

Curriculum vitae

Afnan Al-Hunaiti

Assistant Professor

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Personal Information

Full name: Afnan H. A. Al-Hunaiti
Nationality: Jordanian / Finnish
Gender: Female
Spoken languages: Arabic, English

Research interests: Catalysis (inorganic complexes) and organocatalyst, Development of new oxidation catalysts, Biomimetic metabolic enzymes, and Environmental inorganic chemistry and atmospheric catalysis.

Academic Qualifications (*earned degrees were based on English language*)

Degree	Years	Field / Subject	Institution	Title of Thesis
Ph.D.	2008 – 2015	Catalysis oxidation-reduction (Inorganic Chemistry)	University of Helsinki, Department of Chemistry, Laboratory of Inorganic Chemistry, Helsinki, Finland	<i>Oxidation of Fine Chemicals by Iron Based and Metal-Free Catalysis</i>
M.Sc.	2007 – 2008	Organic Chemistry	University of Helsinki, Department of Chemistry, Laboratory of Organic Chemistry, Helsinki, Finland	<i>5,6-Disubstituted Pyrimidine Nucleosides synthesis</i>
B.Sc.	2003 – 2007	Organic Chemistry	University of Helsinki, Department of Chemistry, Laboratory of Organic Chemistry, Helsinki, Finland	
B.Sc.	1997 – 2002	Pharmacy	University of Jordan, Faculty of Pharmacy, Amman, Jordan	

Scientific Training

Period	Course / Workshop	Organizer	Location
2015 Oct 10	<i>In-situ</i> UV-vis	Agilent and University of Helsinki	Helsinki, Finland
2015 Feb 12 – 13	<i>In-situ</i> FT-IR	Agilent and University of Helsinki	Helsinki, Finland
2010 Sep 23 – 44	Agilent Company, HPLC Training Course	Agilent and University of Helsinki	Helsinki, Finland
2008 Oct 13 – 14	Perch software training course (NMR Data analysis software), CSC	CSC – IT Center for Science	Helsinki, Finland
2007 Mar 31 – Apr 1	Agilent Company, GC_MS Training Course	Agilent and University of Helsinki	Helsinki, Finland

Curriculum vitae

Posts, Titles and Experience

	Title / Position	Institution	Duties
2018 Feb – Current	Assistant Professor	University of Jordan School of Science Department of Chemistry Amman, Jordan	<i>Teaching</i> <i>Research</i> <i>Student supervision</i>
2016 Feb – 2018 Jan	Assistant Professor	University of Petra Faculty of Art and Sciences Department of Chemistry Amman, Jordan	<i>Teaching</i> <i>Research</i> <i>Student supervision</i>
2008 Jun – 2015 Dec	Research Assistant	University of Helsinki, Department of Chemistry, Laboratory of Inorganic Chemistry, Helsinki, Finland	<i>Research Projects</i>
2007 Jun – 2008 May	Research Assistant	University of Helsinki, Department of Chemistry, Laboratory of Organic Chemistry, Helsinki, Finland	<i>M.Sc. research</i>
2001 May – Sep	Research Assistant	University of Hashemite, Department of Allied Health Science Zarqa, Jordan	<i>Preparing laboratory samples, research projects</i>
2000 May – Sep	Research Assistant	University of Hashemite, Department of Allied Health Science Zarqa, Jordan	<i>Preparing laboratory samples, research projects</i>

Research and Scientific Visits

Period	Host	Financial Support
2010 Jul 19 – Aug 13	Technical University of Munich, Inorganic laboratory, Munich, Germany	DAAD
2010 Jun 6 – 11	University of Jyväskylä, Department of Chemistry, Laboratory of Organic Chemistry, Jyväskylä, Finland	University of Helsinki
2009 Apr 10 – 20	University of Jyväskylä, Department of Chemistry, Laboratory of Organic Chemistry, Jyväskylä, Finland	University of Helsinki

Instrumentations

I have gained long-term experience and attended training courses on:

- NMR maintenance, user and analyst.
- GC-MS maintenance, user and analyst.
- ESI-MS User and analyst.
- HPLC maintenance, user and analyst.

Funded Research Projects

- An oxido acetate bridge mixed valent iron complexes as model of catechol dioxygenase and its aspects toward C-H activation. Afnan Al-Hunaiti. Petra University.
- Extracton, identification, characterization and biological activity of calotropis procera. Nuha Sweidan (PI) and Afnan Al-Hunaiti Petra University.

Curriculum vitae

List of Publications

Theses & Monographs

- Ph.D. Thesis, 2015 (expected): “*Oxidation of Fine Chemicals by Iron Based and Metal-Free Catalysis.*” University of Helsinki, Department of Chemistry, Laboratory of Inorganic Chemistry, Helsinki, Finland.
- M.Sc. Thesis, 2008: “*5,6-Disubstituted Pyrimidine Nucleosides synthesis.*” University of Helsinki, Department of Chemistry, Laboratory of Organic Chemistry, Helsinki, Finland.

Articles Published in Peer Reviewed Journals

2020

- [1] Al Bawab A, **Al-Hunaiti A**, Abu Mallouh S, Bozeya A, Abu-Zurayk R, Hussein T. Contamination of plants, soil, and building stones at a Roman heritage archaeological site in an urban area. *Fresenius Environmental Bulletin* 2020, 29, 1322-1333.
- [2] **Al-Hunaiti A**, Al-Said N, Halawani L, Abu Haija M, Baqaien R, Taher D. Synthesis of magnetic CuFe₂O₄ nanoparticles as green catalyst for toluene oxidation under solvent-free conditions. *Arabian Journal of Chemistry* 2020, 13: 4945-4953.
- [3] **Al-Hunaiti A**, Mohaidat Q, Bsoul I, Mahmood S, Taher D, Hussein T. Synthesis and Characterization of Novel Phyto-Mediated Catalyst, and its Application for a Selective Oxidation of (VAL) into Vanillin Under Visible Light. *Catalysts* 2020, 10, 839.
- [4] Dey D, **Al-Hunaiti A**, Vinothini G, Perumalsamy B, Balakrishnan G, Ramasamy T, Dharumadurai D, Biswas B. C-H Functionalization of Alkanes, Bactericidal and Antiproliferative Studies of a Gold(III)-Phenanthroline Complex. *Journal of Molecular Structure* 2020, 128919 (doi.org/10.1016/j.molstruc.2020.128919).
- [5] Hussein T, Alameer A, Jaghbeir O, Albeitshaweesh K, Malkawi M, Boor BE, Koivisto AJ, Löndahl J, Alrifai O, **Al-Hunaiti A**. Indoor Particle Concentrations, Size Distributions, and Exposures in Middle Eastern Microenvironments. *Atmosphere* 2020, 11, 41.

2019

- [6] Arar S, **Al-Hunaiti A**, Masad MH, Maragkidou A, Wraith D, Hussein T. Elemental Contamination in Indoor Floor Dust and its Correlation with PAHs, Fungi, and Gram+/- Bacteria. *International Journal of Environmental Research and Public Health* 2019, 16, 3552.
- [7] Alghamdi MA, **Al-Hunaiti A**, Arar S, Khoder M, Abdelmaksoud AS, Al-Jeelani H, Lihavainen H, Hyvärinen A, Shabbaj II, Almeahadi FM, Zaidan MA, Hussein T, Dada L. A predictive model for steady state ozone concentration at an urban-coastal site. *International Journal of Environmental Research and Public Health* 2019, 16, 256.
- [8] Das B, **Al-Hunaiti A**, Sanchez-Eguia B, Zeglio E, Demeshko S, Meyer S, Haukka M, Dechert S, Repo T, Castillo I, Nordlander E. Di- and Tetrairon(III) μ -oxido complexes of an N3S-donor ligand: catalyst precursors for alkene oxidations. *Frontiers in Chemistry* 2019, 7, 97.
- [9] Dey D, Patra M, **Al-Hunaiti A**, Yadav HR, Al-mherat A, Arar S, Maji M, Choudhury AR, Biswas B. Synthesis, structural characterization and C–H activation property of a tetra-iron(III) cluster. *Journal of Molecular Structure* 2019, 1180, 220–226.

2018

- [10] Hussein T, Juwhari H, Al Kuisi M, Alkattan H, Lahlouh B, **Al-Hunaiti A**. Accumulation and Coarse Modes Aerosols Concentrations and Carbonaceous Contents in the Urban Background Atmosphere in Amman – Jordan. *Arabian Journal of Geosciences* 2018, 11, 617.

2017

- [11] Aldamen M, **Al-Hunaiti A**, Eronen A, Mubarak M, Gerroll B, Peters A. Na₁₄[(H₂P₄W₆O₃₄)₂CO₂Na₂(H₂O)₂].26H₂O: A New, Carbon-Free, Polyoxometalate Catalyst for Water Oxidation. *Journal of Cluster Science* 2017, 28, 3087-3101.
- [12] **Al-Hunaiti A**, Arar S, Täubel M, Wraith D, Maragkidou A, Hyvärinen A, Hussein T. Floor dust bacteria and fungi and their coexistence with PAHs in Jordanian indoor environments. *Science of the Total Environment* 2017, 601–602: 940–945.

Curriculum vitae

- [13] Maragkidou A, Arar S, **Al-Hunaiti A**, Ma Y, Harrad S, Jaghbeir O, Faouri D, Hämeri K, Hussein T. Occupational Health Risk Assessment and Exposure to Floor Dust PAHs inside an Educational Building. *Science of the Total Environment* 2017, 579: 1050-1056.
- [14] Odeh I, Arar S, **Al-Hunaiti A**, Sa'aydeh H, Hammad G, Duplissy J, Vuollekoski H, Korpela A, Petäjä T, Kulmala M, Hussein T. Chemical Investigation and Quality of Urban Dew Collections with Dust Precipitates. *Environmental Science and Pollution Research* 2017, 24: 12312–12318.

2016

- [15] **Al-Hunaiti A**, Räsänen M, Repo T, Nordlander E. From DNA to catalysis: Thymine-acetate ligated non-heme iron(III) catalyst for oxidative activation of aliphatic C-H bonds. *Chemical Communications* 2016, 52: 2043-2046.
- [16] Maragkidou A, Ma Y, Jaghbeir O, Faouri D, Harrad S, **Al-Hunaiti A**, Arar S, Hameri K, Hussein T. PAHs in Household Floor Dust Collected in Amman, Jordan. *Journal of Chemical Engineering and Process Technology* 2016, 7: 292.

2015

- [17] Das B, **Al-Hunaiti A**, Haukka M, Demshko S, Meyer S, Shteinman AA, Meyer F, Repo T, Nordlander E. Catalytic oxidation of alkanes and alkenes by H₂O₂ with a μ -oxido Diiron(III) complex as catalyst/catalyst precursor. *European Journal of Inorganic Chemistry* 2015, 21: 3590–3601.

2014

- [18] **Al-Hunaiti A**, Räsänen M, Pihko P, Leskelä M, Repo T. Organocatalytic oxidation of secondary alcohols using 1,2-di(1-naphthyl)-1,2-ethanediamine (NEDA). *European Journal of Organic Chemistry* 2014, 28: 6141–6144. (*Cover Page*).
- [19] Räsänen M T, **Al-Hunaiti A**, Atosuo E, Kemell M, Leskelä M, Repo T. Mn(ii) acetate: An efficient and versatile oxidation catalyst for alcohols. *Catalysis Science and Technology* 2014, 4: 2564–2573.

2012

- [20] Biswas B, **Al-Hunaiti A**, Räsänen M T, Ansalone A, Leskelä M, Repo T, Chen Y-T, Tsai H-L, Naik A D, Railliet A P, Garcia Y, Ghosh R, Kole N. Efficient and Selective Oxidation of Primary and Secondary Alcohols Using an Iron(III)/Phenanthroline Complex: Structural Studies and Catalytic Activity. *European Journal of Inorganic Chemistry* 2012, 28: 4479–4485.

2011

- [21] Guo H, Kemell M, **Al-Hunaiti A**, Rautiainen S, Leskelä M, Repo T. Gold-palladium supported on porous steel fiber matrices: structured catalyst for benzyl alcohol oxidation and benzyl amine oxidation. *Catalysis Communications* 2011, 12: 1260–1264.
- [22] Guo H, Kemell M, **Al-Hunaiti A**, Rautiainen S, Leskelä M, Repo T. Gold Catalysis Outside Nanoscale: Bulk Gold Catalyzes the Aerobic Oxidation of p-Activated Alcohols. *ChemCatChem* 2011, 3: 1872–1875.

2010

- [23] **Al-Hunaiti A**, Niemi T, Sibaouih A, Pihko P, Leskelä M, Repo T. Solvent Free Oxidation of primary Alcohols and Diols Using Thymine Iron(III) Catalyst. *Journal of the Chemical Society, Chemical Communications* 2010, 46: 9050-9052.

2006

- [24] Akel H, **Hunaity A**. Growth, swarming and production of halo zone of different *Proteus mirabilis* strains isolated from Jordanian clinical specimens. *Journal of Medical Sciences* 2006, 6: 440-444.
- [25] Akel H, **Hunaity A**, Abdullah I, Doker N. Effect of high concentrations of sodium azide on the isolated thermophilic *Bacillus* phages in different temperatures and pH-values. *Journal of Biological Sciences* 2006, 6: 347-350.