An-Najah National University

**Chemistry Department**

Prof. Othman Hamed

Distinguished Professor

ohamed@najah.edu

**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**

1. 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.

1. Ph.D. thesis - "Asymmetric Synthesis by Pd(II) Catalysis: Chirality Transfer and New Asymmetric Catalytic Systems"

Advisor - Professor Patrick M. Henry

**Continuing Educations**

1. **Coating Science for Coating Chemists.** Shelby Thames Polymer Science Research Center, University of Southern Mississippi, Mississippi, June 1998.
2. **Rheology, Thermal Analysis and Lab Scale Processing.** Haake, Atlanta, Georgia, April 2000.
3. **Master in Practical and Theoretical Aspects of Multiangle Light Scattering.** Wyatt Technology, Santa Barbara, California, June 2000.
4. **Increasing Human Effectiveness.** Rayonier, Jesup, Georgia, February 2000.
5. **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**”.**
* An-Najah National University/Deanship of scientific Research $5000 “Natural Product Based Cisplatin Analogs”.
* Palestinian Ministry of Education and Higher Education $15,000 “Approaches Toward Design and Synthesis of Curcumin-Based Diazepines Inhibitors for AMPA Receptors”.

**Awards**

1. **Hisham Hijjawii Award for applied science** <http://www.najah.edu/node/8768>**, December, 2011.**
2. **Achievement Award:** Rayonier Research Center, February 2013
3. **Achievement Award:** Rayonier Research Center, March 2006.
4. **Achievement Award:** Rayonier Research Center, March 2005.
5. **Quality Award:** Rayonier Research Center, March 2003.
6. **Employee of the Quarter:** For outstanding service and being the best and going the extra mile**,** Rayonier Research Center, June 2001.
7. **Best Teaching Assistant:** Loyola University of Chicago, June 1996.

**Employments**

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| **Years** | **Ranks** | **Institute** |
| **2022-** | Distinguished Professor | Chemistry Department, An-Najah National University |
| **2018-2022** | Professor | Chemistry Department, An-Najah National University |
| **2012-2018** | 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**  **1996-1997**  **1988-1990** | Post Doctoral Associate  Lecturer  Lecturer | USDA, New Orleans, USA  Loyola University Chicago  KFUPM, Dhahran, Saudi Arabia |

**Expertise**

1. Total synthesis of natural products with bioactivities
2. Thermoplastic/cellulose composites.
3. Thermal Bonding.
4. Fiber modification for applications in absorbent products
5. Superabsorbent polymers and fibers.
6. Polymers modification (derivatization, cross-linking, and graft *co*-polymerization).
7. Molecular Masses Determination of Polymers by SEC combined with triple detector (multiangle laser detector, optilab DSP, and viscoteck).
8. 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.
9. Structural elucidation by modern spectroscopic techniques (UV-Visible, FT IR, and multi-dimensional NMR).
10. Modern chromatographic techniques (HPLC, SEC, Gas-liquid, GCMS, Thin Layer, and Flash Chromatography).
11. Handling of air- and moisture-sensitive compounds (Schlenk line, glove box and glove bag).
12. Scale-up of bench processes.

**Accomplishments**

1. Development of polymer based antimicrobial reagesnts
2. Development of cellulose fiber with antimicrobial properties.
3. Developed a new method for making cellulose fiber with high permeability.
4. Developed a new superabsorbent material from naturally occurring monomers.
5. Asymmetric total synthesis of the antifungal natural product Partheniol.
6. Synthesis and complete characterization of novel palladium catalysis for asymmetric synthesis.
7. Developed a new superabsorbent fiber from cellulose fiber.
8. Developed cellulose fibers with improved liquid acquisition properties.
9. Developed cellulose fibers with anti-bacterial properties.
10. Developed cellulose fibers with reduced defiberization energy.
11. Developed new water miscible silicon polymers for fiber softening.
12. Developed cellulose fibers useful for making baby diapers and adult incontinent free of hard spots (
13. Synthesis and characterization of new epoxy monomers from naturally occurring and Petroleum monomers (patent application, USDA).
14. Synthesis and complete assignment of cellulose ethers by proton and carbon-13 and 2D NMR.
15. 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**

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| **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. |
| **Heterocyclic Chemistry** | 2021 | Ph.D. |
| **Polymer Chemistry** | 2021 | Ph.D. |
| **Analytical Organic Chemistry** | 2007-present | B.Sc. |
| **Special Topics In Organic Chemistry**  **Advanced Organic Chemistry**  **Physical Organic Chemistry**  **Special Topics 3 in Organic Chemistry**  **Organic Spectroscopy**  **Chemistry Research** | 2008-  2008-  2008  2009-  2018  2017- | M.S.  B.Sc.  B.Sc.  B.Sc.  B.Sc.  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 Diimne 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” graduated.
15. Shyma Taleeb “Cur Cumin Based Herero Cycles with Possible Dual Action Antibacterial Activity” graduated 2015.
16. Basema Khalaf “Synthesis of Three Dimensional Cellulose Diimne Polymer For Waste Water Purification” graduated.
17. Oswa Fare “DESIGN, SYNTHESIS AND BIOLOGICAL ACTIVITIES OF CURCUMIN BASED |ALKALOIDS” graduated, 2018.
18. Ten more students are currently working on their projects, 5 of joined my research group this year (2017-2018).

Ph.D. Students

1. Rola Alkerm Graduated 2020, “**Natural Based 1,4-Benzodiazepines as a Non-Competitive AMPA Receptor Antagonists”**
2. Rana Alkerm graduated 2020 **HETEROCYLCIC BASED CUCUMIN: DESIN, SYNTHESIS AND ANTICANCER EFFICAY AGAINST HELA CELLS**
3. Ghadeer Hanbali “**Assessment and removal of heavy trace   
   metals by magnetic multiwall carbon nanotube decorated by novel functionality in ground water in Jericho, Palestine, using ICP/MS” graduated 2020**
4. Bayan Khalaf “ **PURIFICATION OF WATER IN PALESTINE FROM PERSISTENT PESTICIDES USING NANOPARTICLES OF MODIFIED CELLULOSE Graduated 2020**
5. Eman Makarzeh “**NANOGRAPHENE OXIDE WITH LIPOHELIC AND ELCTOPHILIC GROUPS FOR CONTROLLED RELEASE OF ADAMANTANE CANCER DRUGS”**

**Active Participation in Scholarly Conferences**

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| **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 Detremining Modes of Palladation of Olefins Using Chirality Transfer |
| The 4th 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 1H and 13C Resonances in The Repeat Unit of Tri-O-Methylcellulosel" 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**

* Othman Hamed, Oswa Fares, Shaima Taleeb, Ghaleb Adwan, Haythem Saadeh, Shehdeh Jodeh “1,4-Bnezodiazepines From The Natural Product Curcumin: Design, Synthesis And Biological Activities” submitted to Journal of Chemistry-HINDAWI.
* Othman A. Hamed, Shehdeh Jodeh, Israa Dagher, R. Salghi, K. Azzaoui,Nisreen Al-Hajj, Wade Jodeh, I. Warad “Enzymatic Hydrolysis of Olive Industry Solid Waste Into Glucose, The Precursor Of Bioethanol” 37, \*\*\*\*, **2018**
* K.Azzaouia, Mejdoubi, A.Lamhamdi, S.Jodeh , O. Hamed M.Berrabah S.Jerdioui R.Salghic .Akartasse A.ErrichdÁ .Ríosef M.Zougag “Preparation and Characterization of Biodegradable Nanocomposites Derived from Carboxymethyl Cellulose and Hydroxyapatite” *Carbohydrate Polymer*, [167](http://www.sciencedirect.com/science/journal/01448617/167/supp/C), 1, 59-69, **2017**.
* S. Jerdioui1, L. L. Elansari1, E. Mejdoubi1, K. Azzaoui1, A. Lamhamdi, S. Jodeh, O. Hamed, A. Tahani, M. Zenkouar, A. Zarrouk ,Y. Brahmi “Physicochemical study of the effect of maturation time on the chemical composition of an oxygenated apatite” *Journal of Materials and Environmental Sciences* 8, (4) 1211-1219*,* **2017**
* Yang Hu, Othman Hamed, Rachid Salghi, Noureddine Abidi, Shehdeh Jodeh, Reham Hattb “Extraction and Characterization of Cellulose From Agricultural Waste Argan Press Cake” *Cellulose and Chemistry Research, 24, 2*, **2017**
* Laila Afia, Othman Hamed, Mohamed Larouj, Hassan Lgaz, Shehdeh Jodeh, Rachid Salghi “Novel Natural Based Diazepines as Effective Corrosion Inhibitors for Carbon Steel in HCl Solution: Experimental, Theoretical and Monte Carlo Simulations” *Transactions of the Indian Institute of Metals 70(9):*2319–2333, **2017.**
* Ahmed Elyahyaoui, Kawtar Ellouzi , Hamzeh Al Zabadi , Brahim Razzouki , Saidati Bouhlassa , Khalil Azzaoui , El Miloud Mejdoubi , Othman Hamed , Shehdeh Jodeh, and Abdellatif Lamhamdi “Adsorption of Chromium (VI) on Calcium Phosphate: Mechanisms and Stability Constants of Surface Complexes*” Appl. Sci*. 7, 222, **2017.**
* M. Lakrat, K. Azzaoui, S. Jodeh, N. Akartasse, E. Mejdoubi, A. Lamhamdi, M.Berrabaha, O. Hamed, B. Razzouki, M. Algarra “The removal of methyl orange by nanohydroxyapatite from aqueous solution: isotherm, kinetics and thermodynamics studies” *Desalination and Water Treatment 85* 237–249, **2017**
* M. Messalia. Lgaz, R. Dasanayakec, R. Salghib, S.Jodeh, N.Abidic, O. Hamed, “Guar gum as efficient non-toxic inhibitor of carbon steel corrosion in phosphoric acid medium: Electrochemical, surface, DFT and MD simulations studies” *Journal of Molecular Structure* 1145(5), 43-54, **2017**.
* N. Akartasse, E. Mejdoubi, B. Razzouki, K. Azzaoui, S. Jodeh, O. Hamed , M. Ramdani , A.

Lamhamdi, M. Berrabah, I. Lahmass, W. Jodeh and S. El Hajjaji. Natural product based

composite for extraction of arsenic (III) from waste water Chemistry Central Journal (2017)

11:33.

* 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.
* A. Jaafara, A. Boussaouda, S. Jodehb, K. Azzaouic, B. Hamed, R. Salghi, G. Hanbali, A. Rasem Hasan, B. Khalaf “Neutral red removal Using different techniques: Direct photolysis, UV/H2O2, Fenton and Photo-Fenton” *Der Pharma Chemica*, 8(18):345-349, **2016**
* 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 tripodal receptor” Mor. J. Chem. 4 (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**.
* S Jodeh1, R. Odeh, M. Sawalha, O. Hamed, R. Salghi, S. Radi, I. Warad “The Study of Mobility of Pb and Zn From New and Used Lubricant Engine Oil in Soil Using PVC Columns” *Arabian Journal of Chemical and Environmental Research* 2 (1)), 22–2*,* **2015.**
* Abderrazak Errich, Souad El Hajjaji, Laila Mandi, Mohamed Fekhaoui, Brahim Rezzouki, Shehdeh Jodeh, Khalil Azzaoui, Abdellatif Lamhamdi. Othman Hamed, Rachid Salghi6, A. Rasem Hasan, Ghadir Hanbali “Impact of Waste Water on The Physico-Chemical Quality of Water Sources In Bed of Oued Essaquia Elhamra In South of Morocco*” International Journal of Application or Innovation in Engineering & Management (IJAIEM)*  5, (9), **2016**
* 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. Salghi1, D. Ben Hmamou, O. Benali, S. Jodeh, I. Warad,O. Hamed, Eno. E. Ebenso, A. Oukacha5, 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**.
* 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 H 2SO4 Solution” Maghr. J. Pure &Appl. Sci., 1 (1), 24-42, **2015**.
* 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](http://link.springer.com/journal/10086) 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. Hammouti3, 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, Oth
* man A. “Chemically Stiffened Fibers In Sheet Form” United States Patent Application No. 20070270070.

1. Chmielewski, Harry; Hamed, Othman A. J. “Liquid Distribution Mat Made of Enhanced Cellulosic Fibers” US 7,854,822 B2, **2011**.
2. Hamed, Othman A.; Chmielewski; Harry J “Acquisition Fiber In Sheet Form With Low Degree Of Yellowing And Low Odor”, US Patent Application 20070020452
3. Hamed, Othman A.; Chmielewski; Harry J. “Liquid Distribution Mat Made of Enhanced Cellulosic Fibers” US 7686921, **2010**.
4. Chmielewski, Harry J.; Hamed, Othman A.; Haeussler, Michael "Plasticizing formulation for Fluff Pulp and Plasticized fluff pulp Products made Therefrom " WO Patent 200606022, **2006.**
5. 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](http://www.freepatentsonline.com/20050247419.html?highlight=hamed%20othman)**”** **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**.
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