Dustin E. Gross
Associate Professor
Department of Chemistry
Sam Houston State University
[redacted]

Academic Training

UNIVERSITY OF TEXAS AT AUSTIN — Austin, TX
Doctor of Philosophy, Organic Chemistry, 2009

UNIVERSITY OF ARIZONA — Tucson, AZ
Bachelor of Science, Chemistry, 2003

Summary of Relevant Experience

SAM HOUSTON STATE UNIVERSITY — Huntsville, TX
Department of Chemistry
Associate Chair, 2019-present
Graduate Advisor, 2019-present
Associate Professor, 2018-present
Assistant Professor, 2012-2018

UNIVERSITY OF ILLINOIS — Urbana, IL
Department of Chemistry
Postdoctoral Researcher, 2009-2012

UNIVERSITY OF TEXAS — Austin, TX
Department of Chemistry and Biochemistry
Graduate Research Assistant and Teaching Assistant, 2003-2009

UNIVERSITY OF ARIZONA — Tucson, AZ
Department of Chemistry
Undergraduate Research Assistant and Teaching Assistant, 1999-2003

Advised Masters Theses

10. Hemachandra, Thusini – Solution Phase and Computational Studies on the Formation, Hydrolysis, and Dynamic Exchange of Phenyl Benzoboroles, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2021.
9. Muthumali, Ahangama Investigation of oligo(Benzoxazaborole)s Derived from Alkyl-Linked bis(Aminophenol)s, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2021.

8. Nguyen, Thao N. Investigation of Diazaborole Formation and Diazaborole-Linked Macrocycles with Ethylhexyl Ester Substituents, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2018.
7. Rathnayaka Mudiyanselage, Chathurika R. Synthesis and Spectroscopic Studies of Benzoxazaboroles, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2018.
6. Ekanayake, Dulamini I. Effect of Boron Trifluoride on the Transesterification of Boronate Esters, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2017.
5. Abeysinghe, Janaka P. Diazaboroles: Experimental Investigations of their Dynamic Covalent Nature and Computational Chemistry, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2017.
4. Manankandayalage, Chamila P. Synthesis of Diazaborole Based Macrocycles with Pendent Triethylene Glycol (Tg) Groups M.S. Thesis, Sam Houston State University, Huntsville, TX, 2016.
3. George, Sobiya. Synthesis and Characterization of Benzoxazaboroles M.S. Thesis, Sam Houston State University, Huntsville, TX, 2016.
2. Kombala, Chathuri J. Investigation of Boronate Ester Equilibria Towards Macrocycle Synthesis. M.S. Thesis, Sam Houston State University, Huntsville, TX, 2015.
1. Lokugama, Sanjaya D. Synthesis of Diazaborole Linked Oligomers Using Aryl Boronic Acid Derivatives. M.S. Thesis, Sam Houston State University, Huntsville, TX, 2015.

Advised Undergraduate Theses

2. Garcia, Nicholas A. Synthesis and Characterization of bis(Diazaborole)s and an Expanded Ethylhexyl Ester-Based Diazaborole-Linked Macrocycle (McNair Scholars Thesis), Sam Houston State University, Huntsville, TX, 2018.
1. Steward, Micaela L. Synthesis and Characterization of *N*-Substituted Diazaboroles (Honor's Thesis), Sam Houston State University, Huntsville, TX, 2017.

Peer Reviewed Publications

41. Rathnayaka, C.; George, S.; Abeysinghe, J. P.; Lynch, V. M.; Gross, D. E. Synthetic, spectroscopic, and computational investigations of readily accessible 2-phenyl-3-alkylbenzoxazaboroles. *J. Heterocycl. Chem.* **2022**, *59*, 1036-1044.
40. Lokugama, S. D.; Garcia, N. A.; Manankandayalage, C. P.; Nguyen, T.N.; Abeysinghe, J. P.; Gross, D. E. "Self-assembly of rectangular shape-persistent diazaborole-linked macrocycles" *J. Incl. Phenom. Macrocycl. Chem.* **2019**, 93, 283-287.
39. Yuan, P.; McCracken, J. M.; Gross, D. E.; Braun, P. V; Moore, J. S.; Nuzzo, R. G. "A programmable soft chemo-mechanical actuator exploiting a catalyzed photochemical water-oxidation reaction" *Soft Matter* **2017**, *13*, 7312-7317.
38. Kombala, C. J.; Ekanayake, D. I.; Gross, D. E. "Boron trifluoride facilitated transesterification of dioxaborolanes" *Tetrahedron Lett.* **2017**, *58*, 3782-3786.

37. Wang, C.; Bunes, B. R.; Xu, M.; Wu, N.; Yang, X.; Gross, D. E.; Zang, L. “Interfacial Donor-Acceptor Nanofibril Composites for Selective Alkane Vapor Detection” *ACS Sens.* **2016**, *1*, 552-559.

36. Zhang, Y.; Xu, M.; Bunes, B. R.; Wu, N.; Gross, D. E.; Moore, J. S.; Zang, L. “Oligomer-Coated Carbon Nanotube Chemiresistive Sensors for Selective Detection of Nitroaromatic Explosives” *ACS Appl. Mater. Interfaces* **2015**, *7*, 7471-7475.

35. Bunes, B. R.; Xu, M.; Zhang, Y.; Gross, D. E.; Saha, A.; Jacobs, D. L.; Yang, X.; Moore, J. S.; Zang, L. “Photodoping and Enhanced Visible Light Absorption in Single-Walled Carbon Nanotubes Functionalized with a Wide Band Gap Oligomer” *Adv. Mater.* **2015**, 27, 162-167.

34. Nienhaus, L.; Gross, D. E.; Xue, Z.: Moore, J. S.; Gruebele, M.; “Energy transfer in a synthetic dendron-based light harvesting system” *J. Photochem. Photobiol., A,* **2014**, 295, 26-33.

33. Huang, H.; Gross, D. E.; Yang, X.; Moore, J. S.; Zang, L. “One-step Surface Doping of Organic Nanofibers to Achieve High Dark Conductivity and Chemiresistor Sensing of Amines” *ACS Appl. Mater. Interfaces,* **2013***, 5,* 7704-7708.

32. Tahara, K.; Yamamoto, Y.; Gross, D. E.; Kozuma, H.; Arikuma, Y.; Ohta, K.; Koizumi, Y.; Gao, Y.; Shimizu, Y.; Seki, S.; Kamada, K.; Moore, J. S.; Tobe, Y. “Syntheses and Properties of Graphyne Fragments: Trigonally Expanded Dehydrobenzo[12]annulenes” *Chem. Eur. J.* **2013**, *19*, 11251-11260.

31. Yuan, P.; Kuksenok, O., Gross, D. E.; Balazs, A. C.; Moore, J. S.; Nuzzo, R. G. “UV Patternable Thin Film Chemistry for Shape and Functionally Versatile Self-Oscillating Gels” *Soft Matter* **2013**, *9*, 1231-1243.

30. Li, L.; Che, Y.; Gross, D. E.; Huang, H.; Moore, J. S.; Zang, L. “Temperature-Controlled, Reversible, Nanofiber Assembly from an Amphiphilic Macrocycle” *ACS Macro Lett.* **2012**, *1*, 1335-1338.

29. Datar, A.; Gross, D. E.; Balakrishnan, K.; Yang, X.; Moore, J. S.; Zang, L. “Ultrafine nanofibers fabricated from an arylene ethynylene macrocyclic molecule using surface assisted self-assembly” *Chem. Commun.* **2012**, 8904-8906.

28. Kim, S. K.; Yeon, Y.; Gross, D. E.; Sessler, J. L. “Hydrofuran Ring Fused Calix[4]pyrrole: Synthesis and Ion Binding Studies” *Supramol. Chem.* **2012**, *24*, 481-486.

27. Gross, D. E.; Discekici, E.;* Moore, J. S. “Macrocyclic Depolymerization of Arylene-Ethynylene Copolymers: A Dynamic Combinatorial Method” *Chem. Commun.* **2012**, 4426-4428.

26. Gross, D. E.; Zang, L.; Moore, J. S. “Arylene Ethynylene Macrocycles: Privileged Shape-Persistent Building Blocks for Organic Materials” *Pure Appl. Chem.* **2012**, *84*, 869-878.

25. Che, Y.; Gross, D. E.; Huang, H.; Yang, D.; Yang, X.; Discekici, E.;* Xue, Z.; Zhao, H.; Moore, J. S.; Zang, L. “Diffusion-Controlled Detection of TNT: Interior Nanoporous Structure and Low HOMO Level of Building Blocks Enhance Selectivity and Sensitivity” *J. Am. Chem. Soc.* **2012**, *134*, 4978-4982.

24. Finke, A. D.; Gross, D. E.; Han, A.;* Moore, J. S. “Engineering Solid-State Morphologies in Carbazole Ethynylene Macrocycles” *J. Am. Chem. Soc.* **2011**, *133*, 14063-14070.

23. Gross, D. E.; Moore, J. S. “Arylene Ethynylene Macrocycles via Depolymerization-Macrocyclization” *Macromolecules* **2011**, *44*, 3685-3687.

22. Kim, S. K.; Gross, D. E.; Cho, D.-G.; Lynch, V. M.; Sessler, J. L. “N-Tosylpyrrolidine Calix[4]pyrrole: Synthesis and Ion Binding Studies” *J. Org. Chem.* **2011**, *76*, 1005-1012. (Featured Article; Cover)

21. Moyer, B. A.; Sloop, F. V. Jr.; Fowler, C. J.; Haverlock, T. J.; Kang, H.-A.; Delmau, L. H.; Bau, D. M.; Hossain, M. A.; Bowman-James, K.; Shriver, J. A.; Bill, N. L.; Gross, D. E.; Marquez, M.; Lynch, V. M.; Sessler, J. L. “Enhanced Liquid-Liquid Anion Exchange Using Macrocyclic Anion Receptors: An Equilibrium Model for Sulfate-Nitrate Exchange Based on Sulfate Binding” *Supramol. Chem.* **2010**, *22*, 653-671.

20. Kim, S. K.; Sessler, J. L.; Gross, D. E.; Lee, C.-H.; Kim, J. S.; Lynch, V. M.; Delmau, L. H.; Hay, B. P. “A Calix[4]arene Strapped Calix[4]pyrrole: An Ion-Pair Receptor Displaying Three Different Cesium Cation Recognition Modes” *J. Am. Chem. Soc.* **2010**, *132*, 5827-5836.

19. Gale, P. A.; Tong, C. C.; Haynes, C. J. E.; Adeosun, O.; Gross, D. E.; Karnas, E.; Sedenberg, E. M.;* Sánchez-Quesada, R.; Sessler, J. L. “Octafluorocalix[4]pyrrole: A Chloride/Bicarbonate Antiport Agent” *J. Am. Chem. Soc.* **2010**, *132*, 3240-3241.

18. Gross, D. E.; Mikkilineni, V.;* Lynch, V. M.; Sessler, J. L. “Bis-Amidopyrrolyl Receptors Based on Anthracene and Carbazole” *Supramol. Chem.* **2010**, *22*, 135-141.

17. Caltagirone, C.; Bill, N. L.; Gross, D. E.; Light, M. E.; Sessler, J. L.; Gale, P. A. “Bis-Cation Salt Complexation by meso-Octamethylcalix[4]pyrrole: Linking Complexes in Solution and in the Solid State” *Org. Biomol. Chem.* **2010**, *8*, 96-99.

16. Gross, D. E.; Yoon, D.-W.; Lynch, V. M.; Lee, C.-H.; Sessler, J. L. “Anion Binding Behavior of Heterocycle-Strapped Calix[4]pyrroles” *J. Incl. Phenom. Macrocycl. Chem*. **2010**, *66*, 81-85.

15. Yoon, D.-W.; Gross, D. E.; Lynch, V. M.; Lee, C.-H.; Bennett, P. C.; Sessler, J. L. “Real-Time Determination of Chloride Anion Concentration in Aqueous-DMSO Using a Pyrrole-Strapped Calixpyrrole Anion Receptor” *Chem. Commun.* **2009**, 1109-1111.

14. Fowler, C. J.; Haverlock, T. J.; Moyer, B. A.; Shriver, J. A.; Gross, D. E.; Marquez, M.; Sessler, J. L.; Hossain, M. A.; Bowman-James, K. “Synergized Anion Exchange for Sulfate Extraction” *J. Am. Chem. Soc.* **2008**, *130*, 14386-14387.

13. Cui, R.; Li, Q; Gross, D. E.; Meng, X.; Li, B.; Marquez, M.; Yang, R.; Sessler, J. L.; Shao, Y “Anion Transfer at a Micro-Water/1,2-Dichloroethane Interface Facilitated by β-Octafluoro-meso-octamethylcalix[4]pyrrole” *J. Am. Chem. Soc.* **2008**, *130*, 14364-14365.

12. Sessler, J. L.; Kim, S. K.; Gross, D. E.; Lee, C.-H.; Kim, J. S.; Lynch, V. M. “Crown-6-Calix[4]arene Capped Calix[4]pyrrole: An Ion Pair Receptor for Solvent Separated CsF Ions” *J. Am. Chem. Soc.* **2008**, *130*, 13162-13166.

11. Gross, D. E.; Schmidtchen, F. P.; Antonius, W.; Gale, P. A.; Lynch, V. M.; Sessler, J. L. "Cooperative Binding of Calix[4]pyrrole-Anion Complexes and Alkylammonium Cations in Halogenated Solvents" *Chem. Eur. J.* **2008**, *14*, 7822-7827.
10. Nielsen, K. A.; Martín-Gomis, L.; Sarova, G. H.; Sanguinet, L.; Gross, D. E.; Fernández-Lázaro, F.; Stein, P. C.; Levillain, E.; Sessler, J. L.; Guldi, D. M.; Sastre-Santos, Á.; Jeppesen, J. O. "Binding Studies of Tetrathiafulvalene-Calix[4]pyrroles with Electron-Deficient Guests" *Tetrahedron* **2008**, *64*, 8449-8463.
9. Yoon, D.-W.; Gross, D. E.; Lynch, V. M.; Sessler, J. L.; Hay, B. P.; Lee, C.-H. "Benzene-, Pyrrole-, and Furan-Containing Diametrically Strapped Calix[4]pyrroles–An Experimental and Theoretical Study of Hydrogen-Bonding Effects in Chloride Anion Recognition" *Angew. Chem. Int. Ed.* **2008**, *47*, 5038-5042.
8. Martinez-Garcia, H.; Morales, D.; Perez, J.; Coady, D. J.; Bielawski, C. W.; Gross, D. E.; Cuesta, L.; Marquez, M.; Sessler, J. L. "Calix[4]pyrrole as a Promoter of the CuCl-Catalyzed Reaction of Styrene and Chloramine-T" *Organometallics* **2007**, *26*, 6511-6514.
7. Cuesta, L.; Gross, D.; Lynch, V. M.; Ou, Z.; Kajonkijya, W.; Ohkubo, K.; Fukuzumi, S.; Kadish, K. M.; Sessler, J. L. "Design and Synthesis of Polymetallic Complexes Based on meso-Calix[4]pyrrole: Platforms for Multielectron Chemistry" *J. Am. Chem. Soc.* **2007**, *129*, 11696-11697.
6. Plitt, P.; Gross, D. E.; Lynch, V. M.; Sessler, J. L. "Dipyrrolyl-Functionalized Bipyridine-Based Anion Receptors for Emission-Based Selective Detection of Dihydrogen Phosphate" *Chem. Eur. J.* **2007**, *13*, 1374-1381. (Featured on Cover)
5. Sessler, J. L.; Gross, D. E.; Cho, W.-S.; Lynch, V. M.; Schmidtchen, F. P.; Bates, G. W.; Light, M. E.; Gale, P. A. "Calix[4]pyrrole as a Chloride Anion Receptor: Solvent and Countercation Effects" *J. Am. Chem. Soc.* **2006**, *128*, 12281-12288.
4. Sessler, J. L.; Cho, W.-S.; Gross, D. E.; Shriver, J. A.; Lynch, V. M.; Marquez, M. "Anion Binding Studies of Fluorinated Expanded Calixpyrroles" *J. Org. Chem.* **2005**, *70*, 5982-5986.
3. Custelcean, R.; Delmau, L. H.; Moyer, B. A.; Sessler, J. L.; Cho, W.-S.; Gross, D.; Bates, G. W.; Brooks, S. J.; Light, M. E.; Gale, P. A. "Calix[4]pyrrole: An Old Yet New Ion-Pair Receptor" *Angew. Chem. Int. Ed.* **2005**, *44*, 2537-2542. (Featured on Cover)
2. Ndungu, J. M.; Gu, X.; Gross, D. E.; Cain, J. P.; Carducci, M. D.; Hruby, V. J. "Synthesis of Bicyclic Dipeptide Mimetics for the Cholecystokinin and Opioid Receptors" *Tetrahedron Lett.* **2004**, *45*, 4139-4142.
1. Ndungu, J. M.; Gu, X.; Gross, D. E.; Ying, J.; Hruby, V. J. "A Simple and Efficient Synthesis of an Asp-Gly Dipeptide Mimetic" *Tetrahedron Lett.* **2004**, *45*, 3245-3247.

Conference and Symposium Presentations and Invited Lectures and Seminars

49. Hodges, J.; Gross, D. E. Synthesis of oligo-benzodiazaboroles based on meta-phenylene ethynylene linking units ACS SWRM, Baton Rouge, LA November 6, 2022.

48. Gross, D. E. Outcomes from Teaching Enhancement Grant: Flipping the organic chemistry prelab meeting Oral presentation. 2022 Be(e) STEM Symposium SHSU April 21, 2022.

47. Gross, D. E. "Solution-Phase and Computational Studies on the Dynamic Covalent Exchange of Nitrogen-Containing Boronate Ester Derivatives" Oral presentation. 2021 ACS Southwest Regional Meeting (SWRM), Austin, TX November 1, 2021. Main Group Chemistry in the Southwest Presentation #253

46. Hemachandra, T. P.; Gross, D. E. "Solution phase and computational studies on the formation, hydrolysis, and dynamic exchange of phenyl benzoboroles" Live presentation 3554922. ACS National Meeting, virtual, April 14, 2021.

45. Muthumali, A.; Gross, D. E. "Investigation of oligo(benzoxazaborole)s derived from alkyl-linked bis(aminophenol)s" Live presentation 3556380. ACS National Meeting , virtual, April 14, 2021.

44. Muthumali, A.; Gross, D. E. "Bis(aminophenol) Derivatives for Synthesis of Poly(benzoxazaborole)s and Bis(benzoxazaborole)s" Oral presentation. 123rd Annual Meeting of the Texas Academy of Science at Stephen F. Austin State University, Nacogdoches, TX, February 28-29, 2020.

43. Hemachandra, T. P.; Gross, D. E. "Determination of Relative Stability of Heteroborole systems using Dynamic Covalent Reactions" Oral presentation. 123rd Annual Meeting of the Texas Academy of Science at Stephen F. Austin State University, Nacogdoches, TX, February 28-29, 2020.

42. Haltom, I.; Gross, D. E. "Synthesis of a Tert-butyl Diazaborole-linked Macrocycle using Le Chatelier's Principle" Oral presentation. 123rd Annual Meeting of the Texas Academy of Science at Stephen F. Austin State University, Nacogdoches, TX, February 28-29, 2020.

41. Hemachandra, T. P.; Rathnayaka, R. M. C.; Gross, D. E. "Thermodynamic and kinetic studies of dynamic covalent reactions involving benzoxazaboroles" Poster presentation SWRM 277. ACS Southwest Regional Meeting (SWRM), El Paso, TX, November 13-16, 2019.

40. Haltom, I.;* Gross, D. E. "Utilization of Le Chatelier's principle for the synthesis of diazaborole-linked materials" Poster presentation SWRM 237. ACS Southwest Regional Meeting (SWRM), El Paso, TX, November 13-16, 2019.

39. Muthumali, A.; Gross, D. E. "Synthesis and characterization of poly(benzoxazaborole)s and bis(benzoxazaborole)s derived from bis(aminophenol)s" Poster presentation SWRM 214. ACS Southwest Regional Meeting (SWRM), El Paso, TX, November 13-16, 2019.

38. Villanueva, O. H.;* Gross, D. E. "Dynamic Covalent Exchange and Relative Stabilities of Benzodioxaboroles, Benzodiazaboroles, and Benzoxazaboroles" 12th Annual Undergraduate Research Symposium, SHSU April 27, 2019.

37. Castillo, E.;* Haltom, I.;* Gross, D. E. "Synthesis and characterization of rectangular *tert*-butyl substituted diazaborole-based macrocycles." Poster presentation SWRM 208. ACS Southwest Regional Meeting (SWRM), Little Rock, AR, November 7-10, 2018.

36. Villanueva, O.;* Rathnayaka, R. M. C.; Gross, D. E. "Dynamic covalent exchange and relative stabilities of benzodioxaboroles, benzodiazaboroles, and benzoxazaboroles." Poster presentation SWRM 372. ACS Southwest Regional Meeting (SWRM), Little Rock, AR, November 7-10, 2018.

35. Chavelas, D.;* Rathnayaka R. M. C.; Gross, D. E. "X-ray crystallographic analysis of several benzoxazaborole derivatives." Poster presentation SWRM 373. ACS Southwest Regional Meeting (SWRM), Little Rock, AR, November 7-10, 2018.

34. Gross, D. E. "Synthesis and characterization of 3-aryl-1,3,2-benzoxazaboroles" (Invited Talk: INOR 318) ACS National Meeting, Boston, MA, August 21, 2018.

33. Williams, D.; Gross, D. "Report from the Front in the War on Cramming." Oral presentation, 15th Annual SHSU Teaching and Learning Conference, Huntsville, TX, August 16, 2018

32. Garcia, N. A.;* Gross, D. E. "The Synthesis and characterization of Bisdiazaboroles and an Expanded Ethylhexyl-ester Based Diazaborole-linked macrocycle" Oral presentation, 11th Annual Undergraduate Research Symposium, SHSU April 28, 2018.

31. Rathnayaka, R. M. C.; Gross, D. E. *"Synthesis and Spectroscopic Studies of Benzoxazaboroles"* Poster presentation, ACS Southwest Regional Meeting (SWRM), Lubbock, TX, October 31, 2017.

30. Nguyen, T. N.; Gross, D. E. *"Synthesis of Diazaboroles from Functionalized Monomers"* Poster presentation, ACS Southwest Regional Meeting (SWRM), Lubbock, TX, October 31, 2017.

29. Garcia, N. A.;* Gross, D. E. *"Synthesis and Characterization of Ethylhexyl Ester Based Diazaborole-Linked Macrocycles"* Poster presentation, ACS Southwest Regional Meeting (SWRM), Lubbock, TX, October 29, 2017. (*Outstanding Undergraduate Poster Award)

28. Steward, M. L.;* Gross, D. E. "Synthesis, characterization, and stability studies of *N*-alkyl benzodiazaboroles" Oral Presentation, 10th Annual Undergraduate Research Symposium, SHSU, Huntsville, TX, April 29, 2017.

27. Abeysinghe, J. P.; Gross, D. E. "Benzodiazaboroles: synthesis, reversible formation, and structural properties" Oral presentation, 120th Annual Meeting of the Texas Academy of Science at The University of Mary-Hardin Baylor (UMHB), Belton, TX, March 3-5, 2017.

26. Ekanayake, D. I.; Gross, D. E. "Boron trifluoride facilitated boronate ester exchange" Oral presentation, 120th Annual Meeting of the Texas Academy of Science at The University of Mary-Hardin Baylor (UMHB), Belton, TX, March 3-5, 2017.

25. Nguyen, T. N.; Gross, D. E. "Synthesis of diazaborole-based macrocycles with ethylhexyl ester functional groups" Poster presentation, 120th Annual Meeting of the Texas Academy of Science at The University of Mary-Hardin Baylor (UMHB), Belton, TX, March 3-5, 2017.

24. Rathnayaka, R. M. C.; Gross, D. E. "Synthesis and stability analysis of N-alkylbenzoxazaboroles" Poster presentation, 120th Annual Meeting of the Texas

Academy of Science at The University of Mary-Hardin Baylor (UMHB), Belton, TX, March 3-5, 2017.

23. Abeysinghe, J. P.; Gross, D. E. "Synthesis and characterization of substituted diazaboroles" Poster presentation, ACS Southwest Regional Meeting (SWRM), Galveston, TX, November 10-13, 2016.
22. Ekanayake, D. I.; Gross, D. E. "Effect of Lewis acids on the transesterification of boronate esters" Poster presentation, ACS Southwest Regional Meeting (SWRM), Galveston, TX, November 10-13, 2016.
21. Gross, D. E. "Synthesis of nitrogen containing benzoboroles and studies of their dynamic covalent interchange" Oral presentation, ACS Southwest Regional Meeting (SWRM), Galveston, TX, November 10-13, 2016.
20. Steward, M. L.;* Gross, D. E. "Synthesis of *N*-substituted diazaboroles" Poster presentation, ACS Southwest Regional Meeting (SWRM), Galveston, TX, November 10-13, 2016.
19. Lokugama, S. D; Manankandayalage, C. P.; Gross, D. E. "Dynamic synthesis of diazaborole based oligomers and macrocycles" Poster INOR 983, 251st ACS National Meeting, San Diego, California, March 13-17, 2016.
18. George, S.; Gross, D. E. "Synthesis and characterization of *N*-alkylbenzoxazaboroles" Poster presentation, ACS Joint Southeastern/Southwest Regional Meeting, Memphis, TN, November 4-6, 2015.
17. Manankandayalage, C. P.; Gross, D. E. "The dynamic nature of benzodiazaborole formation and the synthesis of benzodiazaborole based oligomers" Poster presentation, ACS Joint Southeastern/Southwest Regional Meeting, Memphis, TN, November 4-6, 2015.
16. Kombala, C. J.; Gross, D. E. "Investigation of Boronic Acid Derivatives for Use in Dynamic Macro Cycle Formation" Oral presentation-Group B, 18th Annual Graduate Research Exchange, Sam Houston State University, Huntsville, TX, February 18, 2015.
15. Lokugama, S. D.; Gross, D. E. "Diazaboroles as a Novel Material for Dynamic Macromolecule Synthesis" Oral presentation-Group C, 18th Annual Graduate Research Exchange, Sam Houston State University, Huntsville, TX, February 18, 2015.
14. Kombala, C. J.; Gross, D. E. "Synthesis of boronic acid derivatives for use in dynamic macrocycle formation" Poster presentation 129, ACS 70th Southwest Regional Meeting, Ft. Worth, TX, November 19-22, 2014.
13. Lokugama, S. D.; Gross, D. E. "Investigation of diazaboroles for new molecular architectures" Poster presentation 128, ACS 70th Southwest Regional Meeting, Ft. Worth, TX, November 19-22, 2014.
12. Gross, D. E.; "Arylene-Ethynylene Macrocycles: Building Blocks for Organic Materials" Interview Seminar, Texas State University, December 12, 2011.
11. Gross, D. E.; "Arylene-Ethynylene Macrocycles: Building Blocks for Organic Materials" Interview Seminar, Sam Houston State University, December 06, 2011.

10. Gross, D. E.; Discekici, E.; Moore, J. S. “Synthesis of hybrid arylene ethynylene macrocycles via alkyne metathesis depolymerization” Oral presentation, The 46th Midwest / 39th Great Lakes Joint Regional Meeting of the ACS, Saint Louis, MO, October 19-22, 2011.
9. Gross, D. E.; Discekici, E.;* Moore, J. S. “Converting Arylene Ethynylene Polymers to Macrocycles” Oral presentation, 242nd ACS National Meeting, Denver, CO, August 28-September 1, 2011.
8. Gross, D. E.; Discekici, E.;* Moore, J. S. “Arylene Ethynylene Macrocycles via Alkyne Metathesis Depolymerization” Poster presented at the 14th International Symposium on Novel Aromatic Compounds (ISNA-14), Eugene, OR, July 24-29, 2011.
7. Gross, D. E.; Finke, A. D.; Zang, L.; Moore, J. S. “Sensory Materials Based on Carbazole-Ethynylene Macrocycles” Oral presentation, Trace Explosives Detection Workshop, Portland, OR, April 11-15, 2011.
6. Gross, D. E. “Carbazole-Based Arylene Ethynylene Macrocycles: Synthesis via Alkyne Metathesis, Organic Nanofibril Formation and Explosives Sensing” Oral presentation, NanoHour Seminar Series, Beckman Institute University of Illinois, Urbana, IL, March 9, 2011.
5. Gross, D. E.; Sessler, J. L. “Calixpyrrole-Anion Complexes as Cation Selective Receptors.” Poster presented at the III International Symposium on Macrocyclic and Supramolecular Chemistry, Las Vegas, NV, July 2008.
4. Gross, D. E.; Sessler, J. L. “Calixpyrrole-Chloride Complex as a Cation Selective Receptor.” Poster presented at the Chemistry and Biochemistry Spring Symposium, University of Texas at Austin, TX, April 2008.
3. Sessler, J. L.; Gross, D. E.; Mikkilineni, V. K.* “Carbazole-Based Expanded Porphyrins” Poster presented at the Chemistry and Biochemistry Spring Symposium, University of Texas at Austin, Austin, TX, April 2008. (*Undergraduate Prize Awarded)
2. Gross, D. E.; Sessler, J. L. “A New Schiff Base Expanded Porphyrin Derived from Carbazole.” Poster presented at the II International Symposium on Macrocyclic and Supramolecular Chemistry, Salice Terme, Italy, July 2007.
1. Gross, D. E.; Sessler, J. L. “Characterization of β-fluorinated and Strapped Calix[4]pyrroles by Isothermal Titration Calorimetry.” Poster presented at the XIII International Symposium on Supramolecular Chemistry, Notre Dame, IN, June 2004.

Funded External Grants

American Chemical Society – Petroleum Research Fund, Undergraduate New Investigator Award (2016-2018, $55,000) “Benzodiazaboroles as Potential Dynamic Covalent Functional Groups for New Molecular Architectures”

Internal Grants and Fellowships

SHSU Engaged Learning Fellowship, SHSU 2023-2025

SHSU EURECA, EURECA FAST Award Summer 2021: Computational investigations of dynamic covalent heteroborole exchange reactions, PI: Dustin Gross, Student: Kalyn Chan, $6,000.

Agency: SHSU STEM Center, 2021 Teaching Enhancement Grant: Flipping the organic chemistry prelab meeting, PI: Dustin Gross, $2,000.

Other Awards and Nominations

SHSU College of Science in Engineering Technology Excellence in Teaching, 2022. (Nomination)
Dorothy B. Banks Research Fellowship Award, Department of Chemistry and Biochemistry, University of Texas at Austin, 2007-2008 ($10,000)
Professional Development Award, Department of Chemistry and Biochemistry, University of Texas at Austin, 2006 ($500)
Graduate Fellowship, Hamilton/Schoch, 2003 ($1000)

Reviewing Activities

Journal Articles

Journal of the American Chemical Society, Chemistry – An Asian Journal, Chemical Communications, Chemical Science, The Journal of Organic Chemistry, Crystal Growth and Design, ACS Applied Energy Materials, Journal of Inclusion Phenomena and Macrocyclic Chemistry

Grant Proposals and Fellowship Applications

ACS-PRF Undergraduate programs
NSF Graduate Research Fellowship Program

Textbooks

Techniques and Experiments in Organic Chemistry: Biological Perspectives and Sustainability (1st Ed., Friestad), 2023.
Essentials of Organic Chemistry (1st Ed., Parise), 2018
Organic Chemistry – Principles and Mechanisms (2nd Ed., Joel Karty), 2016

Committee Service

Chemistry Safety Committee	2022-present
Commencement Leadership Committee	2021-present
Commencement Committee	2016-present
Medical and Dental School Evaluation Committee	2016-present
COSET Academic Review Panel	2015-2020

Professional Affiliations

American Chemical Society
American Association for the Advancement of Science
International Society of Heterocyclic Chemistry

Certifications and Workshops

Active Learning in STEM Classes Big and Small	June 2018
Active Learning for Busy Skeptics (and True Believers)	May 2019
SHSU Engaging Classrooms' Virtual Engagement Workshop	May 2020
ACUE – Certificate in Effective College Instruction	2020
SHSU Online – Faculty Certification for Online Teaching	2021
Engaging Exploration Workshop (SHSU QEP)	May 2022

Courses Taught

Course Number and Title	Semester(s)
CHEM 1106 - Inorganic and Environmental Chemistry Lab	Su12, Su13, Su15
CHEM 1107 - Organic and Biochemistry Lab	Su15
CHEM 1111(1411 lab) - General Chemistry I Lab	Su12, Su13, Su15, Su17
CHEM 1112(1412 lab) - General Chemistry II Lab	Su15
CHEM 2123 - Organic Chemistry I Lab	Su12, Su13, Fa14, Sp15, Su15, Fa16, Sp17, Su17, Su18, Fa18, Sp19, Fa20, Fa20(7week), Sp21, Su21, Fa21, Sp22, Su22
CHEM 2125 - Organic Chemistry II Lab	Fa13, Sp14, Su15, Su16, Fa17, Sp18, Su19, Fa20(7week), Su21, Su22
CHEM 2323 - Organic Chemistry I Lecture	Su12, Sp13(2), Su13, Fa15(2), Su16, Fa16(2), Sp19(3), Fa19, Fa20, Sp21, Sp22, Fa22(2), Sp23
CHEM 2325 - Organic Chemistry II Lecture	Fa12(2), Fa13, Sp14(2), Su14, Fa14(2), Sp15(2), Su15(2), Sp16(2), Sp17(2), Fa17(2), Sp18(2)
CHEM 4100 - Chemical Literature Seminar	Fa19, Sp20, Fa20, Sp21, Fa21, Sp22, Fa22, Sp23
CHEM 5100 - Chemical and Literature Seminar	Fa19, Sp20, Fa20, Sp21, Fa21, Sp22, Fa22, Sp23
CHEM 5385 - Advance Topics: Polymer Chemistry	Fa13, Sp16
CHEM 5361 - Physical Organic Chemistry	Fa18, Fa21