

Dr. Matibur Zamadar  
Associate Professor  
Department of Chemistry &  
Biochemistry, Stephen F. Austin  
State University

Email: [zamadarmr@sfasu.edu](mailto:zamadarmr@sfasu.edu),  
Phone: (936)-468-2243 (office)  
Office : Chemistry 104 A  
Fax : (936)-468-7634

*Office:*  
P.O. Box 13006, SFA Station,  
Nacogdoches, TX 75962-3006

---

## EDUCATION

Ph.D., 2005-2011, Organic Chemistry, The City University of New York, New York, USA  
M.Phil., 2010, Organic Chemistry, The City University of New York, New York, USA  
M.Sc., 2003-2005, Inorganic Chemistry, Indian Institute of Technology, Bombay, India  
B.Sc., 2000-2003, Chemistry, University of Calcutta (Narendrapur Ramakrishna Mission Residential College), Kolkata, India

## PROFESSIONAL EXPERIENCE

Associate Professor, Department of Chemistry & Biochemistry, Stephen F. Austin State University, August 2020  
Assistant Professor, Department of Chemistry & Biochemistry, Stephen F. Austin State University, August 2014-August 2020  
Postdoctoral Research Associate, February, 2013-August, 2014, Organic Chemistry, University of Colorado, Boulder, Colorado  
Postdoctoral Research Associate, 2011- 2013, Department of Chemistry, Brookhaven National Laboratory, Upton, New York, USA

## PUBLICATIONS:

### A. ARTICLES IN SCIENTIFIC JOURNALS

1. Multi-component redox system for selective and potent antineoplastic activity towards ovarian cancer cells, D. Roy, B. Jenkins, et. al., M. Zamadar\*, *Biochem. Biophys. Res. Commun.*, **2022**, 592, 38-43.
2. Jacob R Herschmann, Aqeeb Ali, Michele Harris, Matthew McClinton, Matibur Zamadar, "Effect of Toxic Metal Ions on Photosensitized Singlet Oxygen Generation for Photodegradation of Polyaromatic Hydrocarbon Derivatives and Inactivation of *Escherichia coli*." *Photochemistry and Photobiology*, **2019**, 95, 823-832.

3. **Matibur, Zamadar**, Christopher, Orr, Miranda, Uherek; “Water Soluble Cationic Porphyrin Sensor for Detection of Hg<sup>2+</sup>, Pb<sup>2+</sup>, Cd<sup>2+</sup>, and Cu<sup>2+</sup>”, *Journal of Sensors*, **2016**, *2016*, 1-8.
4. Cecile C. Givelet, Paul I. Dron, Jin Wen, Thomas F. Magnera, **Matibur Zamadar**, Klara Cepe, Hiroki Fujiwara, Yue Shi, Michael R. Tuchband, Noel Clark, Radek Zboril, and Josef Michl “Challenges in the Structure Determination of Self-Assembled Metallacages: What Do Cage Cavities Contain, Internal Vapor Bubbles or Solvent and/or Counterions?” *Journal of American Chemical Society*, **2016**, *138*, 6676–6687.
5. Darrell R Fry and **Matibur Zamadar**; “Solid State Porphyrin Based Mercury Ion Sensors” *Research & Reviews: Journal of Chemistry*, **2015**, *4*, 46-55.
6. **Matibur Zamadar**; Sadayuki Asaoka; David C. Grills; John R. Miller “The Giant Infrared Bands of Electrons and Holes in Conjugated Molecules” *Nature Communications*, **2013**, *4*, 3818/1-3818/7 (doi:10.1038/ncomms3818).
7. **Matibur Zamadar**; Andrew R. Cook; Anna Lewandowska-Andralojc; Richard Holroyd; Yan Jiang; Jin Bikalis; John R. Miller “Electron Transfer by Excited Benzoquinone Anions: Slow Rates for Two-Electron Transitions” *J. Phys. Chem. A* **2013**, *117*, 8360-8367.
8. Justin C. Johnson; Akin Akdag; **Matibur Zamadar**; Z Xudong Chen; Andrew F. Schwerin; Irina Paci; Millicent B. Smith; Zdeněk Havlas; John R. Miller; Z Mark A. Ratner; Arthur J. Nozik; Josef Michl “Toward Designed Singlet Fission: Solution Photophysics of Two Weakly Coupled Covalent Dimers of 1,3-Diphenylisobenzofuran” *J. Phys. Chem. B* **2013**, *117*, 4680-4695.
9. Adaickapillai Mahendran; Yasemin Kopkalli; Goutam Ghosh; Ashwini Ghogare; Mihaela Minnis; Bonnie I. Kruft; **Matibur Zamadar**; David Aebisher; Lesley Davenport; Alexander Greer “A Hand-held Fiber-optic Implement for the Site-specific Delivery of Photosensitizer and Singlet Oxygen” *Photochem. Photobiol.* **2011**, *87*, 1330-1337.
10. **Matibur Zamadar**; Goutam Ghosh; Adaickapillai Mahendran; Mihaela Minnis; Bonnie Kruft; Ashwini Ghogare; David Aebisher; Alexander Greer “Photosensitizer Drug Delivery via an Optical Fiber” *J. Am. Chem. Soc.* **2011**, *133*, 7882-7891.
11. David Aebisher; **Matibur Zamadar**; Adaickapillai Mahendran; Goutam Ghosh; Cathy McEntee; Alexander Greer “Fiber-Optic Singlet-Oxygen [<sup>1</sup>O<sub>2</sub>(<sup>1</sup>Δ<sub>g</sub>)] Generator Device Serving as a Point Selective Sterilizer” *Photochem. Photobiol.* **2010**, *86*, 890-894. (Featured article in American Society for Photobiology Home & appeared in American Society for Photobiology Newsletter in Autumn 2010, Vol 39, [4:214]).
12. **Matibur Zamadar**; Alexander Greer “Singlet Oxygen as a Reagent in Organic Synthesis” Invited Chapter *In Handbook of Synthetic Photochemistry*; Albini, A., Fagnoni, M., Eds.; Wiley-VCH: Weinheim **2010**, Ch 11, pp. 353-386.

13. **Matibur Zamadar**; David Aebisher; Alexander Greer “Singlet Oxygen Delivery Though the Porous Cap of a Hollow-Core Fiber Optic Device” *J. Phys. Chem. B* **2009**, *113*, 15803–15806.

14. Jovan Giaimuccio; **Matibur Zamadar**; David Aebisher; Gerald J. Meyer; Alexander Greer “Singlet Oxygen Chemistry in Water. 2. Photophysics of Quenching of a Photosensitizer by O<sub>2</sub> at the Water/Porous Glass Interface” *J. Phys. Chem. B* **2008**, *112*, 15646-15650.

15. David Aebisher; Nikolay S. Azar; **Matibur Zamadar**; Harry D. Gafney.; Naveen Gandra; Ruomei Gao; Alexander Greer “Singlet Oxygen Chemistry in Water. A Porous Vycor Glass-Supported Photosensitizer” *J. Phys. Chem. B* **2008**, *112*, 1913-1917.

## **B. COMPLETED THESES**

1. Matibur Zamadar, Ph.D. Thesis, 2011 “Hybrid Fiber-Optic Device for Spatiotemporal Control of Photosensitizer Release and Singlet Oxygen Delivery”, The City University of New York, New York, USA

2. Matibur Zamadar, M.Sc. Thesis, 2005 “Synthesis of Organoselenium Compounds with Intramolecular Interaction”, Inorganic Chemistry, Indian Institute of Technology, Bombay, India

## **C. CONTRIBUTION TO INTELLECTUAL PROPERTY**

1. Matibur Zamadar, **United States Patent** (US 11,324,826, B2) received on May 10, 2022, titled: Multifunctional Treatment and Diagnostic Compositions and Methods

2. Matibur Zamadar, **South Africa Patent** (ZA 2020/05436) received on Feb 22, 2023, titled: Multifunctional Treatment and Diagnostic Compositions and Methods

3. Matibur Zamadar, **Indian Patent** (IN 424884) received on May 10, 2022, titled: Multifunctional Treatment and Diagnostic Compositions and Methods

4. Matibur Zamadar, **World Intellectual Property Organization** (WO 2021/086312) received on May 10, 2022, titled: Multifunctional Treatment and Diagnostic Compositions and Methods

5. Matibur Zamadar, **World Intellectual Property Organization** (WO 2019/190459 A1) received on May 10, 2022, titled: Multifunctional Treatment and Diagnostic Compositions and Methods

## **DEVELOPMENT OF COURSE CURRICULUM FOR EXISTING COURSE WITH NEW DELIVERY METHOD**

1. Developed CHE 111 (Introductory Chemistry I) online class
2. Developed CHE 111L (Introductory Chemistry I Laboratory) online class

### **HONORS/AWARDS/GRANTS/FELLOWSHIPS:**

1. Faculty Creative Activity Grants (FRG-RCA) “Title: Developing a multifunctional treatment solution of TMPyP/DHN/Fe(III) ions for the treatment of Alzheimer’s disease.” **(Funded, 2018-2019)**
2. Summer Undergraduate Research Experience (SURE) Grants “Title: Quenching of Hydroxyl Radicals by 1,5-dihydroxynaphthalene (DHN) for Stopping/Slowing Down the Aggregation of Amyloid  $\beta$  ( $A\beta$ ) Peptide in Alzheimer Disease” **(Funded, Summer II-2018)**
3. Research Grant Development Award, ORSP, Stephen F. Austin State University, Summer II, **2018** (\$5,000; **Funded**)
4. Faculty Creative Activity Grants (FRG-RCA) “Title: The Preparation of Tin Porphyrin—Ruthenium Complex for Targeting Tumor Hypoxia in Cancer Treatment” **(Funded, 2016-2017)**
5. **External Grant** submitted to Nation Science Foundation (NSF) “Title: Oxygen Gas ( $O_2$ ) and Singlet Oxygen ( $^1O_2$ ) Generation in Hypoxic Aqueous Solution by Porphyrin-Ruthenium Complex” (\$584,145.00, **Pending, submitted September 29, 2016, not funded**)
6. Research Grant Development Award, ORSP, Stephen F. Austin State University, Summer II, **2016** (\$5,000; **Funded**)
7. Distinguished Grants Award: Faculty Research—Junior Faculty, Stephen F. Austin State University, **May 4, 2016**
8. SFASU Faculty Research and Creative grants “Title: Magnesium catalyzed Unactivated alkene, isobutylene polymerization” (\$21,945; **Funded, 2014-2015**)
9. Minigrant (MG)-project support (\$1,500; **Funded, September 16, 2014 – August 31, 2015**)
10. Welch Departmental Grant, Department of Chemistry (\$1000; **Funded March 12, 2015**)

11. RDP to buy the small equipment (\$3,500; **Funded, May 28, 2015**)
12. RDP to buy a multi-meter for sensing dissolved gasses (\$14,000; **Submitted September 14, 2015, not funded**)
13. **External Grant** submitted to NIH/NCI for cancer research “Title: A synthesis of Tin(IV) Porphyrin-Cobalt(III) Prodrugs for cancer Treatment” (\$131,000.00, **Pending, submitted June 29, 2015, not funded**)
14. **External Grant** submitted to The Welch Foundation “Title: An approach of Developing a Combined System for Delivering Singlet Oxygen and Cisplatin Drugs with Minimal Side-Effects “ (\$186,034, **not funded, January 29, 2105**)
15. **Internal Grant** submitted to Faculty Research Engagement grant (FREG) at SFASU (**not funded, March 24, 2015**)
16. Research Excellency Award, Graduate Center of City University of New York (CUNY) **2010**
17. Doctoral Research Award at Brooklyn College, CUNY **2010**
18. Robert Ginell Memorial Outstanding Graduate Research Award, Brooklyn College, CUNY **2009**
19. Conference Travel Grant, Graduate Center of CUNY **2009**
20. Brooklyn College Science Day Poster Award, Brooklyn College **2008**
21. Qualified in Graduate Aptitude Test in Engineering (GATE, 96.07 percentile), India **2005**

#### **CONFERENCES/WORKSHOPS ATTENDED/ABSTRACT PRESENTED**

1. Jacob Herschmann<sup>(a)</sup>, Aqeeb Ali<sup>(a)</sup>, Matthew Murphy<sup>(a)</sup>, Michele Harris, Matibur Zamadar “Developing a treatment solution comprised of TMPyP/DHN for the treatment of Alzheimer’s disease.” American Chemical Society Meeting- East Texas Local Section-Undergraduate Poster, The University of Texas at Tyler, Tyler, **April 16, 2019.**
2. Jacob Herschmann<sup>(a)</sup>, Matibur Zamadar “Developing a multifunctional treatment solution of TMPyP/DHN for the treatment of Alzheimer’s disease.”, Texas Academy of Science, Howard Payne University, Brownwood Texas, **March 1-2, 2019.**
3. Aqeeb Ali<sup>(a)</sup>, Matibur Zamadar “Effect of Metal Ions on Photosensitized Singlet Oxygen Generation for Photodegradation of Polyaromatic Hydrocarbon Derivatives and Photoinactivation of Escherichia coli.”, Texas Academy of Science, Howard Payne University, Brownwood Texas, **March 1-2, 2019.**

4. Jacob Herschmann, Aqeeb Ali, Michele Harris, Matibur Zamadar “Quenching of Hydroxyl Radicals by 1,5-dihydroxynaphthalene (DHN) for Stopping/Slowing Down the Aggregation of Amyloid  $\beta$  ( $A\beta$ ) Peptide in Alzheimer Disease”, Summer Undergraduate Research Experience (SURE), The College of Sciences and Mathematics, SFASU, **August 10, 2018**.
5. Phillip Sharp, Michele Harris, Matibur Zamadar “Photodynamic and Chemotherapeutic Effect of 1-Nitropyrene”, Graduate Research Conference, SFASU, **April 23, 2018**.
6. Jacob Herschmann, Aqeeb Ali, Michele Harris, Matibur Zamadar “Effect of Toxic Metal Ions on Photodegradation of Polycyclic Hydrocarbon Derivatives and Photoinactivation of Escherichia coli”, American Chemical Society Meeting- East Texas Local Section-Undergraduate Poster, Longview, **April 12, 2018**.
7. Phillip Sharp, Michele Harris, Matibur Zamadar “Photodynamic and Chemotherapeutic Effect of 1-Nitropyrene”, Symposium on Arts & Research (SOAR) SFASU, **March 27, 2018**.
8. Matthew McClinton, Matibur Zamadar “Photo-Oxidative Degradation of Persistent Organic Wastewater Pollutants with the Use of Water-Soluble Cationic Porphyrins”, Undergraduate Research Conference, SFASU, **April 18, 2017**.
9. Aqeeb Ali, David Gonzalez, Robert Weise, Matibur Zamadar “A Synthesis Porphyrin-Ruthenium Polypyridyl complex for Splitting Water to Oxygen Gas” 2017 Meeting of the Texas Academy of Science, University of Mary Hardin-Baylor, Belton, TX, **March 2017**.
10. David Gonzalez, Robert Weise, Matibur Zamadar “Synthesis and characterization of porphyrin-ruthenium photocatalyst for splitting water at pH 7 without the aid of sacrificial electron donor or acceptor” Southwest Regional Meeting (SWRM), Regional ACS Meeting, Galveston, TX, **November 2016**.
11. Christopher Orr, Matibur Zamadar “Water-soluble cationic porphyrin sensor for detection of  $Hg^{2+}$ ,  $Pb^{2+}$ ,  $Cd^{2+}$ , and  $Cu^{2+}$ ” Southwest Regional Meeting (SWRM), Regional ACS Meeting, Galveston, TX, **November 2016**.
12. Christopher, Orr, Matibur Zamadar, Miranda, Uherek “Water Soluble Cationic Porphyrin Sensor for Detection of  $Hg^{2+}$ ,  $Pb^{2+}$ ,  $Cd^{2+}$ , and  $Cu^{2+}$ ”, Undergraduate Research Conference at Stephen F. Austin State University, **March 31, 2016**.
13. Matibur, Zamadar, Christopher, Orr, Miranda, Uherek “Water Soluble Cationic Porphyrin Sensor for Detection of  $Hg^{2+}$ ,  $Pb^{2+}$ ,  $Cd^{2+}$ , and  $Cu^{2+}$ ”, Bright Ideas Conference at Stephen F. Austin State University, **May 4, 2016**.

14. Grant Writing Workshop, Office of Research and Sponsor Program, Stephen. F. Austin State University, **February 16, 2016**
15. Grant Writing Workshop, Office of Research and Sponsor Program, Stephen. F. Austin State University, **February 23, 2016**
16. Managing Multiple Writing Workshop, Center for Teaching & Learning, Stephen. F. Austin State University, **October 20, 2015**
17. Boosting Student Engagement with Social Media Workshop, Center for Teaching & Learning, Stephen. F. Austin State University, **October 27, 2015**
18. A Patent Education Lecture Series, STEM program, Stephen. F. Austin State University, **November 02, 2015**
19. Faculty Research Spotlight Speaker, Dept. Chemistry and Biochemistry, Stephen. F. Austin State University, **November 23, 2015**
20. Matibur Zamadar; Goutam Ghosh; David Aebisher; Mohammad Alqaim; Alexander Greer “Fiber optic device for targeted singlet oxygen delivery for potential application in human diseases such as brain tumors” 240<sup>th</sup> American Chemical Society National Conference, Boston, **August, 2010**
21. Matibur Zamadar; David Aebisher; Alexander Greer “A hybrid photosensitizer/fiber optic device for on-site singlet oxygen generation” 238<sup>th</sup> American Chemical Society National Conference, Washington DC, **August, 2009**
22. Matibur Zamadar; David Aebisher; Alexander Greer “A hybrid photosensitizer/fiber optic device for on-site singlet oxygen generation” Gordon Research Conferences, Photochemistry, Bryant University, Smithfield, RI, **July, 2009**
23. Matibur Zamadar; David Aebisher; Steven Greenbaum; Alexander Greer “Tetraphenylporphyrin Photosensitizer Covalently-Bonded by a Urea Linkage Onto Porous Vycor Glass” 40<sup>th</sup> Middle Atlantic Regional Meeting of the American Chemical Society, Queen, NY, **May, 2008**
24. Matibur Zamadar; David Aebisher; Nikolay Azar; Naveen Gandra; Ruomei Gao; Harry D. Gafney; Alexander Greer “Singlet Oxygen Chemistry in Water. A Porous Vycor Glass Supported Photosensitizer” New York Academy of Science, NY, **January, 2008**
25. Matibur Zamadar; David Aebisher, Alexander Greer “A Hybrid Photosensitizer/Fiber Optic Device for On-Site Singlet Oxygen generation” Brooklyn College Science Day, The City University of New York, NY, **May, 2009**
26. Matibur Zamadar; Jovan Giaimuccio; David Aebisher; Gerald J. Meyer; Alexander Greer “Singlet Oxygen Chemistry in Water. 2. Photophysics of Quenching of a Photosensitizer by O<sub>2</sub> at the Water/Porous Glass Interface”

Brooklyn College Science Day, The City University of New York, NY, **May, 2008**

27. Matibur Zamadar; David Aebisher; Nikolay Azar; Naveen Gandra; Ruomei Gao; Harry D. Gafney; Alexander Greer “Singlet oxygen chemistry in water: a porous vycor glass-supported photosensitizer” Ninth Annual Celebration of Science, Engineering and Mathematics at the Graduate Center of City University of New York, NY, **April, 2008**
28. Attended Brooklyn College Grantsmanship Workshop, **June, 2010**, Brooklyn, NY

## **DETAILS OF TEACHING & MENTORING EXPERIENCE**

**Assistant Professor, Department of Chemistry and Biochemistry, Stephen F. Austin State University, Texas, USA**

### **Duties/Responsibilities**

#### A. Teaching Responsibilities:

Teach Organic Chemistry, Polymer Chemistry, General Chemistry, and Introductory Chemistry courses to students. Students include Chemistry and Biochemistry majors, Biology majors, Pre-Medical, Pre-Veterinary, Nursing and Liberal arts undergraduate students and Master students.

#### Courses Taught:

- CHE 111 (Introductory Chemistry I)
- CHE 111 (Introductory Chemistry I) online
- CHE 111L (Introductory Chemistry I)
- CHE 111L (Introductory Chemistry I) online
- CHE 112 (Introductory Chemistry II)
- CHE 112L (Introductory Chemistry II)
- CHE 133 (General Chemistry I)
- CHE 331 (Organic Chemistry I)
- CHE 331L (Organic Chemistry I Laboratory)
- CHE 332 (Organic Chemistry II)
- CHE 332L (Organic Chemistry II Laboratory)
- CHE 475/476 (advanced supervised problems)
- CHE 575 (intro to Polymer Chemistry)
- CHE 516 (Polymer Synthesis)
- CHE 581 (Supervised Instructions)
- CHE 589 (Thesis Research)

**Graduate Assistant, Department of Chemistry, Brooklyn College, at the City University of New York, Brooklyn College:**

#### **Courses Taught:**



- CHEM 51 (Organic Chemistry I Recitation)
- CHEM 51L (Organic Chemistry I, Laboratory)
- CHEM 52 (Organic Chemistry II Recitation)
- CHEM 52L (Organic Chemistry II, Laboratory)
- CC 3.22 (General Chemistry Laboratory)
- CORE 7.1 ((General Chemistry Laboratory)

**Peer-led team learning (PLTL) Workshop:** The objective of the PLTL workshop model is to engage teams of six to eight students in learning organic chemistry. Each team is supervised by a trained peer leader. PLTL is a model of teaching to help students to understand the material, to enhance the skill of solving problems, and to encourage students to participate in discussion of scientific ideas. I have served twice as a peer leader of PLTL workshop at the chemistry department of Brooklyn College, CUNY.

### **B. Others Duties:**

Academic Advising for undergraduate and graduate students. Mentoring undergraduate and graduate research in organic chemistry/biochemistry/photomedicine areas.

### **UNDERGRADUATE RESEARCH STUDENTS SUPERVISED**

#### *At Stephen F. Austin State University:*

1. Kody Hughes (Undergraduate Student: Summer 2015)
2. Daniel C. Crawford (Undergraduate Student: Summer 2015)
3. David Gonzalez (Undergraduate Student: Summer 2015-Fall 2016)
4. Christopher Orr (Undergraduate Student: Summer 2015-Spring 2017)
5. Christina Padilla (Undergraduate Student: Summer 2015)
6. Morgan Anderson (Undergraduate Student Fall2015-Spring 2016)
7. Jacob Fripp (Undergraduate Student Fall2015-Spring 2017)
8. Patrik A Perez (Undergraduate Student Summer 2016-Fall 2016)
9. Aqeeb Ali (Undergraduate Student Fall 2016-fall 2018)
10. Miranda Uherek (Undergraduate Student: Fall2015-Spring 2017)
11. Jacob R Herschmann (Undergraduate Student: Spring 2017-fall 2018)
12. Phillip B Sharp (Graduate Student: Summer 2017-present)
13. Roberto N Silva v (Undergraduate Student: Fall 2017)
14. Stacey Koepp (Undergraduate Student: Spring 2017-Summer 2017)
15. Daniel Beard (Undergraduate Student: Fall 2017)
16. Matthew McClinton (Undergraduate Student: Fall 2016)
17. Alice Huang (Undergraduate student, Spring 2018-fall 2018)
18. Aksa Muhammad (Undergraduate student, Fall 2018-spring 2019)
19. Alexander J Nelson (Undergraduate student, Fall 2018-spring 2019)
20. Matthew Murphy (Undergraduate student, Fall 2018-Fall 2022)
21. DeeAnna Berry (Undergraduate student, Spring 2019-spring 2019)

### **SUMMER RESEARCH EXPERIENCE (SRE) STUDENTS AT THE DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY, SFASU SUPERVISED**

1. Kody Hughes
2. Aqeeb Ali
3. Matthew McClinton
4. Matthew Murphy
5. Jacob R Herschmann

***At the The City Univeristy of New York, Brooklyn College:***

- Goutam Ghosh (graduate Student)
- Mohammad Alqaim (Undergraduate Student)
- Druti Shikdar (High school)

***At University of Colorado, Boulder:***

1. Nicholas Holloran (Undergraduate Student)

**MASTER'S THESIS COMMITTEES As A THESIS COMMITTEE MEMBER/THESIS DIRECTOR:**

***At Stephen F. Austin State University:***

1. Alexis W. Sanches (SFASU Dept. of Chemistry & Biochemistry, Committee Member, completed **December 10, 2015**)
2. Lauren N. Williams (SFASU Dept. of Chemistry & Biochemistry, Committee Member, completed **May 2015**)
3. Daniel G. Kushaney (SFASU Dept. of Chemistry & Biochemistry, Committee Member, completed **May 2015**)
4. Daniel G. Kushaney (SFASU Dept. of Chemistry & Biochemistry, Committee Member, completed **May 2015**)
5. Amanda Raley (SFASU Dept. of Chemistry & Biochemistry, Committee Member, completed, **April 2018**)
6. Antonio Trevino (SFASU Dept. of Chemistry & Biochemistry, Committee Member, completed, **June 2018**)
7. Giang Nguyen (SFASU Dept. of Chemistry & Biochemistry, Committee Member, in-process, **November 2017- present**)
8. Christopher Orr (SFASU Dept. of Chemistry & Biochemistry, Committee Member, in-process, **November 2017- present**)
9. Phillip B Sharp (SFASU Dept. of Chemistry & Biochemistry, **Thesis Director, December 2018**)
10. Jacob Herschmann (SFASU Dept. of Chemistry & Biochemistry, **Thesis Director, Spring 2019-present**)
11. Aqeeb Ali (SFASU Dept. of Chemistry & Biochemistry, **Thesis Director, Summer II 2019-present**)

**PROFESSIONAL SERVICE AND PUBLIC SERVICES:**

Serve on various departmental, college, and university level committee

**SFASU Department of Chemistry:**

1. Recruitment-Retention-CHE Newsletter
2. REU/ Beckman Grant Writing Committee
3. Safety Committee and Chemical Approval Committee
4. Welch Committee
5. Research Capstone Committee
6. Chemistry Lab Re-Design Committee
7. Awards Banquet/ Social Committee
8. Core Assessment CHE 111 Committee
9. Graduate Advisory Committee
10. Assisted in drafting a flyer for international student's admission.

**SFASU College of Science & Mathematics:**

1. Symposium on Arts & Research (SOAR) college liaison and/or proposal reviewer
2. Committee Member for National Conference for Undergraduate Research Grants
3. STEM faculty advisory board

**SFASU University-Wide Committees:**

1. Undergraduate Research Advisory Committee
2. Empirical and Quantitative Skills Scoring Team
3. University Grievance Panel committee
4. Parents Day
5. Showcase Saturday (participated three times since joining the department)

**Scientific Community Services:**

- |  |            |
|--|------------|
| 1. Reviewed RSC journal                | 11/20/2014 |
| 2. Reviewed RSC journal                | 12/30/2014 |
| 3. Reviewed RSC journal                | 1/20/2015  |
| 4. Reviewed RSC journal                | 2/12/2015  |
| 5. Reviewed RSC Journal                | 3/24/2015  |
| 6. Reviewed RSC Journal                | 4/28/2015  |
| 7. Reviewed RSC Advances communication | 6/12/2015  |
| 8. Reviewed RSC Advances communication | 7/6/2015   |
| 9. Reviewed RSC Advances               | 8/19/2015  |
| 10. Reviewed RSC Advances              | 10/15/2015 |
| 11. Reviewed Talanta                   | 2/10/2018  |

**PROFESSIONAL INTERESTS:**

Dr. Zamadar's research interests are in the field of organic synthesis, photochemistry, physical-organic chemistry, medicinal chemistry, and polymer chemistry. Currently, Dr. Zamadar's research group is involved in three research areas. First, his group is involved in exploring the fundamental chemistry of porphyrin and metal ions to design and develop antibacterial, chemotherapeutic and phototherapeutic drugs for the treatment of cancers and bacterial infections. The second focus of his research group is to synthesis of new porphyrin-metal coordination complexes for solar energy utilization. The third interest of his group is to design and synthesize a porphyrin based molecular optical sensor for determining toxic metal ions which are dangerous to human health and environment. In addition to sensing toxic metals by porphyrins, his group is also investigating for new methods of removing inorganic toxic metals, organic, and pathogens from contaminated water. Furthermore, his research efforts focus to involve in the development of (1) organic chemistry teaching methodology, (2) problem solving and critical thinking skills in undergraduate organic chemistry students, (3) professional skills and ethics training for chemistry majors, and (4) oral and written communication skills for chemistry majors.

#### **PROFESSIONAL SKILLS:**

- Experienced in the use of ChemDraw molecular structure drawing program
- Manipulation & safe handling of air-sensitive reagents (glove box techniques, Schlenk techniques)
- Experienced in the use of D2L course management programs
- Use & maintenance of gas/mass chromatographs
- Use & maintenance of Dynamic light scattering
- Use & maintenance of Ultraviolet-visible spectrometer
- Use & maintenance of Fluorimeter
- Use & maintenance of Rayonet Photoreactor
- Use of Raman spectroscopy, Diffuse Reflectance Infrared Fourier transform (DRIFT) spectroscopy, cyclic voltammetry
- Use of Gel permeation chromatography (GPC)