1H , ^{13}C , DEPT135, COSY, NOSY) Spectra, Mass Spectra and UV Spectrophotometry.
- Gas Chromatography GC and GC/MS.
- Thermal Analyses TGA, DTG, DTA and DSC.
- Scanning Electron Microscopy (SEM).
- Optical Polarizing Microscopy (OPM).
- Gel Permeation Chromatography (GPC).
- Resin formation (thermoset & thermoplastic)
- Ultra-violet curing processes (rate of curing, energy of curing)
- Carding properties of fibers & formation of fiber mat.
- Mechanical Properties (hardness, tensile, flexural, impact)
- Dimensional stability and thickness swelling properties

Further Experiences

Teaching Experiences:

Under Graduates:

Teaching for undergraduate students most basic Organic and Polymer Chemistry such as: Organic Chemistry I, Organic Chemistry II, Organic Synthesis, Heterocyclic Chemistry, Experimental Organic Chemistry, Different Chromatographic Techniques, Bio-Chemistry, Spectroscopic techniques (IR, H^1NMR , Mass and UV), Fundamentals of Polymer Chemistry, Different Polymerization Techniques and Modern Polymer Synthesis, etc.

Post-Graduates:

Supervising for graduate students (master and PhD). Teaching Special Topics for graduate students such as: Advanced Organic Chemistry Advanced Heterocyclic Chemistry, Organometallic Chemistry and Advances in Polymer Chemistry etc.

Computer Experiences:

- Professional computer user in teaching and research.
- Academic computer course in designing power point presentations
- Excellent experiences in the programming with computers software's as Hyper Chem 3D, Isis Draw, Chem Draw, Chem Sketch, Origin Draw and also excellent experience with all Windows programs and all MS windows family.



Language Experiences:

- ✚ Native language Arabic.
- ✚ Fluent spoken and written of English Language.
- ✚ Fair Command of French Language.

Fellowships

- ✚ Post doctoral fellowship at chemistry laboratory of bioactive molecules and Aroma (**LCMBA/CNRS UMR 6001**), Institute of Chemistry, Faculty of Science, Nice-Sophia Antipolis University. (Nice, France, 2008 - 2009).
- ✚ Post doctoral fellowship at division of bio-resources paper & coating technology, school of industrial technology, university of sains Malaysia. (Penang, Malaysia, 2009 - 2010).
- ✚ Visiting researcher, at division of bio-resources paper & coating technology, school of industrial technology, university of sains Malaysia. (Penang, Malaysia, July 2011).
- ✚ Visiting researcher, at division of bio-resources paper & coating technology, school of industrial technology, university of sains Malaysia. (Penang, Malaysia, July- August 2012).
- ✚ Visiting scientist, at INEGI (institute of mechanical engineering and industrial Management) and faculty of engineering university of Porto (FEUP). (June – July 2014).

Membership of Professional Organization and Societies

- The Egyptian Society of Chemistry.
- The Egyptian Society for Polymer Science & Technology (ESPST).

Conferences & Workshops

Participated on the organization of national & international conferences and workshops on Material Science, Organic Chemistry and their Application those are:

- The first Arabian Olympiad in Chemistry (Organization Committee) (Assiut, Assiut University, Egypt, Sep. 2002).
- 10th Ibn Sina International Conference for Pure and Applied Chemistry (Organization Committee) (Laxur, Assiut University, Egypt, Feb. 17, 2007).
- The Second Annual Conference for Young Scientists (Basic Science & Technology) (Assiut, Faculty of Science, Assiut University, Egypt, Oct. 18, 2008).

Attended several international conferences and workshops on Material Science, Organic Chemistry and their Application those are:

- 2nd spring school on Current Activities of Materials Science (Assiut, Assiut University, Egypt, April 2001).



- Materials Science and Radiation Physics workshop (Assiut, Assiut University, Egypt, December 2003).
- 10th Ibn Sina International Conference For Pure and Applied Chemistry (Laxur, Assiut University, Egypt, 17-19 February, 2007).
- The First Annual Conference for Young Scientists (Basic Science & Technology). (Assiut, Faculty of Science, Assiut University, Egypt, 5-7 May, 2007).
- 2nd International Conference on Environmental Research and Technology (Park Royal Hotel, Penang Malaysia, 2-4 June, 2010).
- The Saudi International Petrochemical Technologies Conference King Abdulaaziz City for Science and Technology (KACST) (Conference Hall, KACST, Building 36, Riyadh, Saudi Arabia, 6, 7 June, 2011).
- International Conference of Materials Science and Its applications (ICMSA) Taif University (Taif University, Taif, Saudi Arabia, 13-15 February, 2012).
- 5th Saudi Science Conference Umm Al Qura University (King Abdul Aziz Hall, Umm Al Qura University, 16-18 April, 2012).
- 2nd Saudi Nanotechnology Conference (2SINC) "Nanotechnology innovation opportunities for future" King Abdulaaziz City for Science and Technology (KACST) (Conference Hall, KACST, Building 36, Riyadh, Saudi Arabia, 11-13 November, 2012).
- 5th International Conference on Drug Discovery & Therapy' 18th - 21st February 2013 at Dubai Women's College, Dubai, UAE.
- The 4th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS) 24 – 27 April, 2014, Fethiye, Mugla - Turkey).

Attended several workshops and seminars on the uses & applications of various scientific instruments those are:

- Workshop on NMR Applications for Polymer Industry, by: Varian Company for Instruments, USA.(Sheraton Cairo Hotel, Cairo, Egypt, August, 26, 2007).
- Workshop on Thermal Analyses Techniques for Polymer Applications (Simultaneous DSC/TGA, Hyper DSC, TMA, DMA, Multi-cell DSC Techniques), by: TA Instruments, USA & MESLO Egypt and North Africa for Scientific Equipments. (City Star Hotel, Cairo, Egypt, April, 28, 2007).
- Seminar on Basic Theory and Applications of FT-IR, by: Thermo Fisher Scientific, USA & Research Instruments Company. (Conference room, School of Industrial Technology, USM, Penang, Malaysia, November, 17, 2009).
- Better Seminar on Application in Thermo-gravimetric Analyzer & Thermal Analysis in Polymer and Food Analysis & Application of UV-vis and



- Fluorescence Technique in Food and Environmental Analysis by: Perkin Elmer Company for Instruments, USA. (Conference room, School of Industrial Technology, USM, Penang, Malaysia, December 10, 2009).
- Seminar on Thermo Fisher Scientific Discovery Day by: Thermo Fisher Scientific, USA. (Movenpick Hotel, Jeddah, Saudi Arabia, February 19, 2012)
 - Anton Paar Seminar: Measure What is Measurable for Microwave (Syntheses & Digestion) by: Anton Paar. (Movenpick Hotel, Jeddah, Saudi Arabia, March 17, 2012)
 - Workshop on GC, GC/MS Analyzers and Applications By: Thermo Scientific and Global Analyser Solutions (GAS) (Movenpick Hotel, Jeddah, Saudi Arabia, May 26, 2012)

Other creative activities

Training

- ♥ *Training workshop in electron microscopy (Techniques & Interpretations).* (Electron microscopy unit, Assiut University, Egypt, March 2005)
- ♥ *Training workshops in the following computer programs: (Hardware (20 h.); Audio / Video (10 h.); HTML (20 h.); Macromedia flash (20 h.); Adobe Photoshop (20 hr.)* (Training resources and multimedia center, (TRMC) Faculty of Science Assiut University, Egypt, from October 2005 to December 2005)
- ♥ *Practical training assignment in the field of Flavor, Fragrance Chemistry and Chemistry of Cosmetic Products.* At the University of Nice-Sophia Antipolis (France), Department of Chemistry, from Sep. to Oct. 2006)
- ♥ *Training workshop in Computer Aided Drug Design Using molecular Operating Environment (MOE) Software.* (Faculty of Pharmacy, Assiut University, Egypt, December, 5-7, 2006)
- ♥ *Training course in Principles of Bioinorganic Chemistry (Theoretical Bases).* (Petra, Jordan, March, 1-8, 2007; Sponsored by US National Science Foundation Cornell University, New York, USA)

Projects

Participate actively as a member on the following projects:

- ✚ **Title:** Enhancement and Development of organic Chemistry Teaching Program for the Bachelor Degree of Science (Chemistry Major) (EDOCTEP). (Assiut University, Egypt, Sep.2004 – Aug.2006)
Budget: HEEPF, Higher Education Enhancement Projects 2nd cycle B-048-10
- ✚ **Title:** Professional Master in Flavor & Fragrance Chemistry and Chemistry of Cosmetic Products.



(Assiut University – Egypt, University of nice-Sophia Atipolis – France,
University of Ferrara – Italy; Sep. 2004 – Aug. 2007)

Budget: TEMPUS, European Union Scheme for Higher Education, Finance
under the MEDA budget of the European Union for the Mediterranean Partner States.

- ✚ **Title:** Faculty of Science Development Project (FASCDP).
(*Vice project manager*, Assiut University, Egypt, Jan.2008 – Oct.2010)
Budget: Universities Development Funding Project (UDFP), Education development
Fund.
- ✚ **Title:** Construction of Material and Nano-Science Research Center (MNSRC).
(As subproject from (FASCDP) (Activity no. 4.1)
(Assiut University, Egypt, Jan.2008 – Jul.2010)
Budget: Universities Development Funding Project (UDFP), Education development
Fund.