TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Whitney A. Webre Title: Associate Professor of Instruction

B. Educational Background

Degree	*Year*	*University*	*Major*
Ph.D.	2019	University of North Texas	Analytical Chemistry

Thesis/Dissertation
Spectral, Electrochemical, Electron Transfer, and Photoelectrochemical Studies of Tetrapyrrole Derived Supramolecular Systems

B.S.	2013	Spring Hill College	Biochemistry

C. University Experience:

St. Edward's University:
CHEM 1140 (General Chemistry 1 Lab): Fall 2021 – Present
CHEM 1340 (General Chemistry 1 Lecture): Fall 2021
CHEM 2120 (General Chemistry 2 Lab): Spring 2022 – Present
CHEM 2134 (Inorganic Chemistry Lab): Spring 2022

Texas State University:
CHEM 3410 (Quantitative Analysis Lab and Lecture): Fall 2019 – Present
CHEM 1142 (General Chemistry 2 Lab Coordinator): Fall 2019 – Fall 2023
CHEM 1135 (Engineering Chemistry Lab Coordinator): Fall 2020 – Present
CHEM 1342 (General Chemistry 2 Lecture): Spring 2020 – Present
REU Co-Coordinator/Coordinator: Summer 2021 – Present
Chemistry and Biochemistry Undergraduate Advising: Spring 2023 – Present
CHEM 1341 (General Chemistry 1 Lecture): Fall 2023
CHEM 1320 (Foundations of Chemistry Lecture): Summer 2025

University of North Texas:
Laboratories: General Chemistry 1 and 2, Organic 1, Quantitative Analysis, and Chemistry for Non-Majors
Lectures: General Chemistry 1
Recitations: General Chemistry 1

D. Relevant Professional Experience

Associate Professor of Instructional Fall 2024 – Present
Texas State University San Marcos, TX

Undergraduate Laboratory Coordinator Fall 2019 – Present
Texas State University San Marcos, TX
- CHEM 1142 (2019-2023), CHEM 1135 (2020-Present), and CHEM 3410 (2019–Present)

REU Co-Coordinator/Coordinator Summers 2021 – Present
Texas State University San Marcos, TX

Undergraduate Advisor, Chemistry & Biochemistry Department Spring 2023 – Present
Texas State University San Marcos, TX

Adjunct Professor – Chemistry Fall 2021 – Present
St. Edward's University Austin, TX

Lecturer Fall 2019 – Summer 2024
Texas State University San Marcos, TX

Graduate Research Assistant Aug. 2014 – July 2019
University of North Texas Denton, TX
- Characterization of organic donor-acceptor systems using various instrumentation and analytical methods
- Fabricates Dye Sensitized Solar Cells (DSSC) with organic dyes for overall efficiency analysis

NSF EAPSI Fellowship June – Sept. 2016
National Institute for Materials Science Tsukuba, Japan
- Worked under collaborators: Dr. Jonathan Hill and Dr. Karshuhiko Ariga
- Analyzed porphyrin dimers using UV-Vis and Circular Dichroism (CD) Spectrophotometry

Laboratory Analyst Feb. - Aug. 2014
Dow Chemical, STO Operations Hahnville, LA
- Products Analyzed: Surfactants and Polyethylene Glycols
- Analyzed products created by the FDA Ethoxylates Park Plant to ensure they were safe for consumption and use
- Special product analysis for flush validation, stability studies, in-process, and post-production samples

REU Research Assistant May – Aug. 2011
Tulane University New Orleans, LA
- Worked under Dr. Vijay John for the Environmental Engineering and Chemistry Departments
- Analyzed remediation methods of chlorinated hydrocarbons in ground water using aerosol and high pressure techniques to create zero-valent iron infused nanocarbons

II. SCHOLARLY/CREATIVE

Lab Manuals:

1) Webre, Whitney. Engineering Chemistry Lab Manual, 2024 (1st Edition) ISBN 978-1-5339-6984-2
2) Webre, Whitney. Engineering Chemistry Lab Manual, 2025 (2nd Edition) ISBN: 978-1-5339-7634-5

Research Publications:

3) Gary N Lim, **Whitney A. Webre,** and Francis D'Souza. "Charge separation in supramolecular ferrocene(s)-zinc-porphyrin-fullerene triads: A femtosecond transient absorption study." *J. Porphyr. Phthalocyanines,* 2015, **19**, 270.
4) Patrick J. Commins, Jonathan P. Hill, Yoshitaka Matsushita, **Whitney A. Webre**, Francis D'Souza, Jan Labuta, and Katsuhiko Ariga. "Selective Octabromination of Tetraphenylporphyrins based on *Meso*-Substituent Identity: Structural and Electrochemical Studies". *J. Porphyr. Phthalocyanines,* 2016*,* **20**, 213.
5) Thien H. Ngo, David Zieba, **Whitney A. Webre**, Gary N. Lim, Paul A. Karr, Scheghajegh Kord, Shangbin Jin, Katsuhiko Ariga, Marzia Galli, Steve Goldup, Jonathan P. Hill, and Francis D'Souza. "Engaging Copper(III) Corrole as an Electron Acceptor: Photoinduced Charge Separation in Zinc Porphyrin-Copper Corrole Donor-Acceptor Conjugates". *Chem. Eur. J.* 2016, **22**, 1301.
6) **Whitney A. Webre**, Jonathan P. Hill, Yoshitaka Matsushita, Paul A. Karr, Katsuhiko Ariga, and Francus D'Souza. "Anion Binding, Electrochemistry and Solvatochromism of β-Brominated Oxoporphyrinogens." *Dalton Trans.,* 2016, **45**, 4006.
7) Shivaraj Yellappa, **Whitney A. Webre**, Habtom B. Gobeze, Anna Middleton, Chandra B. KC, and Francis D'Souza. "Phenothiazine sensitized solar cells: Effect of number of cyanocinnamic acid anchoring groups on DSSC performance." *ChemPlusChem.*, 2017, **82**, 896-903.
8) T. H. Ngo, J. Labuta, G. N. Lim, **W.A. Webre**, F. D'Souza, P. A Karr, J. E. M. Lewis, J.P Hill, K. Ariga, and S. M. Goldup. "Porphyrinoid rotaxanes: building a mechanical picket fence." *Chem. Sci.,* 2017, **8**, 6679
9) **Whitney A. Webre,** Habtom B. Gobeze, Shuai Shao, Paul A. Karr, Katsuhiko Ariga, Jonathan P. Hill, and Francis D'Souza. "Fluoride-ion-binding promoted photoinduced charge separation in a self-assembled C_{60} alkyl cation bound bis-crown ether-oxoporphyrinogen supramolecule." *Chem. Commun.*, 2018, **54**, 1351.
10) Pavel Svec, **Whitney A. Webre**, Gary J. Richards, David Miklik, Jan Labuta, Paul A. Karr, Katshujiko Ariga, Francis D'Souza, and Jonathan P. Hill. "Phenanthroline-Fused Pyrazinacenes: One-Pot Synthesis, Tautomerization and a Ru(II)(2,2'-bpy)2 Derivative". *Eur. J. Inorg. Chem.* 2018, **22**, 2541.
11) Siddhartha Kumar, **Whitney A. Webre**, Jacob Schaffner, Sheikh M. S. Islam, Francis D'Souza and Hong Wang. "A2 and A2B2 Benzoporphyrins as Sensitizers for Dye-Sensitized Solar Cells." *J. Porphyr. Phthalocyanines,* 2019, **23**, 599.
12) Daniel T. Payne, **Whitney A. Webre**, Yoshitaka Matsushita, Nianyong, Zhu, Zdenek Futera, Jan Labuta, Wipakorn Jevasuwan, Naoki Fukata, John S. Fossey, Francis D'Souza, Katsuhiko Ariga, Wolfgang Schmitt, and Jonathan P. Hill. "Multimodal Switching of a Redox Active Macrocycle." *Nature Communications*, 2019, **10**, 1007.
13) Yi Hu, **Whitney A. Webre**, Michael B. Thomas, Austen Moss, Sarah N. Hancock, Jacob Schaffner, Francis D'Souza and Hong Wang. "β-Functionalized push–pull opp-dibenzoporphyrins as sensitizers for dye-sensitized solar cells: the role of the phenylethynyl bridge." *Journal of Materials Chemistry A*, 2019, **7**, 10712.
14) Mandeep K. Chahal, Jan Labuta, Vaclav Brezina, Paul A. Karr, Yoshitaka Matsushita, **Whitney A. Webre**, Daniel T. Payne, Katsuhiko Ariga, Francis D'Souza, and Jonathan P. Hill. "Knock-on

synthesis of tritopic calix[4]pyrrole host for enhanced anion interactions." *Dalton Trans.*, 2019, **48,** 15583.

15) Mandeep K. Chahal, Nadiia Velychkivska, **Whitney A. Webre**, Jan Labuta, Shinsuke Ishihara, Katsuhiko Ariga, Francis D'Souza, and Jonathan Hill. "Increasing the complexity of oxoporphyrinogen colorimetric sensing chromophores: N-alkylation and β-substitution." *J. Porphyr. Phthalocyanines*, 2019, **23**, 1184.
16) Gary J. Richards, Ael Cador, Shinji Yamada, Anna Middleton, **Whitney A. Webre**, Jan Labuta, Paul Karr, Katsuhiko Ariga, Francis D'Souza, Samia Kahlal, Jean-Francois Halet and Jonathan P. Hill. "Amphiprotism-Coupled Near-Infrared Emission in Extended Pyrazinacenes Containing Seven Linearly Fused Pyrazine Units." *J. Am. Chem. Soc.*, 2019, **141**, 50, 19570.
17) Daniel T. Payne, Mandeep K. Chahal, Vaclav Brezina, **Whitney A. Webre**, Katsuhiko Ariga, Francis D'Souza, Jan Labuta and Jonathan P. Hill. "Diporphyrin tweezer for multichannel spectroscopic analysis of enantiomeric excess." *Front. Chem. Sci. Eng.*, 2020, **14** 28 – 40.
18) Sriparna Chatterjee, **Whitney A. Webre**, Shyamapada Patra, Bibhudutta Rout, Gary Glass, and Francis D'Souza. "Achievement of superior efficiency of TiO_2 nanorod-nanoparticle composite photoande in dye sensitized solar cells." *J. Alloys Compd.*, 2020, **828**, 154188.
19) Daniel T. Payne, **Whitney A. Webre**, Habtom B. Gobeze, Sairaman Seetharaman, Yoshitaka Matsushita, Paul A. Karr, Mandeep K. Chahal, Jan Labuta, Wipakorn Jevasuwan, Naoki Fukata, John S. Fossey, Katsuhiko Ariga, Francis D'Souza, and Jonathan P. Hill. "Nanomolecular singlet oxygen photosensitizers based on hemiquinonoid-resorcinarenes, the fuchsonarenes." *Chem. Sci.*, 2020, **11**, 2614 – 2620.
20) Mandeep K. Chahal, Habtom B. Gobeze, **Whitney A. Webre**, Paul A. Karr, Daniel T. Payne, Katsuhiko Ariga, Francis D'Souza, and Jonathan P. Hill. "Electron and energy transfer in a porphyrin-oxoporphyrinogen-fullerene triad, ZnP-OxP-C_{60}." *Phys. Chem. Chem. Phys.*, 2020, **22**, 14356-14363.
21) Yi Hu, Michael B. Thomas, **Whitney A Webre**, Austen Moss, R. G. Warunda Jinadasa, Vladimir N. Nesterov, Francis D'Souza, and Hong Wang. "Nickel (II) Bisporphyrin-Fused Pentacenes Exhibiting Abnormal High Stability." *Angew. Chem. Int. Ed.*, 2020, **59**, 20075.
22) Siddhartha Kumar, **Whitney A. Webre**, Courtney Stewart, Francis D'Souza, and Hong Wang. "A Synthetic Approach to β-Functionalized Naptho[2,3]porphyrins." *Org. Lett.*, 2020, **22**, 18, 7078-7082.
23) Mandeep K. Chahal, Nadiia Velychkivska, **Whitney A. Webre**, Jan Labuta, Shinsuke Ishihara, Katsuhiko Ariga, Francis D'Souza, and Jonathan P. Hill. "Increasing the complexity of oxoporphyrinogen colorimetric sensing chromophores: N-alkylation and β-substitution." *Porphyrin Science by Women*, 2021, 1031 – 1041.
24) Siddhartha Kumar, **Whitney A. Webre**, Jacob Schaffner, Sheikh M. Islam, Francis D'Souza, and Hong Wang. "A2 and A2B2 Benzoporphyrins as sensitizers for dye-sensitized solar cells." *Porphyrin Science by Women*, 2021, 1077 – 1088.

Awards:

- **Excellence in Teaching,** College of Science and Engineering, TXST Oct. 2024
- **Excellence in Teaching,** Department of Chemistry/Biochemistry, TXST March 2024
- **Teaching Award of Honor**, Texas State University Sept. 2020
- **3rd Place Talk**, ACS DFW Meeting in Miniature April 2019
- **Women Chemists Committee/Eli Lilly Travel Award**, American Chemical Society Dec. 2018
- **Chemistry Centennial Celebration Student Endowment**, University of North Texas May 2018
- **First Place Seminar** at Graduate Student Seminar Day, University of North Texas April 2017
- **NSF EAPSI Grant**, National Science Foundation June 2016
- **CAS Graduate Student Support Grant**, University of North Texas May 2016

IV. SERVICE

Texas International Wine Competition 2022 – Present
Volunteer

Partners in Science Outreach Program Volunteer Aug. 2011-May 2013
Spring Hill College Mobile, AL

- Conducted Chemistry and Physics experiment monthly with 8th grade students at inner city public schools
- Evaluated the needs and strengths of individual students to improve teaching approaches between monthly visits

Volunteer Program Tutor Aug. 2009 – May 2013
Spring Hill College Foley Center Mobile, AL

- Tutored under-privileged youth in various school subjects
- James T. Strickland Youth Center, Carmel Health Institute, Taylor Park After School Care Facility