

SHEENA M. REEVES

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EDUCATION

Ph.D. in Chemical Engineering, Mississippi State University April 2011
Dissertation: *Effects of Aging and Crystal Attributes on Particle Size Distributions in Breakage Experiments in Stirred Vessels*
Certification: *Material Engineering and Science* January 2010

B.S. in Chemical Engineering, Mississippi State University May 2006
Minors: *Mathematics, Chemistry*

PROFESSIONAL EXPERIENCE

Assistant Professor October 2014 – Present
*Chemical Engineering Department
Prairie View A&M University, Prairie View, TX*

Adjunct Instructor January 2012 – September 2014
*Chemical Engineering Department
Prairie View A&M University, Prairie View, TX*

Graduate Teaching Assistant August 2008 - May 2010
*Dave C. Swalm School of Chemical Engineering
Mississippi State University, Mississippi State, MS*

Graduate Research Assistant July 2006 - April 2011
*Dave C. Swalm School of Chemical Engineering
Mississippi State University, Mississippi State, MS*
Projects: *Effects of Aging and Crystal Attributes on Particle Size Distributions in Breakage Experiments in Stirred Vessels, Effect of Cooling Rate on Oleic and Linoleic Acid Crystal Compositions*

Undergraduate Research Assistant May 2004 - May 2006
*Dave C. Swalm School of Chemical Engineering
Mississippi State University, Mississippi State, MS*
Projects: *Quantification of Erythrocyte Rupturing in a Dielectrophoretic Microdevice, Determination of the Effect of Breakage on Crystal Shape Distribution, Removal of Bacteria from Raw Oysters*

COURSES TAUGHT

Undergraduate Courses

CHEG 2013: Material Science (Summer 2013)
CHEG 2043: Thermodynamics I (Spring 2012, Spring 2013, Summer 2013, Summer 2014)
CHEG 2053: Materials and Energy Balances (Spring 2012, Summer 2012, Fall 2012, Spring 2013, Summer 2013, Fall 2013, Spring 2014, Summer 2014)

CHEG 3013: Heat, Mass, and Momentum Transport (Fall 2012, Fall 2013, Fall 2014)
CHEG 3023: Unit Operations (Fall 2013, Summer 2014)
CHEG 3043: Equilibrium Stage Separation Processes (Spring 2012, Spring 2013, Spring 2014)
CHEG 3053: Thermodynamics II (Fall 2012, Fall 2013, Fall 2014)
CHEG 3063: Kinetics and Reactor Design (Spring 2012, Spring 2013, Spring 2014, Spring 2015)
CHEG 4033: Process Dynamics and Controls (Fall 2014)
CHEG 4103-19: Introduction to Particle and Crystallization Technology (Fall 2014)
CHEG 4483: Senior Design and Professionalism II (Summer 2012)
GNEG 2151: Engineering Research I (Spring 2013)

Graduate Courses

CHEG 5013: Advanced Reaction Engineering (Fall 2012, Spring 2015)
GNEG 5193-P90: Advanced Thermodynamics for Chemical Engineers (Spring 2014)

PRODUCTS

1. **Reeves, S.M.** and P.J. Hill, "Mechanisms Influencing Crystal Breakage Experiments in Stirred Vessels." *Crystal Growth and Design*, 12, 2748-2758 (2012).
2. Hill, P.J. and **S.M. Reeves**, "Aspect Ratios and Modeling in Fragmentation and Attrition," Technical Presentation - American Institute of Chemical Engineers (AIChE) 103rd Annual Conference, October 2011.
3. **Reeves, S.M.** and P.J. Hill, "Effect of Aging on Crystal Breakage in Stirred Vessels," Technical Presentation - American Institute of Chemical Engineers (AIChE) 101st Annual Conference, November 2009.
4. **Reeves, S.M.** and P.J. Hill, "Effect of Cooling Rate on Oleic and Linoleic Acid Crystal Compositions," Technical Presentation - American Institute of Chemical Engineers (AIChE) 100th Annual Conference, November 2008.
5. **Reeves, S.M.** and P.J. Hill, "Crystallization of C₁₈ Fatty Acids for the Production of Biodiesel," Technical Presentation - Mississippi State University Graduate Student Association (GSA) 6th Annual Research Symposium, April 2008.

Other significant products:

1. Echerenwa, C. and **S.M. Reeves**, "Effect of Mechanical Shaking on the Weight Distribution of NaCl Crystals," Poster Presentation – LSAMP Symposium, February 2013.
2. **Reeves, S.M.** and P.J. Hill, "Breakage Behavior of NaCl Crystals in a Stirred Vessel," Technical Presentation - American Institute of Chemical Engineers (AIChE) 101st Annual Conference, November 2009.
3. **Reeves, S.M.** and P.J. Hill, "Crystallization of C₁₈ Fatty Acids for the Production of Biodiesel," Technical Presentation - Alliance for Graduate Education in Mississippi (AGEM) Winter Scholar Symposium, January 2008.
4. **Reeves, S.M.** and A.R. Minerick, "Quantification of Erythrocyte Rupturing in a Dielectrophoretic Microdevice," Poster Presentation - American Society of Engineering Education (ASEE) Regional Conference, April 2006.
5. **Reeves, S.M.**, Vedantham, K., and P.J. Hill, "Determination of the Effect of Breakage on Crystal Shape Distribution," Technical Session - National Organization of Black Chemists and Chemical Engineers (NOBCChE) National Conference, March 2005.
6. Pate, A., **Reeves, S.M.**, and A.R. Minerick, "Lab-on-a-Chip Sample Preparation for Subcellular Analysis: a Technique to Rapidly Rupture Erythrocytes in a Dielectrophoretic Microdevice," Poster Session - American

Electrophoresis Society (AES) / American Institute of Chemical Engineers (AIChE) Annual Conference, November 2006.

7. Pate, A., **Reeves, S.M.**, and A. Minerick. "Examination of Erythrocyte Rupturing in Dielectrophoretic Microdevices," Final Symposia of the NSF REU Site Chemistry - Chemical Engineering: The Bonds Between Us, August 2006.
8. **Reeves, S.M.**, Vedantham, K., and P.J. Hill, "Determination of the Effect of Breakage on Crystal Shape Distribution," Technical Session - National Organization of Black Chemists and Chemical Engineers (NOBCChE) National Conference, March 2005.

Synergistic Activities

1. Developer and instructor of the Introduction to Particle and Crystallization Technology course at Prairie View A&M University. The course was taught in the fall semester of 2014. The course was designed to prepare students in the area of particle and powder characterization, particle processing (granulation, fluidization), particle formation, storage and transport, separation methods (sieving, filtration, settling), and safety procedures and hazards. The course also covered colloids, respiratory drugs, and slurries. Students were juniors and seniors in the chemical engineering major. The curriculum required students to research disasters using solids in industry and to show ability in solid/liquid equilibrium.
2. Facilitator for Middle School Days hosted by the Roy G. Perry College of Engineering at Prairie View A&M University. This program allowed middle school students in the surrounding counties to perform hands-on experiments involving polymerization, thermodynamics, and heat transfer. The program was designed to encourage students to (a) attend college and (b) pursue careers in the STEM fields.

PROFESSIONAL AFFILIATIONS

American Institute of Chemical Engineers (AIChE)

National Society of Black Engineers (NSBE)

PROFESSIONAL DEVELOPMENT

<i>Mettler-Toledo R&D and Manufacturing For Polymers, Fuels, and Chemicals Seminar</i> The Westin Galleria, Houston, TX	July 2014
<i>Word Press Basic Training</i> Prairie View A&M University, Prairie View, TX	May 2014
<i>TEES Workshop</i> Texas A&M University, College Station, TX	January 2014
<i>PVAMU/TAMU ADVANCE-PAID Professional Development Workshop</i> Houston, TX	May 2013
<i>NSF ADVANCE Scholar Symposium</i> Texas A&M University, College Station, TX	October 2012
<i>STEM Women of Color Conference</i> Purdue University, West Lafayette, IN	April 2012