

Al-Zahrani, Abdulrahim

Professor, Department of Chemical and Materials Engineering, King Abdulaziz University

Education

Degree	Field of Study	Institution	Year
PhD	Chemical Engineering	Oregon State University	1988
MS	Chemical Engineering	Oregon State University	1985
BS	Chemical Engineering	KFUPM	1982

Academic Experience

From	To	Institution	Rank	Title	Full or Part Time
June 1982	1982	KFUPM	Gr. Assistant		Full Time
1984	1988	Oregon State University	Gr. Assistant	M.Sc. & PhD	Full Time
1989	1995	King Abdulaziz University	Assist. Prof.		Full Time
1996	2000	King Abdulaziz University	Assoc. Prof.		Full Time
2002	Present	King Abdulaziz University	Professor		Full Time

Funded Research Projects and Patents from the Past Five Years

1.	Gaber Edris, Abdulrahim Alzahrani and Yahia Alhamed “Utilization of Microalgae for Enhanced CO ₂ Sequestration in a Photobioreactor” – Project funded by Deanship of Scientific research, King Abdulaziz University, Project No. 315/135/431, October 2011.
2.	Waleed Alalayah, Gaber Edris, Abdulrahim Alzahrani and Yahia Alhamed, “Biohydrogen production by Chlorella vulgaris in a solar flat plate bioreactor” - Project funded by Deanship of Scientific research, King Abdulaziz University, Project No February 2014
3.	Belal Al Zaitone, Abdulrahim A AlZahrani, Yahya Alhamed and Alf Lamprecht “Drying Kinetics of Complex Fluids in Single Droplet Dryer (SDD) ”, Project funded by Deanship of Scientific research, King Abdulaziz University, April 2015.
4.	S. F. Zaman, A. Alzahrani, Y. Alhamed, M. Daous“Investigation of transition metal promoted high surface area Mo ₂ N catalyst for Fischer Tropsch Olefin (FTO) Synthesis”, Project funded by Deanship of Scientific research, King Abdulaziz University, May 2015.

Current Membership in Professional Societies and Organizations

	Society/organization	Rank	Member Since
1.	American Institute of Chem. Engineering (AIChE, USA)	Member	1995
2.	Saudi Council for Engineers	Member	2001
3.	Saudi Chemical Society	Member	1005

Honors and Awards

1.	Outstanding Graduate Student Award, Chemical Engineering Department, Oregon State University, USA.
2.	Recognition Certificate from the Dean of College of Engineering for outstanding performance, King Abdulaziz University, (2013).

Institutional and Professional Services (administration, committees, units, etc.)

1.	2007 – 2012	Vice Dean of Engineering for Research and Graduate Studies
2.	2007- Present	A Member of the Council of the Deanship of Graduate Studies
3.	2007- Present	A Member of the Council of the Deanship of Community Services
4.	2007- Present	A Member of the Training and Scholarship Committee
5.	2007- Present	A Member of Graduate Admission and Registration Committee

Principal Publications/Presentations 2016/2017

- 1- S. Podila Y. A. Alhamed, A.A. Al-Zahrani, L. Petrov Hydrogen production by ammonia decomposition using Co catalyst supported on Mg mixed oxide systems International Journal of hydrogen energy 40 (2015)15411-15422.
- 2- Inokawa, H. Driss, F. Trovela, H. Miyaoka, T. Ichikawa, Y. Kojima, S. F. Zaman, A. Al-Zahrani, H. Driss, A. Goguet, R. Burch, L. Petrov, M. Daous, D. Rooney, "Mild temperature palladium-catalyzed ammoxidation of ethanol to acetonitrile Applied Catalysis" A: General 506, (2015), Pages 261–267.
- 3- N. Pasupulety, H. Driss, Y. A. Alhamed, A. A. AlZahrani, M. A. Daous, L. Petrov, Influence of preparation method on the catalytic activity of Au/Cu-Zn-Al catalysts for CO₂ hydrogenation to methanol, Proc. Bulgarian Academy of Sciences 68 (2015) 1511-1518.
- 4- S. Podila, Y. A. Alhamed, A. A. AlZahrani, La. A. Petrov Hydrogen production by ammonia decomposition using Co catalyst supported on Mg mixed oxide systems International Journal of Hydrogen Energy 40 (2015) 15411-15422.
- 5- Alhamed, YA ; El-Shazly, AH; Al-Zahrani, AA; Daous, MA, "Improving the Performance of a Graphite Electrode by Using Polyaniline Coated Graphite and Its Application in Batch Electrooxidation of Oxalic Acid", INTERNATIONAL JOURNAL OF ELECTROCHEMICAL SCIENCE, : 11 Issue: 1 Pages: 486-497 Published: JAN 2016.
- 6- Bake Habibulla, Sharif F. Zaman, Mohammad Daous, Abdulrahim Al-Zahrani, Samiullah Rather, Lachezar Petrov, Partial Oxidation of Methanol Over Co₃O₄–CeO₂ Composite System promoted by Nano Structured Iron Particles, Comptes rendus de l'Académie Bulgare des Sciences, 69 (2016) 995-1004.
- 7- Habibullah Bake, Sharif F. Zaman, Yahia A. Alhamed, Abdulrahim A. Al-Zahrani, Muhammad A. Daous, Sami Ullah Rather, Hafedh Driss and Lachezar A. Petrov, Partial oxidation of methanol over Au/CeO₂–ZrO₂ and Au/CeO₂–ZrO₂–TiO₂ catalysts, RSC Advances, 6 (2016) 22555-22562.
- 8- N. Pasupulety, H. Driss, Y. A. Alhamed, A. A. AlZahrani , M. A. Daous, L. Petrov, N. Lingaiah, P. S. Sai Prasad. Ammoxidation of 2-methyl pyrazine to 2-cyano pyrazine on MoO₃/FePO₄ catalysts, Journal of Chemical Sciences, 128 (2016) 227-234.
- 9- S. Podila, H. Driss, Sharif F. Zaman, A. A. Al-Zahrani, M. A. Daous, A. M. Ali, L. Petrov Effect of preparation methods on the catalyst performance of Co/Mg-La mixed oxide catalyst for COx-free hydrogen production by ammonia decomposition.
- 10- Hitoshi Inokawa, Hafedh Driss, Florencio Trovela, Hiroki Miyaoka, Takayuki Ichikawa, Sharif F. Zaman, Abdulrahim Al-Zahrani, Yahia Alhamed, Lachezar Petrov, Catalytic hydrolysis of sodium borohydride on Co catalysts, International Journal of Energy Research (Wiley), 40 (2016) 2078-2090.
- 11- Seetharamulu Podila, Hafedh Driss, Sharif F. Zaman, Yahia A. Alhameda, Abdulrahim A. AlZahrani, Muhammad A. Daous, Lachezar A. Petrov, Hydrogen Generation by Ammonia Decomposition Using Co/MgO-La₂O₃ catalyst: Influence of support calcination atmosphere, Journal of Molecular Catalysis A Chemical 414 (2016) 130-139.
- 12- N. Pasupulety, H. Driss, Sharif F Zaman, Y. A. Alhamed, A. A. AlZahrani, M. A. Daous, L. Petrov, Influence of alumina precursor on the physico-chemical properties of V-Sb-P-W-O/Al₂O₃ system studied in the ammoxidation of propane, Applied catalysis A: General, 512 (2016) 52–62.
- 13- S. Podila, Sharif F Zaman, H. Driss, Y. A. Alhamed, A. A. Al-Zahrani, L. A. Petrov, Hydrogen production by ammonia decomposition using high surface area Mo₂N and Co₃Mo₃N, catalysts Catalysis Science & Technology 6, (2016) 1496-1506.
- 14- S. F. Zaman, Y. A. Alhamed, A. A. AlZahrani, M. A. Daous, L. A. Petrov, Ammonia Decomposition Using Co/MgO-La₂O₃ catalyst: Influence of support calcination atmosphere S.

- S. Podila, H. Driss, Sharif F. Hydrogen Generation, Journal of Molecular Catalysis A: Chemical 414 (2016) 130–139.
- 15- Faissal Abdel-Hady, Saani Shakil, Mostafa Hamed, Abdulrahim Alzahrani, Abdel-Hamid Mazher, Design, Simulation and Manufacturing of an Integrated Composite Material Parabolic Trough Solar Collector, International Journal of Engineering and Technology, Vol 8 No 5 (2016), P. 2333- 2345.
- 16- S. Podila, S. F. Zaman, H. Driss, Y. A. Alhamed, A. A. Al-Zahrani, L. A. Petrov, Hydrogen production by ammonia decomposition using high surface area Mo₂N and Co₃Mo₃N catalysts, Catalysis Science & Technology 6, (2016) 1496.
- 17- Podila, Sharif F. Zaman, H. Driss, A. A. Al-Zahrani, M. A. Daous, L. A. Petrov, High performance of bulk Mo₂N and Co₃Mo₃N catalysts for hydrogen production from ammonia: Role of citric acid to Mo molar ratio in preparation of high surface area nitride catalysts International Journal of Hydrogen Energy Article in press (2017) 1-15.
- 18- S. F. Zaman N. Pasupulety, A. A. Al-Zahrani, M A. Daous, Saad S. Al-Shahrani, Hafedh Driss, Lachezar A. Petrov and Kevin J. Smith, “Carbon monoxide hydrogenation on potassium promoted Mo₂N catalysts”, Applied catalysis : General 532 (2017) 133-145.
- 19- Sharif F. Zaman, N. Pasupulety, A. A. Al-Zahrani, M A. Daous, Saad S. Al-Shahrani, Hafedh Driss, L. A. Petrov, Ammonia treated Mo/AC catalysts for CO hydrogenation with an improved oxygenates selectivity, Journal of Chemical Sciences, Accepted manuscript, March 2017.
- 20- Seetharamulu Podila, Sharif F. Zaman, Hafedh Driss, Yahia A. Alhameda, Abdulrahim A. Al-Zahrani, Muhammad A. Daous, Lachezar A. Petrov, High performance of bulk Mo₂N and Co₃Mo₃N catalysts for hydrogen production from ammonia: Role of citric acid to Mo molar ratio in preparation of high surface area nitride catalysts, International Journal of Hydrogen Energy, February 2017, DOI: 10.1016/j.ijhydene.2017.01.044 (In Press, Corrected Proof).

Patent

1. Y. Alhamed, A. Al Zahrani, M. Daous, K.M. El-Yahyaoui, Process of oxidative dehydrogenation using a boria-alumina catalyst, Pat. No. Appl.: US2010/0179358 A1.
 2. Y. Alhamed, A. Al Zahrani, M. Daous, K.M. El-Yahyaoui, Process of oxidative dehydrogenation using a boria-alumina catalyst, WO2008141827-A1.
 3. L. Petrov, Y. Alhamed, A. Al Zahrani, M. Daous, M. Umar, M. Al-Hazmi, Platinum containing catalysts for propane dehydrogenation, EPA № 12005440.8/26.07.2012.
 4. L. Petrov, Y. Alhamed, A. Al Zahrani, M. Daous, M. Umar, M. Al-Hazmi, Alkane dehydrogenation catalyst and process for its preparation, EPA № 12006767.3/27-09-2012 .
 5. L. Petrov, Y. Alhamed, A. Arafat, A. Al Zahrani, M. Daous, M. Al-Hazmi, Gold containing catalysts for propane dehydrogenation, submitted.
 6. H. Zhang, L. Petrov, Y. Alhamed, A. Al-Zahrani, M. Daous, M. Al-Hazmi, Mixed oxide catalysts for ammonia decomposition, submitted.
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