

Jafar I Abdelghani, Ph.D.

Contact Information

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Nationality

Jordanian

Education:

- Ph.D. in Analytical/Material Chemistry, University of North Texas, Denton, TX(USA) 2014
- Master of Science in Chemistry, University of Jordan, Amman (Jordan) 2004
- Bachelor of Science in Chemistry, University of Jordan Amman(Jordan) 2000

Employments

- Since Sep 2015** Assistant professor at the Hashemite University, Faculty Of Science, Amman-Jordan
- Feb 2015-
Sep 2015** Assistant professor at the Philadelphia University, Faculty Of Pharmacy, Amman-Jordan
- Sep 2014-
Jan 2015** Analytical manager in the pharmaceutical research Unit (PRU) Amman- Jordan
- Jan 2014-
June 2014** Faculty assistant of the Chemistry Department at the University of Texas, Texas (USA)
- Jan 2010-
Dec 2013** Teaching assistant of the Chemistry Department at the University of Texas, Texas (USA)

**March 2006-
March 2009** Supervisor in bioequivalence center (Jordan Center for Pharmaceutical Research (JCPR), Amman-Jordan

**May 2004-
Feb 2006** Researcher in bioequivalence center (ACDIMA) Amman-Jordan

**Jan 2001-
Nov 2001** Analyst in Hikma pharmaceutical company Amman-Jordan

Awards and Prizes

- Received \$1000 Academic achievement Scholarship 2010
- Received student government association Raupe Scholarship as Travel Grant for attending ACS Conference – 2011
- Semiconductor Research Corporation Financial Aid for 2012

Areas of Research Interest

- **Graphene CVD/ making and transferring**
 - Construct and build **CVD** machine from scratch
 - Leading the graphene project growing and investigation for semiconductor proposes.
 - Optimize and operate the **CVD** machine to grow graphene on different conditions.
 - Create a method to transfer graphene to other substrate effectively and precisely.
- **Graphene applications studied**
 - Graphene hydrogenation detection using **FTIR**.
 - Investigate the adsorption of different gas like CO and NH₃ on graphene sheet using **QCM** technique.
 - Studied the corrosion inhibition effectiveness of graphene on different metals like Cu, Ni and Ru.

➤ **Electrocatalysts/PEM Fuel Cell**

- Develop a method to deposit the Bismuth on Ruthenium electrodes electrochemically
- Investigate the deposition condition and the effect of different parameters like ambient and anion effect.
- Electrochemical investigations of catalysts on oxygen reduction in PEM fuel cell
- Exploration of **ORR** electro-catalysts by using **RRDE** method

➤ **Plasma damage of ILD/low-k**

- Oxygen gas plasma time dependent was investigated using **XPS** and **FTIR**.
- Hydrogen gas plasma time dependent was investigated using **XPS**.
- **AFM** instrument used to check the surface features.

PUBLICATIONS

- Interaction of polychlorinated biphenyls with dissolved humic acid from Azraq (Jordan). Mahmoud A. Alawi ;FawwazKhalili and **JafarAbdelghani** Asian Journal of Water and Pollution, (2008) Vol 5(No. 1) : 45 - 48
- Simultaneous Determination of Triprolidine and Pseudoephedrine in Human Plasma by Liquid Chromatography-ion trap mass spectrometry. Ashok Shakya, Tawfeek Arafat, Ahmed Abuawwad, MontherMelhim, **JafarAbdelghani**, MahmoodYacoub. *J Chromatogr B Analyt Technol Biomed Life Sci.* 2009, 877(32),4071-8
- Quantification of Tamsulosin in Human Plasma by High-Performance Liquid ChromatographyCoupled with Electrospray Tandem Mass Spectrometry. Ashok. Shakya, Tawfeek Arafat, Ahmed Abu-Awwad, **JafarAbdelghani**, MontherMelhim. *ActaChromatographica* 22(2010)1, 99–116.
- Interfacial Characterization of Post Etch Polymer Residues and Plasma Treated Cu Surfaces related to Advanced Cu Interconnects. SirishRimal, Simon Koskey, Tamal Mukherjee, ArindomGoswami, **Jafar Abdelghani**, Nick Ross, Oliver Chyan* . SEMICON® Korea 2013 SEMI® Technology Symposium (STS).

- Evaluation of Plasma Damage to Low-k Dielectric Trench Structures by Multiple Internal Reflection Infrared Spectroscopy, SirishRimal, Tamal Mukherjee, **JafarAbdelghani**, ArindomGoswami, Oliver Chyan*.” ECS Solid State Letters, 3 (3) N1-N4 (2014)”.
- Competitive Removal of Four Colorants by Biochar: Application of Partial LeastSquares-Kernel Calibration in Competitive Adsorption Studies, AymanIssa, Yahya S. Al-Degs, Anas Y. Al-Reyahi, Amjad H. El-Sheikh, **Jafar Abdelghani**, Alan P. Newman. Water, Clean – Soil, Air, Water 2017, 45 (9999).
- Simultaneous Determination and Stability Assessment of Metformin and Sitagliptin in Pharmaceutical Form by High Performance Liquid Chromatography. **Jafar I. Abdelghani**, Fawaz I. Deabas, Ali M. Qaisi, Khalid Shadid, EyadS. M.Abu-Nameh. *Jordan Journal of Pharmaceutical Sciences, Volume 10, No. 2, 2017.*
- Comprehensive Screening of Group-III Food Additives in Easy-to- Prepare Soft DrinksUsing Liquid Chromatography, Ayman Issa, Yahya S. Al-Degs,**JafarAbdelghani**,Anas Y. Al-Reyahi , Amjad H. El-Sheikh. submitted
- Interaction of some phthalate compounds used in cosmetics with Humic acid, **JafarAbdelghani**, FawwazKhalili, Ola Aljoulani. Under submission
- EQCM and XPS Study of Bismuth Underpotential Deposition on Ruthenium,Lin, Po-Fu, **Abdelghani, Jafar**, Taylor Daniel, Chyan, Oliver M*. “Under submission”.

Presentation

- Synthesis of high quality graphene monolayer by thermal chemical vapor deposition, **Abdelghani, Jafar I***, Chyan, Oliver, Simon Koskey. Abstract submitted ACS, 2011 at Austin, USA.
- Electrochemical quartz crystal microbalance and X-ray photoelectron spectroscopy study of bismuth underpotential deposition on ruthenium, Lin,

Po-Fu, **Abdelghani, Jafar**, Taylor Daniel, Chyan, Oliver M. abstract submitted ACS, 2011 at Austin, USA.

Other skills and training

- Worked as a lab coordinator for 3years
- Teaching various chemistry labs for 5years
- Knowledgeable in new method devolvement and validation using various techniques
- Extensive experience in using **LC/MS/MS, UPLC, HPLC, UV, fluorescence, and ECD**
- Skilled in using **PVD** instrument such as sputtering, thermal evaporation, and **CVD**
- Experience in thin film characterization technique such as **XPS, SEM, AFM**, four point probes, spectroscopic techniques such as **ATR-FTIR**, and Raman
- Proven problem solving and analytical skills in a team work environments (**ATMI, Intel, and TEL**)
- Experienced in cell and electrode design for multi-purpose applications
- Training course in using API LC/MS/MS 3000

Computer Skills

MS office, WordPerfect, Origin, Peakfit, Windows, Excel, Front page, Powerpoint Scifinder Scholar, Science Direct

Doctoral Research:

Titled of the PhD Dissertation: "Interfacial Characterization of Chemical Vapor Deposition (CVD) Grown Graphene and Electrodeposited Bismuth on Ruthenium Surface" Advisor (Dr. Oliver Chyan)

M.S Research:

Titled of the Master Thesis "Interaction of Poly chlorinated Biphenyl (PCBs) with Dissolved Humic Acid (HA) " Advisors (Dr. Mahmoud Alawi and Dr. Fawwaz Khalili)

Languages

- Arabic (Excellent)
- English (Excellent)