

Hajem Fawzi Bataineh

Email: hajem@hu.edu.jo

Experience

Assistant Professor of Chemistry

Chemistry Department - Hashemite University [Jordan - Zarqa]
February 2016 – Present

Teach basic and advanced inorganic courses to undergraduate students

Assistant Professor of Chemistry

Chemistry Department - University of Petra [Jordan - Amman]
September 2015 – February 2016

Teach basic and advanced inorganic courses to undergraduate students

Graduate Research Assistant

Dr. A. Bakac, Ames Lab - Iowa State University [Ames, IA - USA]
August 2009 – December 2014

Study the chemistry of iron(IV) in aqueous and non-aqueous systems.

Provide solid evidences that Fenton reaction pathway changes from radical to non-radical pathway upon changing reaction conditions, which helped in solving a long-standing debate over the Fenton reaction mechanism.

<https://www.ameslab.gov/node/8447>

Applied the advanced knowledge in kinetics and thermodynamics to develop an environmentally-friendly catalytic system, based on iron(II) as a catalyst, for the oxidation of various organic substrates.

Characterization using different spectrophotometric methods, including NMR, GC-MS and UV-Vis spectroscopy.

Received enough safety training to act as the Safety Representative for our research group.

Graduate Teaching Assistant

Chemistry Department – Iowa State University [Ames, IA - USA]
August 2009 – December 2013

Teach general and advanced chemistry recitations and laboratories to undergraduate students.

Part-time Lecturer

Chemistry Department, Jordan University of Science and Technology [Irbid, Jordan]
September 2007 – May 2009

Teach general and organic chemistry laboratory courses to undergraduate students.

Advanced ITC Teacher

Saudi Aramco, [Dhahran, Saudi Arabia]
July 2005 – July 2007

Teach general chemistry course -college level- as a part of one year highly selective scholarship program for high school graduates (College Preparatory Program (CPP))

https://en.wikipedia.org/wiki/College_Preparatory_Center

Graduate Teaching Assistant

Chemistry Department, Jordan University of Science and Technology [Irbid, Jordan]

September 2002 – September 2004

Teach laboratory courses to undergraduate students, including general, organic and analytical chemistry and computer applications in chemistry.

Education

Ph. D. Inorganic Chemistry

Iowa State University [Ames, IA – USA]

Aug 2009 – May 2015

Thesis: "Solvent Iron(IV) Oxo Complexes in Catalytic Oxidations and Electron Transfer Reactions"

Advisor: Dr. Andreja Bakac

M.Sc. Applied Chemistry

Jordan University of Science and Technology [Irbid, Jordan]

Sep 2001 – Mar 2005

Thesis: "Physicochemical study of inclusion complexes of steroids and cyclodextrins"

Advisor: Dr. Nathir Al-Rawashdeh

B.Sc. Chemistry

Yarmouk University [Irbid, Jordan]

Aug 1996 – Jun 2000

Publications

pH-induced mechanistic changeover from hydroxyl radicals to iron(IV) in the Fenton reaction.

Hajem Bataineh, Oleg Pestovsky, and Andreja Bakac

Chem. Sci., **2012**, 3, 1594-1599

Iron(II) Catalysis in Oxidation of Hydrocarbons with Ozone in Acetonitrile.

Hajem Bataineh, Oleg Pestovsky, and Andreja Bakac

ACS Catalysis, **2015**, 5(3), 1629-1637

Electron transfer reactivity of the aqueous iron (IV)-oxo complex. Outer-sphere vs proton-coupled electron transfer.

Hajem Bataineh, Oleg Pestovsky, and Andreja Bakac

Inorganic Chemistry, **2016**, 55(13), 6719-6724

Presentations and Posters

Mechanistic Study of Tetravalent Iron in Aqueous and Non-aqueous Solutions.

Hajem Bataineh, Oleg Pestovsky, and Andreja Bakac

Gordon Research Conference: Inorganic Reaction Mechanisms, Galveston March 3-8, 2013, poster presentation.

Mechanistic Study of Tetravalent Iron in Aqueous versus Non-aqueous Solution.

Hajem Bataineh

[hajem@hu.edu.jo]

Hajem Bataineh , Oleg Pestovsky and Andreja Bakac
ACS Midwest Regional Meeting, Omaha October 24-26, 2012, oral presentation

Effects of coordinating anions and pH on Fenton reaction.

Hajem Bataineh , Oleg Pestovsky and Andreja Bakac
Gordon Research Conference: Inorganic Reaction Mechanisms, Galveston
March 6-11, 2011, Poster presentation
Iowa State University Chemistry Departmental Seminar, April 13, 2011, oral
Presentation

Achievements and Honors Received The Henry Gilman Fellowship for excellence in research, May 2013, Iowa State University, Ames, IA USA.

<http://www.chem.iastate.edu/graduate/awards>

Received The ISU Teaching Excellence Award, May 2013, Iowa State University, Ames, IA USA.

<http://www.chem.iastate.edu/graduate/awards>

References Dr. Andreja Bakac: Ames Lab Senior Scientist (retired), Iowa State University / USA-Iowa.

abbakac@gmail.com

Prof. Aaron Sadow: Professor of Inorganic Chemistry, Iowa State University / USA-Iowa.

sadow@iastate.edu

Prof. Nathir Al-Rawashdeh: Professor of Physical Chemistry, Jordan University of Science and Technology / Jordan-Irbid.

nathir@just.edu.jo ; nathir63@yahoo.com

Prof. Khaled Shwakfeh: Professor of organic Chemistry, Jordan University of Science and Technology / Jordan-Irbid.

shawakfa@just.edu.jo

Prof. Rami Abdel-Rahem: Professor and Chair - Chemistry Department, University of Petra / Jordan-Amman.

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