

## Curriculum vita



**Name:** Ahmed A.M. Abu-Rayyan

**Affiliation:** Applies Science University, College of Science, Department of Chemistry

**Title:** Associated Professor / organic chemistry

**Date of Birth:** 05- Jul- 1973

**Nationality:** Jordanian

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**Research Fields:** Synthesis new compounds, Heterocyclic compounds, Carbene chemistry, Heavy metal analysis, Public health problems.

### Universities and Institutions attended

1. Nov., 2001 - Jul. 2005: Faculty of chemistry and Pharmacy , Eberhard Karls University of Tübingen, Germany, Doctorate of philosophy in organic chemistry.  
\* Thesis entitled “**Synthesis of Organic and Inorganic Derivatives of Imidazol-2-ylidenes and 2-Methyleneimidazolines**”.
2. Oct, 1995 – Sep, 1998: College of Graduate Studies , University of Jordan, Amman, Jordan. Master degree in Chemistry.  
\* Thesis entitled “**Synthesis and Characterization of some Metal Complexes of Pyridine-2-aldehyde Semicarbazones**”.
3. Aug, 1995 – July, 2001: Faculty Sciences, Yarmouk University, Irbid, Jordan, 21163, B.O. Box 566. Bachelor degree in chemistry.

## **Scientific Academic Experience**

- 1 Sep. 2019: Associated Professor, **College of Science, Department of Chemistry, Applied Science University, Amman, Jordan.**
- 2 Oct. 2017- Sep. 2019 Associated Professor, **College of Science, Department of Chemistry, University of Hail, Hail, KSA.**
- 3 Sep. 2010 – Sep. 2017: Assistant Professor, **College of Public Health & Health Informatics, Department of Public Health, University of Hail, Hail, KSA.**
- 4 Sep. 2007- Aug. 2010: Assistant Professor Faculty of Pharmacy **Al-Isra University. Amman/ Jordan.**
- 5 Oct. 2006 – Aug. 2007: Researcher **Faculty of chemistry and Pharmacy, Eberhard Karls University of Tübingen Tuebjngen/Germany.**
- 6 June. 2006 – Sep. 2006 Researcher/ **Guelph University. Canada.**
- 7 Oct. 2006 – Aug. 2007: Researcher Faculty of chemistry and Pharmacy, Eberhard Karls **University of Tübingen Tuebjngen/Germany.**
- 8 Sep. 2000 – Oct. 2001: Teaching assistant **Hashemite university. Jordan.**
- 9 Sep. 1999 – Aug. 2000: Teaching assistant **Mutah university. Jordan.**

## **Administrative Experience**

- 1 Sep. 2018- Sep. 2019 Manger for Development and Quality Assurance Unit, College of Science, Hail University. Hail, KSA.  
  
Sep. 2018- Sep. 2019 Manger for Development and Quality Assurance Unit, **Chemistry Department** College of Science, Hail University. Hail, KSA.
- 2 Sep. 2014 - Aug. 2018 Vice Dean for Training. College of Public Health & Health Informatics, Hail University. Hail, KSA..
- 3 Nov. 2010- Aug. 2014 Manger for Development and Quality Assurance unit College of Public Health & Health Informatics, Hail University. Hail, KSA.
- 4 Sep.2008 - Sep.2010 Dean Assistants / faculty of Pharmacy –Isra University. Jordan
- 5 Sep. 2009- Aug. 2010.Chairmen / Department of Basic Pharmaceutical Science Isra University. Jordan.

## **Publication:**

1	<p><b>Physico-chemical and biological responses for hydroxyapatite/ZnO/graphene oxide nanocomposite for biomedical utilization.</b> AlSalem, H.S., Keshk, A.A., Ghareeb, R.Y., Almahri, <b><u>A., Abu-Rayyan A.</u></b> Materials Chemistry and Physics, 2022, 283, 125988</p>
2	<p><b>Survey of Jordanian awareness about hazardous symbols of chemicals.</b> Bahtiti, N., <b><u>Abu-Rayyan, A.</u></b>, Sasa, T., Alahmad, W. WSEAS Transactions on Environment and Development, 2021, 17, pp. 1030–1038, 95</p>
3	<p><b>3-(Bromoacetyl)coumarins: Unraveling their synthesis, chemistry, and applications</b> Abdou, M.M., <b><u>Abu-Rayyan, A.</u></b>, Bedir, A.G., ...El-Desoky, E.-S.I., Ghaith, E.A. RSC Advances 2021 Volume 11, Issue 61, Pages 38391 – 38433 /</p>
4	<p><b>The degradation of methylene blue dye using copper-doped hydroxyapatite encapsulated into polycaprolactone nanofibrous membranes</b> Alrafai, H.A., Ali Al-Ahmed, Z., Ahmed, M.K., ...Shoueir, K.R., <b><u>Abu-Rayyan, A.</u></b> New Journal of Chemistry, 2021/ 45(35), pp. 16143–16154 /</p>
5	<p><b>Physicomechanical and morphological properties of hydroxyapatite nanocrystals substituted with copper–zirconium</b> Alturki, A.M., <b><u>Abu-Rayyan, A.</u></b>, Abualnaja, K.M., ...El-Saeed, R.A., El-Shabasy, R.M. Journal of Materials Research and Technology, 2021, 14, pp. 2312–2321</p>
6	<p><b>Measuring the Health Impact of Drinking Water Sources in El-Fashir, Sudan,</b> Waed Alahmad, Ahmed Abu-Rayyan , Najm Eldinn Elsser Elhassan , Mohammed Ismail Humaida Indian Journal of Forensic Medicine &amp; Toxicology,2021;15(1) 1640-1647</p>
7	<p><b>The Role of Health Education in Promotion of Health Care Waste Management in Khartoum North Teaching Hospital</b> Ahmed Abu-Rayyan, Waed Alahmad, Fatima Fadul ALI Osman, Kamal Elbssir M Ali, Indian Journal of Forensic Medicine &amp; Toxicology,2021;15(1) (719-726)</p>
8	<p><b>Immunomodulatory effect of <i>Moringa peregrina</i> leaves, ex vivo and in vivo study</b> Ibrahim Salameh Al-Majali, Sawsan Atallah Al-Oran, Mona Rushdie Hassuneh, Haitham Naief Al-Qaralleh, Walid Abu Rayyan, Osama Yosef Al-Thunibat, Eyad Mallah, <b><u>Ahmed Abu-Rayyan</u></b>, Shadi Salem.(Centr Eur Immunol 2017; 42 (3): 231-238)</p>

9	Mohammed A. Al-Anber, <b>Ahmed Abu-rayyan</b> Mohammed S. Almogbel Removal of inorganic ferric ion from water by using coal of date Palm Seeds (CDPS) Biointerface Research in Applied Chemistry Volume 6, Issue 2, 1149-1156. 2016.
10	Mohd Alaraj, Naif Al-Tamimi, Walid Abu Rayyan, Fahad Alshammari <sup>2</sup> , Ashfaque Hossain, Turkey Al Hadires, Meqbil Alanazi, Bahaa Al-Trad, Fayez Alfouzan , <b>Ahmed Abu Rayyan</b> , Anwaar Al-Shammary, Maram Alanazi, Ibrahim Ginawi, Audah Al Hazmi .Role of Age and Uric Acid Levels on Dialysis Efficacy Among End Stage Renal Disease Patients in Saudi Arabia .Journal of Research in Medical and Dental Science   Vol. 4   Issue 2   April – June 2016
11	<b>Ahmed Abu Rayyan</b> , Hamid El .Nourain Hamdan <sup>1</sup> , Walid Abu Rayyan, Ibrahim S. Majali Biological burden of Raw Vegetables in Hail City Sch. J. App. Med. Sci., 2016; 4(4D):1398-1401
12	Abu Rayyan, W. and, <b>Abu-Rayyan, A.</b> Attribution of Metals Concentration of Fruits and Vegetables of Hail Markets on Anemia Prevalence. Sch. J. App. Med. Sci.,; 4(1C):273-277 (2016).
13	Elsayed A. M. Shokr, Ibrahim G. Alreshidi Anwar O. Alrasheedi Fahad L. Alharbi <sup>2</sup> Mohammed A. Alsahli, Khalid O. Alshammari Njoud M. alenezi <b>A.Ravian</b> EFFECT OF DATES ON BLOOD ELEMENTS, GLUCOSE AND LIPID IN HUMAN POPULATION HAIL,KSA.International Journal of Current Research Vol. 8, Issue, 04, pp. 29845-29849, April, 2016
14	<b>Ahmed Abu-Rayyan</b> , Qutaiba Abu-Salem, Eyad Mallah, Cäcilia Maichle-Möbmerb, Manfred Steimann, Norbert Kuhn, and Klaus-Peter Zeller .The Acetylacetonate Ion as its <i>E/Z</i> -Isomer in 1,3-Diisopropyl-4,5-dimethylimidazolium Acetylacetonate <i>Z. Naturforsch.</i> 2008, <i>63b</i> , 1438 – 1440
15	K. Sweidan, <b>A. Abu-Rayyan</b> , A. Al-Sheikhc, Cäcilia Maichle-Möbmerd, M. Steimannnd, and N. Kuhn, <i>Synthesis, Structure and Reactions of 1,3-Dimethyl-5-bis(thiomethyl)methylenebarbituric Acid</i> , <i>Zeitschrift fuer Naturforschung, B: Chemical Sciences</i> (2009), 64(b), 106-110
16	<b>A. Abu-Rayyan</b> , N. Kuhn, , Q. Abusalem, C. Maichle-Möbmer, E. Mallah and M. Steimann, <i>C-H-O Hydrogen Bonds in Imidazolium Carboxylates</i> , <i>Zeitschrift fuer Naturforschung, B: Chemical Sciences</i> (2008), 63(8), 1015-1019
17	<b>A. Abu-Rayyan</b> , N. Kuhn, Q. Abusalem, C. Maichle-Möbmer, M. Steimann und K. Gerald <i>On the hydrolysis of 2,3-dihydro-1,3-di-tert-butyl-4,5-dimethylimidazol-2-ylidene. The crystal structure of 1,3-di-tert-butyl-4,5-dimethylimidazolium bicarbonate [1].</i> <i>Zeitschrift fuer Anorganische und Allgemeine Chemie</i> (2008), 634(5), 823-824
18	Abu-Safieh, K. A.; Khanfer, M.r; Al-Far, R.; Ali, B. F.; Maichle-Moessmer, C.; <b>Abu-Rayyan, A.</b> <i>5-Hydrazino-1,3-dimethyl-4-nitro-1H-pyrazole.</i> <i>Acta Crystallographica, Section E:</i> (2007), E63(9), o3814
19	<b>Abu-Rayyan, A;</b> Al-Hourani, B. J.; Banert, Klaus; Maichle-Moessmer, C.; Al-Labadi, A; <i>Synthesis and solid-state structure of 5-methyl-2-(4-nitroimidazol-1-yl)thiazole.</i> <i>Analytical Sciences</i> (2006), 22(4), x107-x108

20	Warad, I.; Al-Gharabli, S.; Al-Labadi, A.; <b>Abu-Rayyan, A.</b> <i>Synthesis, characterization and NMR studies of novel hemilabile neutral and dicationic palladium (II) complexes: Pd(2-PH<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>)<sub>2</sub> and Pd(1-PH<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>)<sub>2</sub>diamine by using ether-phosphine ligand.</i> Journal of Saudi Chemical Society (2005)5, 9(3), 507-518
21	Kamal Elbassir, Fatima Fadul Ali, Najla Siddig Nasir. <b>Ahmed Abu-Rayyan</b> , Assessment of Treatment Outcome of patients with Tuberculosis at treatmentCentres in Khartoum Locality Sudan 2015< Eurpean Journal of Pharmaceutical and Medical Research 2016,3(3)73-75.
22	Dr. Kamal Elbssir Mohammed Ali* and Prof Abdel Rahman Kabbashi Abdel Gadir, <b>Ahmed Abu-Rayyan</b> DATA QUALITY OF HEALTH INFORMATION SYSTEM AT KHARTOUM STATE HEALTH CENTERS- SUDAN Eurpean Journal of Pharmaceutical and Medical Research 2016,3(3)68-72
23	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Piludu, C.; Steimann, M.. <i>Reaction of tellurium tetraiodide with 2, 3-dihydro-1,3-diisopropyl-4,5-dimethylimidazol-2-ylidene.</i> Heteroatom Chemistry (2005), 16(5), 316-319.  9- Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Al-Sheikh, A.; Eichele, K.; Maichle-Moessmer, C.; Steimann, M.; Sweidan, K.. <i>Structural chemistry of 2-methylenimidazolines.</i> Zeitschrift fuer Naturforschung, B: Chemical Sciences (2005), 60(3), 294-299.
24	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Kolb, H.; Stroebele, M.. <i>The crystal structures of (DDI)<sub>2</sub>[Sb<sub>2</sub>F<sub>6</sub>O] and (DDI)<sub>2</sub>[Sb<sub>3</sub>F<sub>7</sub>O<sub>2</sub>] (DDI = 1,3-diisopropyl-4,5-dimethylimidazolium). A contribution to the hydrolysis of SbF<sub>3</sub>.</i> Zeitschrift fuer Anorganische und Allgemeine Chemie (2005), 631(5), 914-918.
25	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Steimann, M.; Stroebele, M.. <i>Imidazole derivatives. Part 58. [(ImCH<sub>2</sub>Br)Br]<sub>6</sub>. An unexpected cage structure.</i> Zeitschrift fuer Anorganische und Allgemeine Chemie (2004), 630(8-9), 1229-1234.
25	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Eichele, K.; Piludu, C.; Steimann, M. <i>Imidazole derivatives. 57. Weak interionic interactions in 2-haloimidazolium hexahalotellurates(IV).</i> Zeitschrift fuer Anorganische und Allgemeine Chemie (2004), 630(4), 495-497.
27	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Eichele, K.; Schwarz, S.; Steimann, M.. <i>Weak interionic interactions in 2-bromoimidazolium derivatives.</i> Inorganica Chimica Acta (2004), 357(6), 1799-1804.
28	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Steimann, M. <i>Interactions between halogen atoms in the crystal of 2 ImIBr .gtorsim. Br-CF<sub>2</sub>CF<sub>2</sub>-I (Im = 1,3-diisopropyl-4,5-dimethylimidazolyl).</i> Zeitschrift fuer Anorganische und Allgemeine Chemie (2003), 629(12-13), 2066-2068.
29	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Strobele, M. <i>Imidazole derivatives. 51. 2-Chloro-1,3-diisopropyl-4,5-dimethylimidazolium dichlorophosphate. First structural characterisation of the [PO<sub>2</sub>Cl<sub>2</sub>]- anion.</i> Zeitschrift fuer Anorganische und Allgemeine Chemie (2002), 628(11), 2251-2253
30	Kuhn, N.; <b>Abu-Rayyan, A.</b> ; Goehner, M.; Stelmann, M. <i>Imidazole derivatives. Part 49. Synthesis and crystal structure of the dichlorine adduct of 2,3-dihydro-1,3-diisopropyl-4,5-dimethylimidazol-2-ylidene.</i> Zeitschrift fuer Anorganische und Allgemeine Chemie (2002), 628(8), 1721-1723

## **Conferences:**

- Membership of the preparatory committee of the 11 Eurasia conference 6-10 October 2010 Amman-Jordan
- Contribution 8th Jordanian Chemistry Conference (21 April 2008) University of Petra, Amman, Jordan
- Contribution to HALCHEM II International Meeting (26 September – 1 October 2004 in Riviera Capimana in Italy). Poster title is “The Structural Chemistry of 2-Halomethyl-indazolium Halides”.
- Contribution 4th Jordanian Chemistry Conference (20 May 1999) University of Mutah, Kark, Jordan

## **Skills:**

- Excellent knowledge synthesis and preparation of chemical compounds.
- Excellent knowledge using elemental analysis instruments graphite and flame atomic absorption.
- Excellent knowledge using Column Chromatography, TLC, GC, and HPLC.
- Excellent knowledge using Separation and purification techniques.

## **References:**

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