

Bamufleh, Hisham

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

Education			
<i>Degree</i>	<i>Field of Study</i>	<i>Institution</i>	<i>Year</i>
PhD	Chemical Engineering	University of Tulsa	2002
MS	Thermal Engineering	King Abdulaziz University	1997
MS	Chemical Engineering	University of Tulsa	1999
BS	Chemical Engineering	King Abdulaziz University	1989

Academic Experience					
<i>From</i>	<i>To</i>	<i>Institution</i>	<i>Rank</i>	<i>Title</i>	<i>Full or Part Time</i>
2002	2012	King Abdulaziz University	Assist. Prof.		Full Time
2012	current	King Abdulaziz University	Assoc. Prof.		Full Time

Non Academic Industrial Experience (including Consultations)					
<i>From</i>	<i>To</i>	<i>Company/Entity</i>	<i>Title</i>	<i>Position Description</i>	<i>Full or Part Time</i>
1990	1990	Saudi Arabian Air lines	Lab. Chemist	Analysing plating solutions	Full Time
1990	1995	Saudi Aramco	Process Engineer	Monitor and follow up process units	Full Time
2016	current	House of experience	Head	industrial studies, troubleshooting, requests and training programs	Part time

Funded Research Projects and Patents from the Past Five Years	
1.	Principal investigator of the research group (3-34/RG) funded by KAU" Energy Integration, Cogeneration, and Incorporation of Solar Energy in Industrial Facilities".
2.	Principal investigator of the research (263/135/1433) funded by KAU" Process Integration Strategies for the Optimization of Water Usage and Discharge for Petroleum Refineries and petrochemical plants"
3.	Principal investigator of the research (254/135/1433) funded by KAU" Benzene Reduction from model gasoline using ionic liquids"
4.	Principal investigator of the research (135-021-D1434) fundud by KAU "Kinetic, equilibrium and thermodynamic implemtation of azo blue dye decontamination from polluted wastewater using innovative ZnO nanoparticles hybrid beads"
5.	"Energy Integration, Cogeneration, and Incorporation of Solar Energy in Industrial Facilities" (Co-I), KAU funded, 2013
6.	Co-investigator in the research fundud by KAU Investigation of a novel catalyst for direct synthesis of ethanol from acetic acid KAU research fund, Started on January 2014.
7.	Development of Functionalized Metallic Organic Frameworks (MOFs) for Carbon Dioxide (CO ₂) Capture, funded by KAU, 2013-2014.

8.	Investigation of Dry Reforming of Methane Over Pd Promoted Ni/CeZrO _x Catalysts, funded by KAU, 438/135/217.
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Certifications and Professional Registrations

1.	Fundamental of Engineering (FE) license from Oklahoma State, October 2001
2.	Professional Engineering (PE) license from Oklahoma State, April 2004

Current Membership in Professional Societies and Organizations

<i>Society/organization</i>	<i>Rank</i>	<i>Member Since</i>
1. Professional Engineering	PE	2004-date
2. AIChE	Student Advisor	2014

Honors and Awards

1.	B.Sc. undergraduate with "Excellent" grade and GPA of 4.13/5
2.	Prince Bandar Bin Sultan prize for M.Sc. graduation with 4/4
3.	Prince Bandar Bin Sultan prize for PhD graduation with 4/4
4.	King Abdulaziz University recognition for PhD graduation with 4/4
5.	Fundamental of Engineering (FE) certificate from Oklahoma state board

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

1.	Head of the General courses unit
2.	Head of the planning department in the emergency and disasters center (EDC)
3.	College representative of the Makkah Imarah
4.	Head of department academic affairs committee
5.	Head of the faculty social committee
6.	Head of the department social committee
7.	Member of the student consultations committee
8.	Member in KACST industrial science and engineering research committee

Principal Publications/Presentations from the Past five Years

1.	César Sotelo-Pichardo, Hisham S. Bamufleh , José María Ponce-Ortega, and Mahmoud M. El-Halwagi, Optimal Synthesis of Property-Based Water Networks Considering Growing Demand Projections ‡, Industrial & Engineering Chemistry Research November 2014
2.	Hasan Uslu, Göksel Demir, Cuma Bayat, Kailas L. Wasewar 4 and Hisham S. Bamufleh , Adsorptive separation of adipic acid from aqueous solutions by perlite or its composites by manganese or copper Membrane, Water Treatment, Vol. 5, No. 4 (2014) 295-304
3.	Ahmed Arafat, Hisham S. Bamufleh , Fe ₂ O ₃ /TUD-1: an efficient catalysts for Friedel–Crafts alkylation of aromatics, J. Porous Mater October 2014
4.	H. Shokry Hassan, M. F. Elkady, A. H. El-Shazly and Hisham S. Bamufleh , Formulation of Synthesized Zinc Oxide Nanopowder into Hybrid Beads for Dye Separation, Journal of Nanomaterials Volume 2014
5.	Hasan Uslu, Dipaloy Datta and Hisham Saeed Bamufleh , Extraction Equilibria of Gibberellic Acid by Tridodecylamine 2 Dissolved in Alcohols, Journal of Chemical & Engineering Data, October, 2014
6.	Muhammad Umar, Yahia Abubakar Al-Hamed, Abdulraheem Al-Zahrani, Hisham Saeed Bamufleh " Optimizing the Synthesis of Ethyl <i>tert</i> -Butyl Ether in Continuous Catalytic Distillation Column Using New Ion Exchange Resin Catalyst". <u>Chin.J.Chem.Eng.</u> 2013, Vol. 21 Issue (10) 1121-1128

7.	Hisham S. Bamufleh , José María Ponce-Ortega, and Mahmoud M. El-Halwagi, Multi-Objective Optimization of Process Cogeneration Systems with Economic, Environmental, and Social Tradeoffs, <i>Clean Technologies and Environmental Policy</i> , 15, 2013, 185-197.
8.	Ce'sar Giovani Gutierrez-Arriaga, Faissal Abdelhady, Hisham Bamufleh , Medardo Serna-Gonzalez, Mahmoud M. El-Halwagi, Jose' Mari'a Ponce-Ortega, Industrial waste heat recovery and cogeneration involving 3 organic Rankine cycles, <i>Clean Techn Environ Policy</i> , August 2014.
9.	Luis Fernando Lira-Barragan, Ce'sar G. Gutierrez-Arriaga, Hisham S. Bamufleh , Faissal Abdelhady, Jose' Mari'a Ponce-Ortega, Medardo Serna-Gonzalez and Mahmoud M. El-Halwagi Reduction of greenhouse gas emissions from steam power plants through optimal integration with algae and cogeneration systems, <i>Clean Techn Environ Policy</i> (2015) 17:2401–2415.
10.	Hasan Uslu and Hisham S. Bamufleh , A comparative study for adsorption of carbolic acid by synthetic resins, <i>Membrane Water Treatment</i> , Vol. 6, No. 6 (2015).
11	Hasan Uslu, Dipaloy Datta, Hisham S. Bamufleh , Hasan Uslu, Dipaloy Datta and Hisham S. Bamufleh , Reactive extraction of phenol from aqueous solution using tri-octylamine dissolved in alkanes and alcohols, <i>Journal of Molecular Liquids</i> 212 (2015) 430–435.
12	Faissal Abdelhady, Hisham Bamufleh, Mahmoud M. El-Halwagi and José María Ponce-Ortega, Optimal design and integration of solar thermal collection, storage, and dispatch with process cogeneration systems, <i>Chemical Engineering Science</i> . Volume 136, 2 November 2015, Pages 158-167.
13	Hasan Uslu, Dipaloy Datta and Hisham S. Bamufleh , Extraction of Picric Acid from Wastewater by a Secondary Amine (Amberlite LA2) in Octan-1-ol: Equilibrium, Kinetics, Thermodynamics, and Molecular Dynamics Simulation, <i>Ind. Eng. Chem. Res.</i> 2016, 55, 3659–3667.
14	Kayhan Bayazit, Hasan Uslu, Aslı Gök, Ş. İsmail Kırbaşlar, Dheiver Santos and Hisham S. Bamufleh Investigation of Ternary Phase Diagrams of (Water + Butyric Acid + Phenyl Acetate) at Different Temperatures, <i>J. Chem. Eng. Data</i> 2016, 61, 1313–132.
15	Hasan Uslu and Hisham S. Bamufleh , Effect of Solvent and pH on the Extraction of Carbolic Acid from Aqueous Solution by TOMAC, <i>J. Chem. Eng. Data</i> 2016, 61, 1676–1680.
16	Javier Tovar-Facio, Luis F. Lira-Barragán, Fabricio Nápoles-Rivera, Hisham S. Bamufleh , José M. Ponce-Ortega and Mahmoud M. El-Halwagi, Optimal Synthesis of Refinery Property-Based Water Networks with Electrocoagulation Treatment Systems, <i>ACS Sustainable Chem. Eng.</i> 2016, 4, 147–158.
17	S.A. Sulaiman ¹ , H.S. Bamufleh , S.N.A. Tamili ¹ , M. Inayat and M.Y. Naz, Characterization Of Date Palm Fronds As A Fuel For Energy production, <i>Bull. Chem. Soc. Ethiop.</i> 2016 , 30(3), 465-472.
18	Hisham Bamufleh , Faissal Abdelhady, Hassan M. Baaqeel and Mahmoud M. El-Halwagi, <u>Optimization of multi-effect distillation with brine treatment via membrane distillation and process heat integration</u> , <i>Desalination</i> , Volume 408, 15 April 2017, 110-118.

Conference

1. Characteristics of Liquid–Solid Mass Transfer in a Bubble Column Equipped With a Vertical Tube of Circular Fins, H. S. Bamufleh, S. A. Nosier, and M. A. Daous, Defect and Diffusion Forum Vols. 312-315 (2011) pp 647-652
2. Improving the Diffusion Controlled Cementation of Cadmium Ions Using Reciprocating Fixed Bed of Zinc Rings, A.H. El-Shazly1, A.A. Mubarak, H.S. Bamufleh, Defect and Diffusion Forum Vols. 312-315 (2011) pp 694-699
3. "New Trends in Petroleum Refining" 1st Saudi – Chinese Oil Refinery Forum **Hisham Bamufleh** 28th - 29th October, 2013 organized by KACST.
4. Improving the Diffusion Controlled Cementation of Copper Ions on a Fixed Bed of Zinc Raschig Rings Using Flow Pulses in a Batch Reactor Ahmed H. El-Shazly, Ashraf A. Mubarak, **Hisham S. Bamufleh**.
5. Desulfurization of Diesel Fuel using Sand-Templated Nanocarbon Adsorbents. **Hisham S. Bamufleh**, Sultan M. Alharbi and Nawaf D. Alsulami, 3rd Annual International Conference on Chemistry, Chemical Engineering and Chemical Process (CCECP 2015) 26-27th January 2015 in Hotel Fort Canning, Singapore.
6. Optimal Synthesis of Property-Based Water Networks Considering Growing Demand Projections 3rd Saudi – Chinese Oil Refinery Forum César Sotelo-Pichardo, **Hisham S. Bamufleh**, José M. Ponce-Ortega, and Mahmoud M. El-Halwagi, 27th - 28th October, 2015 organized by KACST.
7. César G. Gutiérrez-Arriaga ,Medardo Serna-González , Faissal Abdelhady , **Hisham S. Bamufleh**, José María Ponce-Ortega, Mahmoud M. El-Halwagi, Sustainable Integration of Algal Biodiesel Production with Steam Electric-Power Plants for Mitigating CO₂ Emissions, SDEWES2014.0095
8. **Hisham Bamufleh**, Faissal Abdelhady, Hassan M. Baaqeel and Mahmoud M. El-Halwagi, Optimization of multi-effect distillation with brine treatment via membrane distillation and process heat integration, 20th Annual Energy, Utility & Environment Conference, USA largest Feb 810, 2017, San Diego CA.

Recent Professional Development Activities (*Workshops, training, etc.*)

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| 1. | ABET Program Assessment Workshop, ABET Professional Services, King Abdulaziz University, Jeddah, Saudi Arabia, 15 th November, 2012. |
| 2 | Participated in the first coordinated workshop between King Abdulaziz City for Science & Technology (KACST) and French National Center for Scientific Research (CNRS). |