

Dr. Abdulrahman Almithn

Assistant Professor



Personal Data:

Nationality | Saudi
Date of Hire | 2014
Date Rank Obtained | 2020
Department | Chemical Engineering
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Education:

Academic Degree	Major	specialty	Place of Issue	Address	Date
Doctorate (PhD)	Chemical Engineering	Reaction Kinetics and Catalysis	University of Florida	Gainesville, FL, USA	2020
Masters (M.Sc.)	Chemical Engineering	Reaction Kinetics and Catalysis	University of Florida	Gainesville, FL, USA	2016
Bachelor (B.Sc.)	Chemical Engineering	--	King Faisal university	Al-Ahsa, Saudi Arabia	2014

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions):

PhD	C-X bond hydrogenolysis on transition metals: Effects of high co-adsorbates coverages, catalyst model, and phosphorus incorporation.
Master	--

Experiences:

Title of Job	Address of Work	Country	Date	
Vice-Dean for Academic Affairs, College of Engineering	King Faisal university	Al-Ahsa, Saudi Arabia	From	2023
			To	Present
Chair, Chemical Engineering Department	King Faisal university	Al-Ahsa, Saudi Arabia	From	2022
			To	2023
Acting Chair, Civil & Environmental Engineering Department	King Faisal university	Al-Ahsa, Saudi Arabia	From	2022
			To	2023
Assistant Professor	King Faisal university	Al-Ahsa, Saudi Arabia	From	2020
			To	Present
Lecturer	King Faisal university	Al-Ahsa, Saudi Arabia	From	2017
			To	2020
Teaching Assistant	King Faisal university	Al-Ahsa, Saudi Arabia	From	2014
			To	2016

Teaching Assistant	University of Florida	Gainesville, FL, USA	From	2017
			To	2018
Chemical Engineering Intern	Saudi Aramco	Dhahran, Saudi Arabia	From	2013
			To	2013

Research Interests:

1. Heterogeneous Catalysis
2. Density Functional Theory (DFT)
3. Kinetics and Reaction Engineering
4. Adsorption and Diffusion on Catalytic Surfaces

Publications:

#	Name of author(s)	Title of Publication	Publisher and Date of Publication	Link of Publication
1	Almithn, A.	Effects of P:Ni Ratio on Methanol Steam Reforming on Nickel Phosphide Catalysts	Molecules, 2023	https://www.mdpi.com/1420-3049/28/16/6079
2	Waldt, C., Montalvo-Castro, H., Almithn, A., Loaiza-Orduz, Á., Plaisance, C., & Hibbitts, D	Role of phosphorous in transition metal phosphides for selective hydrogenolysis of hindered C–O bonds	Journal of Catalysis, 2023	https://doi.org/10.1016/j.jcat.2023.02.011
3	Almithn, A., Alghanim, S. N., Mohammed, A. A., Alghawanim, A. K., Alomaireen, M. A., Alhulaybi, Z., & Hossain, S. S.	Methane Activation and Coupling Pathways on Ni ₂ P Catalyst	Catalysts, 2023	https://www.mdpi.com/2073-4344/13/3/531
4	Alhulaybi, Z., Dubdub, I., Al-Yaari, M., Almithn, A., Al-Naim, A. F., & Aljanubi, H.		Polymers, 2022	https://www.mdpi.com/2073-4360/15/1/12

	Al-Naim, A. F., & Aljanubi, H.			
5	Almithn, A.; Alhulaybi Z.	A Mechanistic Study of Methanol Steam Reforming on Ni ₂ P Catalyst	Catalysts, 2022	https://www.mdpi.com/2073-4344/12/10/1174
6	Mehar, V.; Almithn, A.; Egle, T.; Yu, M.H.; O'Connor, C.R.; Karatok, M.; Madix, R.J.; Hibbitts, D.; Weaver, J.F.	Oxophilicity Drives Oxygen Transfer at a Palladium–Silver Interface for Increased CO Oxidation Activity	ACS Catalysis, 2020	https://pubs.acs.org/doi/abs/10.1021/acscatal.0c03885
7	Almithn, A.; Hibbitts, D.	Impact of Metal and Heteroatom Identities in the Hydrogenolysis of C–X Bonds (X = C, N, O, S, and Cl)	ACS Catalysis, 2020	https://pubs.acs.org/doi/abs/10.1021/acscatal.0c00481
8	Witzke, M. E.; Almithn, A.; Coonrod, C. L.; Triezenberg, M. D.; Hibbitts, D. D.; Flaherty, D. W.	In Situ Methods for Identifying Reactive Surface Intermediates During Hydrogenolysis Reactions: C–O Bond Cleavage on Nanoparticles of Nickel and Nickel Phosphides	Journal of American Chemical Society, 2019	https://pubs.acs.org/doi/abs/10.1021/jacs.9b06112
9	Almithn, A.; Hibbitts, D.	Comparing Rate and Mechanism of Ethane Hydrogenolysis on Transition-Metal Catalysts	Journal of Physical Chemistry C, 2019	https://pubs.acs.org/doi/abs/10.1021/acs.jpcc.8b11070
10	Almithn, A.; Hibbitts, D.	Effects of Catalyst Model and High Adsorbate Coverages in Ab Initio Studies of Alkane Hydrogenolysis	ACS Catalysis, 2018	https://pubs.acs.org/doi/abs/10.1021/acscatal.8b01114
11	Witzke, M. E.; Almithn, A.; Coonrod, C. L.; Hibbitts, D. D.; Flaherty, D. W.	Mechanisms and Active Sites for C–O Bond Rupture Within 2-Methyltetrahydrofuran over Ni, Ni ₁₂ P ₅ , and Ni ₂ P Catalysts	ACS Catalysis, 2018	https://pubs.acs.org/doi/abs/10.1021/acscatal.7b04403

12	Almithn, A.; Hibbitts, D.	Supra-monolayer Coverages on Small Metal Clusters and Their Effects on H ₂ Chemisorption Particle Size Estimates	AIChE Journal, 2018	https://aiche.onlinelibrary.wiley.com/doi/abs/10.1002/aic.16110
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Language Proficiency:

1. Arabic
2. English