

# Midland College Faculty Vitae

## **Name:**

Brian Flowers

## **Names of all higher education institutions attended, with degrees earned:**

2016

Ph.D. in Chemical Engineering University of Alabama, Tuscaloosa, Alabama  
Dissertation: 'Advanced Solvents for CO<sub>2</sub> Separations'  
Awards: American Institute of Chemists Graduate Student of the Year 2015,

2013

M.S. in Chemical Engineering - University of Alabama, Tuscaloosa, Alabama  
Awards: Alabama License Tag Fellowship Recipient

2011

B.S. with Honors in Chemical Engineering - University of Alabama, Tuscaloosa, Alabama  
Awards: Magna Cum Laude graduate, Omega Chi Epsilon Vice President, Tau Beta Pi Member, AIChE Secretary, ChemE Car Team Captain, Herschel and Lynn Matheny Engineering Leadership Scholarship recipient

## **All previous teaching positions, including the names of the institutions, the position, and beginning and ending dates of employment:**

Instructor of Engineering/Physics - Midland College (2016 - present):

Physical Science  
Introduction to Engineering  
Statics  
Engineering Graphics

Graduate Teaching Assistant - University of Alabama (2014 - 2016):

Reactor Design  
Industrial Health & Safety  
Unit Operations Laboratory

## **Significant professional publications related to the teaching position, with a full citation for each:**

#### Presentations:

Methane/Water Solubility Via the Addition of  $\alpha$ -Cyclodextrin and Its Effects on the Microfluidic Synthesis of Methane (sI) and Propane (sII) Hydrates. AIChE Conference, 2014, Atlanta

Microfluidic Synthesis of Methane (sI) and Propane (sII) Hydrates. 8th International Conference on Gas Hydrates, 2014, Beijing

Microfluidic Synthesis of Methane (sI) and Propane (sII) Hydrates. AIChE National Conference, 2013, San Francisco

Continuous Fine Chemicals Processing With Aqueous Phase Organic Synthesis. AIChE National Conference, 2013, San Francisco

Microchemical Synthesis of Non-Covalently Bonded Materials. AIChE National Conference, 2012, Pittsburgh

Raman Microscopy and ATR on Dendrimer Complexes. ACS National Conference, 2006, San Francisco

#### Publications:

Flowers, B.S., Mittenenthal, M.S., Jenkins, A.H., Wallace, D.A., Whitley, J.W., Dennis, G.P., Wang, M., Turner, C.H., Emel'Yanenko, V.N., Verevkin, S.P., Bara, J.E. 1,2,3-Trimethoxypropane: A Glycerol-Derived Physical Solvent for CO<sub>2</sub> Absorption. ACS Sustainable Chemistry and Engineering 2017, 5(1), 911-921.

Flowers, B.S., Hartman, R.L. Particle Handling Techniques in Microchemical Processes. Challenges 2012, 3, 194-211.

Burgess, J. S., Acharya, C. K., Lizarazo, J., Yancey, N., Flowers, B., Kwon, G., ... & Street, S. Boron-doped carbon powders formed at 1000 C and one atmosphere. Carbon 2008, 46(13), 1711-1717.