

CURRICULUM VITAE

PERSONAL DATA

Name	Abdulrahman Ghonaim Alhamzani
Nationality	Saudi Arabia
Position	Professor
E-Mail	agalhamzani@imamu.edu.sa
Phone	Office: 011 259 4681, Mobile: +966505165670

EDUCATION

Year	Academic Degree	Institution
2008	Doctor of Philosophy (Chemistry)	West Virginia University, USA
1998	Master of Science (Chemistry)	King Saud University
1993	Bachelor of Science (Chemistry)	King Saud University

WORK EXPERIENCE

Period	Position	Address
May 2022 to Dec 2023	Consultant and Member.	Innovation & Entrepreneurship Deanship at Al-Imam M. S. University, Riyadh, Saudi Arabia
Jan 2018 – 2019	Laboratories Manager.	College of Science, Al-Imam University, Riyadh
Jan 2014 to Jan 2016	Vice-Dean for academic affairs,	College of Science Al-Imam M. S. University, Riyadh, Saudi Arabia
Oct2011 to Nov 2017	Vice-Dean for Development and Quality,	Preparatory Programs Deanship at Al-Imam M. S. University, Riyadh, Saudi Arabia
Jan 2010 to Aug 2011	Chair, Department of chemical technology	Riyadh College of Technology, Saudi Arabia.
June 2009 to Aug 2011	Faculty at the Department of Chemical Technology	Riyadh College of Technology, Riyadh, Saudi Arabia. Courses taught: Organic Chemistry, Organic Reactions Mechanisms, Spectroscopic Analysis, Materials Sciences, and Corrosion

Sept 2, 2008, to May 2009	Creation of Marketing and Promotional materials in the Arabic Language and Advising on student programs from the MENA region.	Office of International Students and Scholars at West Virginia University, Morgantown, WV, United States.
June 29 to Aug 7, 2008	Instructor of CHEM 231-Organic Chemistry: Brief Course,	Department of Chemistry, West Virginia University, Morgantown, WV, United States.
May 2006 to May 2008	Graduate Teaching Assistant,	Department of Chemistry, West Virginia University, Morgantown, WV, United States. Courses taught for Chemistry labs: CHEM 115-General Chemistry, CHEM 235-Organic Chemistry 1 Lab, CHEM 236- Organic Chemistry 2 Lab
Aug 1999 to Jun 2001	Lecturer,	Riyadh College of Technology, Riyadh, Kingdom of Saudi Arabia. Courses taught: (General Chemistry 101, Quantitative Analytical Chemistry (both lecture and lab section), and Electrochemical Methods of Analysis (both lecture and lab section
Oct 1993 to May 1998	Laboratory Instructor,	Riyadh College of Technology, Riyadh, Kingdom of Saudi Arabia. Courses taught: (General Chemistry Labs, Physical Chemistry 1 and 2 Labs, Polymer Chemistry Lab, Organic chemistry lab
May 1993 to Sept 1993	Chemist,	Drinking Water Laboratory, Riyadh, Kingdom of Saudi Arabia

RESEARCH INTERESTS

My current research interest focuses on Eco-Friendly Sustainable Materials for the Circular Economy. Most of the related projects I have worked on are: **(1)** the chemical treatment of agricultural waste as a biomass resource and used for effective adsorption of toxic contaminants (organics and heavy metals). **(2)** Chemical Treatment of Slaughtering-houses and Tanneries Proteinaceous wastes to be used as Fertilizer for Plants. **(3)** Electroanalytical and Semiempirical calculations of novel organic materials and their physical applications.

PUBLICATIONS

- 1- Al-Qudah, M.A.; Al-Jaber, H.I.; Abu Orabi, F.M.; Hasan, H.S.; Aldahoun, A.K.; Alhamzani, A.G.; Alakhras, A.I.; Bataineh, T.T.; Rawashdeh, A.M.M.; Abu-Orabi, S.T. Unveiling the Impact of Drying Methods on Phytochemical Composition and Antioxidant Activity of Anthemis palestina. *Plants*, (2023), 12, 3914. <https://doi.org/10.3390/plants12223914>
- 2- Abdulrahman G. Alhamzani, Al-Hassan S. Mahdy, Mortaga M. Abou-Krisha, Tarek A. Yousef, M. Abd-ElSabour, Eco-friendly synthesized silver-magnetic nanocomposite supported on nanocellulose modified glassy carbon electrode as an electrochemical sensor for simultaneous determination of dopamine and acetaminophen, *Sensors and Actuators A: Physical*, (2023), 364, 114810, (ISSN 0924-4247), <https://doi.org/10.1016/j.sna.2023.114810>.

- 3- Shaaban, S., Al-Karmalawy, AA, Alhamzani, A.G., Abou-Krishna, M.M., Al-Qudah, M. A., and Yousef, T. A. Synthesis and Molecular Docking Analysis of New Thiazo-isoindolinedione Hybrids as Potential Inhibitors of the SARS-CoV-2 Main Protease. *Orient. J. Chem.*, Vol. 39(4), 913-918 (2023)
- 4- Yousef Al-Dalahmeh, Sondos Abdullah J. Almahmoud, Nezar Al-Bataineh, Taqwa A. Alghzawi, Abdulrahman G. Alhamzani, Aamal A. Al-Mutairi, Hala I. Al-Jaber, Sultan T. Abu Orabi, Tareq T. Bataineh, Mohammed S. Al-Sheraideh, Mahmoud A. Al-Qudah, (2023), *Scrophularia peyronii* Post. from Jordan: Chemical Composition of Essential Oil and Phytochemical Profiling of Crude Extracts and their in-vitro Antioxidant Activity. *Life*, (2023), 13(6), 1404. <https://doi.org/10.3390/life13061404> (ISSN: 2075-1729)
- 5- Saad Shaaban, Aly Abdou, Abdulrahman G. Alhamzani, Mortaga M. Abou-Krishna, Mahmoud A. Al-Qudah, Mohamed Alaasar, Ibrahim Youssef, Tarek A. Yousef. Synthesis and in silico investigation of organoselenium clubbed Schiff bases as potential Mpro inhibitors for the SARS-CoV-2 replication. *Life*, (2023), 13, 912. <https://doi.org/10.3390/life13040912> (ISSN: 2075-1729)
- 6- Hameed, D.S.; Al-Jibori, S.A.; Behjat-manesh-Ardakani, R.; Faihan, A.S.; Yousef, T.A.; Alhamzani, A.G.; Abou-Krishna, M.M.; Al-Janabi, A.S.M.; Hsiao, B.S. Spectroscopic, Anti-Cancer Activity and DFT Computational Studies of Pt(II) Complexes with 1-Benzyl-3-phenylthiourea and Phosphine-Diamine Ligands. *Inorganics*, (2023), 11(3), 125. <https://doi.org/10.3390/inorganics11030125> (ISSN: 2304-6740)
- 7- Xiangyu Huang, Cheng-Shiuan Lee, Katherine Zhang, Abdulrahman G. Alhamzani, and Benjamin S. Hsiao. (2023). Sodium Alginate/Aldehyde Cellulose Nanocrystal Composite Hydrogel for Doxycycline and Other Tetracyclines Removal. *Nanomaterials*, (2023), 13, 1161. <https://doi.org/10.3390/nano13071161> (ISSN 2079-4991)
- 8- Abdulrahman G. Alhamzani, Tarek A. Yousef, Mortaga. M. Abou-Krishna, K. Yogesh Kumar, M.K. Prashanth, L. Parashuram, Byong-Hun Jeong, M.S. Raghu. Fabrication of layered In₂S₃/WS₂ heterostructure for enhanced and efficient photocatalytic CO₂ reduction and various paraben degradation in water. *Chemosphere*, (2023), 138235, ISSN 0045-6535, <https://doi.org/10.1016/j.chemosphere.2023.138235>
- 9- Huang, Xiangyu; Hadi, Pejman; Joshi, Ritika; Alhamzani, Abdulrahman; Hsiao, Benjamin. A Comparative Study of Mechanism and Performance of Anionic and Cationic Dialdehyde Nanocelluloses for Dye Adsorption and Separation. *ACS Omega*, (2023) 8 (9), 8634-8649. DOI: 10.1021/acsomega.2c07839, <https://doi.org/10.1021/acsomega.2c07839> (ISSN 2470-1343)
- 10- Tarek A. Yousef, T. A., Alhamzani, A. G., Abou-Krishna, M. M., Kumar, Y. Y., Prashanth, M.K., and Byong-Hun Jeon. Synthesis molecular docking study and anticancer activity of novel 1,3,4-oxadiazole derivatives as potential tubulin inhibitors. *HELIYON*, (2023), e13460, DOI: <https://doi.org/10.1016/j.heliyon.2023.e13460> ISSN 2405-8440
- 11- Abdulrahman G. Alhamzani, Zahra M. Al-Smadi, Hala I. Al-Jaber, Hasan I. Tashtoush, Sultan T. Abu Orabi, Mahmoud A. Al-Qudah. New Flavonoid Isolated from the Aerial Parts of *Ajuga orientalis* L. *Phytochemistry Letters*, 2023, 54, 133-136. <https://doi.org/10.1016/j.phytol.2023.02.004> ISSN: 1874-3900
- 12- Al-Bataineh, N.; Algethami, F.K.; Al-Jaber, H.I.; Alhamzani, A.G.; Bataineh, R.M.; Al-Dalahmeh, Y.; Bataineh, T.T.; Abu-Orabi, S.T.; Al-Qudah, M.A. *Ballota saxatilis* from Jordan: Evaluation of Essential Oil Composition and Phytochemical Profiling of Crude Extracts and Their In-Vitro Antioxidant Activity. *Separations*, 2023, 10, 114. <https://doi.org/10.3390/separations10020114>
- 13- Ritika Joshi, Nilay Sebat, Kai Chi, Madani Khan, Ken I. Johnson, Abdulrahman G. Alhamzani, Mohamed A Habib, Tom Lindström, Benjamin S. Hsiao. "Low Fouling Nanostructured Cellulose Membranes for Ultrafiltration in Wastewater Treatment". *Membranes*, (2023), 13, 147. <https://doi.org/10.3390/membranes13020147>
- 14- Mohamed Abd-Elsabour, Hytham F. Assaf, Ahmed M. Abo-Bakr, Abdulrahman G. Alhamzani, Mortaga, M. Abou-Krishna, Aamal A. Al-Mutairi, and Hesham M. Alsoghier. Green electro-organic synthesis of a novel catechol derivative based on o-benzoquinone nucleophilic addition. *New J. Chem.*, (2023), Advance Article, DOI: <https://doi-org.sdl.idm.oclc.org/10.1039/D2NJ04530C>
- 15- Hui Chen, Priyanka R. Sharma, Sunil K. Sharma, Abdulrahman G. Alhamzani, Benjamin S. Hsiao.: Effective Thallium(I) Removal by Nanocellulose Bioadsorbent Prepared by Nitro-Oxidation of Sorghum

- Stalks. *Nanomaterials*, (2022),12(21), 4156, <https://doi.org/10.3390/nano12234156>
- 16- Tarek A. Yousef, Abdulrahman G. Alhamzani, Mortaga M. Abou-Krishna, C. B. Pradeep Kumar, M. S. Raghu, K. Yogesh Kumar, M. K. Prashanth, Byong-Hun Jeon. Experimental and theoretical examinations of triazole-linked saccharin derivatives as organic corrosion inhibitors for mild steel in hydrochloric acid. *Journal of Molecular Structure*, (2023) Volume 1275, 134603, ISSN 0022-2860, <https://doi.org/10.1016/j.molstruc.2022.134603>
 - 17- Abdulrahman G. Alhamzani, Tarek A. Yousef, Mortaga M. Abou-Krishna, M.S. Raghu, K. Yogesh Kumar, M.K. Prashanth, Byong-Hun Jeon, Design, synthesis, molecular docking and pharmacological evaluation of novel triazine-based triazole derivatives as potential anticonvulsant agents. *Bioorganic & Medicinal Chemistry Letters*, 77 (2022) 129042.
 - 18- Yousef, T.A.; Hussein, R.K.; Alhamzani, A.G.; Al-Enazi, A.T.; AL-Osimi, M.B.; Abou-Krishna, M.M. Environment-Friendly Corrosion Inhibitors for Aluminum in Hydrochloric Acid: Quantum and Experimental Research. *Metals* 2022, 12, 1538. <https://doi.org/10.3390/met12091538>
 - 19- S.K. Alghamdi, F. Abbas, R.K. Hussein, A.G. Alhamzani, N.T. El-Shamy, Spectroscopic characterization (IR, UV-Vis), and HOMO-LUMO, MEP, NLO, NBO Analysis and the Antifungal Activity for 4-Bromo-N-(2-nitrophenyl) benzamide; Using DFT Modeling and in silico Molecular Docking. *Journal of Molecular Structure*, (2023) Volume 1271, 134001, ISSN 0022-2860, <https://doi.org/10.1016/j.molstruc.2022.134001>.
 - 20- M. A. Habib, A. G. Alhamzani, and Abbas I. Alakhras. Leather Fatliquoring Agent from Camel Hump Fat. *Egypt. J. Chem.* (2022), 65, No. SI:13, pp. 379-383. DOI 10.21608/EJCHEM.2022.120134.5391
 - 21- M. Abd-ElSabour, M. M. Abou-Krishna, A. G. Alhamzani, and T. A. Yousef, (2022), An effective, novel, and cheap carbon paste electrode for naproxen estimation. *Reviews in Analytical Chemistry*, (2022) 41: 168-179. <https://doi.org/10.1515/revac-2022-0041>
 - 22- Haythem F. Assaf; Hesham M. Alsoghier; M. Abd-ElSabour; Tarek A. Yousef; Abdulrahman G. Alhamzani; Mortaga M. Abou-Krishna, (2022), "Electrochemical Sensor for Detection of Nicotine in Tobacco Products Based on Graphene Oxide nanosheets Conjugated with a Poly(1,2-Naphthoquinone-4-Sulphonic Acid) Modified Glassy Carbon Electrode". *Nanomaterials*, 2022, 12(14), 2354. <https://doi.org/10.3390/nano12142354>
 - 23- H. R.M. Rashdan, H. Okasha, M. A. Abdelhakeem, A. M. Mosallam, H. Temairk, A.G. Alhamzani, M. M. Abou-Krishna, T. A. Yousef, A. H. Abdelmonsef, (2022), Synthesis and In-vitro Biological Analyses of New Quinazolin-2,4-dione Derivatives. *Egypt. J. Chem.* Vol. 65, No. 9 pp. 189-199, (2022), DOI: 10.21608/EJCHEM.2022.111820.5077
 - 24- A. G. Alhamzani, M. A. Habib, L. A. Al-Mutabagani, and A. A. Al-Mutairi, (2022) Isolation Cellulose Nanofibers from Date-Palm Tree Leaflets (*Phoenix Dactylifera L.*) by Ball-Milling Technique, *J. Appl. Scie.*, (2022), 22(5), 241-247, DOI: 10.3923/jas.2022.241.247
 - 25- El-Shamy, N.T.; Alkaoud, A.M.; Hussein, R.K.; Ibrahim, M.A.; Alhamzani, A.G.; Abou-Krishna, M.M. (2022), DFT, ADMET and Molecular Docking Investigations for the Antimicrobial Activity of 6,6'-Diamino-1,1',3,3'-tetramethyl-5,5'-(4-chlorobenzylidene)bis[pyrimidine-2,4(1H,3H)-dione]. *Molecules* 2022, 27, 620. <https://doi.org/10.3390/molecules27030620>
 - 26- Abd-ElSabour, M., Alhamzani, A.G. & Abou-Krishna, M.M. Fabrication of novel nickel-modified electrodes and their application for methanol oxidation in fuel cell. *Ionics* (2022). <https://doi.org/10.1007/s11581-022-04447-0>
 - 27- Safaa El-Nahas, Abdulrahman S. Arafat, Hanan Salah El Din, Abdulrahman G. Alhamzani, Mortaga M. Abou-Krishna, and Hesham M. Alsoghier. A Novel Alternative Methods for Decalcification of Water Resources Using Green Agro-Ashes. *Molecules*, (2021), 26(22), 6777. <https://doi.org/10.3390/molecules26226777>
 - 28- Deghady, A. M., Hussein, R.H., Alhamzani, A.G., and Mera, A. Density Functional Theory and Molecular Docking Investigations of the Chemical and Antibacterial Activities for 1-(4-Hydroxyphenyl)-3-phenylprop-2-en-1-one. *Molecules*, (2021), 26, 3631. <https://doi.org/10.3390/molecules26123631>
 - 29- Alhamzani, A. G. "Using of Sukary and Khlass Date Pits as a Bio-adsorbents for Adsorption of Lead and Copper Ions from Waste Water". *Orient. J. Chem.* (2021), 37(2). <http://dx.doi.org/10.13005/ojc/370206>
 - 30- Alhamzani, A. G. and Habib, M. A. "Preparation of cellulose nanocrystals from date palm tree leaflets

- (Phoenix dactylifera L.) via repeated chemical treatments". *Cellulose Chem. Tech.* (2021), 55, Jan-Feb, 33-39. DOI: <http://dx.doi.org/10.35812/CelluloseChemTechnol.2021.55.04>
- 31- Alhamzani, A. G., Habib, M. A. "High Quality Activated Carbon from Local Agriculture by-products: An innovative low-cost base treatment process". *Res. J. Chem. Enviro.* (2020), 24(4), pp. 10-15.
 - 32- Alhamzani, A. G., Attia, M. I., Habib, M. A. "Assessment of Zinc (II) Removal From Aqueous Solutions Using Prepared Activated Carbon And Bentonite., *Res. J. Pharm. Bio. Chem. Science.* 2019, 10(2), 278-290, ISSN: 0975-8585.
 - 33- M.M. Abou-Krishna, A.G. Alshammari, F.H. Assaf, F.A. El-Sheref, "Electrochemical Behavior of Zn-Co-Fe alloy electrodeposited from a sulfate bath on various substrate materials" *Arabian Journal of Chemistry*, 2019, 12(8), pp. 3526-3533. <http://dx.doi.org/10.1016/j.arabjc.2015.10.008>
 - 34- Habib, M A and A G Alshammari, "Valorization of the Agriculture Byproduct of Palm Date Trees: Preparation of Activated Carbon for Organic Dyes Removal from Tanneries Wastewater." *Res. J. Pharm. Bio. Chem. Sciences.* 2018, 9(3), pp. 326-331, ISSN: 0975-8585.
 - 35- M. H. Heikal, M. E. Zaki, A. Alshammari, "Preparation and Characterization of an Eco-Friendly Binder from Alkali-Activated Aluminosilicate Solid Industrial Wastes Containing CKD and GGBS". *J. Mater. Civ. Eng.* 2018, 30(6): 04018093. [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0002286](https://doi.org/10.1061/(ASCE)MT.1943-5533.0002286)
 - 36- Habib, M A and A. G. Alshammari, "Recycling and utilization of Waste deep-frying oil in leather industry" *Indian J. Chem. Tech.* Vol. 24, 2017, pp. 198-205.
 - 37- M. O M'hamed, A. G. Alshammari, O. M. Lemine, "Green High-Yielding One-Pot Approach to Biginelli Reaction under Catalyst-Free and Solvent-Free Ball Milling Conditions". *Applied Sciences* 2016, 6(12), 431; <https://doi.org/10.3390/app6120431>.
 - 38- M. Abou-Krishna, F. Assaf, O. Alduaij, A. Alshammari, and F. El-Sheref, "Electrochemical Behavior and Corrosion Resistance of Electrodeposited Nano-particles Zn-Co-Fe Alloy". *Anti-Corrosion Methods and Materials*, Vol. 63, Issue 1, 2016. p29-35.
 - 39- H. Hafez, A. Alshammari, A. El-Gazzar, "Facile heterocyclic synthesis, antimicrobial activities of polysubstituted and condensed pyrazolopyranopyrimidine and pyrazolopyranotriazine derivatives". *Acta Pharmaceutica*, Vol. 65, 2015, 399-412. DOI: 10.1515/acph-2015-0037
 - 40- M. Abou-Krishna, F. Assaf, O. Alduaij, A. Alshammari, and F. El-Sheref, "Corrosion Behavior of Electrodeposited Zn-Co-Fe Alloy". *Indian Journal of Chemical Technology*, Vol. 23, July 2016, pp.
 - 41- Mohamed OuldM'hamed, L. Khezami, A. Alshammari, S. Ould-Mame, I. Ghiloufi, O. Lemine, Removal of Cd(II) ions from aqueous Solution using Ni-doped α -Fe₂O₃ Nanocrystals. *Water Science & Technology*. Vol. 72, Issue 4, 2015.
 - 42- A. Alshammari, "Removal of Water Hardness by Gas Sparged Dialysis Membrane Process". *Research Journal of Environmental Sciences*, Vol. 9, No. 1, pp. 16-27, 2015.
 - 43- A. Alshammari, "Equilibrium Study of Cobalt Ions Adsorption on Three Types of Natural Saudi Clays". *Research Journal of Envir. Toxicology*, Vol 9, No. 1, pp. 17-33, 2015.
 - 44- A. Alshammari, "Adsorption of Acid Dyes from Wastewater on Saudi Bentonite Clay" . *Trends in Applied Sciences Research*, Vol. 9, No. 10, p. 557.
 - 45- M. Habib and A. Alshammari, "Leather Fatliquor From Hide Fleshings". *J. Soci. Leather Tech. Chemists.* Vol 98, issue 5, 2013.
 - 46- A. Alshammari, A. El-Gazzar and H. Hafez, "Efficient Synthesis of a New Class of N-Nucleosides of 4H-Thiochromeno[2,3-d]pyrimidine-10-Sulfone as Potential Anticancer and Antibacterial Agents," *International Journal of Organic Chemistry*, Vol. 3 No. 3A, 2013, pp. 15-27.
 - 47- A. Alshammari and A. El-Gazzar, "Novel Synthesis Approach and Antiplatelet Activity Evaluation of 6-Arylmethyleneamino-2-Alkylsulfonylpyrimidin-4(3H)-one Derivatives and Its Nucleosides," *International Journal of Organic Chemistry*, Vol. 3 No. 3A, 2013, pp. 28-40.
 - 48- Penn, J. H., and Al-Shammari, A. G. "Teaching Reaction Mechanisms Using CAN Method". *J. Chem. Educ.* 2008, Vol. 85, 9, 1219-1295