

Resume



Personal Information:

Name : Yahya Salem Al-Degs (يحيى سالم احمد الدقس)
Date of Birth : 12-9-1971
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Citations: : 3800 (Scopus)

Education:

- **Ph.D.** in Chemistry – Analytical and Industrial Applications, 2000, School of Chemistry and Chemical Engineering. The Queen’s University of Belfast, Belfast, UK.
Thesis Title: “Adsorption of Anionic Reactive Dyes on Activated Carbon from Aqueous Solution”
- **M.Sc.** in Analytical Chemistry, 1995, School of Chemistry, University of Jordan. Thesis Title: “Surface Modification of Diatomaceous Earth from Al-Azraq Area” (79.4%, Very Good)
- **B.Sc.** in Chemistry, 1992, School of Chemistry, Yarmouk University (81.4%, Very Good)
- **General Secondary Certificate.** 1988, Jordan, (88.9%)

Employment History:

<u>Place of Work</u>	<u>Post</u>	<u>Period</u>
The Hashemite University (Jordan)	Full Professor	Feb. 2018 - Now
The Hashemite University (Jordan)	Associate professor	Sep. 2014 - Now
Salman Bin Abdul-Aziz University (Saudi Arabia)	Associate professor (sabbatical leave)	Sep. 2013 - Sep. 2014
The Hashemite University (Jordan)	Associate professor	Dec. 2011 - Sep. 2013
The Hashemite University (Jordan)	Assistant professor	Sep. 2004 - Dec. 2011
The Hashemite University (Jordan)	Part-time Lecturer	July 2002 - Sep. 2004.
Al-Isra University (Jordan)	Assistant Professor	Feb. 2001 - July 2002.
Royal Scientific Society (Jordan)	Researcher	May 1995 - Jan. 1998.

Teaching Experience:

During my work at Al-Isra and The Hashemite Universities, I acquired a good background in teaching the following undergraduate courses dealing with the following subjects:

1. General Chemistry.
2. Analytical Chemistry.
3. Practical Analytical Chemistry.
4. Environmental Analytical Chemistry.
5. Instrumental Analysis.
6. Practical Instrumental Analysis.

7. Physical Pharmacy (physical chemistry for pharmacists).

Research Experience:

As a researcher at Royal Scientific Society (industrial chemistry centre), I involved in various research activities, involving the following topics:

1. Soil Chemical Analysis.
2. Food Analysis.
3. Water Analysis.

During my research in United Kingdom, I acquired a good experience in preparation of activated carbon from many carbonaceous materials.

Current Research:

During my work at The Hashemite University I have started the following research areas in participation with my colleagues:

1. Application of second-order multivariate calibration methods (PARAFAC, ATLD, SWALTD, N-PLS, and U-PLS) in chemical analysis including food and pharmaceutical analysis.
2. Developing new analytical procedures for determination of heating values of common fuels and different carbonaceous materials.
3. Developing new chromatographic procedures for determination of melamine, colouring agents, antioxidants, and preservatives in food and food products.
4. Application of Artificial Neural Networks in chemical analysis and for clustering purposes.
5. Application of first-order multivariate calibration methods (CLS, ILS, PCR, PLS-1 & 2, and NAS-based methods) for simultaneous determination of organic pollutants (dyes, pesticides, and detergents) in wastewater and active ingredients in drugs formulations.
6. Application of natural Jordanian silicate adsorbents (zeolite, clay, and diatomite) in metals and organics adsorption and separation.
7. Developing chromatographic supports from raw Jordanian diatomite and other natural silicate minerals.
8. Solid-phase extraction of trace metals using activated carbon, multiwalled nanotube activated carbon and molecularly imprinted polymers (MIP).

Funded Projects:

The following projects were funded by HU and other sources:

1. Title: Preparation and Utilization of Electrodes Modified with Naturally – Occurring Jordanian Silicates. Funded by *The Hashemite University* (2005), 3690 JD.
2. Title: Selective Extraction of Harmful Dyes from Wastewater Utilizing Polar Functionalized Molecularly Imprinted Polymers: An Environmental Study. Funded by *The Hashemite University* (2007), 2900 JD.
3. Title: Solid – phase Extraction and Simultaneous spectrophotometric determination of trace amounts of cationic dyes using multivariate regression Funded by *The Hashemite University* (2007), 2800 JD.

4. Title: Selective adsorption of sulphur compounds in diesel oil using novel Jordanian clay adsorbents. Funded by Ministry of Higher Education and Scientific Research (Scientific Research Fund) (Dec. 2008), 84,000 JD.
5. Title: Metals recovery from petroleum fly ash produced in Jordanian electrical power stations. Funded by The higher council for science and technology (Scientific Research Fund) (June 2009), 30,000 JD.
6. Title: Structural Elucidation of Chemical – Real Time Monitoring/Analyzing Outcomes of Chemical Reactions, Reaction Kinetics and Mechanisms using Nuclear Magnetic Resonance NMR, Funded by The Hashemite University (2011), 210, 000 JD.
7. Title: Assessment of the Adsorption and Electrochemical Performance of Microwave-Heated Natural Silicate Minerals. Funded by The Hashemite University (2011), 2750 JD.
8. Title: Modification of wood surface using some metal oxides and magnetite solid phase extraction of some metal ions from aqueous solution. Funded by The Hashemite University (2016), 19,500 JD.
9. Title: Novel physical vapour deposition (PVD) of metal and metal oxides on graphene for magnetic solid phase extraction of common pollutants. Funded by The Hashemite University (2017), 95,000 JD
10. Title: Leaching of heavy metals from E-waste under real-life landfill conditions to assess their impact on the environment. Funded by The Hashemite University (2018), 106,000 JD

Supervising Master Students:

I supervised many students toward their master degree during my academic carrier:

1. Title: Preparation and Utilization of Electrodes Modified with Naturally-Occurring Jordanian Silicate in Electroanalysis (The Hashemite University, 2008). Student: Nanacy Al-Rabady, **Co-supervisor**.
2. Title: Preconcentration Determination of Organic Pollutants using Solid-Phase Extraction with Conjunction of HPLC and Multivariate calibration (The Hashemite University, 2009). Student: Asma Al-Mallah. **Main-supervisor**.
3. Title: Development of Digestion and Preconcentration Procedure of Mercury in Phosphate Ore (The Hashemite University, 2009). Student: Randa Al-Asad. **Co-supervisor**
4. Title: Evaluation of Date Seeds as Solid Extractants for Pesticides from Water (The Hashemite University, 2010). Student: Saed Jaber Tayser. **Main-supervisor**.
5. Title: A modified analytical method for determination of Erythrosine (E127) in different matrices. (Al-albays University, 2010). Student: Samer Abu-alrub. **Co-supervisor**.
6. Title: Preparation and Utilization of Electrodes Modified with Naturally-Occurring Jordanian Clays in Electroanalysis, Based on their Adsorptive Properties Studies. (The Hashemite University, 2012) Student Amal Olymat. **Co-supervisor**.
7. Title: Determination of melamine in liquid and powder milk using liquid chromatography with photodiode array detection. (The Hashemite University, 2012). Student: Assam Abo-Wardeh. **Main-supervisor**.
8. Title: Application of Multivariate Calibration for Quantification of Paracetamol, Chlorpheniramine Maleate and Pseudoephedrine Hydrochloride in a Marketed Formulation. Student: Eman Abo-Sayleek. (The Hashemite University, 2016). **Main-supervisor**
9. Title: Quantification of Amoxicillin in Different Drug Formulations using Multivariate Calibration. (The Hashemite University, 2016). Student: Duaa Harb. **Main-supervisor**
10. Title: Activation of Natural Jordanian Clay by Different Activators to Enhance Adsorption of Pollutants from Solution. (The Hashemite University, 2016). Student: Mona Hindi. **Co-supervisor**

11. Title: Extraction of Selected Heavy Metals from Local Spent Oil Shale and Oil Shale Ash. Student: Fadia Musleh (The Hashemite University, 2016). **Co-supervisor**
12. Title: Determination of Paracetamol and diphenhydramine hydrochloride active pharmaceutical ingredients in a commercial formulation by multivariate calibration Student: Reema Omair (The Hashemite University, 2017). **Main-supervisor.**
13. Title: Assessment of Food Colorants Usage in Highly Consumed Foodstuffs in Jordan by Application of Different Analytical Techniques. Student: Ammar AL-Asafrah (The Hashemite University, 2017). **Main-supervisor.**
14. Title: Development of New Method for Determination of the Active Ingredients in Cold and Flu Pharmaceutical Formulation. Student: Musab Al-Ghodran (The Hashemite University, 2017) **Main-supervisor.**
15. Title: Accurate Quantification of Antioxidants in Processed Food Matrices and Estimation of Daily Intake by Young Consumers Student: Manar Adi (The Hashemite University, 2018) **Main-supervisor.**
16. Title: Accurate Quantification of Artificial Sweeteners in Highly Consumed Processed Foodstuff using Different Analytical Techniques. Student: Amani AL-Zghool (The Hashemite University, 2018) **Main-supervisor.**
17. Title: Accurate Determination of Preservatives in Highly Consumed Processed Foodstuff using Different Analytical Techniques. Student: Khaled Al Zaiid. (The Hashemite University, 2020) **Main-supervisor.**
18. Title: Extraction of organic matters from oil shale using different solvent extraction techniques. Student: Saif Al-Zawahrah(The Hashemite University, 2020). **Main-supervisor.**

Member in examination committees:

I have been an internal and external examiner for many local master theses:

1. Title: Study on the Inclusion Complexes of Water Insoluble Drugs with natural and Modified Cyclodextrins (The Hashemite University, 2005). Student: Lamis Mohammed Omar.
2. Title: Development of preconcentration method for some pesticides in water samples using carbon nanotubes prior to high performance liquid chromatographic analysis (The Hashemite University, 2007). Student: Ahmad Aqel Insisi
3. Title: Development of a Preconcentration Method of Phenols from Aqueous Solution Medium (The Hashemite University, 2009) Student: Maisa Khaled Al-Jafari
4. Title: Adsorption of Sulphur Compounds in Jordanian Diesel Fuel by Jordanian Bentonite. (Jordan University, 2009). Student: Mohammed Ali Sultan
5. Title: Removal of nitrate ions from drinking water using local lemon wood charcoal and olive seeds charcoal. (Jordan University, 2009). Student: Mohammed Mostafa Al-Jboor.
6. Title: Adsorption of Sulphur Compounds from Jordanian Diesel Fuel using Jordanian Zeolite. (Jordan University, 2010). Student: Faisal Omar Mustafa.
7. Title: Developing a New Method for Separation of Cr(III) and Cr(VI) in Environmental Samples using Olive Tree By-products (The Hashemite University, 2010). Student: Malek Abu Hilal.
8. Title: Development of new method for solid phase extraction of phenols from aqueous medium. (The Hashemite University, 2011). Student: Abdullah Mohammad Al-Zawahrah.
9. Title: Complexes of Lithium with different binary ligands systems and their applications in synergistic extraction of lithium. The Hashemite University. Student: Amneh Shtaiwi (2011).
10. Title: Developing a model for a "Cause and Effect" Diagram (Fishbone Model) to Characterize Uncertainty in the Measured Pharmacokinetic Parameters from Concentration-

- Time Profiles. (University of Jordan, 2011). Student: Zahra'a "Mohammad Hamad" Ghanameh.
11. Title: Determination of Aluminium concentrations in traditional Jordanian meals and drinks. The Hashemite University 2012. Student: Karema Yousef Misef.
 12. Title: Speetrophotmetric Method for Determination of Ammonia in Industrial Water Using Ninhydrin. Al-albays University 2012. Student: Khaerieh Al-Zboun.
 13. Title: Spectrophotometric method for determination of chromium ion in aqueous solution using ninhydrin. Al-albays University 2015. Student: Tiba Rahoomi
 14. Title: Kinetics Study of Competitive Adsorption of Food Colorants on Natural Jordanian Clay. The Hashemite University 2015. Student: Huda Abdullah Hussein Al Masri.
 15. Title: Complexes of lithium with organosulfur and organophosphorous ligands and their applications in liquid-liquid extraction of lithium. The Hashemite University 2016. Student: Enas Madi
 16. Title: Evaluation of new multi-walled carbon nanotubes-titanium dioxide composites for environmental applications. The Hashemite University 2016. Student: Anas Awad.
 17. Title: Mixed-ligand Ruthenium (II) complexes build from azoimine-pyridine oxime and pyridine methyl oxime-type ligands: Spectroscopic, electrochemical properties, structure, DFT studies and catalytic activity. The Hashemite University 2017. Student: Sally Abu-Hmaid 2017
 18. Title: Preparation and characterisation of modified magnetic olive wood sorbents for magnetic solid phase extraction of some metal ions from aqueous medium. Hashemite University 2017. Student: Rawan Al-Salameen.
 19. Title: Effect of some physical and chemical treatments of cypress wood on its solid phase extraction ability of some metal ions from water. Hashemite University 2017. Student: Anwar Shudayfat
 20. Title: Utilizing limestone sawing sludge in industrial flue gas desulfurization. Hashemite University 2017. Student: Hamzeh Mashaqbeh.
 21. Title: Determination of mineral content in selected types of pollen grain by ICP-OES. Al-Balqa' Applied University 2018. Student: Hamzeh Al-Dukaini.
 22. Title: The use of magnetic carbon nanotubes for solid phase extraction of some non-steroidal anti-inflammatory drugs from pharmaceutical-industries. Hashemite University 2018 Student: Rania Qawariq.
 23. Title: Effect of adding Schiff base on extraction of metal ions from water using magnetic adsorbents. Hashemite University 2018 Student: Dua`a Tahboub.
 24. Title: Removal of some metal ions onto insolubilized humic acid from Iraqi soil. Al al-Bayt University 2018. Student: Baraa Aldulaimy.
 25. Title: Cucurbiturils as ionic liquid receptors in water. Hashemite University 2019. Student: Husam Abed Al-Fattah.
 26. Title: The use of modified graphene for adsorption and magnetic solid phase extraction of phthalate product prior to their HPLC determination. Hashemite University 2019. Student Rami Freihat.
 27. Title: Development of New HPLC Method for Analyzing Drugs Used in H-Pylori Treatment. The University of Jordan 2020. Student: Rawan Hussin Al- Faqeer.

Publications in Refereed Journals:

1. Ramia Z. Al Bakain, Yahya S. **Al-Degs**, James V. Cizdziel, Mahmoud A. Elsohly. Linear Discriminant Analysis based on Gas Chromatographic Measurements for Geographical prediction of USA medical domestic Cannabis. *Acta Chromatographica* 2020 (accepted)
2. Ramia Z. Al Bakain, Yahya S. **Al-Degs**, James V. Cizdziel, Mahmoud A. Elsohly. Comprehensive chromatographic profiling of cannabis from 23 USA States marketed for medical purposes. *Acta Chromatographica* 2020 (accepted)
3. Abdelghani, J.I., **Al-Degs**, Y.S., Issa, A.A. Rapid and reliable chromatographic method to monitor coloring agents in highly consumed beverages. *Journal of Food Processing and Preservation* 2020
4. Al Bakain, R.Z., **Al-Degs**, Y.S., Cizdziel, J.V., Elsohly, M.A. Comprehensive classification of USA cannabis samples based on chemical profiles of major cannabinoids and terpenoids. *Journal of Liquid Chromatography and Related Technologies* 43, 172-184, 2020.
5. Salameh, B.A., **Al-Degs**, Y.S., Abu Safieh, K.A., AL-Zghool, A.W. Novel application of multivariate standard addition method based on net analyte signal for quantification of artificial sweeteners in complex food matrices. *Journal of Food Measurement and Characterization* 14 (1), 78-87, 2020
6. Amjad H.El-Sheikh, Rawan M.Al-Salamin, Hiba S.Alshamaly, Dua'a M.Tahboub, Yahya S. **Al-Degs**, Ismail I.Fasfousa, Nabil N.Al-Hashimi, Jafar I.Abdelghani. Effect of varying deposition conditions of magnetite on sawdust on the physiochemical properties of the prepared composites. *Journal of Environmental Chemical Engineering* 7, 2019.
7. Abdelghani, J.I., **Al-Degs**, Y.S., El-Sheikh, A.H., Fasfous, I.I., Al-Asafrah, A.A. Quick monitoring of coloring agents in highly consumed candies using multivariate calibration. *Arabian Journal of Chemistry* 13, 4228-4236, 2020.
8. **Al-Degs**, Y.S., El-Sheikh, A.H., Harb, D.M.. Accurate quantification of amoxicillin in different drug formulations using advanced chemometric methods. *Jordan Journal of Pharmaceutical Sciences* 13, 19-27, 2020.
9. Al-Saqarat, B.S., **Al-Degs**, Y.S., Musleh, F.M., Dawoud, J.N., Sunjuk, M.S. Structural characterization of shale oil obtained by Soxhlet extraction. *Environmental Progress and Sustainable Energy* 38, e13234, 2019.
10. Abdelghani, J.I., Khalili, F.I., **Al-Degs**, Y.S., Abu-Nameh, E.S. Studying competitive retention of phthalate esters by humic acid under multi-variable experimental design optimization: Interaction between experimental factors. *Desalination and Water Treatment* 150, 320-330, 2019.
11. Aylin Alin, Claudio Agostinelli, Georgi Gergov, Plamen Katsarov, **Yahya Al-Degs**. Robust multivariate diagnostics for PLSR and application on high dimensional spectrally overlapped drug systems. *Journal of Statistical Computation and Simulation* 89, 966-984, 2019.
12. **Yahya S Al-Degs**, Amjad H. El-Sheikh, EmanA. Abu Saaleek, Reema A. Omeir, Musab A. Al-Ghodran. Combination of Cumulative Area Pre-Processing and Partial Least Squares for Handling Intensely Overlapping Binary and Ternary Pharmaceutical Drug Systems. *Acta Pharmaceutica Scientia*. 57, 161-182, 2019.
13. G. Gergov, A. Alin, P. Katsarov, V. Simeonov, D. Yankov, **Y. Al-Degs**. Net analyte signal-based methods for the simultaneous determination of paracetamol, propyphenazone and caffeine by UV spectrophotometry. *Bulgarian Chemical Communications* 50, 265 – 273, 2018

14. P. Katsarov, G. Gergov, A. Alin, B. Pilicheva, **Y. Al-Degs**, V. Simeonov and M. Kassarova. Advanced spectrophotometric chemometric methods for resolving the binary mixture of doxylamine succinate and pyridoxine hydrochloride. *Acta Pharmaceutica* **68**, 61–73, 2018.
15. G. Gergov, A. Alin, M. Doychinova, M. De Luca, V. Simeonov, **Y. Al-Degs**. Assessment of different PLS algorithms for quantification of three spectrally overlapping drugs. *Bulgarian Chemical Communications* **49**, 410–421, 2017
16. Amjad H. El-Sheikh, Yahya S. **Al-Degs**, Asma'a H. Abu-Wardeh and Mohammad A. Al-Ghouti. Quantification of melamine in milk and dairy products by liquid chromatography after a simple sample clean-up procedure. *Journal of Food Processing and Preservation*. **41**, 12867, 2017.
17. Ramia Z. Al Bakain, Yahya **Al-Degs**, Bertyl Andri, Didier Thiébaud, Jérôme Vial, Isabelle Rivals. Supercritical Fluid Chromatography of Drugs: Parallel Factor Analysis for Column Testing in a Wide Range of Operational Conditions. *Journal of Analytical Methods in Chemistry*. e- 5340601 , 2017
18. B. S. Al-Saqarat, K. M. Ibrahim, F.M. Musleh, Y.S. **Al-Degs**. Characterization and utilization of solid residues generated upon oil and heat production from carbonate-rich oil shale. *Environmental Earth Science* **76**, 264, 2017.
19. Ayman Issa, Yahya S. **Al-Degs**, Amjad H. El-Sheikh, Anas Y. Al-Reyahi, Ramia Z. Al-Bakain, Jafar Abdelghani, Alan P. Newman. Application of Partial Least Squares-Kernel Calibration in Competitive Adsorption Studies Using an Effective Chemically Activated Biochar. *CLEAN - Soil, Air, Water* **45**, 333, 2017.
20. Mohammad A. Al-Ghouti, Yahya S. **Al-Degs**, Ayman A. Issa, Ramia Z. Al Bakain, Majeda Khraisheh. Mechanistic and Adsorption Equilibrium Studies of Dibenzothiophene-Rich-Diesel on MnO₂-Loaded-Activated Carbon: Surface Characterization. *Environmental Progressing and Sustainable Energy* **36**, 903-913, 2017
21. Mahmoud Abu-Ghoush, Ismail Fasfous, Yahya **Al-Degs**, Murad Al-Holy, Ayman A. Issa, Anas Y. Al-Reyahi, Abdel Aziz Alshathri. Application of Mid-Infrared spectroscopy and PLS-Kernel Calibration for Quick Detection of Pork in High Value Meat Mixes. *Food Measure* **11**, 337–346, 2017.
22. A.A. Issa, H. M. Abdel-Halim, Y.S. **Al-Degs**, H.A. Al-Masri. Application of Multivariate Calibration for Studying Competitive Adsorption of Two Problematic Colorants on Acid Activated-Kaolinitic Clay. *Research on Chemical Intermediates* **43**, 523–544, 2017.
23. Mohammad A. Al-Ghouti, Ayman A. Issa, Bety S. Al-Saqarat, Anas Y. Al-Reyahi, Yahya S. **Al-Degs**. Multivariate Analysis of Competitive Adsorption of Food Dyes by Activated Pine Wood. *Desalination and Water Treatment* **57**, 27651–27662, 2016.
24. Yahya S. **Al-Degs**, Amjad H. El-Sheikh, Ramia Z. Al-Bakain, Alan P. Newman, Mohammad A. Al-Ghouti. Conventional and upcoming sulfur cleaning technologies for petroleum fuel: A Review. *Energy Technology* **14**, 679-699, 2016.
25. Ismail I. Fasfous, Yahya S. Al-Degs, Asmaa M. Mallah. Assessment of different partial least squares variants for determination of binary-drug system exhibiting intense spectral overlap. *Indian Drugs* **53**, 26-37, 2016.
26. Ramia Z. Al Bakain, Yahya S. **Al-Degs**, Amjad H. El-Sheikh, Sharif Arar. Spectrophotometric Determination of Melamine in Liquid Milk by Multivariate Second Order Calibration. *Current Analytical Chemistry* **12**, 74-84, 2016.

27. Ramia Z. Al Bakain, Yahya S. **Al-Degs**, Amjad H. El-Sheikh, Anas Y. Al-Reyahi , Asma'a H. Abu-Wardeh. A Quick Detection of Melamine Adulteration in Milk and Dairy Products using First-Order Multivariate Calibration. *Journal of Food Processing and Preservation* 39, 2718-2727, 2015.
28. Yahya S. **Al-Degs** and Mohammad A. Al-Ghouti. Influence of Diesel Acidification on Dibenzothiophene Removal: A New Desulfurization Practice. *Separation and Purification Technology* 139, 1-4, 2015.
29. Mohammad A. Al-Ghouti and Yahya S. **Al-Degs**. A Novel Desulphurization Practice Based on Diesel Acidification Prior to Activated Carbon Adsorption. *The Korean Journal of Chemical Engineering* 32, 685-693, 2015.
30. Kayed A. Abu Safieh, Yahya S. **Al-Degs**, Mahmoud S. Sunjuk, Abdoullah Saleh, Mohammad A. Al-Ghouti. Selective Removal of Dibenzothiophene from Commercial Diesel Using Manganese Dioxide Modified Activate Carbon: A Kinetic Study. *Environmental Technology* 36, 98-105, 2015.
31. Ayman A. Issa, Yahya S. **Al-Degs**, Kholoud Mashal, Ramia Z. Al-Bakain. Fast Activation of Natural Biomasses by Microwave Heating. *Journal of Industrial and Engineering Chemistry* 21, 230-238, 2015
32. Kholoud Mashal, Mohammed Salahat, Mohammed Al-Qinna, Yahya S. **Al-Degs**. Spatial distribution of cadmium concentrations in street dust in an arid environment. *Arabian Journal of Geosciences* 8, 3171–3182, 2015.
33. Ramia Z. Al-Bakain, Yahya S. **AL-Degs**, Ayman A. Issa, Saadi Abdou; Jawad, Kayed Abu Safieh, Mohammad A. AL-ghouti. Activation of Kaolin with Minimum Solvent Consumption by Microwave Heating. *Clay Minerals* 49, 667-681, 2014.
34. Mohammad A. Al-Ghouti, Yahya S. **Al-Degs** Selective Removal of Organosulphur Compounds from Diesel using Mn-Loaded-Activated Carbon. *Energy Technology* 2, 802-810, 2014.
35. Yahya S. **Al-Degs**, Ayoub Ghrir, Hani Khoury, Gavin M. Walker, Mahmoud Sunjuk, Moh A. Al-Ghouti. Characterization and Utilization of Fly Ash of Heavy Fuel Oil Generated in Power Stations. *Fuel Processing Technology* 123, 41-46, 2014.
36. Bassam El-Eswed, Mahmoud Sunjuk, Yahya S. **Al-Degs**, Amneh Shtaiwi. Solvent extraction of Li⁺ using organophosphorus ligands in the presence of ammonia. *Separation Science and Technology* 49, 1342-1348, (2014).
37. Kholoud Mashal, Yahya S. **Al-Degs**, Mohammed Al-Qinna, Mohammed Salahat. Elucidation of Phosphorous Sorption by Calcareous Soils using Principal Component Analysis. *Chemistry and Ecology* 30, 133-146, 2014.
38. Ayman. A. Issa, Yahya. S. **Al-Degs**, Mohammad A. Al-Ghouti, Amal A.M. Olimat. Studying Competitive Sorption Behavior of Methylene Blue and Malachite Green using Multivariate Calibration. *Chemical Engineering Journal* 240, 554-564, 2014.
39. Amjad H. El-Sheikh, Yahya S. **Al-Degs**, Jamal A. Sweileh, Adi J. Said. Separation and flame atomic absorption spectrometric determination of total chromium and chromium (III) in phosphate rock used for production of fertilizer. *Talanta* 116, 482-487, 2013.
40. Amjad H. El-Sheikh, Yahya S. **Al-Degs**. Spectrophotometric determination of food dyes in soft drinks by second order multivariate calibration of the absorbance spectra-pH data matrices *Dyes and Pigments* 97, 330-339, 2013.

41. T. Magee, W. McMinn, G. Farrell, L. Topley, Yahya S. **Al-Degs**, M. Khraisheh, G. Walker. Moisture and Temperature Dependence of the Dielectric Properties of Pharmaceutical Powders. *Journal of Thermal Analysis and Calorimetry* 111, 2157-2164, 2013.
42. Yahya S. **Al-Degs**, Amjad H. El-Sheikh, Saed T. Jaber. Application of heated date seeds as a novel extractant for diuron from water. *Arabian Journal of Chemistry* 6, 121-129, 2013.
43. Yahya S. **Al-Degs**, Jamal A Sweileh. Simultaneous determination of five commercial cationic dyes in stream waters using diatomite solid-phase extractant and multivariate calibration. *Arabian Journal of Chemistry* 5, 219-224, 2012.
44. Yahya S. **Al-Degs**, Amjad H. El-Sheikh, Ayman A. Issa, Mohammad A. Al-Ghouti, Mahmoud Sunjuk. A Simple and accurate analytical method for determination of three commercial dyes in different water systems using partial least squares regression. *Water Science & Technology* 66, 1647-1655, 2012.
45. Yahya S. **Al-Degs**, Rajab Abu-El-Halawa, Samer S. Abu-Alrub. Analyzing Adsorption Data of Erythrosine Dye Using Principal Component Analysis. *Chemical Engineering Journal* 191, 185-194, 2012.
46. Yahya S. **Al-Degs**, Mohammad A. Al-Ghouti, and Gavin M. Walker. Determination of higher heating value of petrodiesels using mid-infrared spectroscopy and chemometry. *Journal of Thermal Analysis and Calorimetry*. 107, 853-862, 2012.
47. Yahya S. **Al-Degs**, Mohammed Al-Ghouti and Nidaa Salem. Determination of frying quality of vegetable oils used for preparing falafel using infrared spectroscopy and multivariate calibration. *Food Analytical Methods* 4, 540-549, 2011.
48. Mohammad Al-Ghouti, Yahya S. **Al-Degs**. New adsorbents based on microemulsion modified diatomite and activated carbon for removing organic and inorganic pollutants from waste lubricants. *Chemical Engineering Journal* 173, 115-128, 2011.
49. Mohammad A. Al-Ghouti, Yahya S. **Al-Degs**, Ayoub Ghrair, Hani Khoury, Mahmoud Ziedan. Extraction and separation of vanadium and nickel from fly ash produced in heavy fuel power plants. *Chemical Engineering Journal* 173, 191-197, 2011.
50. Amjad H. El-Sheikh, Yahya S. **Al-Degs**, Randa M. Al-As'ad and Jamal A. Sweileh. Effect of oxidation and dimensions of MWCNTs on Hg(II) adsorption and preconcentration from real waters. *Desalination* 270, 214-220, 2011.
51. Mohammad A. Al-Ghouti, Fawwaz I. Khalili, and Yahya S. **Al-Degs**. Minimization of organosulphur compounds by activated carbon from commercial diesels fuel: Mechanistic Study. *Chemical Engineering Journal* 162, 669-676, 2010.
52. Faisal Mustafa, Mohammad A. Al-Ghouti, Fawwaz I. Khalili, and Yahya S. **Al-Degs**. Characteristics of organosulphur compounds adsorption onto Jordanian zeolitic tuff from diesel fuel. *Journal of Hazardous Materials* 182, 97-107, 2010.
53. Mohammad A. Al-Ghouti, Yahya S. **Al-Degs** and Mohammad Amer. Application of chemometrics and FTIR for determination of viscosity index and base number of motor oils *Talanta* 81, 1096-1101, 2010.
54. Adnan S. Abu-Surra, Yahya S. **Al-Degs**, and Musa I. El-Barghouthi. Preparation of A highly selective adsorbent for toxic sudan IV dye using imprinted polymer technology. *Research Journal of Chemistry and Environment* 15, 183-187, 2010.

55. Adnan S. Abu-Surra and Yahya S. **Al-Degs**. A molecularly imprinted polymer via a salicylaldehyde based cobalt(III) complex: A highly selective solid-phase extractant for anionic reactive dyes. *Journal of Applied Polymer Science* 117: 2316-2323, 2010.
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