

Mohammed Hashmat Ali
Professor
Southeast Missouri State University (SEMO), Missouri, USA.

Professional Appointment:

Professor and Graduate program Chair, Chemistry Department, Southeast Missouri State University, USA.

Research Interests:

- Green Chemistry: Development of Environmentally Benign Synthetic Methodology, use of environmentally benign solvents in syntheses, Ionic liquids, Microwave Assisted Organic Synthesis, Solid Supported Reagents and Catalysts, Strained Small Ring Molecule Synthesis, Natural Product Synthesis.

Education:

B. Sc (Honors)	Dhaka University, Bangladesh.
M. S. (Physical Inorganic Chemistry)	Dhaka University, Bangladesh.
M. S. (Organic Chemistry)	South Dakota State University, USA.
Ph. D. (Organic Chemistry)	University of Kansas, USA.

Honors (2005-2016):

- Fulbright Scholar, **2016**. Received Fulbright scholarship for Bangladesh to teach and incorporate green chemistry in the chemistry curriculum at the International University of Business, Agriculture, and Technology (IUBAT).
- Chaired a session at the International Conference on Applied and Pure Chemistry, Mauritius, July 2-6, **2012**.
- Distinguished Bangladeshi Teacher in the U. S. A., honored by the Daffodil University, Dhaka, Bangladesh, June 14, **2011**.
- Invited to speak at the Annual *Organic Chemistry Day* symposium at the University of Missouri, Columbia, Missouri, April 9, **2011**.
- Awarded a NSF three-year grant to send 14 SEMO undergraduate students to India for green chemistry research, NSF-OISE project# 0966395, **2011**.
- Chaired a technical session at the Conference on Engineering Research, Innovation and Education-2010 (CERIE-2010), January 11-13, **2010**, Sylhet, Bangladesh.
- Past Chair-Grants and Research Funding Committee, Southeast Missouri State Univ., **2005-2010**.
- Keynote speaker during the month-long celebration of Green Chemistry at the University of Tennessee at Martin, USA, October 8, **2009**.
- Distinguished Bangladeshi in the U. S. A. honored by the Jagannath University, Dhaka, Bangladesh, August 5, **2007**.
- Pfizer Pharmaceutical Company, U. S. A., Inaugural Green Chemistry Award, **2006**.
- *PRIDE* Award, Southeast Missouri State University College of Science and Mathematics rec, **2006**.
- Panelist, 'Green Chemistry in Undergraduate Curriculum' workshop at the Midwest ACS regional Meeting, Joplin, MO, October 26-30, **2005**.

Peer Reviewed Publications (2005-2016):

1. Oxidation of Sulfides to Sulfones with Alumina Supported RuCl_3 and NaIO_4 in Dimethyl Carbonate Media, Ali, Mohammed*; Olesen, Bjorn; Ranu, Brindaban; Clippard, Luke; Heath, Jacqueline; Meyer, Garrett; Williams, Tawanika, *Synthesis*, **2016**, 48, 429.
2. A Facile and Selective Procedure for Oxidation of Hydroquinones using Silica Gel Supported Catalytic Cerium(IV) Ammonium Nitrate, Mohammed Ali, Andrea Welker, Crystal Tucker, *Synthesis* **2015**, 47, 3207.
3. Green Chemistry: Use of Solid Supported Reagents in Organic Synthesis, *Proceedings of the Conference on Engineering Research, Innovation and Education (CERIE-2010)*, Mohammed Ali, Sylhet, Bangladesh, January 11-13, **2010**.
4. Oxidation of Sulfides with 1,3-Dibromo-5,5-dimethylhydantoin in the Presence of Hydrated Silica Gel, M. H. Ali, J. Heddel, T. Wenczewicz, *J. Sulfur Chem.* **2009**, 30, 160.
5. Ceric Ammonium Nitrate (CAN) Catalyzed Oxidation of Sulfides to Sulfoxides, Mohammed Hashmat Ali, Donna Kriedelbaugh and Timothy Wenczewicz, *Synthesis*, **2007**, 3507.
6. Silica Gel Supported Ceric Ammonium Nitrate (CAN): A Simple and Efficient Solid-Supported Reagent for Oxidation of Oxygenated Aromatic Compounds to Quinone, Mohammed Hashmat Ali, Melinda Niedbalski, Gary Bohnert, and Daniel Bryant. *Synth. Commun.* **2006**, 36, 1751.
7. Oxidation of Sulfides with N-Bomosuccinimide in the Presence of Hydrated Silica Gel, Mohammed Hashmat Ali, Melanie Hartman, Kimberly Lamp, Chad Schmitz, and Tim Wenczewicz. *Synth. Commun.* **2006**, 36, 1769.
8. Oxidative Cleavage of Oximes with Silica Gel Supported Chromic Acid in Non-Aqueous Media, Mohammed Hashmat Ali, Stacie Greene, Candace J. Wiggin, and Saira Khan. *Synth. Commun.* **2006**, 36, 1761.
9. Oxidation of Sulfides with Pyridinium Tribromide in the Presence of Hydrated Silica Gel, Mohammed Hashmat Ali and Susan Stricklin. *Synth. Commun.* **2006**, 36, 1779.
10. A Simple and Efficient Heterogeneous Procedure for Thioacetalization of Aldehydes and Ketones, Mohammed Hashmat Ali and Maria Goretti Gomes, *Synthesis*, **2005**, 1326.

Invited Lectures (2005-2016):

1. Genetically Modified Food: Myth or real, International University of Business, Agriculture and Technology, Dhaka, Bangladesh, June 15, **2015**.
2. Green Chemistry: Sustainability and our Society, International University of Business, Agriculture and Technology, Dhaka, Bangladesh, January 8, **2015**.
3. Green Chemistry and Sustainable Earth, Daffodil International University, Dhaka, Bangladesh, December 30, **2014**.
4. Green Chemistry: A Path to the Sustainable Earth, International University of Business, Agriculture and Technology, Dhaka, Bangladesh, May 22, **2013**.
5. Green Chemistry: Sustainable Chemistry in the 21st Century, International University of Business, Agriculture and Technology, Dhaka, Bangladesh, June 12, **2013**.
6. Substituting Halogenated Solvents with Green Solvents in Organic Transformations, Center for Research and Excellence, Dhaka University, Bangladesh, August 2, **2012**,
7. Green Chemistry at the Southeast Missouri State University, University of Missouri, Columbia, April 9, **2011**.
8. Green Chemistry in India–Summer 2011: A Joint NSF-IRES project between Southeast Missouri State University and The Indian Association for the Cultivation of Science, Mohammed Ali, Bjorn Olesen, and Brindaban Ranu, invited International Year of Chemistry show case poster

- presentation, Joint Midwest and Great Lakes American Chemical Society (MWGLRM) meeting, St. Louis, October 20, **2011**.
9. Emergence and Evolution of Green Chemistry for Environmental Responsible and Sustainable Technologies, Daffodil University, Dhaka, June 14, **2011**.
 10. Green Chemistry for Environmental Responsible and Sustainable Technologies, North South University, Dhaka, June 22, **2011**.
 11. Green Chemistry: Past Present and Future, Bhuiyan Institute of Technologies, Dhaka, June 16, **2011**.
 12. Green Chemistry for Environmental Responsible and Sustainable Technologies, State University of Bangladesh, June 18, **2011**.
 13. Birth of Green Chemistry, University of Liberal Arts, Dhaka, June 18, **2011**.
 14. Green Chemistry: Heterogeneous Catalysis in Organic Synthesis, American Chemical Society, Southern Illinois section, November 17, **2010**.
 15. The Cuyahoga River Saga: Birth of Green Chemistry, Jagannath University, Dhaka, Bangladesh, January 14, **2010**.
 16. Green Chemistry: Use of Solid Supported Reagents and Microwave Technology in Organic Synthesis, University of Tennessee, Martin, October **2009**.
 17. Research and Teaching in Green Chemistry at SEMO, Pfizer Pharmaceutical's Annual Green Chemistry Symposium, Pfizer campus, St. Louis, October 30, **2007**.
 18. Use of a Fluorous Phase Screen in Organic Reactions, Indian Association for the Cultivation of Science, Jadavpur, India, July 19, **2007**.
 19. Recent Advances in Green Chemistry, Jagannath University, Dhaka, Bangladesh, August 5, **2007**.
 20. Green Chemistry Research in My Group, Dhaka University, Bangladesh, July 28, **2007**.
 21. Undergraduate Research in Science, Keynote speech, SEMO Student Research Conference, SEMO, April 18, **2007**.
 22. Green Chemistry, SEMO College of Science and Mathematics Pride Award Presentation, SEMO, April 23, **2007**.
 23. Green Chemistry: Solid Supported Reagents in Non-Aqueous Media, University of Kalyani, Kolkata, India, May 22, **2006**.
 24. Fluorous Phase Screen in Exothermic Reactions, Indian Association for Cultivation of Science, Kolkata, India, May 25, **2006**.
 25. Green Chemistry: Development of Environmentally Benign Chemical Processes, Atomic Energy Center, Dhaka, Bangladesh, June 1, **2006**.
 26. Green Chemistry: Taking Care of the Environment, Eden College, Dhaka, Bangladesh, June 5, **2006**.
 27. Green Solvent: Perfluorohydrocarbons in Chemical Reactions, Dhaka University, Bangladesh, June 6, **2006**.
 28. Green Chemistry in Undergraduate Organic Chemistry Lab, Green Chemistry Symposium, ACS Midwest Regional Meeting, Joplin, Oct. 27, **2005**.
 29. Green Chemistry in Organic Synthesis, Bangladesh University of Engineering and Technology (BUET), June 7, **2005**.
 30. Green Chemistry, American School in Dhaka, Bangladesh, June 8, **2005**.
 31. Use of a Fluorous Phase Screen in Electrophilic Aromatic Bromination and Oxidation of Sulfides with Molecular Bromine. Green Chem Symposium, ACS Midwest Regional Meeting, Joplin, Oct. 27, **2005**.

Contributed Presentations at the American Chemical Society (Regional and National) and International Professional Meetings (2005-2015):

1. Preparation of Aldehydes and Carboxylic Acids Utilizing a New Green Ruthenium Heterogeneous Catalyst, Brian Christmas, Jami Conley, Greg Felock, Noelle Linstad, Mohammed Ali, Bjorn Olesen, and Brindaban Ranu, 245th ACS National Meeting, New Orleans, April 7-11, **2013**.
2. Oxidation of Alcohols to Aldehydes and Oxidative Cleavage of Alkenes with a Green Ruthenium Catalyst, Robert Bolhofner, Mollie Laramore, John Wanner, Mohammed Ali, Bjorn Olesen, Brindaban Ranu, Midwest Regional ACS meeting, Springfield, MO, October 16-19, **2013**.
3. Oxidation of Benzyl Alcohols to Benzoic Acids with an Environmentally Friendly Ruthenium Catalyst, Alaina Pasierb, Brian Rabe, Addison Woll, Mohammed Ali, Bjorn Olesen, Brindaban Ranu, Midwest Regional ACS meeting, Springfield, MO, October 16-19, **2013**.
4. Ruthenium Catalyzed Green Oxidation Reactions of Sulfides, Alcohols, and Aldehydes, Mohammed Ali, International Conference on Pure and Applied Chemistry, Mauritius, July 2-6, **2012**.
5. Preparation of Sulfones Utilizing a New Green Ionic Liquid Oxidizing Reagent, Luke Clippard, Jacqueline Heath, Garrett Meyer, and Tawanika Williams, Mohammed Ali, Bjorn Olesen, and Brindaban Ranu, 46th Midwest-39th Great Lakes Joint Regional ACS Meeting, St. Louis, October 19-22, **2011**.
6. Preparation of Sulfones Utilizing a New Green Ruthenium/Aluminum Oxide Heterogeneous Catalyst, Luke Clippard, Jacqueline Heath, Garrett Meyer, and Tawanika William, Mohammed Ali, Bjorn Olesen, and Brindaban Ranu, 46th Midwest-39th Great Lakes Joint Regional ACS Meeting, St. Louis, October 19-22, **2011**.
7. Preparation of Benzoxazoles and Benzothiazoles Utilizing a Green procedure, Mohammed Ali and Shravani Madabhusi, 46th Midwest-39th Great Lakes Joint Regional ACS Meeting, St. Louis, October 20-21, **2011**.
8. Green Chemistry: Use of solid supported reagents in organic synthesis, Mohammed Ali, Conference on Engineering Research, Innovation and Education 2010 (CERIE-2010), Sylhet, Bangladesh, January 11-13, **2010**.
9. A Green Synthesis of N-Aryl and N-Alkyl Pyrroles by Microwave Irradiation Bjorn Olesen*, Mohammed Ali* and Jonathan Beasley, American Chemical Society Midwest Regional meeting, Iowa City, Iowa, October 23, **2009**.
10. Green Chemistry: Use of Fluorous Phase Screen in Organic Reactions, 8th International Symposium on Green Chemistry, Mohammed Ali, Beijing, China, May 26, **2007**.
11. Thioacetalization of Aldehydes Using Dithiols and Catalytic Amounts of 1,3-Dibromo-5,5-dimethylhydantoin, Jessica Boester, ACS Midwest Regional meeting, Joplin, October 26-30, **2005**.
12. The Oxidation of Thiols to Disulfides Using 3,3-Dimethyl-1,3-Dibromohydantoin in Various Non-Halogenated Solvents. Katie Frey, ACS Midwest Regional meeting, Joplin, October 26-30, **2005**.
13. Catalytic Oxidation of Sulfides to Sulfones with Silica Gel Supported $\text{RuCl}_3/\text{NaIO}_4$ in Non-Aqueous Media, Tim Wencewicz, ACS Midwest Regional meeting, Joplin, October 26-30, **2005**.
14. Solid Supported Reagents in Dimethyl Carbonate Media: Green Chemistry Procedure, Symposium on Green Chemistry, Mohammed Ali, Zuhai, China, May 26-30, **2005**.

(My research students made 139 presentations at the local and regional professional meetings during this period)

Funded Grants (2005-2016):

- Green Chemistry in Bangladesh, Fulbright Scholar Grant, **2016**.
- US-India Summer Program for Research in Green Chemistry, National Science Foundation, U. S. A., **2011-2014**.

- Green Chemistry: Development of Green Synthesis of Benzothiazole, Grants and Research Funding Committee (GRFC), SEMO, 2010-2012.
- Research in Green Chemistry, Pfizer Pharmaceutical Co. 2007-2008.
- Green chemistry: Oxidation of Alcohols with Pyridinium Chlorochromate (PCC) Supported on Silica Gel, GRFC, SEMO, 2007-2008.
- Green Chemistry: Oxidative Cleavage of Diols to Aldehydes Using Silica Gel Supported Periodic Acid Salts, GRFC, SEMO, 2006-2008.
- Introduction of Microwave Assisted Organic Synthesis (MAOS) to Undergraduate Organic Chemistry Lab, Funding for Results, SEMO, 2006-2008.