

## MELISSA S. REEVES

Associate Professor of Chemistry, Tuskegee University, Tuskegee, AL 36088-1645

### A. Professional Preparation.

Undergraduate:	University of Florida	Chemistry	B. S.	1988
Graduate:	Indiana University	Physical Chemistry	Ph.D.	1991
Postdoctoral:	University of Minnesota	Physical Chemistry		1991-93

### B. Appointments.

Associate Professor	Tuskegee University	Chem. Dept.	1999-present
Director, Undergrad. Res.	Tuskegee University		Fall 2004-present
Visiting Faculty	Jackson State University	CCMSI	Summer 2000
Faculty Intern	3M Corporation	Advanced Mater.	Summer 1997,98
Assistant Professor	Tuskegee University	Chem. Dept.	1995-99
Assistant Prof., part-time	Indiana University	Chem. Dept.	1993-95

### C. Publications.

#### Closely Related Publications

- R. N. Chambliss and M. S. Reeves, "Simulated Tensile Behavior of Graphene-Polypropylene Nanocomposites", *PMSE Preprints* **98**: 420-421 (2008).
- R. N. Chambliss and M. S. Reeves, "Atomistic Simulation of Graphite-Polypropylene Nanocomposites Including Covalent Graphite Modification," *Polymeric Mater.: Sci. and Engrg.* **96**: 601-602 (2007).
- D. L. Hudson, V. N. Moses, M. S. Reeves, D. R. Dean, and A. G. Ludwick, "Computational Comparison of Isotactic and Syndiotactic Polystyrene and their Alkyl-Substituted Analogs", *PMSE Preprints* **94**: 582-583 (2006).
- D. L. Hudson, J. A. Hinkley, T. C. Clancy, and M. S. Reeves, "Molecular Modeling of Penetrants in Aromatic Polyimides," *ACS Polymer Preprints* **44**: 1230 (2003).
- R. B. Ross and M. S. Reeves, "Atomistic Simulations of the Cohesive and Surface Properties of Polyethylene and Polypropylene," *Polym. Matrls. Sci. Engrg.* **81**: 440 (1999).
- D. G. Truhlar, D. W. Schwenke, S. L. Mielke, M. S. Reeves, R. W. Numrich, D. H. Briesemeister\*, D. C. Chatfield, R. S. Friedman, M. Kalke\*, G. J. Tawa, and M. J. Unekis "Large-scale Calculations of the Quantum Dynamics of Molecular Collisions and Reactions," in *Toward Teraflop Computing and New Grand Challenge Applications*, Ed. R. K. Kalia and P. Vashishta (Nova Science Publishers, Inc., New York, 1995) pp. 151-171.

#### Other Relevant Publications

- A. H. Conner and M. S. Reeves, "Reaction of Formaldehyde at the Ortho- and Para-Positions of Phenol: Exploration of Mechanisms Using Computational Chemistry," *Wood Adhesives 2000, 7<sup>th</sup> Intl. Symp.*, (S. Lake Tahoe, NV, USA, 22-23 Jun 2000 (2001) pp. 483-487.
- M. S. Reeves, D. C. Chatfield, and D. G. Truhlar, "Preconditioned Complex Generalized Minimal Residual Algorithm for Dense Algebraic Variational Equations in Quantum Reactive Scattering," *J. Chem. Phys.* **99**: 2739 (1993).
- D. C. Chatfield, M. S. Reeves, D. G. Truhlar, C. Duneczky, and D. W. Schwenke, "Complex Generalized Minimal Residual Algorithm for Solving Reactive Scattering Equations," *J. Chem. Phys.* **97**: 8322 (1992).
- M. S. Reeves and E. R. Davidson, "Potential Surface Symmetry and Vibronic Wavefunctions of Methane Cation," *J. Chem. Phys.* **95**: 6551 (1991).

### D. Synergistic Activities

1. Director of the Tuskegee University Research Experience for Undergraduates in Material Science and Engineering, 2005-present.
2. Faculty member in the Interdisciplinary Material Science and Engineering Ph.D. program at Tuskegee University as well as the Tuskegee Center for Advanced Materials.

3. Member of the Physical Chemistry On-line Consortium (<http://bluehawk.monmouth.edu/~tzielins/PCOLWEB/ChemOnLine/>)
4. Treasurer, Sigma Xi, The Scientific Research Society, Tuskegee Chapter. Our primary activity is the Annual Student Research Symposium.
5. Director of Undergraduate Research, Tuskegee University, 2004-2006.
6. Co-Chair of the Undergraduate Science and Engineering Conference (USEC), held at Tuskegee University, Nov. 2002 again Nov. 2003.

**E. Collaborators & Other Affiliations.**

**(a) Collaborators** - R. David Anderson, Aaron I. Baba, Adrian A. Cargill, Jr., Rozlyn N. Chambliss, Thomas C. Clancy, Derrick R. Dean, Marcy Hamby-Towns, Jeffrey A. Hinkley, Danielle L. Hudson, Adriane G. Ludwick, Valerie N. Moses, Yevgeniy Podolyan, Gregory Pritchett, Barbara G. Rackley, Rick Ross, Deborah Sauder, Emmanuel Sikabwe, John Stevens, Gabriela Weaver, Kyle R. Willian, Theresa Zielinski.

**(b) Graduate and Postdoctoral Advisors** -Graduate Adviser - Dr. Ernest R. Davidson, Indiana University Bloomington; Post-doctoral Advisor - Dr. Donald G. Truhlar, University of Minnesota, Minneapolis.

**(c) Thesis Advisor and Postgraduate-Scholar Sponsor** - Valerie N. Moses (Ph.D.), Danielle L. Hudson. (M.S.), Nydeia Wright (M.S., current), Rozlyn N. Chambliss (M.S., current)