ASHFAQ A. BENGALI
Professor of Chemistry, Texas A&M University at Qatar
e-mail: ashfaq.bengali@qatar.tamu.edu

EDUCATION

Director's Postdoctoral Fellow - Los Alamos National Laboratory (**1994-1995**)
Postdoctoral Fellow - University of California-Berkeley (**1992-1994**) [*Bergman and Moore*]
Ph.D. - Chemistry, University of Minnesota (**1992**) [*Leopold*]
B. A. - Chemistry, Carleton College (**1986**)

ACADEMIC APPOINTMENTS

Texas A&M University at Qatar, Executive Director – Center for Teaching and Learning (**2018**)
Texas A&M University at Qatar, Director – Teaching Innovation (**2018**)
Amherst College, Visiting Professor of Chemistry (**2017**)
Texas A&M University at Qatar – Dean's Fellow for Teaching Excellence (**2016**)
Texas A&M University at Qatar – Interim Science Program Chair (**2014-2015**)
Texas A&M University at Qatar, Professor (**2011-present**)
Texas A&M University at Qatar, Associate Professor (**2006-2011**)
Dickinson College, Associate Professor (**2001-2006**)
Dickinson College, Assistant Professor (**1995-2001**)

FUNDED GRANTS

Qatar National Research Fund, NPRP, **2017-2020** [$760,000, PI]
Qatar National Research Fund, NPRP, **2016-2019** [$809,000, LPI]
Qatar National Research Fund, NPRP, **2013-2016** [$1,016,774, PI]
Qatar National Research Fund, NPRP, **2012-2015** [$927,976 LPI]
Qatar National Research Fund, NPRP, **2010-2013** [$1,050,000, LPI]
Qatar National Research Fund, NPRP, **2010-2013** [$1,050,000, PI]
Qatar National Research Fund, NPRP, **2008-2011** [$605,895, LPI]
Qatar National Research Fund, Undergraduate Research Program, **2008** [$8,000, PI]
ACS Petroleum Research Fund, **2004-2007** [$50,000, PI]
Dickinson College, Innovation Fund, **1999** [$15,000, PI]
Research Corporation, Cottrell College Science Award, **1997-1999** [$30,000, PI]
Camille and Henry Dreyfus Faculty Start-up Grant, **1995-2000** [$12,500, PI]
Los Alamos National Laboratory Directors Fellowship, **1994-1995**

REFEREED JOURNAL PUBLICATIONS

61. "In Situ Solution-State Characterization of MOF-Immobilized Transition-Metal Complexes by Infrared Spectroscopy, H. Mamlouk, P. Elumalai, M. P. Kumar, F. H. Aidoudi, A. A. Bengali*, S. T. Madrahimov*, Appl. Mater. **DOI:** 10.1021/acsami.9b18099 (2019).

60. “Thermal dehydrogenation of dimethylamine borane catalyzed by a bifunctional rhenium complex”. V. Yempally, S. Moncho, Y. Wang, S. J. Kyran, W. Y. Fan, E. N. Brothers, D. J. Darensbourg*, A. A. Bengali*, *Organometallics*, **38**, 2602 (2019).
59. “Oxidation of aromatic alkenes and alkynes catalyzed by a hexa-acetonitrile iron(II) ionic complex $[Fe(CH_3CN)_6][BF_4]$”. C. P. Yap, J. K, Ng, S. Madrahimov, A. A. Bengali, T. S. Chwee, W. Y. Fan, *New Journal of Chemistry*, **42**, 11131 (2018).
58. “Detection of an Unusual Intermediate in the Photolysis of an Iron Tricarbonyl Complex”, R. S. Anju, S. Moncho, E. N. Brothers, W. Y. Fan, A. A. Bengali., *J. Organomet. Chem*. **851**, 189 (2017).
57. “Ancillary Ligand Effects Upon the Photochemistry of $Mn(bpy)CO_3X$ Complexes”, V. Yempally, S. Moncho, F. Hasanayn, W. Y. Fan, E. N. Brothers, A. A. Bengali, *Inorg. Chem.* **56**, 11244 (2017).
56. “A Robust Pentacoordinated Iron (II) Proton Reduction Catalyst Stablized by a Tripodal Phosphine”, C. P. Yap, K. Hou, A. A. Bengali, W. Y. Fan, *Inorg. Chem.* **56**, 10926 (2017).
55. “Palladium-Catalyzed, Multicomponent Approach to β-Lactams via Aryl Halide Carbonylation”, G. M. Torres, M. D. Macias, J. S. Quesnel, O. P. Williams, V. Yempally, A. A. Bengali, B. A. Arndtsen, *J. Org. Chem*. **81**, 12106 (2016).
54. “Computational Study of the Palladium-Catalyzed Carbonylative Synthesis of Aromatic Acid Chlorides: The Synergistic Effect of $PtBu_3$ and CO on Reductive Elimination”, J. Quesnel, S. Moncho, K. Ylijoki, E. N. Brothers, A. A. Bengali, B. Arndtsen, *Chem. Eur. J*., **42**, 15107 (2016).
53. “Ligand Displacement Reaction Paths in a Diiron Hydrogenase Active Site Model Complex”, J. H. Blank, S. Moncho, A. M. Lunsford, E. N. Brothers, M. Y. Darensbourg, A. A. Bengali, *Chem. Eur. J.* **36**, 12752 (2016).
52. “A Unified Set of Experimental Organometallic Data Used to Evaluate Modern Theoretical Methods”, R. K. Raju, A. A. Bengali, E. N. Brothers, *Dalton Trans.*, **45**, 13766 (2016).
51. “Iron (0) Mediated C-H Activation of 1-hexyne; A Mechanistic Study Using Time-Resolved Infrared Spectroscopy”, J. H. Blank, R. K. Raju, T. Yan, E. N. Brothers, M. Y. Darensbourg, A. A. Bengali, *Dalton Trans.,* **45**, 12292 (2016).
50. “Catalysis and Mechanism of H_2 Release from Amine-boranes by Diiron Complexes”, A. M. Lunsford, J. H. Blank, S. Moncho, S. Haas, S. Muhammad, E. N. Brothers, M. Y. Darensbourg, A. A Bengali, *Inorg. Chem*. **55**, 964, (2016).
49. “Charge Transfer Complexes Formed in the Reaction of 2-amino-4ethylpyridine with π-electron Acceptors” S. Y. AlQaradawi, A. Mostafa, A. A. Bengali, *J. Mol. Struc*., **1106**, 10, (2016).
48. “Intramolecular C-C Bond Coupling of Nitriles to a Diimine Ligand in Group 7 Metal Tricarbonyl Complexes”, V. Yempally, W. Y. Fan, B. A. Arndtsen, A. A. Bengali, *Inorg. Chem*. 54, 11441, (2015).
47. “A Nickel-Based, Tandem Catalytic Approach to Isoindolinones from Imines, Aryl Iodides, and CO”, J. Tjutrins, J. L. Shao, V. Yempally, A. A. Bengali, B. A. Arndtsen, *Organometallics*, 34, 1802, (2015).
46. “Group VI Transition Metal Carbonyl Hydrosulfides as Water Soluble H_2S Releasing Agents”, H. T. Poh, A. A. Bengali, W. Y. Fan, *RSC Adv*., 5, 10703 (2015).
45. “Calculation of Ionization Energy, Electron Affinity and Hydride Affinity Trends in Pincer-Ligated d^8-Ir(tBu_4PXCXP) Complexes: Implications to the Thermodynamics of Oxidative H_2 Addition" A. Baroudi,; A. El-Hellani, A. Bengali, A. Goldman, F. Hasanayn, *Inorg. Chem*. 53, 12348 (2014)
44. Oxidative Addition of Haloalkanes to Metal Centers: A Mechanistic Investigation”, V. Yempally, S. Moncho, S. Muhammad, E. N. Brothers, A. A. Bengali, *Organometallics*, 33, 3591 (2014).
43. “Dehydrogenation of a Tertiary Amine-Borane by a Rhenium Complex”, S. Muhammad, S. Moncho, E. N. Brothers, A. A. Bengali, *Chem. Comm*., 50, 5874 (2014).

42. “Thermal and Photochemical Reactivity of a Manganese Diazabutadiene Complex”, V. Yempally, R. K. Raju, W. Y. Fan, E. N. Brothers, D. J. Darensbourg, A. A. Bengali, *Inorg. Chem*. 53, 4081 (2014).
41. “The Extraordinary Fluxionality of $Ru_6(\mu_6\text{-}C)(\mu\text{-}CO)(CO)_{16}$” J. P. Canal, A. A. Bengali, M. C. Jennings, R. K. Pomeroy, *Inorg. Chem. Comm.* 43, 31 (2014).
40. “Hydrogenation of Dimethyl Carbonate to Methanol by trans $[Ru(H)_2(PNN)(CO)]$ Catalysts: DFT Evidence for Ion-Pair Mediated Metathesis Paths for C-OMe Bond Cleavage”, F. Hasanayn, A. Baroudi, A. A. Bengali, A. S. Goldman, *Organometallics*, 32, 6969 (2013).
39. “Light Enhanced Displacement of Methylacrylate from Iron Carbonyl: Investigation of the Reactive Intermediate *via* Rapid-Scan FTIR and Computational Studies”, S. Muhammad, S. Moncho, B. Li, S. J. Kyran, E. N. Brothers, D. J. Darensbourg, A. A. Bengali, *Inorg. Chem*., 52, 12655 (2013).
38.“A multipass cell based on confocal mirrors for sensitive broadband laser spectroscopy in the near IR”, T. Mohamed, F. Zhu, S. Chen, J. Strohaber, A. A. Kolomenskii, A. A. Bengali, H. A. Schuessler, *Applied Optics*, 52, 7145, (2013).
37. “Estimating the Strength of the M-H-B Interaction: A Kinetic Approach”, S. Muhammad, S. Moncho, E. N. Brothers, D. J. Darensbourg, A. A. Bengali, *Dalton Trans.*., 42, 6720, (2013).
36. “Acrylic Acid Derivatives of Group 8 Metal Carbonyls – A Structural and Kinetic Study”, B. Li, S. J. Kyran, A. D. Yeung, A. A. Bengali, D. J. Darensbourg, *Inorg. Chem*., 52, 5438, (2013).
35. “Kinetic and Thermodynamic Investigations of CO_2 Insertion Reactions into Ru-Me and Ru-H Bonds. An Experimental and Computational Study”, D. J. Darensbourg, S. J. Kyran, A.D. Yeung, A. A. Bengali, *Eur. J. Inorg. Chem*., 4024, (2013).
34. “Mechanism of CO Displacement from an Unusually Labile Rhenium Complex: An Experimental and Theoretical Investigation”, S. Muhammad, V. Yempally, M. Anas, S. Moncho, S. Kyran, E. N. Brothers, D. J. Darensbourg, A.A. Bengali, *Inorg. Chem*. 51, 13041, (2012).
33. “Time Resolved Infrared Spectroscopy. Kinetic Studies of Weakly Binding Ligands in an Iron-Iron Hydrogenase Model Compound”, S. Muhammad, S. Moncho, E. N. Brothers, M. Y. Darensbourg, D. J. Darensbourg, A. A. Bengali, *Inorg. Chem.* 51, 7362, (2012).
32. “Time Resolved Infrared Spectroscopy Studies of Olefin Binding in Photogenerated CpRu(CO)X (X = Cl or I) Transients”, S. Muhammad, S. J. Kyran, R. K. Raju, E. N. Brothers, D. J. Darensbourg A. A. Bengali, *Organometallics*, 31, 3972, (2012).
31. “Photochemically Generated Transients from κ^2- and κ^3-Triphos Derivatives of Group 6 Metal Carbonyls and Their Reactivity with Olefins”, S. J. Kyran, S. Muhammad, M. Knestrick, A. A. Bengali, D. J. Darensbourg, *Organometallics*, 31, 3163, (2012).
30. “Ligand displacement from $TpMn(CO)_2L$ Complexes: A large rate enhancement compared to the $CpMn(CO)_2L$ analog”, B. H. G. Swennenhuis, R. Poland, N. J. DeYonker, C. E. Webster, D. J. Darensbourg, A. A. Bengali, *Organometallics*, 30, 3054, (2011).
29. “Hydrogen generation from water upon $CpMn(CO)_3$ irradiation in a hexane/water biphasic system”, J. Kee, Yong, T.; B. H. G. Swennenhuis, A. A. Bengali, W. Y. Fan, *Organometallics*, 30, 2154, (2011).
28. “Ligand Substitution from the $(\eta^5\text{-}DMP)Mn(CO)_2(Solv)$ [DMP = 2,5-dimethylpyrrole, Solv = solvent] Complexes: To Ring Slip or Not to Ring Slip?”, B. H. G. Swennenhuis, R. Poland, W. Y Fan, D. J. Darensbourg, A. A. Bengali, *Inorg. Chem*. 49, 7597,(2010).
27. "Reactivity of the M-(η^2-alkyne) bond [M = Cr, W]: A kinetic and DFT study", Bert H. G. Swennenhuis, G. Benjamin Cieslinski, Edward, N. Brothers, Ashfaq A. Bengali, *J. Organomet. Chem.* 695, 891, (2010).
26. "Displacement kinetics of η^2-bound furan and 2,3-dihydrofuran from Mn and Cr centers: Evidence for the partial dearomatization of the furan ligand", Jeremy R. Andreatta, G. Benjamin Cieslinski, Madeeha Batool, Xue-Zhong Sun, Michael W. George, Edward N. Brothers, Donald J. Darensbourg, Ashfaq A. Bengali, *Inorg. Chem*. 48, 7787, (2009).

25. "Trends in the reactivity of the $CpMn(CO)_2(\eta^2$-arene) bond [arene = benzene, toluene, *o*-xylene, *m*-xylene, *p*-xylene, and mesitylene]: An experimental and theoretical investigation", Ashfaq A. Bengali, Khaldoon T. Abdulrazak, Wai Yip Fan, *Organometallics*, 28, 3123, (2009).
24. "Linkage isomerization reactions of $M(CO)_2L$ complexes (M= $(\eta^5$-$C_5H_5)Mn$, $(\eta^5$-$C_5H_5)Re$, $(\eta^6$-$C_6H_6)Cr$; L = 2,3-dihydrofuran]: A step-scan FTIR and DFT study", Ashfaq A. Bengali, Michael B. Hall, and Hong Wu, *Organometallics*, 27, 5826, (2008).
23. "Reactivity of the $CpMn(CO)_2$-XR Bond [X = Cl, Br]: A kinetic study using rapid scan FTIR spectroscopy" Ashfaq A. Bengali, Wai Yip Fan, *Organometallics*, 27, 5488, (2008).
22. "Investigating the reactivity of the $(\eta^6$-$C_6H_5R)Cr(CO)_2$-$(\eta^2$-$C_6H_5R)$ [R = H, CH_3, CF_3] bond: A laser flash photolysis study with infrared detection", Ashfaq A. Bengali and Amy Grunbeck, *Organometallics*, 24, 5919, (2005).
21. "Displacement of the heptane solvent from $(\eta^5$-$C_5H_5)Re(CO)_2$(heptane): A flash photolysis study using infrared detection", Ashfaq A. Bengali, *J. Organomet. Chem.*, 690, 4989, (2005).
20. "The Mechanism and Energetics of Silane and THF Displacement from the $(\eta^6$-$C_6H_6)Cr(CO)_2(HSiEt_3)$ and $(\eta^6$-$C_6H_6)Cr(CO)_2$(THF) Complexes", Ashfaq A. Bengali and Robert Fehnel, *Organometallics*, 24, 1156, (2005).
19. "Electronic and Steric Influences on the Rate and Energetics of THF and Me_nTHF (n = 1,2) Displacement from the $LRe(CO)_2$ (L = Tp, Tp*, Cp*) Fragments by Acetonitrile", Ashfaq A. Bengali, Benjamin K. Mezick, Matthew N. Hart, and Shahnaz Fereshteh, *Organometallics*, 22, 5436, (2003).
18. "Synthesis, Kinetics, and Thermodynamics: An Advanced Laboratory Investigation of the *cis/trans* Isomerization of $Mo(CO)_4(PR_3)_2$ (R = Et, n-butyl) ", Ashfaq A. Bengali and Kim E. Mooney, *J. Chem. Educ.*, 80, 1044, (2003).
17. "Estimating the $(CO)_5Cr$-$(\eta^2$-benzene) Bond Dissociation Enthalpy: Reaction of the $(CO)_5Cr(\eta^2$-benzene) Complex With a Series of $(CH_3)_n$THF (*n* = 0, 1, 2, and 4) Ligands", Ashfaq A. Bengali and Trent F. Stumbaugh, *J. Chem. Soc., Dalton Trans*. 354, (2003).
16. "A Kinetic and Mechanistic Study of the Displacement of η^2 Coordinated Arenes From $Cp^*Re(CO)_2(\eta^2$-$C_6H_5R)$ [R = -H, $-CH_3$, and $-C(CH_3)_3$]: Evidence for a Dissociative Mechanism and Estimation of the Re-$(\eta^2$-Arene) Bond Strength", A. A. Bengali and A. Leicht, *Organometallics*, 20, 1345, (2001).
15. "Determination of the Regiochemistry of Di-substituted Arenes Generated By Addition of a Carbanion to the $(\eta^6$-anisole)$Cr(CO)_3$ Complex", A. A. Bengali, C. Samet, and S. B. Charlton, *J. Chem. Educ*., 78, 68, (2001).
14. "Observation of the $(\eta^5$-$C_5H_5)Mn(CO)_2$(toluene) Complex By Low Temperature IR Spectroscopy and Determination of the Mn-toluene Bond Strength", A. A. Bengali, *Organometallics*, 19, 4000, (2000).
13. "Displacement of the Benzene Solvent Molecule From $Cr(CO)_5$(benzene) by Piperidine: A Laser Flash Photolysis Experiment", A. A. Bengali and S. B. Charlton, *J. Chem. Educ.*, 77, 1348, (2000).
12. "Displacement of the THF solvent molecule from $(\eta^5$-$C_5H_5)Mn(CO)_2$(THF) by simple two electron donor ligands: evidence for a dissociative mechanism and determination of the Mn-THF bond strength", J. E. Coleman, K. E. Dulaney, and A. A. Bengali, *J. Organomet. Chem.* 572, 65, (1999).
11. "A kinetic and spectroscopic study of the interaction between a $M(CO)_5$ (M=Cr,W) fragment and ethyl diazoacetate", S. Cole, K. E. Dulaney, and A. A. Bengali, *J. Organomet. Chem*. 560, 55 (1998).
10. "Evidence for the formation of free 16-electron species rather than solvate complexes in the ultraviolet irradiation of $CpCo(CO)_2$ in noble gas solvents", A. A. Bengali, R. G. Bergman, C. B. Moore, *J. Am. Chem. Soc.*, 117, 3879 (1995).
9. "Activation of carbon-hydrogen bonds in alkanes and other organic molecules by Ir(I), Rh(I), and Ir(III) complexes", A. A. Bengali, B. A. Arndtsen, P. M. Burger, R. H. Schultz, B. H. Weiller, K. R. Kyle, C. B. Moore and R. G. Bergman, *Pure and Applied Chemistry.,* 67, 281 (1995).

8. "Activation of the C-H bonds in neopentane and neopentane-d_{12} by Cp*Rh(CO)$_2$: Spectroscopic and temporal resolution of rhodium-krypton and rhodium-alkane complex intermediates", A. A. Bengali, R. H. Schultz, R. G. Bergman and C. B. Moore, *J. Am. Chem. Soc.*, 116, 9585 (1994).
7. "IR flash kinetic spectroscopy of C-H bond activation of cyclohexane-d_0 and -d_{12} by Cp*Rh(CO)$_2$ in liquid rare gases: Kinetics, thermodynamics and an unusual isotope effect", R. H. Schultz, A. A. Bengali, M. J. Tauber, B. H. Weiller, E. P. Wasserman, K. R. Kyle, R. G. Bergman, C. B. Moore, *J. Am. Chem. Soc.*, 116, 7369 (1994).
6. "Negative ion photoelectron spectroscopy of CH_2=SiH and CH_3-Si", A. A. Bengali, D. G. Leopold, *J. Am. Chem. Soc.*, 114, 9192 (1992).
5. "A gas phase study of the Group VI transition metal tricarbonyl complexes by negative ion photoelectron spectroscopy", A. A. Bengali, S. M. Casey, C.-L. Cheng, J. P. Dick, P. T. Fenn and P. W. Villalta, *Optical Methods for Time and State Resolved Chemistry*, C.-Y. Ng Ed., 1638, 234 (1992).
4. "Negative ion photoelectron spectroscopy of coordinatively unsaturated Group VI carbonyls: $Cr(CO)_3$, $Mo(CO)_3$ and $W(CO)_3$", A. A. Bengali, S. M. Casey, C.-L Cheng, J. P. Dick, P. T. Fenn, P. W. Villalta and D. G. Leopold, *J. Am. Chem. Soc.*, 114, 5257 (1992).
3. "Photoelectron spectroscopy of Cr_2^- and the Group VI metal tricarbonyl anions", D. G. Leopold, A. A. Bengali, S. M. Casey, C.-L. Cheng, J. P. Dick, P. T. Fenn and P. W. Villalta, *Proceedings of the 39th ASMS conference on Mass Spectrometry and Allied Topics*, 71-71 (1991).
2. "A study of Cr_2^- by negative ion photoelectron spectroscopy", S. M. Casey, P. W. Villalta, A. A. Bengali, C.-L Cheng, J. P. Dick, P. T. Fenn and D. G. Leopold, *J. Am. Chem. Soc*. 113, 6688 (1991).
1. "Redox reaction rates using potentiostatic coulometry", R. W. Rammette, R. Z. Harris, A. A. Bengali and R. J. Noll, *Anal. Chem*. 59, 154 (1987).

INVITED TALKS

21. "Organometallic Photochemistry", Amherst College, USA, Oct. 7th, 2016.
20. "Transition Metal Catalyzed Hydrogen Release from Amine-Boranes", Brandeis University, USA, Oct. 6th, 2016.
19. "Catalytic Dehydrogenation of Amino-Boranes", American University of Beirut, Beirut, Lebanon, April. 14th, 2016.
18. "H_2 release from amino-boranes by Diiron complexes", National University of Singapore, Dec. 7th, 2015.
17. "Detection and Reactivity of Organometallic Intermediates, Departmental Seminar, Lehigh University, Bethlehem, PA, USA, March 4th, 2013.
16. "Detection and Reactivity of Organometallic Intermediates", Departmental Seminar, National University of Singapore, Singapore, Oct., 2012
15. "Detection of Intermediates in Catalytic Processes Using Time-Resolved Infrared Spectroscopy". A. A. Bengali, Jacobs University, Bremen, Germany, June 2012.
14. "Time Resolved IR Spectroscopy of Metal Carbonyl Complexes". A. A. Bengali, Lund University, Lund, Sweden, May 2011.
13. "Time Resolved IR Spectroscopy of Metal Carbonyl Complexes". A. A. Bengali, McGill University, Montreal, Canada, April 2011.
12. "The influence of ancillary ligands upon the reactivity of the Mn-L bond in XMn(CO)$_2$L complexes [X = Tp and DMP]: A time resolved IR study. A. A. Bengali, University of New South Wales, Departmental Seminar, Sydney, Australia, March 10th, 2011.

11. “The influence of ancillary ligands upon the reactivity of the Mn-L bond in $XMn(CO)_2L$ complexes [X = Tp and DMP]: A time resolved IR study. A. A. Bengali, University of Melbourne, Departmental Seminar, Melbourne, Australia, March 8th, 2011.
10. "Reactivity of the metal-(η^2-alkyne) bond" A. A. Bengali, Singapore International Chemistry Conference 6, Singapore, Dec. 18th, 2009.
9. "Time-resolved IR Studies of Metal Complexes: Reactivity of the Metal-(η^2-arene) Bond", A. A. Bengali, University of Nottingham, Nottingham, UK, May, 2009.
8. "Time-resolved IR Studies of Metal Complexes: Reactivity of the Metal-(η^2-aromatic) Bond", A. A. Bengali, EPFL, Lausanne, Switzerland, March, 2009.
7. "Time-resolved IR Studies of Metal Complexes", Qatar University, April 2009.
6. "Reactivity of the metal-(η^2-aromatic) bond", A. A. Bengali, 3rd meeting of the QAFCO-TAMUQ Chemistry Conference, Doha, Qatar, Jan. 8th, 2009.
5. "Organometallic Photochemistry" A. A. Bengali, Singapore International Chemistry Conference 5, Singapore, Dec. 18th, 2007.
4. "Investigating the reactivity of the $BzCr(CO)_2$-(η^2-C_6H_6) bond: A laser flash photolysis study using infrared detection", A. A. Bengali, 1st Annual QAFCO-TAMUQ Chemistry
Conference, Doha, Qatar, January 8th, 2007.
3. "Research in Organometallic Kinetics", A. A. Bengali, University of Minnesota, Minneapolis, MN, February 4th, 2000.
2. "Organometallic Kinetics", A. A. Bengali, Carleton College, Northfield, MN, February 3rd, 2000.
1. "Photoelectron Spectroscopy of Gas Phase Organosilicon Anions", A. A. Bengali, D. G. Leopold, University of Basel, Basel, Switzerland, July 25th, 1994.

RESEARCH PRESENTATIONS

28. “Catalytic Hydrogen Release from Amine-Boranes”, Magnus conference, London, UK, Sept. 16th, 2019.
27. “Hydrosilylation of carbonyl compounds employing manganese carbonyl complexes”, Asia-Pacific Congress on Catalysis, Bangkok, Thailand, Aug. 4th, 2019.
26. “Hydrosilylation of carbonyl compounds employing earth abundant transition metal complexes”, American Chemical Society National Meeting, Orlando, FL, March 31st, 2019.
25. “Hydrogen Release from Amine Boranes by a Bifunctional Rhenium Catalyst”, Gordon Research Conference, Newport, RI, July 9th, 2016.
24. “Light Activated H_2 Release from Amine Borane by [FeFe]ase Mimics”, American Chemical Society National Meeting, San Diego, CA, March. 13, 2016.
23. “Nitrile Activation by Intramolecule C-C bond coupling”, American Chemical Society National Meeting, San Diego, CA, March. 13, 2016.
22. “Nitrile activation by intramolecular C-C bond coupling to a diimine ligand in group 7 metal tricarbonyl complexes”, 6th EuCheMS conference on Nitrogen ligands, Beaune, France (September 13-17th, 2015).
21. “Intermediates in the Photochemical Activation of Borane-Amines”, Royal Australian Chemistry Institute, Adelaide, Australia, Dec., 2014.

20. “Photo-induced Oxidative addition of Haloalkanes to Rhenium and Nickel metal centres: A time-resolved FTIR study” Gordon Research Conference, Rhode Island, USA, July 6, 2014.
19. “Photochemical Generation of Metal-borane Complexes: Estimating the Metal-H-B Bond Enthalpy” ICCC-41 Conference, Singapore, July 24th, 2014
18. “Light Enhanced Displacement of Methylacrylate from Iron Carbonyl” 247th American Chemical Society National Meeting, Dallas, TX, March 16th, 2014.
17. “Manganese Tricarbonyl and Tetracarbonyl Complexes with a Bulky DAB Ligand”, 13th Royal Australian Chemical Institute Inorganic Chemistry Divisional Conference, Brisbane, Dec. 8th, 2013.
16. “Mechanism of CO displacement from an Unusually Labile Rhenium Complex”, 245th American Chemical National Meeting, New Orleans, LA, April 7th, 2013.
15. “Benchmark study of density functional methods for organometallic reactions”, 96th Canadian Chemistry Conference, Quebec, May 26th, 2013.
14. “Solution Photochemistry of an Iron-Iron Hydrogenase Model Compound”, 7th Singapore International Chemistry Conference, Singapore, Dec. 17th, 2012.

13. “Time Resolved Infrared Spectroscopy: Kinetic Studies of Weakly Binding Ligands in an Iron-Iron Hydrogenase Model Compound”, XXIV IUPAC Symposium on Photochemistry, Portugal, 15th July, 2012.
12. " The Metal-Solvent Interaction: A Time Resolved Infrared Study”. A. A. Bengali, 95th Canadian Chemistry Conference, Calgary, Canada, May 2012.
11. “Optical Ultra-trace Gas Detection: Looking for a Needle in a Million Haystacks”, A. A. Bengali, Hans Schuessler, TAMUQ-Industry Research Forum, Doha, Qatar, May 2012.
10. “Photochemistry of $CpM(CO)_2Cl$ [M = Fe, Ru] complexes: A time-resolved infrared study” Muhammad Sohail, Samuel J. Kyran, Donald J. Darensbourg, Ashfaq A. Bengali, 243rd ACS National Meeting, San Diego, March 26th, 2012.
9. “Solvent displacement from (η^5-pyrrole)$Mn(CO)_2L$ complexes”, Bert Swennenhuis, Ashfaq A. Bengali, XXIII IUPAC Symposium on Photochemistry, Ferrara, Italy, July 11th, 2010.
8. “Reactivity of the M-(η^2-alkyne) bond [M=Cr, W]: A kinetic and DFT study”, Bert Swennenhuis, G. Benjamin Cieslinski, Edward N. Brothers, Ashfaq. A. Bengali, 239th American Chemical Society Meeting, San Francisco, March 22nd, 2010.
7. "Displacement Kinetics of η^2-furan and 2,3-dihydrofuran From Mn and Cr Centers", Jeremy R. Andreatta, G. Benjamin Cieslinski, Madeeha Batool, Xue-Zhong Sun, Michael W. George, Edward N. Brothers, Donald J. Darensbourg, Ashfaq A. Bengali, 237th ACS National Meeting, Salt Lake City, March 23rd, 2009.
6. "Reactivity of the Metal-(η^2-Arene) bond", A. A. Bengali, A. Grunbeck, L. Bahorich, 233rd National Meeting of the American Chemical Society, Chicago, IL, March, 2007.
5. "The Mechanism and Energetics of Silane and THF Displacement from the (η^6-C_6H_6)$Cr(CO)_2(HSiEt_3)$ and (η^6-C_6H_6)$Cr(CO)_2$(THF) Complexes", Ashfaq A. Bengali, 229th National Meeting of the American Chemical Society, San Diego, CA, March 14th, 2005.
4. "Estimating the $(CO)_5Cr$-(η^2-benzene) Bond Dissociation Enthalpy: Reaction of the $(CO)_5Cr$(η^2-benzene) Complex With a Series of $(CH3)_n$THF (*n* = 0, 1, 2, and 4) Ligands", Ashfaq A. Bengali, Trent F. Stumbaugh, 225th National Meeting of the American Chemical Society, New Orleans, LA, March 23rd, 2003.

3. "Displacement of the Benzene Solvent Molecule From $Cr(CO)_5$(benzene) by Piperidine: A Laser Flash Photolysis Experiment", A. A. Bengali, Samantha Charlton, 220th National Meeting of the American Chemical Society, Washington, DC, August 19th, 2000.
2. "Negative Ion Photoelectron Spectroscopy of Transition Metal Dicarbonyl Complexes," A. A. Bengali, J.P. Dick and D.G. Leopold, 203rd National Meeting of the American Chemical Society, San Francisco, CA, April 4th, 1992.
1. "Cr_2: A Negative Ion Photoelectron Spectroscopic Study" D.G. Leopold, S.M. Casey, P.W. Villalta, A.A. Bengali, C.-L. Cheng, J.P. Dick, and P.T. Fenn, 201st National Meeting of the American Chemical Society, Atlanta, GA, April 17th, 1991.

RESEARCH COLLABORATIONS

1. Prof. Donald Darensbourg (Texas A&M University, USA)
2. Prof. Marcetta Darensbourg (Texas A&M University, USA)
3. Prof. Edward N. Brothers (Texas A&M University at Qatar)
4. Prof. Wai Yip Fan (National University of Singapore)
5. Prof. Michael George (University of Nottingham, UK)
6. Prof. Michael Richmond (University of North Texas, USA)
7. Prof. Charles Edwin Webster (University of Memphis, USA)
8. Prof. Bruce Arndtsen (McGill University)
9. Prof. Faraj Hasanayn (American University of Beirut)

SERVICE

Executive Director, Center for Teaching and Learning, 2017-present
Bridging Science and Engineering Courses Committee, 2015-2016
TAMUQ Dean's Search Committee, 2015-2016
Interim Chair of Science Program, 2014-2015
SEC Chemistry high school teacher development committee (Chair) 2014
Purchasing Task Force (Chair) 2013
Principal Investigators Committee (co-Chair), 2013
Faculty Grievance Committee, 2012-2013
College Wide Science Promotion Committee, member, 2013
Chair of Field Appropriate Sub-Committee, 2013
Science Promotion and Rolling Contract committee, member, 2012-2014
Research Strategic plan development committee, member, 2012
Organizing committee member for the 1st annual TAMUQ-Industry Research Forum, 2012
Member, Mid-Career and Post-Rolling Contract Review Committee, 2012
Peer reviewer, Ph.D thesis, National University of Singapore, 2012
Member of the organizing committee for the IUPAC POC 2012 conference, 2011-2012
Science Coordinator for ABET and SACS accreditation 2009-present
Member of the TAMUQ admissions board, 2007-2009.
Member of the Space Allocation Committee, 2009
Chair of Field Appropriate Sub-Committee, 2009
Chair of Research Sub-Committee for the 5-year TAMUQ strategic plan, 2009

Research Steering Committee, Supreme Education Council (Qatar), 2007-2008
Academic Program and Standards Committee, Chair (Dickinson College), 2005
NSF Nanotechnology proposal review panel, 2005
Dana Internship Committee (Dickinson College), 2000-2003
Science Executive Committee (Dickinson College), 1998
Judicial Board (Dickinson College), 1998
Peer reviewer for: *JACS*, *Organometallics, and other journals.*
Peer reviewer for: ACS-PRF, NSF proposals.

CHEMISTRY COURSES TAUGHT REGULARLY

General, thermodynamics and kinetics, quantum mechanics, inorganic/organometallic