Abdellatif Ibdah

Office Address:

Department of Chemistry
College of Science
Jordan University of Science and Technology (J.U.S.T)
P.O.Box 3030, Irbid 22110, Jordan
E-mail address: aaibdah@just.edu.jo or ibdah77@gmail.com

Date of Birth: December 3, 1977
Nationality: Jordanian

Education:

Ph.D	Iowa State University, USA	**2005**	Inorganic Chemistry
M.S.	Jordan University of Science and Technology (JUST)	**2001**	Organic Chemistry
B.S.	Jordan University of Science and Technology (JUST)	**1998**	Applied Chemistry

Administrative Experience

Assistant Dean of Science and Arts — **Sept 2023 – Present** Jordan University of Science and Technology (J.U.S.T), Jordan

Chairman, Department of Chemistry — **Sept 2019 – Sept 2021** Jordan University of Science and Technology (J.U.S.T), Jordan

Academic Experience

- Associate Professor — **July 2018 - Present** Jordan University of Science and Technology (J.U.S.T), Jordan
- Assistant Professor — **Sept 2012 – July 2018** Jordan University of Science and Technology (J.U.S.T), Jordan
- Assistant Professor — **2011 – 2012**, King Faisal University (KFU), KSA
- Assistant Professor — **2008 -2011,** King Fahd University of Petroleum and Minerals (KFUPM), KSA
- Postdoctoral Research Associate — **2007 –2008**, University of California Riverside, USA
- Postdoctoral Research Associate — **2005- 2007**, The Ohio State University, USA

Research Interest

1) Kinetics and Reaction Mechanism (Organometallic catalysis and Molybdenum enzymes)
2) Computational study of organometallic catalysis (ab initio and DFT)
3) Computational Modeling of Molybdenum enzyme Active-site

Relevant Skills

1) Kinetic study of reaction using ^{1}H-NMR and UV Spectrometer
2) Theoretical modeling of chemical reactions
3) GAUSSIAN and GAMESS computer programs
4) Data analysis, fitting software (kaleidagraph)
5) Synthesis of Air/moisture sensitive organic and inorganic compounds

Teaching Experience at Jordan University of Science and Technology (J.U.S.T)
- General Chemistry (CHEM 101, CHEM 102 and CHEM 103)
- Biochemistry (CHEM 262)
- Literature Survey and Seminar (CHEM 391)
- Biochemistry Laboratory (CHEM 266)
- Bioorganic Chemistry (CHEM 112)
- Organic Chemistry (CHEM 217)
- Organometallics (CHEM 423)
- Inorganic Chemistry I (CHEM 222)
- Special Topics in chemistry (CHEM 471 A)
- Laboratory Project (CHEM 492)
- Literature Survey and Seminar for M.Sc Students (CHEM 791)

Teaching Experience at King Faisal University (K.F.U)

- Inorganic Reaction Mechanism (CHEM 437)
- Biochemistry I (CHEM 261)

Teaching Experience at King Fahd University of Petroleum and Minerals (K.F.U.P.M)

- Inorganic Reaction Mechanism (CHEM 528, Graduate Course)
- General Chemistry I
- General Chemistry Laboratory I
- General Chemistry Laboratory II
- Organic Chemistry Laboratory I

Committees served at JUST
- Scientific research committee
- Social committee
- Accreditation and quality assurance committee
- Graduate studies committee
- Students issues committee
- Exams committee
- Laboratories and public safety committee

Workshop and training

- Chemical safety and security officer and trainer, June **2-6, 2013.**
- Statistical package for social sciences, May **22-23, 2013.**
- Modern university instructional methods, Jan **6-7, 2013**
- Jordan Chemical Inventory Management Course, **Nov 22- Dec 24, 2020**
- Basics of Distance Education, Feb **10-11, 2021**
- Exams and Assessment, **June 23-24, 2021**
-

HONORS

- Graduate Student Scholarship, Iowa State University

- Graduate College Scholarship for MS program, Jordan University of Science and Technology (J.U.S.T)

CONFERENCES

1) Abdellatif Ibdah and Russ Hille "**Experiment and Computational Study on the Role of the Glutamate Residue in Molybdenum Hydroxylase Reaction Mechanism"** *Gordon Research Conference of Inorganic Reaction Mechanism, Galveston, TX, USA, March 6-11,* ***2011****.*

2) Abdellatif Ibdah, Russ Hille "**The Rule of Glu-730 in Xanthine Dehydrogenase Mechanism from *Rhodobacter Capsulatus***" *Poster Presentation, Gordon Conference of Molybdenum and Tungsten Enzymes, New London, New Hampshire,USA, July 1-6,* ***2007.***

3) Abdellatif Ibdah, William S. Jenks, James H. Espenson "**Kinetics, Mechanism, and Computational Study of Sulfur Atom Transfer Reaction from Thiirane to EPh_3 (E= As, P)**" *Poster Presentation, Gordon Conference of Inorganic Reaction Mechanism, Ventura, California,USA, Feb 13-18,* ***2005.***

4) Abdellatif Ibdah, William S. Jenks, James H. Espenson "**Theoretical Study of Re(V) catalysts and Re(VII) intermediates for Oxygen Atom Transfer Reactions**" *Seminar Presentation, 228th ACS national meeting, Philadelphia,USA, Aug 22-26,* ***2004.***

5) Abdellatif Ibdah, William Jenks "**Theoretical Study of Sulfur Atom Transfer Reactions from ER_3(E=P, As) to Thiiranes**" *Poster Presentation, Midwest theoretical chemistry conference, Ames, Iowa, USA, June 12-14,* ***2003.***

PROJECTS AND GRANTS: (as principle investigator)

1- The influence of adding cocatalyst on rate of the oxygen atom transfer reaction using rhenium oxo dimer: kinetics and computational study. Started in 22/11/2018, ended in 14/07/2022. **Approved fund (USD): 14240**

2- Kinetics and Mechanistic study of the monomerization reaction for Re(V) dimer with series of monodentate ligands. Started in 22/11/2017, ended in 21/02/2019. **Approved fund (USD): 7162**

3- Oxidation of alkenes to epoxide catalyzed by rhenium(V) catalysis: kinetic and mechanistic study. Started in 15/03/2017, ended in 14/08/2018. **Approved fund (USD): 11984**

4- Catalytic Oxidation of organic sulfide to sulfoxide by rheium(V) complex: Mechanistic study. Started in 30/11/2014, ended in 30/05/2016. **Approved fund (USD): 9164**

5- Mechanistic Study of oxidation reaction catalyzed by Rhenium(V)dimer as catalyst. Started in 19/10/2014, ended in 20/11/2015. **Approved fund (USD): 9164**

6- Computational study of Rhenium(V) complexes catalyze oxygen atom transfer. Started in 16/04/2014, ended in 16/01/2016. **Approved fund (USD): 11984**

7- Mechanistic, Kinetics, and Study of Rhenium(V) Catalyze Oxygen Atom Transfer Reaction (OAT). Started in 22/05/2013, ended in 23/05/2015. **Approved fund (USD): 19527**

PUBLICATIONS

1) **Abdellatif Ibdah**, Ahmed Al-ajlouni, and Baraah Al Momani. **Mechanistic Study on MeRevO(edt)Im catalysis for the oxygen atom transfer from pyridine oxide to Ph_3As: Kinetics and Computational Study.** *Manuscript in preparation to be submitted*

2) **Abdellatif Ibdah**, Ahmed Hijazi, and Nour Bany Hamad. **Kinetics, Equilibrium, and Computational Study on the Monomerization Reaction of $\{CH_3Re^VO(pdt)\}_2$ dimer with monodentate ligands.** *Journal of Organometallic Chemistry* (**2023**), 1002, 122907

3) Isam M. Arafa, Abeer H. Al-Qaderia, **Abdellatif A. Ibdah**, and Mazin Y. Shatnawi. **Photosensitization of asymmetric molecular, and bimolecular aliphatic-μ-bridged-meso-phenyl porphyrin**. *J. Porphyrins Phthalocyanines **2023;*** **27** *765–777*

4) Ahmed K Hijazi, Ziyad A Taha, **Abdellatif Ibdah**, Idris M Idris, Waleed M Al-Momani, **Structural properties and in vitro evaluation of some Ln (III) complexes as potential selective antimicrobial and antioxidant substances**, *Chemical Papers, **2021**, 1-14*

5) Raed M.Al-Zoubi, Noor H.Al-Shatnawi, Walid K.Al-Jammal, **Abdlateef Ibdah**, Mazhar S.Al-Zoubi, Michael J.Ferguson, AhmadZarour, AksamYassin, AbdullaAl-Ansari. **Palladium-catalyzed highly regioselective Buchwald-Hartwig amination of 5-substituted-1,2,3-triiodobenzene: Facile synthesis of 2,3-diiodinated N-arylanilines as potential anti-inflammatory candidates**. *Journal of Organometallic Chemistry* (**2021**), 940, 121786

6) Deeb Taher, Firas F Awwadi, Mousa Al-Noaimi, Lina K Khader, Hassan K Juwhari, Hazem Amarne, Mohammed H Kailani, **Abdellatif Ibdah**, **Bis (N, N′-substituted oxamate) Zincate (II) complexes: Synthesis, spectroscopy, solid state structure and DFT calculations,** *Inorganica Chimica Acta, **2019**, 487,* 409-418

7) **Abdellatif Ibdah,** salwa Alduwikat, **Thermochemistry and Bond Nature of Oxo and Thio ligand in Rhenium(V) Catalyst and Rhenium(VII) Intermediate: Density Functional Calculation.** *European Journal of Inorganic Chemistry **2018**, 24, 2874-2880*

8) **Abdellatif Ibdah,** Heba Bani bakar, Salwa Alduwikat**, Kinetic and Computational Studies of Rhenium Catalysis for Oxygen Atom transfer Reactions,** *Australian Journal of Chemistry*, **2018**, 71 (2&3), 149-159

9) Raed M. Al-Zoubi, **Abdellatif Ibdah**, Walid K. Al-Jammal, Mazhar S. Al-Zoubi, Ahmad A. Almasalma, Robert McDonald, **Mild, Efficient, and Regioselective Synthesis of Diiodophenyl-boronic Acid Derivatives via Metal–Iodine Exchange of 5-Substituted 1,2,3-Triiodoarenes,** *Synthesis,* **2018**, 50(2), 384-390

10) **Abdellatif Ibdah,** salwa Alduwikat, **Kinetics and mechanistic study on deoxygenation of pyridine oxide catalyzed by $\{MeRe^VO(pdt)\}_2$ dimer,** *Journal of Organometallic Chemistry* ,**2017**, 842, 9-20.

11) **Abdellatif Ibdah**, Raed M. Al-zoubi, **Mechanistic study on rhenium(V) dimer catalysis for the oxygen atom transfer from pyridine oxide to Ph_3E(E = P, As): experiment and computational study,** *Reaction Kinetics, Mechanisms and Catalysis*, **2016**, 118(2), 365-376

12) **Abdellatif Ibdah**, **Computational study on chain pathways for oxygenatom transfer catalyzed by a methyl(dithiolate)thiorhenium(V) compound**, *Reaction Kinetics, Mechanisms and Catalysis* **2015**, 116(2), 339-350

13) Rami Suleiman, **Abdellatif Ibdah**, and Bassam El Ali, **DFT Study on the Mechanism of Palladium-Catalyzed Alkoxycarbonylation and Aminocarbonylation of Alkynes: Hydride versus Amine Pathways,** *Journal of Organometallic Chemistry,* **2011** 2355-2363.

14) Bassem A. Al-Maythalony, Anvarhusein A. Isab, Mohammed I.M. Wazeer, **Abdellatif Ibdah**. **Investigation of the interaction of gold(III)-alkyldiamine complexes with L-histidine and imidazole ligands by 1H and 13C NMR, and UV spectrophotometry.** *Inorganica Chimica Acta*, **2010**, 3200-3207.

15) Wagener, Nadine; Pierik, Antonio J.; **Abdellatif Ibdah**, Hille, Russ; Dobbek, Holger **The Mo-Se active site of nicotinate dehydrogenase.** *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106(27), 11055-11060.

16) Marino A. Campo, Haiming Zhang, Tuanli Yao, **Abdellatif Ibdah**, Ryan D. McCulla Qinhua Huang, Jian Zhao, William S. Jenks, and Richard C. Larock **Aryl to Aryl Palladium Migration in the Heck and Suzuki Coupling of o-Halobiaryls.** *Journal of the American Chemical Society*, ***2007,*** 129(19), 6298-6307.

17) **Abdellatif Ibdah,** William S. Jenks, James H. Espenson. **Kinetics, Mechanism, and Computational Studies of Rhenium Catalyzed Desulfurization Reactions of Thiiranes (Thioepoxides)**. *Inorganic Chemistry* **2006**, 45 (14), 5351 -5357.

18) **Abdellatif Ibdah**, James H. Espenson, William S. Jenks. **Computational Study of Sulfur Atom Transfer Reactions from Episulfides to ER_3 (E = As, P).** *Inorganic Chemistry* **2005,** 44 (23), 8426 -8432.

19) Shawakfeh, Khaled Q.; Al-Ajlouni, Ahmad M.; **Abdellatif Ibdah**. **Synthesis and selective catalytic oxidation of new dimeric steroids.** *Acta Chimica Slovenica* **2002**, 49(4), 805-813.

Master Thesis Supervised

1) **Salwa Ali Ahmad Alduwikat**, Kinetics and Mechanistic study of rhenium oxo dimer catalysis for oxygen atom transfer reaction. **May 2016.**

2) **Aya ahmad mohammad al khateeb**. Kinetic Study of Oxidation of Indigo Carmine by Pyridinium Chlorochromate and Characterization of Product. **Dec 2016.**

3) **Hebah mohammad khlaif bani bakar**, Catalytic Oxidation of organic sulfide to sulfoxide by rhenium(V) complex: Mechanistic study. **Jan 2017**

4) **Noor Khalifah Mahmoud bani hamad,** Kinetics and Mechanistic study of the monomerization reaction for Re(V) dimer with series of monodentate ligands, **Jan 2019**

5) **Baraah Mohammed Radwan Al-momani,** Kinetics and mechanistic of oxygen atom transfer reaction from pyridine oxide to triphenyl arsine by rhenium complexes, **Oct 2021**