Ali S. Alshami

Assistant Professor

Chemical Engineering/College of Engineering and Mines

Harrington Hall Room 315

Tel: 701.777.6838

Education

Ph.D., Engineering Science/ Biochemical Eng., Washington State University, 2007

M.S., Chemical Engineering, Washington State University, 2001

B.S., Chemical Engineering, Washington State University, 1997

Professional experience

University of North Dakota, Assistant Professor, 2014-present

King Fahd University of Petroleum and Minerals, Assistant Professor, 2010-2014

Pace Intl/Valent Biosciences, Engineering and Services Manager, 1996-2010

Eaton/Cutler-Hammer Corp, Technology Development Engineer, 2000-2003

Research experience and interests

Biomaterials and bimolecular engineering

Biochemical engineering and control

Bioseparation engineerning

Product and process development and design

Membrane separation processes

Wastewater treatment

Teaching experience and interests

Separations Engineering

Statistics and Numerical Methods

Chemical Engineering Laboratory IV

Bioreactions Engineering

Biochemical Engineering

Chemical Engineering Unit Ops II
Chemical Engineering Computing
Transport Phenomena I
Chemical Engineering Thermodynamics I
Thermal Processing of Biological Materials

Industrial Short Courses

Distillation and Separation Engineering
Bioinstrumentation and Control (Pace Internal LLC)
Six Sigma Training (Eaton/Cuttler-Hammer)

Current membership in professional organizations

American Institute of Chemical Engineers
American Society of Biological Engineers
American Chemical Society

Honors and Awards

Excellence in Teaching Award, Chemical Engineering, 2011
Outstanding Teaching Assistant Award, Washington State University, 2006
Outstanding Graduate Student Scholarship, Washington State University, 2005
WSU GS Fellowship, Washington State University, 2004

Service Activities

Summer and Co-op Training Program Coordinator, 2012-2014
Program Assessment Committee, Chemical Engineering, 2014
Curriculum Committee, Chemical Engineering, 2013
Laboratory and Safety Committee, 2012
Academic Advising Excellence Nomination Committee, 2011

Most important publications and presentations from the past five years

Alshami, A., Wang, Y., and Tang, J., Rasco, B., Dielectric Dispersion Mechanism of Protein Solutions, Part II: Quantitative Analysis, Biomacromolecules, Aug, 2014.

Alshami, A., Wang, Y., and Tang, J., Rasco, B., Dielectric Mechanism Analysis of mono- di- and Polysaccharides in the Microwave and Radio Frequency Range of the Electromagnetic Spectrum, Biomacromolecules, Sept., 2014.

Alshami, A., Wang, Y., and Tang, J., Rasco, B., Dielectric Mechanism Analysis of Carbohydrate-Protein Mixtures, Biophysical Journal, March, 2014.

Alshami, A and R. G. Evans, Pulse Jet Orchard Heater System Development; Part II: System Scaling and Application. *Transactions of the ASABE*. 52(2): 345-355. 2009.

R. G. Evans and **A. Alshami**, Pulse Jet Orchard Heater System Development; Part I: Design, Construction and Optimization. Transactions of the ASABE. 52(2): 331-343. 2009.

Ali A. Alshami. Molecular Dynamics Simulation of Water Movement across the Aquaporin-1 Water Channel, Kuwait Filtration and Separation Conference, Kuwait, December 2013.

Conference presentations

Ali A. Alshami, Biological Treatment Of Flow-back Water from Hydraulic Fracturing: Composition Effects On Growth Kinetics. June 2, 2015. SPE EUROPEC 2015.

Ali A. Alshami, Simulation-aided characterization of biomimetic separation membrane for water purification. American Institute of Chemical Engineers (AIChE), Atlanta, GA. November 2014.

Ali A. Alshami, Molecular Dynamics Simulation of Water Movement across the Aquaporin-1 Water Channel, Kuwait Filtration and Separation Conference, Kuwait, December 2013.

Ali A. Alshami, Yu Wang, Galina Mikhaylenko, and Juming Tang. Dielectric Mechanism Analysis of Food Carbohydrates in the Microwave and Radio Frequency Range of the Electromagnetic Spectrum, Intl. Microwave and Power Institute Symposium, Seattle, WA. July 2005.

Ali A. Alshami, Yu Wang, and Juming Tang. Dielectric Dispersion Analysis of Food Protein Solutions Between 5 and 1800 MHz*. Intl. Microwave and Power Institute Symposium (IMPI)*, Boston, MA. August 2006.