

## Mohammad Al-Masum

Professor, Department of Chemistry, Tennessee State University  
Boswell 220, 3500 John A Merritt Blvd, Nashville, TN 37209  
Tel. 615-963-5339 Fax. 615-963-5326 email [malmasum@tnstate.edu](mailto:malmasum@tnstate.edu)

### Education

**Ph.D.** Received in March 1996, "Palladium Catalyzed Hydrocarbonation of Allenes" with Professor Yoshinori Yamamoto from Tohoku University, Sendai, Japan

**Post-Graduate.** Received in September, 1991, "Claisen Approach to Asymmetric Synthesis of a Brefeldin C Intermediate" with Professor Takeshi Nakai from Tokyo Institute of Technology, Tokyo, Japan

**M.Sc. (Thesis)** Received in December, 1986, "The Preparation of Some Aromatic Ketones From The Reaction of Phenyl-Copper-Magnesium Reagent With Acyl Halides" with Professor M. T. Rahman from University of Dhaka, Dhaka, Bangladesh.

### Professional Experience

Professor, 09, 2017 –present, Associate Professor, 09,2011-2017, Tennessee State University, Nashville, TN; Assistant Professor, 09,2005-08, 2011, Tennessee State University, Nashville, TN; Adjunct Faculty, 06,2014-08, 2014, Fisk University, TN; Adjunct Faculty, 06,2013-08, 2013, Fisk University, TN; Adjunct Faculty, 06,2011-08, 2011, Fisk University, TN; Adjunct Faculty, 06,2010-08, 2010, Fisk University, TN , Adjunct Faculty, 06,2009-08, 2009, Fisk University, TN, Visiting Professor, 06,2006-08,2006, Vanderbilt University, TN; Research Faculty, 07, 2004-07, 2005, University of Tennessee, Knoxville, TN; Research Faculty, 08, 2002-07, 2004, University of Memphis, TN; Postdoctoral Fellow, 01, 2000-06, 2002, RTI International, RTP, NC; Visiting Professor, 07, 1998-12, 1999, Montana State University, MT; Assistant Professor, 04, 1996-03, 1998, Tohoku University, Japan; Lecturer, 08. 1988-03, 1993, Bangladesh University of Engg & Tech, Dhaka, Bangladesh

### Award

2015 Faculty Development Award, Academic Affairs, TSU; 2014 Faculty Development Award, Academic Affairs, TSU; 2010 Faculty Development Award, Academic Affairs, TSU; 2008 Faculty Development Award, Academic Affairs, TSU; 2007 Faculty Research Award, Sponsored Research Program, TSU. Monbusho (Ministry of Education, Japan) Award: 1993-1996. 26th International UNESCO Fellowship, Tokyo Institute of Technology, Japan, 1990-1991

### Teaching

Chem 6408/4008 Special Topic-Metal Catalyzed Cross-coupling Chemistry, Chem 5600/4600 Spectroscopy Application, Chem 5210 Advanced Organic Chemistry, Chem 5110 Graduate Organic Research, Chem 2020 Organic Chemistry II, 2010 Organic Chemistry I, Chem2021, Organic Chemistry Lab II, Chem2011, Organic Chemistry Lab I, , Chem 1030, General Chemistry I, Chem 1111, General Chemistry Lab I, Fall 2005-present, Tennessee State University (TSU)

Renovating Organic Chemistry Laboratory Curriculum, Fall 2005-present, TSU

Chem 3311, Organic Chemistry, Spring 2003, 2004, University of Memphis, TN

Mentor: Graduate and under-graduate students at TSU, 2005-present

Mentor: Post-doc, Graduate and Under-graduate students at Tohoku University, Sendai, Japan

Developing research laboratory for Post-graduate program and conducted several Chemistry courses, 1988-1993, Bangladesh University of Engineering & Technology, Dhaka, Bangladesh

### Reviewer

Regularly reviewing manuscripts for: the ACS journals, the American Chemical Society publications; Elsevier Sciences (Tetrahedron Letters, Tetrahedron, Chemical Engineering Research and Design), Journal of Molecular Catalysis A: Chemical; Molecules.

## Funding

Green chemistry based chemical research to assist with retention and success of underrepresented students, Title III, 2013. \$ 23,500.00 Funded

Developing new methods for Transition Metal Catalyzed Coupling of H-Heteroatoms to Potassium Organotrifluoroborates, Faculty Research Award, TSU, 2007, \$12,000.00 funded

NSF 14-579 (2017) - Facilitating Research at Primarily Undergraduate Institutions: Undergraduate students and their involvement in STEM field research such as synthetic bio-organic chemistry, \$299,459, Pending

UR proposal for American Chemical Society (2016): Novel process of introducing RCOOPdH and RCOPdCl species for esters synthesis, ACS PRF grants (2017), \$ 70,000, Pending

IUSE: EHR (NSF 15-585), 2015: Undergraduate students and their involvement in new organic transformations using potassium organotrifluoroborates, \$ 300,000.00 Reviewed, not funded.

RUI (NSF 14-579): Undergraduate students and their involvement in new organic transformations using potassium organotrifluoroborates NSF grants, \$ 292,000.00, not funded

UR proposal for American Chemical Society: A Novel Route to Organonitrites by Pd-Catalyzed Cross-Coupling of Inorganic Nitrite Salts and Potassium Organotrifluoroborates, ACS PRF grants, \$ 65,000, not funded.

UR proposal for American Chemical Society: Potassium Organotrifluoroborates in Microwave Enhanced Carbonylation Reactions \$ 64,775.00 Reviewed, not funded.

RUI(NSF 00-144): Reactions of Pronucleophiles with Potassium Organotrifluoroborates – New Look and Applications \$ 300,000 Reviewed, not funded

UR proposal for CCLI (NSF-09-529): Microwave Lab Station for Enhancing Instructional and Research Programs in Chemistry \$ 136,661.00 Reviewed, Not Funded

NSF CAREER proposal: Reactions of pronucleophiles with potassium organotrifluoroborates – New look and applications, \$ 499,865 reviewed and not funded

Cottrell College Science Awards: Coupling Reactions Involving Potassium Organotrifluoroborates, Pronucleophiles and Transition Metal Catalyst, \$ 39,948 Reviewed and Not Funded

## Patent

Al-Masum, M. (*E*)-Anethol synthesis by cross-coupling reaction of potassium allyltrifluoroborate and 4-bromoanisole, 2010 Application process is pending. Reference: **2826267-000010**

## Recent Publications

1. **Al-Masum, M.**; Islam M.S.; Shaban, W. Cu-Pd dual catalyst system for amide styrylation reaction from potassium styryltrifluoroborates and amides, *Intl. J. Org. Chem.* **2017**, *7*, 254.
2. **Al-Masum, M.**; Legan S.; Liu, K-Y, Pd-catalyzed microwave irradiated regioselective arylation reaction of crotyl- and allyltrifluoroborates, *Intl. J. Org. Chem.* **2016**, *6*, 220.
3. **Al-Masum, M.**; Quinones, L. Cain, L. Microwave application and anhydrous Cu(OAc)<sub>2</sub> mediated O-arylation of aliphatic amino alcohols, *Intl. J. Org. Chem.* **2016**, *6*, 100.
4. **Al-Masum, M.**, Shaban, W., Microwave irradiated Pd-catalyzed C(sp)-H activation and cross-coupling with styryltrifluoroborates, *Tetrahedron Lett.* **2015**, *56*, 1437.
5. **Al-Masum, M.**; Welch, R. L. Catalyst free, base free microwave irradiated synthesis of aryl nitrites from potassium aryltrifluoroborates and bismuth nitrate, *Tetrahedron Lett.* **2014**, *55*, 1726.

6. **Al-Masum, M.**; Saleh, N.; Islam, T., A Novel Route to Organonitrites by Pd-Catalyzed Cross-Coupling of Sodium Nitrite and Potassium Organotrifluoroborates, *Tetrahedron Lett.* **2013**, *54*, 1141.
7. **Al-Masum, M.**; Lott, B. W.; Ghazialsharif, N., An efficient reaction process for the synthesis of oxazinanes and oxazolidines in the presence of air, *Int. J. Org. Chem.* **2012**, *2*, 362.
8. **Al-Masum, M.**; Liu, K-Y., A New organic transformation by introducing crotyl/vallyl trifluoroborates in cross-coupling reaction with aroyl chlorides, *Tetrahedron Lett.* **2011**, *52*, 5090.
9. **Al-Masum, M.**; Ng, E.; Wai, M., Palladium-catalyzed direct cross-coupling of potassium styryltrifluoroborates and benzoyl chlorides—a one-step method for chalcone synthesis, *Tetrahedron Lett.* **2011**, *52*, 1008.
10. **Al-Masum, M.**; Wai, M. C.; Dunnenberger, H., A Solvent Free C-Benzoylation and N-Benzoylation Reactions by Using Microwave Heating, *Synthetic Commun.* **2011**, *41*, 2888.
11. **Al-Masum, M.**; Alam, S., Remarkable regioselectivity in microwave enhanced palladium catalyzed allylation reaction involving allyltrifluoroborates and aryl halides, *Tetrahedron Lett.* **2009**, *50*, 5201.
12. Domin, D. S.; **Al-Masum, M.**; Mensah, J., Students' categorizations of organic compounds, *Chem. Educ. Res. Pract.* **2008**, *9*, 114.
13. Kabalka, G. W.; **Al-Masum, M.**, Microwave enhanced cross-coupling reactions of potassium alkenyltrifluoroborates and allyl acetates, A new method for 1,4-pentadiene synthesis, *Org. Lett.* **2006**, *8*, 11.
14. Kabalka, G. W.; Dadush, E.; **Al-Masum, M.**, Microwave-enhanced cross-coupling of allyl chlorides with vinyltrifluoroborates, *Tetrahedron Lett.* **2006**, *47*, 7459.
15. Kabalka, G. W.; **Al-Masum, M.**, Mereddy, A.; Dadush, E. Microwave enhanced cross-coupling reactions involving alkenyl- and alkynyltrifluoroborates, *Tetrahedron Lett.* **2006**, *47*, 1133.
16. Kabalka, G. W.; **Al-Masum, M.**, Microwave enhanced cross-coupling reactions involving potassium organotrifluoroborates, *Tetrahedron Lett.* **2005**, *46*, 6329.
17. **Al-Masum, M.**; Kumaraswamy, G.; Livinghouse, T., A new synthetic route to *P*-Chiral phosphineboranes of high enantiopurity via stereocontrolled Pd(0)-Cu(I) cocatalyzed aromatic phosphorylation, *J. Org. Chem.* **2000**, *65*, 4776.
18. **Al-Masum, M.**; Livinghouse, T., Pd(0)-Cu(I) cocatalyzed phosphorylation of methylphenylphosphine-borane with aryl halides and aryl nonaflates, *Tetrahedron Lett.* **1999**, *40*, 7731.
19. **Al-Masum, M.**; Yamamoto, Y., Palladium catalyzed hydrocarboxylation of allenes, *J. Am. Chem. Soc.* **1998**, *120*, 3809.
20. Kamijo, S.; **Al-Masum, M.**; Yamamoto, Y., Palladium catalyzed hydrosulfination of allenes with tosylhydrazine leading to allylsulfones, *Tetrahedron Lett.* **1998**, *39*, 691.
21. Radhakrishnan, U.; **Al-Masum, M.**; Yamamoto, Y. Palladium catalyzed hydroamination of conjugated enynes, *Tetrahedron Lett.* **1998**, *39*, 1037.
22. **Al-Masum, M.**; Meguro, M.; Yamamoto, Y., The two component palladium catalyst system for intermolecular hydroamination of allenes, *Tetrahedron Lett.* **1997**, *38*, 6071.
23. Nakamura, I.; Tsukada, N.; **Al-Masum, M.**; Yamamoto, Y., Palladium catalyzed alkylative dimerization between pronucleophiles and vinyltins, *J. Chem. Soc., Chem. Commun.* **1997**, 1583.
24. Yamamoto, Y.; **Al-Masum, M.**; Takeda, A., Palladium catalyzed  $\gamma$ -addition of pronucleophiles to allenylsulfides, *J. Chem. Soc., Chem. Commun.* **1996**, 831.
25. Yamamoto, Y.; **Al-Masum, M.**; Fujiwara, N., Palladium catalyzed addition-substitution reaction of pronucleophiles with allenylstannanes and propargylstannanes, *J. Chem. Soc., Chem. Commun.* **1996**, 381.
26. Yamamoto, Y.; **Al-Masum, M.**, Palladium catalyzed  $\alpha$ -addition of certain pronucleophiles to alkoxyallenes, *synlett.* **1995**, *9*, 969.
27. Yamamoto, Y.; **Al-Masum, M.**; Fujiwara, N.; Asao, N., Remarkable reversal of the regioselectivity in the palladium catalyzed hydrocarbonation reaction of allenes with methylmalononitrile, *Tetrahedron Lett.* **1995**, *36*, 2811.
28. Yamamoto, Y.; **Al-Masum, M.**; Asao, N., Palladium catalyzed addition of activated methylene and methyne compounds to allenes, *J. Am. Chem. Soc.* **1994**, *116*, 6019.

29. Tomooka, K.; Ishikawa, K.; **Al-Masum, M.**; Nakai, T., Regio- and stereocontrol in the reductive ring opening of the spirocyclic epoxide derived from the 4-siloxy-2-cyclopentenone, *synlett* **1993**, 9, 645.
30. Rahman, M. T.; Hai, A.K.M.A.; **Al-Masum, M.**; Nahar, S. K., Preparation of ketones via organocoppermagnesium reagents and acyl chlorides, *J. Bdesh. Chem. Soc.* **1989**, 2, 17.

#### Recent referred Articles in conference proceedings

31. Alyahya, S.; Liu, K-Y.; **Al-Masum, M.** N-allylation by palladium-catalyzed cross-coupling of potassium. PAPER ID: 2743521, 254<sup>th</sup> ACS national meeting in Washington DC, August 20-24, 2017
32. **Al-Masum, M.** A novel application of Cu-Pd dual catalyst system for the cross-coupling of styryltrifluoroborates and amides. PAPER ID: 2622299, 253<sup>rd</sup> ACS national meeting in San Francisco, California, April 2-6, 2017.
33. **Al-Masum, M.** Use of ArCOPd species for arylation and esterification reactions under microwave irradiation. PAPER ID: 2401717, 251st ACS National Meeting & Exposition, San Diego, California, March 13-17, 2016.
34. **Al-Masum, M.**; Snagg, C.; Chrisman, S. L. Novel reaction of ArCOPdCl species and tertiary alcohols for highly substituted esters. Paper ID: 2401594, 251st ACS National Meeting & Exposition, San Diego, California, March 13-17, 2016.
35. **Al-Masum, M.** C-H activation and C-C bond formation through cross-coupling reaction by using potassium organotrifluoroborates. PAPER ID: 2125870, 249<sup>th</sup> ACS National Meeting & Exposition, Denver, CO, March 22-26, 2015.
36. Shaban, W.; **Al-Masum, M.** Pd-catalyzed cross-coupling reaction of styryltrifluoroborates with activated alkynes and alkanes PAPER ID: 2129072, 249<sup>th</sup> ACS National Meeting & Exposition, Denver, CO, March 22-26, 2015.
37. Welch, R.; **Al-Masum, M.** Palladium-catalyzed microwave heated cross-coupling of organotrifluoroborates and metal fluoride. PAPER ID: 2129183, 249<sup>th</sup> ACS National Meeting & Exposition, Denver, CO, March 22-26, 2015.
38. IUPAC Sponsored Annual Florida Heterocyclic and Synthetic Conference, Gainesville, FL, March 2-5 2014, **March 4, FloHet 15 Room D1, 13.40 Professor Mohammad Al-Masum Tennessee State University, TN, USA, Efficient use of potassium organotrifluoroborates in palladium-catalyzed arylation reaction, and nitration reaction**
39. Chrisman, S.; **Al-Masum, M.** Efficient atom economic synthetic method of functionalized aromatic esters from aroyl halides. PAPER ID: 24189 248th ACS National Meeting & Exposition, San Francisco, CA, August 10-14, 2014.
40. Shaban, W.; **Al-Masum, M.** C-H activation of alkynes and cross-couple with potassium organotrifluoroborates forming enynes. PAPER ID: 24173 248th ACS National Meeting & Exposition, San Francisco, CA, August 10-14, 2014.
41. Welch, R. L.; **Al-Masum, M.** Microwave enhanced catalyst free direct nitration of potassium aryltrifluoroborates. PAPER ID: 18311 (final paper number: 643) 247th ACS National Meeting & Exposition, Dallas, TX, March 16-20, 2014.
42. Quinone, L.; **Al-Masum, M.** Pd-catalyzed microwave enhanced cross-coupling reaction of aryltrifluoroborates with amino alcohol. PAPER ID: 18404 (final paper number: 644) 247th ACS National Meeting & Exposition, Dallas, TX, March 16-20, 2014.
43. Saleh, N.; **Al-Masum, M.** Sodium Nitrite and Bismuth Nitrate are New Nitrite Sources in Pd-Catalyzed Cross-Coupling Chemistry for Organonitrite, 245th ACS National Meeting & Exposition - April 7-11, 2013, New Orleans, LA. ID # 18078

44. Yeasmin, S.; **Al-Masum, M.** Microwave irradiated Pd-catalyzed cross-coupling reaction of potassium organotrifluoroborates with carboxylic acid, 245th ACS National Meeting & Exposition - April 7-11, 2013, New Orleans, LA. ID # 22228
45. Islam, T.; Taylor, K.; **Al-Masum, M.** Microwave irradiated Pd-catalyzed direct arylation reaction of aryltrifluoroborates with aryl chloride, 245th ACS National Meeting & Exposition - April 7-11, 2013, New Orleans, LA. ID # 19339
46. **Al-Masum, M.**; Saleh, N.; Islam, T. Pd-catalyzed cross-coupling of organotrifluoroborates and nitrite to Organonitrites-A novel process 244<sup>th</sup> American Chemical Society National Meeting & Exposition, Philadelphia, PA, August 19-23, 2012. ID #11571
47. New look of potassium allyltrifluoroborates in C-C and C-N bond formation reactions, **Al-Masum, Mohammad**; Liu, Kwei; Ng, Eunice; Wai, Maya; Alam, Shahrina. From Abstracts of Papers, 242nd ACS National Meeting & Exposition, Denver, CO, United States, August 28-September 1, 2011 (2011), ORGN-311. Language: English, Database: CAPLUS
48. Palladium-catalyzed microwave irradiated direct coupling of potassium arylvinyltrifluoroborates and benzoyl chlorides, Ng, Eunice; Wai, Maya; **Al-Masum, Mohammad** From Abstracts of Papers, 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010 (2010), ORGN-761. Language: English, Database: CAPLUS
49. Unprecedented cross coupling reaction of allyltrifluoroborate and benzoyl halides, Liu, Kwei-Yu; **Al-Masum, Mohammad** From Abstracts of Papers, 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010 (2010), ORGN-760. Language: English, Database: CAPLUS
50. Palladium-catalyzed microwave irradiated cross-coupling reaction of potassium organotrifluoroborates and benzoyl halides, **Al-Masum, Mohammad**; Ng, Eunice From Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), ORGN-854. Language: English, Database: CAPLUS
51. Microwave irradiated palladium catalyzed cross-coupling reaction of potassium allyltrifluoroborates and organic halides, **Al-Masum, Mohammad**; Alam, Shahrina From Abstracts of Papers, 237th ACS National Meeting, Salt Lake City, UT, United States, March 22-26, 2009 (2009), ORGN-317. Language: English, Database: CAPLUS
52. Synthesis of ketone from potassium organotrifluoroborates and benzoyl bromide/chloride, **Al-Masum, Mohammad**; Dunnenberger, Henry From Abstracts of Papers, 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008 (2008), ORGN-111. Language: English, Database: CAPLUS
53. Microwave enhanced amination reactions involving dihalocompounds, **Al-Masum, Mohammad**; Akther, Jesmin, From Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), ORGN-504. Language: English, Database: CAPLUS
54. **Al-Masum, M.** Unprecedented cross-coupling of potassium vinyltrifluoroborates and allyl acetates in the presence of palladium catalyst. 5th International Microwave in Chemistry Conference, Imperial College, London, UK, April 18-20, 2007.
55. **Al-Masum, M.** Microwave enhanced palladium catalyzed cross-coupling reactions involving organotrifluoroborates. Abstract of papers, 4th International Microwaves in Chemistry Conference, Orlando, FL, March 8-11, 2006.
56. Microwave-enhanced cross-coupling reactions involving potassium organotrifluoroborates Kabalka, George W.; **Al-Masum, Mohammad** From Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United States, Aug. 28-Sept. 1, 2005 (2005), ORGN-151. Language: English, Database: CAPLUS
57. Bismuth oxide: A new catalyst system for oxazolidine synthesis under mild conditions, **Al-Masum, Mohammad**; Burkey, Theodore J. From Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United States, August 22-26, 2004 (2004), ORGN-774. Language: English, Database: CAPLUS
58. Synthesis and photochemistry of metal arenes with pendant functional groups, Burkey, Theodore J.; To, Tung T.; Duke, Charles B.; **Al-Masum, Mohammad** From Abstracts of Papers, 227th ACS

National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-036.  
Language: English, Database: CAPLUS

59. Synthesis of side chain derivatives of cyclopentadienyl manganese tricarbonyl and benzene chromium tricarbonyl, **Al-Masum, Mohammad**; Burkey, Theodore J. From Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), INOR-559. Language: English, Database: CAPLUS
60. Photochromic properties of manganese and chromium complexes undergoing chelate ring closure and linkage isomerization, Burkey, Ted; To, Tung T.; Duke, Charles B., III; **Al-Masum, Mohammad** From Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), INOR-818. Language: English, Database: CAPLUS
61. A New Look of AlCl<sub>3</sub> in Microwave Irradiated Solvent Free Benzoylation Reaction, **Al-Masum, Mohammad**; Wai, Maya; Dunnenberger, Henry From Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-385. Language: English, Database: CAPLUS
62. Microwave Irradiated Palladium Catalyzed Cross-Coupling Reaction of Potassium Allyltrifluoroborates and Organic Halides, **Al-Masum, Mohammad**; Alam, Shahrina; Wai, Maya From Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-195. Language: English, Database: CAPLUS
63. Palladium Catalyzed Allylation of Alkenyltrifluoroborates with Allyl Chloride, **Al-Masum, Mohammad**; Dadush, Eric; Kabalka, George W. From Abstracts, 57th Southeast/61st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 1-4 (2005), NOV04-404. Language: English, Database: CAPLUS

More than 100 meeting proceedings presented in local, regional, and international (UK, Japan) meetings.

### Professional Developments (Workshops, Training)

1. NSF-HBCU faculty workshop for HBCU institutions, New Orleans, LA, January 24, 2011.
2. 2011 TBR Research Development Symposium, Nashville, TN, March 25, 2011.
3. NSF sponsored QEM network workshop on Information and proposal development for the NSF proposals, Baltimore, MD. January 14-15, 2011
4. eLearn Workshop Series spring 2012
5. Customer Service Training—'I AM TSU', at TSU, 2011

### Invited Speaker

Keynote Speaker Chemistry conference (CPD accredited) 2018 in Paris, France Feb 19-20, 2018.  
Middle Tennessee State University, Nashville, TN, Sept, 2015.  
IUPAC Sponsored Annual Florida Heterocyclic and Synthetic Conference, Gainesville, FL, March, 2014.  
University of Dhaka, Dhaka, Bangladesh, Aug, 2014.  
East Tennessee State University, Johnson City, TN, Nov 2012.  
Middle Tennessee State University, Nashville, TN, Sept, 2011.  
Fisk University, Nashville, TN, April, 2010.  
LeMoyne-Owen College, Memphis, TN, 2007.

### Other Activities

Member Abstract Review Committee Research Symposium 2014, 2015, 2016, TSU  
Participant: Participate in the TSU Advisement Day at the Motlow Community College Campus in Smyrna, 2016  
Participant: FY 16 DOD's ODMEQ Technical Assistance Training Opportunities

Member Student Awards and Faculty Mentor Award Committee Research Symposium 2014, TSU  
Chair: Public relations and student affairs committee, 2014-present  
Member: CAHN's students award committee, 2013, 2014.  
Member: CAHN's outstanding research award and Young research committee, 2012.  
Chair: Organic session, 244<sup>th</sup> ACS National Meeting & Exposition, Philadelphia, PA, 2012.  
Member: CAHNS Homecoming floats committee, 2012  
Faculty Senate: Tennessee State University since 2007  
Chair: Organic session, 237<sup>th</sup> ACS National Meeting & Exposition, Salt Lake City, UT, 2009  
Member: Graduate Committee, Chemistry Department, TSU, 2010-present  
Member: Organic Faculty Search Committee  
Member: Lab coordinator Search Committee  
Member: Under-graduate Curriculum Committee, Chemistry Department, TSU  
Participant: TSU Annual Community Service Day in 2007 and 2009  
Member Board of Trust, Bangladesh Association of Nashville  
President: Bangladesh Association of Nashville, 2009  
Biography for Inclusion: **Who's Who in America 2016** (70<sup>th</sup> Edition)  
Biography for Inclusion: **Who's Who in America 2015** (69<sup>th</sup> Edition)  
Biography for Inclusion: **Who's Who in America 2014** (68<sup>th</sup> Edition)  
Biography for Inclusion: **Who's Who in America 2011** (65<sup>th</sup> Edition)  
Judge, MNPS Project EXPO Trevecca Nazarene University on March 5, 2015