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Assistant Professor  
Department of Chemistry  
Sam Houston State University  
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### 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
2018-present	
Associate Professor, Department of Chemistry	
2012-2018	
Assistant Professor, Department of Chemistry	
UNIVERSITY OF ILLINOIS	Urbana, IL
2009-2012	
Postdoctoral Researcher, Department of Chemistry	
UNIVERSITY OF TEXAS	Austin, TX
2003-2009	
Graduate Research Assistant, Department of Chemistry and Biochemistry	
Teaching Assistant, Department of Chemistry and Biochemistry	
UNIVERSITY OF ARIZONA	Tucson, AZ
1999-2003	
Undergraduate Research Assistant, Department of Chemistry	
Teaching Assistant, Department of Chemistry	

### Advised Masters Theses

- 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.
- Rathnayaka Mudiyanselage, Chathurika R. Synthesis and Spectroscopic Studies of Benzoxazaboroles, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2018.

- Ekanayake, Dulamini I. Effect of Boron Trifluoride on the Transesterification of Boronate Esters, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2017.
- Abeyasinghe, Janaka P. Diazaboroles: Experimental Investigations of their Dynamic Covalent Nature and Computational Chemistry, M.S. Thesis, Sam Houston State University, Huntsville, TX, 2017.
- Manankandayalage, Chamila P. Synthesis of Diazaborole Based Macrocycles with Pendent Triethylene Glycol (Tg) Groups M.S. Thesis, Sam Houston State University, Huntsville, TX, 2016.
- George, Sobiya. Synthesis and Characterization of Benzoxazaboroles M.S. Thesis, Sam Houston State University, Huntsville, TX, 2016.
- Kombala, Chathuri J. Investigation of Boronate Ester Equilibria Towards Macrocycle Synthesis. M.S. Thesis, Sam Houston State University, Huntsville, TX, 2015.
- 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**

- 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, Anticipated Spring 2018.
- Steward, Micaela L. Synthesis and Characterization of *N*-Substituted Diazaboroles (Honor's Thesis), Sam Houston State University, Huntsville, TX, 2017.

#### **Peer Reviewed Publications**

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-Ethyneylene 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  $\beta$ -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.; Schmidchen, 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 Tetraphiafulvalene-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**

31. Rathnayaka Mudiyansel, C. R.; 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, 10<sup>th</sup> Annual Undergraduate Research Symposium, SHSU, Huntsville, TX, April 29, 2017.
27. Abeyasinghe, 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 Mudiyansel, C. R.; 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. Abeyasinghe, 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 70<sup>th</sup> Southwest Regional Meeting, Ft. Worth, TX, November 19-22, 2014.
12. Gross, D. E.; "Arylene-Ethyneylene Macrocycles: Building Blocks for Organic Materials" Interview Seminar, Texas State University, December 12, 2011.
11. Gross, D. E.; "Arylene-Ethyneylene 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 ethyneylene 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 Ethyneethylene Polymers to Macrocycles" Oral presentation, 242<sup>nd</sup> ACS National Meeting, Denver, CO, August 28-September 1, 2011.
8. Gross, D. E.; Discekici, E.\* Moore, J. S. "Arylene Ethyneethylene Macrocycles via Alkyne Metathesis Depolymerization" Poster presented at the 14<sup>th</sup> 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-Ethyneylene Macrocycles" Oral presentation, Trace Explosives Detection Workshop, Portland, OR, April 11-15, 2011.
6. Gross, D. E. "Carbazole-Based Arylene Ethyneethylene 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  $\beta$ -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 Proposals

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"  
Submitted March 2015

### Pending Proposals

NSF-DUE, Improving Undergraduate STEM Education (Co-PI)  
"Reformed Organic Chemistry Laboratories (ROC-Labs) at SHSU and CSUB: a performance expectation design supported by cooperative learning and project-based experimentation"  
Submitted December 2017, \$450,476 total (\$48,193 for D.E.Gross)

### Other Awards and Nominations

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,

#### *Grant Proposals and Fellowship Applications*

ACS-PRF Undergraduate programs and NSF Graduate Research Fellowship Program

#### *Textbooks*

Organic Chemistry – Principles and Mechanisms (2<sup>nd</sup> Ed., Joel Karty), 2016

### Committee Service

COSET Academic Review Panel	2015-present
Chair	(1/2017-present)
Medical and Dental School Evaluation Committee	2016-present
Convocations Committee	2016-present

### Professional Affiliations

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