

Curriculum Vitae – Mohammed Ali Mohammed Assiri

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OBJECTIVE

Implement knowledge, experience and expertise to execute independent, novel, and challenging research work in the area of Organic Chemistry, Green Chemistry and Natural Sciences.

EDUCATION

Ph.D. in Organic Chemistry and Green Chemistry *December - 2016*
University of Wyoming, Laramie, WY,USA

Master of Science in Organic Chemistry *April - 2014*
University of Wyoming, Laramie, WY,USA

Bachelor of Chemistry Science *May - 2004*

King Khalid University, Abha, KSA

Employment History

1. *Aug.2024- Present* **Vice Dean**, Deanship of Research and Graduate Studies for Graduate Studies.
2. *Mar.2024- Present* **Manager** of Research Center for Advanced Material Science(RCAMS). King Khalid University, Abha, KSA.
3. *Oct. 2023 - Present* **Manager** of Research, Development and Innovation Unit. King Khalid University, Abha, KSA.
4. *Aug.2021- Oct 2023* **Vice Dean**, Deanship of Scientific Research for centers and research groups. King Khalid University, Abha, KSA.

5. May. 2021- Present *Associate Professor, Department of Chemistry, College of Science, King Khalid University, Abha, KSA.*
6. May. 2017- Oct.2019 *Department Head of Chemistry, College of Science, King Khalid University, Abha, KSA.*
7. Jan. 2017- May. 2021 *Assistant Professor, Department of Chemistry, College of Science, King Khalid University, Abha, KSA.*
8. Jan. 2011-Dec. 2016 *Research Assistant, Department of Chemistry and Chemical Engineering, University of Wyoming, Laramie, WY.*
9. Aug. 2007-Dec. 2010 *Teaching Assistant, Department of Chemistry, Teachers College, King Khalid University, Abha, KSA.*
10. Aug. 2005- June 2007 *Teacher and Lab Manager, High School, Bisha, KSA.*

PROFESSIONAL EXPERIENCE

Research Assistant, Department of Chemistry and Chemical Engineering

University of Wyoming, Laramie, WY

January 2011 - December 2016

- Experience using UV-Vis Spectra, Nuclear Magnetic Resonance (NMR) spectroscopy, fluorescence lifetimes, mass spectrometry, X-ray diffraction, TA Instruments SDT Q600 Thermogravimetric Analyzer (TGA), Brunauer-Emmet-Teller analysis (BET), Fourier Transform Infrared (FTIR) spectroscopy, Scanning Electron Microscopy (SEM) and transmission electron microscope (TEM).
- Gave department seminars on the Synthesis and Characterization of a New Polyaromatic Viologen; N, N'-Dimethyl-3,10-Diazaperylene Bis-Tetrafluoroborate. Catalytic CO₂ Desorption for Significant Reduction in the Energy Needed for Ethanolamine (MEA) based CO₂ capture technologies.
- Supervised undergraduate research assistants on laboratory projects, order supplies, support the graduate students, and fulfill other managerial duties in the laboratory.
- Analyzed, reported assessment data, and submitted papers in peer reviewed journals.
- Organized skill shared workshops and seminars to develop extension skills for undergraduate students.
- Leading sections in which students conducted several practices on the safe use of chemical equipment.
- Coordinated and participated in extension activities related to Organic Chemistry, Green Chemistry, Chemical Engineering, CO₂ Capture, Metal-Organic Frameworks (MOFs), Advanced Materials and Nano Materials.

- Wrote grant proposals for Department of Energy.
- Presented relevant results at professional meetings and international conferences.
- Evaluated homework, tests, and laboratory work; Grading weekly quizzes, mid-term, and final exams.

Teaching Assistant, Department of Chemistry

King Khalid University- Teachers College, Abha, KSA

August 2007 - December 2010

- Taught laboratory chemistry course for undergraduate students.
- Trained and educated talented students selected from the King Abdulaziz and his Companions Foundation for Giftedness and Creativity.
- Served on several school committees focusing on curriculum development, textbook review, and students' supervision.
- Established positive relationships with students, parents, fellow teachers and school administrators.

Teacher and Lab Manager

High School, Bisha, KSA

August 2005 - June 2007

- Taught Chemistry and laboratory courses.
- Directed scientific research and performed other daily duties.
- Served in exams committee and evaluated students' projects.

PUBLICATIONS

- Qinghua Lai , Sam Toan , **Mohammed A. Assiri**, Huaigang Cheng , Armistead G. Russell, Hertanto Adidharma , Maciej Radosz & Maohong Fan. . Catalyst-TiO(OH)₂ could drastically reduce the energy consumption of CO₂ capture **.J. Nature Communications**. 9 (2018)
- **Mohammed A. Assiri**, Tarik E. Ali, Magdy A. Ibrahim, M. El-Amin, and I. S. Yahiab, Diacetylresorcinol in heterocyclic synthesis part ii: synthesis of some novel 4,6-bis(azolyl/azinyl/ azepinyl)resorcinols. **J. Heterocyclic**.98 (2019) 114-125.
- **Mohammed A. Assiri**, Tarik E. Ali, Noha M. Hassanin, I. S. Yahia, and Gamal B. Sakre, Reaction of 2-Imino-2H-chromene-3-carboxamide with Phosphorus Isothiocyanates: First

Synthesis of Novel Chromeno[2,3-d]pyrimidinyl and Bis(chromeno[2,3-d]pyrimidinyl)phosphines and Chromeno[20,30:4,5]pyrimido[2,1-d][1,3,5,2]triazaphosphinine. **J. Heterocyclic Chem.**, 56 (2019) 1646-1650.

- **Mohammed A. Assiri**, Tarik E. Ali, Mamdouh M. Ali & I. S. Yahia, Synthesis and anticancer activity of some novel diethyl {(chromonyl/pyrazolyl) [(4-oxo-2-phenylquinazolin-3(4H)-yl)amino]methyl}phosphonates. **J. Phosphorus, Sulfur, and Silicon and the Related Elements**, 195 (2018) 668-674.
- **Mohammed A. Assiri**, Tarik E. Ali, Somaya M. El-Edfawy, and I. S. Yahia, Synthesis and Characterization of Some Novel Phosphorylated 4-Oxo-2-phenylquinazolines. **J. Heterocyclic Chem.**, 55 (2018) 1955-1959.
- **Mohammed A. Assiri**, Tarik E. Ali, Magdy A. Ibrahim, Al-Shimaa Badran & I. S. Yahia, The Chemical Behavior of (2E)-3-(4,9-Dimethoxy-5-Oxo-5H-Furo[3,2-g] Chromen-6-yl) Acrylonitrile Towards Some Carbon Nucleophiles. **J. Polycyclic Aromatic Compounds**, 40 (2019).
- Sami Ullah a, Mohamad Azmi Bustam, Abdullah G. Al-Sehemi, **Mohammed Ali Assiri** , Firas A. Abdul Kareem, Ahmad Mukhtar , Muhammad Ayoub , Girma Gonfa, Influence of post-synthetic graphene oxide (GO) functionalization on the selective CO₂/CH₄ adsorption behavior of MOF-200 at different temperatures; an experimental and adsorption isotherms study. **J. Microporous and Mesoporous Materials**, 296 (2020).
- Sami Ullah , Mohamad Azmi Bustam , **Mohammed Ali Assiri** , Abdullah G. Al-Sehemi , Firas A. Abdul Kareem , Ahmad Mukhtar , Muhammad Ayoub , Girma Gonfa, Synthesis and characterization of iso-reticular metal-organic Framework-3 (IRMOF-3) for CO₂/CH₄ adsorption: Impact of post-synthetic aminomethyl propanol (AMP) functionalization. **J. Natural Gas Science and Engineering**, 72 (2019).
- Sami Ullah , Mohamad Azmi Bustam , **Mohammed Ali Assiri** , Abdullah G. Al-Sehemi , Girma Gonfa , Ahmad Mukhtar , Firas A. Abdul Kareem , Muhammad Ayoub, Sidra Saqib , Nurhayati Binti Mellon, Synthesis and characterization of mesoporous MOF UMCM-1 for CO₂/CH₄ adsorption; an experimental, isotherm modeling and thermodynamic study. **J. Microporous and Mesoporous Materials**, 296 (2020).
- Tarik E. Ali, **Mohammed A. Assiri**, Noha M. Hassanin, I. S. Yahia, and Mai S. A. Hussienb, A Convenient Synthetic Route of Diethyl (4-Oxo-chromeno[2,3-d] pyrimidin-2(5)-yl)phosphonates, **J. Heterocyclic Chem.**, 56 (2019) 1684-1686.
- Fawzia F. Alblewia, Rawda M. Okashaa , Zainab M. Hritania , Hany M. Mohamedb , Mohammed A.A. El-Nassagb, Ahmed H. Halawac , Ahmed Morac , Ahmed M. Foudad , **Mohammed A. Assiri** , Al-Anood M. Al-Diesd , Tarek H. Afifia , Ahmed M. El-Agrody, Antiproliferative effect, cell cycle arrest and apoptosis generation of novel synthesized anticancer heterocyclic derivatives based 4H-benzo[h] chromene. **J. Bioorganic Chemistry**, 87 (2019) 560-572.

- Ibrahim A. Shaaban, Tarik E. Ali, **Mohammed A. Assiri**, Ahmed M. Fouda, Somaya M. Eledfawy, Noha M. Hassanin, Regioselective cyclization reaction of 2-imino-2H-chromene-3- carboxamide with triethyl phosphonoacetate; a combined spectral and computational studies. **J. Molecular Structure**, 1199 (2020).
- Ibrahim A. Shaaban, **Mohammed A. Assiri**, Tarik E. Ali, Ahmed M. Fouda, Spectral and computational studies on regioselective synthesis of 4- oxo-6-phenyl-2-selenoxo-1,2,3,4-tetrahydropyrimidine-5-carbonitrile. **J. Molecular Structure**, 1199 (2020).
- Tarik E. Ali, **Mohammed A. Assiri** & I. S. Yahia, Synthesis of novel 3-phenyl-2-oxido/sulfido-1,3,4,2- benzoxadiazaphosphepines, **J. Synthetic Communications** 50 (2018) 1828-1837.
- Tarik E. Ali , Dina A. Bakhomah & **Mohammed A. Assiri**, Synthesis of some new functionalized pyrano[2,3-c]pyrazoles and pyrazolo[4',3':5,6] pyrano[2,3-d]pyrimidines bearing a chromone ring as antioxidant agents. **J. Synthetic Communications** 50 (2020).
- Sami Ullah, Faiz Ahmad, Abdullah G. Al-Sehemi, Mohammed Ali Assiri, Muhammad Rafi Raza, Ahmad Irfan, Effect of expandable graphite and ammonium polyphosphate on the thermal degradation and weathering of intumescent fire-retardant coating. **J Applied Polymer Science** 138(17)(2020). 1097-4628.
- Manickam Selvaraj , Asim Bhaumik , Mohammed A Assiri , Ch Subrahmanyam , Chang-Sik Ha, Solvent-free benzylic oxidation of aromatics over Cu(II)-containing propylsalicylaldehyde anchored on the surface of mesoporous silica catalysts. **J. Dalton Transaction** 50(42) (2021).9710-9718.
- Mohammed A Assiri , Hafiz Muhammad Junaid , Muhammad Tahir Waseem , Asad Hamad , Sajid Hussain Shah , Jamshed Iqbal , Waqar Rauf , Sohail Anjum Shahzad. AIEE active sensors for fluorescence enhancement based detection of Ni²⁺ in living cells: Mechanofluorochromic and photochromic properties with reversible sensing of acid and base. **J. Anal Chim Acta** (2022)
- Mohammed. A. Assiri, T. E. Ali, A. Y. Alzahrani & M. A. Salem. Simple One-Pot Synthesis of Novel 5-(3,5-Dialkyl-1H-pyrazol-1-yl)-2-ethoxy-1,4,2λ5-diazaphosphole 2-Oxides. **Russian Journal of Organic Chemistry** 59, 285–289 (2023)
- **Patent (Publication number: 20160250591)**
- Maohong Fan, Abdulwahab Tuwati, **Mohammed Assiri**. 2017. Catalytic CO₂ Desorption for Ethanolamine Based CO₂ Capture Technologies. **United States Patent and Trademark Office, Washington D.C., USA.**

Abstracts Published in Conference Proceedings

- Mohammed Assiri; Catalytic CO₂ desorption for significant reduction in the energy needed for ethanolamine (MEA) based CO₂ capture technologies. CO₂ Summit II: Technologies and Opportunities, Engineering Conferences International, Santa Ana Pueblo, NM, United States, April 10–14, 2016.
- Edward L. Clennan, Xiaoping Zhang, Mohammad Assiri, Bakupog, Thomas ;Photochemical and electrochemical characterizations of new polyaromatic viologens. Abstract of papers, 246th ACS National Meeting, Indianapolis, IN, United States, September 11, 2013.

PROFESSIONAL MEMBERSHIPS

- Chairman of graduate student unit in college of science at King Khalid University, Abha, KSA. (1-2-2023- Present).
- Ph.D program coordinator in chemistry department at King Khalid University, Abha, KSA.(1-5-2019- Present).
- Chairman of establish Ph.D program committee in chemistry department at King Khalid University, Abha, KSA. (1-5-2019- Present).
- A member of the safety committee at King Khalid University, Abha, KSA. (1-5-2017 to 3-8-2019).
- A member of the Scientific Committee of the Science and Technology Unit at King Khalid University, Abha, KSA
- Chairman of the Scientific Committee of the Science and Technology Unit at King Khalid University, Abha, KSA
- A member of many committee at chemistry department and College of Science, King Khalid University, Abha, KSA.
- Chairman of the Saudi student club at University of Wyoming, Laramie, WY, USA
- Consultant of the president of Saudi student club at University of Wyoming, Laramie, WY, USA
- A member of the Saudi student club at University of Wyoming, Laramie, WY, USA

HONORS AND AWARDS

- A certificate of attendance Driving performance and effective governance program that was given by Lee Kuan Yew School of Public Policy in association with the Academy for developing administrative leaders from 07-5-2023 to 11-5-2023. Riyadh, Kingdom of Saudi Arabia.
- A certificate of appreciation from the President of King Khalid University after the end of two and a half years as head of Chemistry Department.(2019)
- Certificate of Appreciation for outstanding scientific paper and presentation in the scientific research day in King Khalid University, Abha, KSA.(2017)

- Certificate of Achievement, International Students and Scholars and Multicultural Affairs, University of Wyoming (2016).
- Certificate of Completion of PhD Program, University of Wyoming (2016)
- Certificate of Appreciation for Cross-Cultural Advocacy and Service, University of Wyoming (2016).
- Certificate for Serving the Muslim Community of Laramie (2015).
- Certificate of Presidency of Saudi Students Club, Saudi Culture Machine (2014-2015).
- Comprehensive Chemistry Exam Award, University of Wyoming (2013).
- Certificate of Completion of Master program, Department of Chemistry University of Wyoming (2013).
- Certificate of Recognition for Leadership, University of Wyoming (2013).
- Certificate of Appreciation for Serving Saudi Students Club, Saudi Culture Machine (2010,2011,2012 and 2013)
- Certificate of Communication Skills and Leadership, University of Wyoming (2011).
- Certificate of Excellent Teacher, Teachers College-King Khalid University (2008).
- Certificate of Excellence for directing scientific research, High School, KSA (2005, 2006).

COMPUTER AND SOFTWARE PROFICIENCY

Word/operation-related: Microsoft word, Microsoft Spreadsheet-Excel, Microsoft PowerPoint, Database-Microsoft Access.

General: E-mail, Internet & Web-site operation, use of social media for learning and consulting; Video editing tools.