

An-Najah National University

Chemistry Department

Dr. Othman Hamed:
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Higher Education

1979 – 1983, B.S. Yarmouk University, Irbid, Jordan
1983 - 1985, MS Yarmouk University, Irbid, Jordan
1992 - 1996, Ph.D., Loyola University of Chicago, Chicago, Illinois

Thesis

- MS thesis - "Syntheses and Conformations of Some Perimidones and 2,3-dimethyl -1,2,3,4-tetrahydroquinoxalines Derivatives"
Advisor(s) - Professors Mustafa Ibrahim and Zacharia Fataftah.
- Ph.D. thesis - "Asymmetric Synthesis by Pd(II) Catalysis: Chirality Transfer and New Asymmetric Catalytic Systems"
Advisor - Professor Patrick M. Henry

Continuing Educations

- **Coating Science for Coating Chemists.** Shelby Thames Polymer Science Research Center, University of Southern Mississippi, Mississippi, June 1998.
- **Rheology, Thermal Analysis and Lab Scale Processing.** Haake, Atlanta, Georgia, April 2000.
- **Master in Practical and Theoretical Aspects of Multiangle Light Scattering.** Wyatt Technology, Santa Barbara, California, June 2000.
- **Increasing Human Effectiveness.** Rayonier, Jesup, Georgia, February 2000.
- **Managing Interpersonal Relationship Social Styles.** Rayonier, Jesup, Georgia, September 2000.

Research Funding

- Association of Arab Universities 2010-2012, \$15,000.
- Ministry of Higher Education, Palestine 2013-2015, \$30,000 "Sustainable Materials From Olive Industry Waste: Cellulose Derivatives and Bioethanol"

Awards

- **Hisham Hijjawii Award for applied science** <http://www.najah.edu/node/8768>, December, 2011.
- **Achievement Award:** Rayonier Research Center, February 2013

- **Achievement Award:** Rayonier Research Center, March 2006.
- **Achievement Award:** Rayonier Research Center, March 2005.
- **Quality Award:** Rayonier Research Center, March 2003.
- **Employee of the Quarter:** For outstanding service and being the best and going the extra mile, Rayonier Research Center, June 2001.
- **Best Teaching Assistant:** Loyola University of Chicago, June 1996.

Employments

Years	Ranks	Institute
2012-present	Principal Scientist	Rayonier Advanced Material, Jesup, GA, USA
2011-2012	Department Chair	Chemistry Department, An-Najah National University
2009-2012	Associate Professor	Chemistry Department, An-Najah National University
2007-2009	Assistant Professor	Chemistry Department, An-Najah National University
2012 (June 1 to June 2015)	Visiting Principal Scientist	Rayonier Research Center, Jesup, GA,USA
2010 (June 1 to Sept. 1)	Visiting Scientist	Rayonier Research Center, Jesup, GA,USA
2009 (June 1 to Sept. 1)	Visiting Scientist	TransTech Phrama, High Point, NC, USA
2008 (June 1 to Sept. 1)	Visiting Professor	Loyola University Chicago, Chicago, IL, USA
2006-2007	Principal Scientist	Rayonier Research Center, Jesup, GA, USA
2002-2006	Associate Scientist	Rayonier Research Center, Jesup, GA, USA
1999-2002	Senior Scientist	Rayonier Research Center, Jesup, GA, USA
1997-1999	Post Doctoral Associate	USDA, New Orleans, USA
1996-1997	Lecturer	Loyola University Chicago
1988-1990		KFUPM, Dhahran, Saudi Arabia

Expertise

- Total synthesis of natural products with bioactivities
- Thermoplastic/cellulose composites.
- Thermal Bonding.
- Fiber modification for applications in absorbent products
- Superabsorbent polymers and fibers.
- Polymers modification (derivatization, cross-linking, and graft *co*-polymerization).
- Molecular Masses Determination of Polymers by SEC combined with triple detector (multiangle laser detector, optilab DSP, and viscotek).
- Epoxy synthesis, curing, and characterization (viscosity, density, glass transition, modulus (storage and loss) using Rheometer, TGA, DSC, DMA, and Instron) of cured and uncured epoxy materials from Petroleum and naturally occurring starting materials.
- Structural elucidation by modern spectroscopic techniques (UV-Visible, FT IR, and multi-dimensional NMR).
- Modern chromatographic techniques (HPLC, SEC, Gas-liquid, GCMS, Thin Layer, and Flash Chromatography).
- Handling of air- and moisture-sensitive compounds (Schlenk line, glove box and glove bag).
- Scale-up of bench processes.

Accomplishments

- Development of polymer based antimicrobial reagents
- Development of cellulose fiber with antimicrobial properties.
- Developed a new method for making cellulose fiber with high permeability.
- Developed a new superabsorbent material from naturally occurring monomers.
- Asymmetric total synthesis of the antifungal natural product Partheniol.
- Synthesis and complete characterization of novel palladium catalysis for asymmetric synthesis.
- Developed a new superabsorbent fiber from cellulose fiber.
- Developed cellulose fibers with improved liquid acquisition properties.
- Developed cellulose fibers with anti-bacterial properties.
- Developed cellulose fibers with reduced defiberization energy.
- Developed new water miscible silicon polymers for fiber softening.
- Developed cellulose fibers useful for making baby diapers and adult incontinent free of hard spots (
- Synthesis and characterization of new epoxy monomers from naturally occurring and Petroleum

monomers (patent application, USDA).

- Synthesis and complete assignment of cellulose ethers by proton and carbon-13 and 2D NMR.
- Synthesis and complete characterization of poly[6-phenyl-6-deoxy-2,3-di-O-methyl]-(-1-4)-anhydro-D-glucose.

Teaching

A. Courses taught in recent years

Course name	Years	Level
Organic Chemistry 1	2007-present	B.Sc.
Organic Chemistry 2 for Pharmacist	2007-present	B.Sc.
Organic Chemistry 2	2007-present	B.Sc.
Organic Chemistry 3	2007-present	B.Sc.
Organic Chemistry 1 for Pharmacist	2007-present	B.Sc.
Mechanism In Organic Chemistry	2008	Ph.D.
Analytical Organic Chemistry	2007-present	B.Sc.
Special Topics In Organic Chemistry	2008-	M.S.
Advanced Organic Chemistry	2008-	B.Sc.
Physical Organic Chemistry	2008	B.Sc.
Special Topics 3 in Organic Chemistry	2009-	B.Sc.

B. Supervision of Graduate Students in Recent Years:

MS students

1. Hisham Qarareyah, "Palladium Catalysts on polymer support". Graduated June, 2009.
2. Dora Smadi. "Studies Toward Isolation And Identification Of Bioactive Natural Products"
Graduated January, 2011

3. Yusara Fuad "Extraction of Cellulosic Materials from Olive pulp" Graduated December, 2009.
4. Noha Mehdawi "Natural Product Platinum Complexes with potential Anticancer activities" ..
Graduated February, 2010
5. Amal Shalabi "Bio Ethanol Form Olive Industry Waste" Graduated January, 2011.
6. Nisreen Riyad As'ad Yousef Alhaj "Synthesis Of Specialty Polymer From Cellulose Extracted From Olive Industry Solid Waste" Graduated November, 2012.
7. Shyma Taleeb "Synthesis of Curcumin and Tetrahydrocurcumin Based Diazepines with Possible Antibacterial Activities" graduated January 2015.
8. Sana Saqer "Curcumin Based Conducting Polymer" started December 2016.
9. Basema Khalaf "Synthesis Of Three Dimensional Cellulose Diimine Polymer For Waste Water Purification" started December 2016.
10. Reham Hattab "Extraction of cellulose powder from Argana press cake" graduated 2016.
11. Israa Dagher "Enzymatic Hydrolysis of Olive Industry Solid Waste Into Bio-Ethanol" graduated 2015.
12. Shaha Thiab "Optimization and Scale up of Cellulose Extraction Process from Olive Industry Solid Waste" graduated 2016.
13. Mai Azar "Nanocrystalline Cellulose Modified with Imine Functional Group for Waste Water Purification", started December 2016.
14. Abeer Melhem "Synthesis and characterization of magnetic nano cellulose from olive waste (Jeft) for the effective removal of methylene blue from water" started August 2016.
15. And several others joined projects with Dr. Shehdeh Jodeh and Dr. Ahmed Abu Obeid.

Active Participation in Scholarly Conferences

Conference	Date and Place	Paper Subject
243rd ACS National Meeting & Exposition	San Diego, CA, United States, March, 2012	Stereochemical and mechanistic probes for understanding the stereoselectivity of addition to alkenes in the Wacker reaction"
Taibah International Chemistry Conference	Saudi Arabia, Al-Medina, 2009	Oxidation and Carbonylation of chiral Allylic alcohols by Pd(II) Catalyst: A method of Determining Modes of Palladation of Olefins Using Chirality Transfer
The 4 th Palestinian International Conference	Palestine, Abudess 2008	New Value Added Products from Cellulose

Am. Chem. Soc. Nat'l Meeting, 215th,	Dallas, TX March 1998.	"Physical and Dynamic Mechanical Characterization of Sucrose-Based Epoxy Monomers and Thermosets "Abstract No. CARB041
14th New Orleans Carbohydrate Symposium	New Orleans, La April 2-4, 1998	" Recent Advances in Carbohydrates Chemistry"
215th Am. Chem. Soc. Nat'l Meeting	Dallas, TX. March 1998.	"Synthesis and Characterization of Poly-[6-phenyl-6-deoxy-2,3-di-O-methyl]-1,4-anhydroglucose " Abstract No. Cell046
215th Am. Chem. Soc. Nat'l Meeting	Dallas, TX. March 1998	"Carbon-13 Characterization of O-Alkyl Cellulose Derivatives" Abstract No. Cell046
19th International Carbohydrate Symposium	San Diego, CA. August 9-14, 1998	"The Chemistry of carbohydrate Fibers
1999 Proceeding Beltwide Cotton Conference,.	San Diego, Ca., Vol.1, 000, Jan. 1999	"Rational Design of Cellulosic Fiber Insulation Materials"
217th Am. Chem. Soc. Nat'l Meeting	Anaheim, CA. March 1999	"Unequivocally Assigning All The ¹ H and ¹³ C Resonances in The Repeat Unit of Tri-O-Methylcellulose" Abstract No. CELL013
Int. Conf. On Value-Added Products for the Sugar Industry	Baton Rouge, LA. April 27,1999	Physical and Dynamic Mechanical Characterization of Sucrose-Based Epoxy Monomers and Thermosets
NSF, Michigan State	University, E. Lansing, MI, June 23, 1999.	Meeting New Materials Development from sucrose "
219th Am. Chem. Soc. Nat'l Meeting	San Francisco, CA. March 2000	"Synthesis and Characterization of The Repeat Unit of Poly-[(6-Phenyl-6-Deoxy-2,3-di-O-Methyl)-1,2-Anhydroglucose" Abstract No. CELL71

Publications

- K. Azzaouia, , ,
- E. Mejdoubia,
- A. Lamhamdia,
- S. Jodehb, , ,

- O. Hamedb,
- M. Berrabaha,
- S. Jerdiouia,
- R. Salghic,
- N. Akartassea,
- A. Errichd,
- Á. Ríose, f,
- M. Zougagh, g “Preparation and Characterization of Biodegradable Nanocomposites Derived from Carboxymethyl Cellulose and Hydroxyapatite” *Carbohydrate Polymer*, 2
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- Hamed, Othman A., Krzywanski, Romuald S “Hydrogel Forming Material From Byproduct Pulp Fines” **US Patent No. 9382337, 2016.**
- Hamed, Othman A., Krzywanski, Romuald “Hydrogels And Process For Making The Same From Hemicaustic Byproduct” United States Patent No. **20160168796.**
- K. Azzaoui, E. Mejdoubi, A. Lamhamdi, B. Hammouti, N. Akartasse, M. Berrabah, A. Elidrissi, S. Jodeh, O. Hamed, N. Abidi “Novel Tricomponenets composites Films From Polylactic Acid/ Hydroxyapatite/ Poly- Caprolactone Suitable For Biomedical Applications” *J. Mater. Environ. Sci.* 7 (3) (**2016**) 761-769.
- A. Bousskri, R. Salghi, A. Anejjar, M. Messali, S. Jodeh, O. Benali, M. Larouj, I. Warad, O. Hamed and B. Hammouti “The inhibition effect of 1-pentyl pyridazinium bromide towards copper corrosion in phosphoric acid containing chloride” *Portugaliae Electrochimica Acta* **2016**, 34(1), 1-21.
- L. Adardour, H. Lgaz, R. Salghi, M. Larouj, S. Jodeh, M. Zougagh , O. Hamed and M. Taleb “Corrosion Inhibition of Steel in phosphoric acid by Sulfapyridine: Experimental and Theoretical Studies” *Der Pharmacia Lettre*, **2016**, 8 (4):173-185.
- L. Adardour, H. Lgaz, R. Salghi, M. Larouj, S. Jodeh, M. Zougagh, O. Hamed and H. Oudda “Anti-corrosive properties of Sulfamethoxypyridazine on mild steel corrosion in 2M H 3 PO 4 solution: Experimental and theoretical studies” *Der Pharmacia Lettre*, **2016**, 8 (4):212-224.
- S. Jodeh, S. Al Masri, M. Haddad, O. Hamed, D. Jodeh, R. Salghi, S. Radi, J. Amarah, F. El-Hajjaji, I. Warad “Evaluation of potential Residue of Imidacloprid and Abamectin in Tomato, Cucumber and Pepper Plants after Sprayingusing High Performance Liquid Chromatography (HPLC)” *J. Mater. Environ. Sci.* 7 (3) (**2016**) 1037-1047.
- H. Lgaz, O. Benali, R. Salghi, S. Jodeh, M. Larouj, O. Hamed, M. Messali, S. Samhan, M. Zougagh and H. Oudda1 “Pyridinium derivatives as corrosion inhibitors for mild steel in 1M HCl: Electrochemical, surface and quantum chemical studies” *Der Pharma Chemica*, **2016**, 8(2):172-190.
- S Jodeh, J Amarah, S Radi, O Hamed, I Warad, R Salghi, A Chetouni, S Samhan, R Alkowni “Removal of methylene blue from industrial wastewater in Palestine using polysiloxane surface modified with bipyrazolic tripod receptor” *Mor. J. Chem.* 4 N°1 (**2016**)140-156.
- Othman A. Hamed, Firas Jaber, Emad M. Hamed, Kamel Adwan, Shehdeh Jodeh, Rachid Salghi, Haythe, Saadeh “New routes to prepare superabsorbent polymers free of acrylate cross-linker” *Iranian Polymer Journal*, 24 (10), 849-859, **2015.**

- K. Elmouaden, A. Chaouay, R. Oukhrib, O. Jbara, S. Jodeh, R. Salghi, O. Hamed, M. Hilali, L. Bazzi, B. Hammouti, S. Radi “Microbiological Pollution of Marine Environment of the Coastal of Agadir. Impact on the Corrosion of Mild Steel” *Int. J. Electrochem. Sci.*, 10, 7955 – 7965, **2015**.
- R. Salghi, D. Ben Hmamou, O. Benali, S. Jodeh, I. Warad, O. Hamed, Eno. E. Ebenso, A. Oukacha, S. Tahrouch, B. Hammouti “Study of the Corrosion Inhibition Effect of Pistachio Essential Oils in 0.5 M H₂SO₄” *Int. J. Electrochem. Sci.*, 10, 8403 – 8411, **2015**.
- O. Id El Mouden, A. Anejjar, R. Salghi, S. Jodeh, O. Hamed, I. Warad, M. Zougagh and R.S. Dassanayake “Inhibitive Action of Capparis Spinosa Extract on the Corrosion of Carbon Steel in an Aqueous Medium of Hydrochloric Acid” *Journal of Mineral Metal and Material Engineering*, 1, 1-7, **2015**.
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- A. Anejjar, R. Salghi, S. Jodeh, Y. Karzazi, I. Warad, R. Dassanayake, O. Hamed, A. Zarouk, B. Hammouti “Inhibition Effect of 6-bromo-3-nitro-2-phenylimidazol [1,2- α] pyridine on the Corrosion of C38 Steel in H₂SO₄ Solution” *Maghr. J. Pure & Appl. Sci.*, 1 N°1 (2015) 25-42.
- O. Id El Mouden, M. Errami, R. Salghi, H. Bouya, S. Jodeh, I. Warad, O. Hamed, R. Touzani “Disappearance of Azoxystrobin and difenoconazole in green beans cultivated in Souss Massa valley (Morocco)” *Maghr. J. Pure & Appl. Sci.*, 1 N°1 (2015) 11-17.
- Synthesis, characterization and thermal analysis of dipyridin2-ylmethanone oxime
Muneer Abdoh, Ismail Warad, Naveen Shivalingegowda, Neartur Krishnappagowda Lokanath, Rachid Salghi, Shehdeh Jodeh, Othman Hamid, Smaail Radi, Belker Hammouti “*Molecular Crystals and Liquid Crystals* 619(3):xxx-xxx · October 2015.
- M. C. Elbouchtaoui, B. Chebli, M. Errami, R. Salghi, S. Jodeh, I. Warad, O. Hamed, A. El Yamlahi “Efficacité du perydroxan contre deux champignons phytopathogènes *Botrytis cinerea* et *Penicillium digitatum* (Efficiency anti-fungal of perydroxan for *Botrytis cinerea* and *Penicillium digitatum*)” *J. Mater. Environ. Sci.* 6 (7), 1938-1943, **2015**
- Shehdeh Jodeh, Said Al Masri, Othman Hamed, Diana Jodeh Rachid Salghi, Smaail Radi and Ismail Warad “Evaluation of Imidacloprid and Abamectin Residues in Tomato, Cucumber and Pepper Plants using High Performance Liquid Chromatography (HPLC)” *International Journal of ChemTech Research* 7(6), **2015**.
- Othman A. Hamed, Shehdeh Jodeh, Nisreen Al-Hajj, Emad M. Hamed, Ahmed Abo-Obeid, Yusra Fouad “Cellulose acetate from biomass waste of olive industry” **Journal of Wood Science** 61(1) 45-52, **2015**.
- S. Jodeh, O. Hamed, M. Mohamed, T. Ben Hadda, B. Hammouti, R. Salghi, S. Radi, A. Abu Obaid And I. Warad “Removal of Phenol from Olive Industry Liquid Waste Using Polyitaconic Acid” *Asian Journal of Chemistry*; 27, (1), S15-S22, **2015**.
- S. Jodeh, O. Hamed, M. Mohamed, T. Ben Hadda, B. Hammouti, R. Salghi, S. Radi, A. Abu Obaid And I. Warad “Removal of Phenol from Olive Industry Liquid Waste Using Polyitaconic Acid” *Asian Journal of Chemistry*; Vol. 26, Supplementary Issue (2014), S15-S22

- Othman A. Hamed; Noha Mehdawia; Adham Abu Tahac; Emad M. Hamed; Mohammed A. Al-Nuri; Ayman S. Hussein “ Synthesis and Antibacterial Activity of Novel Curcumin Derivatives Containing Heterocyclic Moiety” Iranian Journal of Pharmaceutical Research, 12 (1): 47-56, **2013**.
- Hamed; Othman A.; Chmielewski; Harry J. “Method of making a pulp sheet of odor-inhibiting absorbent fibers” United State patent 8574683 B2, **2013**
- Hamed; Othman A.; Chmielewski; Harry J. “Cellulosic Fibers with Odor Control Characteristics” United State patent 8138106, **2012**.
- Hamed, Othman A; El-Qisairi, Arab; Qaseer; Hanan; Patrik, Henry M.; Danial, Becker “Asymmetric α -hydroxy ketone synthesis by direct ketone oxidation using a bimetallic palladium(II) complex” Tetrahedron Letters 53(22), 2699-2701, **2012**.
- Othman A. Hamed,^{a,*} Yusra Fouad,^a Emad M. Hamed,^b and Nisreen Al-Hajj ^a “Cellulose Powder From Olive Industry Solid Was” BioResources 7(3), 4190-4201, **2012**.
- Hamed, Othman A; Patrik, Henry M., Danial, Becker “Palladium (II)-Catalyzed Dicarboxymethylation of Chiral Allylic Alcohols: Chirality Transfer Affording Optically Active Diesters Containing Three Contiguous Chiral Centers”, Tetrahedron Letter, 51(27), 3517, **2010**.
- Hamed, Othman A. “Treatment Composition For Making Acquisition Fluff Pulp In Sheet Form” WO/**2006/088995**.
- Hamed, Othman A. “Chemically Stiffened Fibers In Sheet Form” United States Patent Application No. 20070270070.
- Chmielewski, Harry; Hamed, Othman A. J. “Liquid Distribution Mat Made of Enhanced Cellulosic Fibers” US 7,854,822 B2, **2011**.
- Hamed, Othman A.; Chmielewski; Harry J “Acquisition Fiber In Sheet Form With Low Degree Of Yellowing And Low Odor”, US Patent Application 20070020452
- Hamed, Othman A.; Chmielewski; Harry J. “Liquid Distribution Mat Made of Enhanced Cellulosic Fibers” US 7686921, **2010**.
- Chmielewski, Harry J.; Hamed, Othman A.; Haeussler, Michael "Plasticizing formulation for Fluff Pulp and Plasticized fluff pulp Products made Therefrom " WO Patent 200606022, **2006**.
- Hamed, Othman “ Superabsorbent Cellulosic Fibers and Method of Making the Same” USA Patent No. 6844066, **2005**
- Hamed, Othman, A; Chmielewski, Harry, J.; “Materials Useful in Making Acquisition Fiber in Sheet Form” USA Patent No. 0079361, **2005**.
- Hamed, Othman A.; Haeussler, Michael “Treatment composition for making acquisition fluff pulp in sheet form” USA Patent No. 0247419, **2005**.
- Hamed, Othman A.; Chmielewski, Harry J.; McBee, Dana B. “Chemically cross-linked cellulosic fiber and method of making same” USA Patent No. 0263258, **2005**.
- Hamed, Othman, A; Chmielewski, Harry, J.; “Materials Useful in Making Acquisition Fiber in Sheet Form” USA Patent No. **0079361**, **2005**.
- Hamed, O.A.; Sachinvala, N.D.; Winsor, D.L. “Synthesis and NMR characterization of 6-Phenyl-6-deoxy-2,3-di-O-methylcellulose]” *J. of Poly. Sci.: Part A: Chem. Poly. Ed.* 6 (13) **2002**.
- Hamed O; el-Qisairi A; Henry P M "Palladium(II)-catalyzed oxidation of aldehydes and ketones. 1. Carbonylation of ketones with carbon monoxide catalyzed by palladium(II) chloride in methanol."

The Journal of organic chemistry **2001**, 66(1), 180-5.

- Hamed, O.A.; Henry, P.M. "Palladium (II)-Catalyze Oxidation of Aldehyde and Ketones. Carbonylation of Ketones with Carbon-Monoxide Catalyzed by Palladium(II) Chloride in Methanol" *J. Org. Chem.* 66(1), 180-185, **2001**
- Vigo, Tyrone L.; Sachinvala, Navzer D.; Hamed, Othman A. "Facile preparations of carboxy-end-capped polyethylene oxides". Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, **2000**,
- Vigo, Tyrone; Sachinvala, Navzer D.; Hamed, Othman A.. Facile preparations of carboxy-endcapped polyethylene oxides (PEO). Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) 41(1), 144-145, **2000**.
- Sachinvala, N.D.; Hamed O.A.; Winsor, D.L. "The Characterization of tri-O-allyl and crotylcellulose by One and Two Dimensional NMR Methods" *J. Poly. Sci.: Part A: Poly. Chem. Ed.* 38,1889, **2000**.
- Hamed, O.A.; Henry, P.M. "Palladium (II) Catalyze Carbonylation of Ketones" *Tetrahedron Lett*, 41,3021, **2000**.
- Vigo, Tyrone; Sachinvala, Navzer D.; Hamed, Othman A. "Facile preparations of carboxy-endcapped polyethylene oxides (PEO)" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) , 41(1), 144-145, **2000**.
- Navzer (Nozar) Sachinvala, Othman Hamed, David L. Winsor, Karol Maskos, Casey Grimm, Tyrone L. Vigo, and Noelie R. Bertoniere" One-Step Conversion of Urea to Tertiary Amines" *J. Org. Chem.*, 65(26) 9234-9237, **2000**.
- Tregre, Gregory J.; Sachinvala, Navzer D.; Hamed, Othman A.; Winsor, David L.; Bertoniere, Noelie R. "Blends of carboxymethyl and diethylaminoethyl cottons". Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), CELL-075. CODEN: 67ZJA5 AN 1999:539909
- Sachinvala, N.D.; Hamed, O.A.; Winsor, D.L "New Liquid Epoxies Created from Cane Sugar" *Science Blog*, **June 10, 1999**.
- Hamed, O.A; Henry, P.M.; Thompson, C; Palladium(II)-Catalyzed Exchange and Isomerization Reactions. 17. Exchange of Chiral Allyl Alcohols with Hydroxide, Methoxide and Phenyl at High [Cl⁻]. Stereochemistry of the Wacker Reaction" *J. Org. Chem.*, 64, 7745-7750, **1999**.
- Sachinvala, N.D.; Hamed O.A.; Winsor, D.L. "Characterization of tri-O-methylcellulose by One and Two Dimensional NMR Methods" *J. Poly. Sci.: Part A: Poly. Chem. Ed.* 37(21), 4019, **1999**.
- Sachinvala, N.D.; Winsor, D.L., Hamed O.A.; "Rational Design of Cellulosic Fiber Insulation Materials" *Beltwide Cotton Conference 2*, 1359, **1999**.
- Hamed, O.; Henry, P.M. "Oxidation of Olefins by Palladium (II) (16). A New Palladium (II) Catalyze Asymmetric Chlorohydrin Synthesis" *Organometallics* **1998**, 17, 5184.
- Arab El-Qisairi; Hamed, O.; Patrick M. "A New Palladium (II)-Catalyzed Asymmetric Chlorohydrin Synthesis" *J. Org. Chem.* **1998**, 63(9), 2790.
- Hamed, O.; Thompson, C; Patrick M. "Stereochemistry of Wacker Reaction (15)- Evidence for Different Modes of Addition at High and Low [Cl⁻]. A Study Using Chirality Transfer" *J. Org. Chem.* **1997**, 62(21), 7082.
- Hamed, O.; Patrick M. "Oxidation of Olefins by Palladium (II). Oxidation of (R)-(-)-Z- and (R)-(-)-E-3-penten-2-ol using Several Nucleophiles to give Chiral -Substituted Ketones. A Simple Means of Finding Stereochemistries and Palladation of Olefins Using Chirality Transfer" *Organometallics*,

1997, *16*(22), 4903.