

Dr. Tulay Aygan Atesin

The University of Texas Rio Grande Valley
School of Earth, Environmental, and Marine Sciences
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Education

PhD, University of Rochester, 2007

Major: Chemistry

MS, University of Rochester, 2004

Major: Chemistry

BS, Bilkent University, 2001

Major: Chemistry

Employment

Academic - Post-Secondary

Academic - Post-Secondary, Associate Professor, School of Earth, Environmental, and Marine Sciences, The University of Texas at Rio Grande Valley, (2023)

Academic - Post-Secondary, Associate Professor, Chemistry Department, The University of Texas at Rio Grande Valley, (2019 - 2023)

Academic - Post-Secondary, Assistant Professor, Chemistry Department, The University of Texas at Rio Grande Valley, (2015 - 2019)

Academic - Post-Secondary, Assistant Professor, Chemistry Department, The University of Texas-Pan American, (2013 - 2015)

Academic - Post-Secondary, Lecturer, Chemistry Department, University of Wisconsin-Whitewater, (2011 - 2013)

Licensures and Certifications Start

ACS Reviewer Lab, American Chemical Society, (October 2018)

Publications

Journal Article, Academic Journal

Sébastien Lachaize and Dominique Gallegos and Juliana Antonio and Abdurrahman Atesin and Tulay Atesin and William Jones. Ortho-Fluoro Effect on the C–C Bond Activation of Benzonitrile Using Zerovalent Nickel.:

Organometallics. (July (3rd Quarter/Summer)) 42, : 2134–2147.

<https://doi.org/10.1021/acs.organomet.3c00275>

Robert Wehrle and Alexander Rosen and Thu Nguyen and Kalyn Koons and Eric Jump and Mason Bullard and Natalie Wehrle and Adam Stockfish and Patrick Hare and Abdurrahman Atesin and Tulay Atesin and Lili Ma. Investigation on the Synthesis, Application and Structural Features of Heteroaryl 1,2-Diketones.: *ACS Omega*. (July (3rd Quarter/Summer)) 7, : 26650–26660.

<https://doi.org/10.1021/acsomega.2c02914>

Andrew Quillen and Quynh Nguyen and Matthew Neiser and Kara Lindsay and Alexander Rosen and Stephen Ramirez and Stefana Costan and Nathan Johnson and Thuy Do and Oscar Rodriguez and Diego Rivera and Abdurrahman Atesin and Tulay Atesin and Lili Ma. Palladium-Catalyzed Direct α -C(sp³) Heteroarylation of Ketones under Microwave Irradiation.: *The Journal of Organic Chemistry*. (April (2nd Quarter/Spring)) 84, : 7652-7663.

<https://pubs.acs.org/doi/abs/10.1021/acs.joc.9b00446>

Tulay Atesin and Abdurrahman Atesin and Oscar Rodriguez and Diego Rivera and Lohany Garcia. Conformational analysis of a TADDOL-based phosphoramidite P,N ligand in a palladium(II) η^3 - π -allyl complex.: *Computational and Theoretical Chemistry*. (July (3rd Quarter/Summer)) 1139, : 70-76.

Tulay Atesin and Gabriela Martinez and David Flores. It is not just up to the Substrate: Palladium(0) Cyclizes Nazarov Substrates through Intramolecular Allylic Alkylation.: *Organometallics*. 36, : 3589-3596.

Kei Kitamura and Naoyuki Shimada and Craig Stewart and Abdurrahman Atesin and Tulay Atesin and Marcus Tius. Enantioselective Palladium(0)-Catalyzed Nazarov-type Cyclization.: *Angew. Chem. Int. Ed.*. 54, : 1-5.

David Stephens and Johant Lakey-Beitia and Abdurrahman Atesin and Tulay Atesin and Gabriel Chavez and Hadi Arman and Oleg Larionov. Palladium-Catalyzed C8-Selective C–H Arylation of Quinoline N-Oxides: Insights into the Electronic, Steric and Solvation Effects on the Site-Selectivity by Mechanistic and DFT Computational Studies.: *ACS Catalysis*. 5, : 167–175.

Sherzod Madrahimov and Tulay Atesin and Olga Karagiari and Amy Sarjeant and Omar Farha and Joseph Hupp and SonBinh Nguyen. Metal-Organic Frameworks Containing (Alkynyl)Gold Functionalities: A Comparative Evaluation of Solvent-Assisted Linker Exchange, de novo Synthesis, and Post-synthesis Modification.: *Cryst. Growth Des.* . 14, : 6320–6324.

Lisa Manus and Robert Holbrook and Tulay Atesin and Marie Heffern and Allison Harney and Amanda Eckermann and Thomas Meade. Axial Ligand Exchange of N-heterocyclic Cobalt(III) Schiff Base Complexes: Molecular Structure and NMR Solution Dynamics.: *Inorganic Chemistry*. (January (1st Quarter/Winter)) 52,

Kara Kamps and Rachael Leek and Lanette Luebke and Race Price and Megan Nelson and Stephanie Simonet and David Eggert and Tulay Atesin and Eric Bratsolias Brown. Surface modification of the TiO₂ nanoparticle surface enables fluorescence monitoring of aggregation and enhanced photoreactivity.: *Integr. Biol.* . (January (1st Quarter/Winter)) 5,

Tulay Atesin and Sabuj Kundu and Karlyn Skugrud and Ting Li and Katherine Lai and Brett Swartz and William Brennessel and William Jones. Predicting Selectivity in Oxidative Addition of C-S Bonds of Substituted Thiophenes to Pt(0) Fragment: Experimental and Theoretical Study.: *Organometallics*. 30,

Brett Swartz and Tulay Atesin and Matthew Grochowski and Stephen Oster and William Brennessel and William Jones. Unusual Lithium Coordinated Platinum and Rhodium Hydride Dimers.: *Inorg. Chim. Acta*. 363,

Andrew Myers and Lingzhen Dong and Tulay Atesin and Roger Skugrud and Christine Flaschenriem and William Jones. Bond cleavage reactions in substituted thiophenes by a rhodium complex.: *Inorg. Chim. Acta*. 361,

Tulay Atesin and Ting Li and Sebastien Lachaize and William Brennessel and Juventino Garcia and William Jones. Experimental and Theoretical Examination of C-CN Bond Activation .: *Organometallics*. 27,

Tulay Atesin and William Jones. Oxidative Addition of C-S Bond of Thiophene to Pt(dmpe): A computational Study Using DFT and MO Methods.: *Inorg. Chem.*. 27, : 53-60.

Tulay Atesin and William Jones. Oxidative Addition of C-S Bond of Thiosphene to Pt(dmpe): A Computational Study Using DFT and MO Methods.: *Organometallics*. 27,

Tulay Atesin and William Jones. Oxidative Addition of the C-S Bond of Thiophene to the (C₅Me₅)Rh(PMe₃) Fragment: A Theoretical Study Revisited.: *Organometallics*. 27,

Wei He and Ildiko Herrick and Tulay Atesin and Patrick Caruana and Colleen Kellenberger and Alison Frontier. Polarizing the Nazarov Cyclization: The Impact of Dienone Substitution Pattern on Reactivity and Selectivity.: *J. Am. Chem. Soc.*. 130,

Tulay Atesin and Abdurrahman Atesin and Karlyn Skugrud and William Jones. Understanding Selectivity in the Oxidative Addition of the Carbon-Sulfur Bonds of 2-Cyanothiophene to (Pt(0)).: *Inorg. Chem.*. 47, : 4596-4604.

Tulay Atesin and Ting Li and Sebastien Lachaize and William Brennessel and Juventino Garcia and William Jones. Experimental and Theoretical Examination of C-CN and C-H Bond Activations of Acetonitrile Using Zerovalent Nickel.: *J. Am. Chem. Soc.*. 129, : 7562- 7569.

Tulay Atesin and Stephen Oster and Karlyn Skugrud and William Jones. The Synthesis and Structural Properties of [M(dippe)(h₂-C₄H₄S)] Complexes of Pd and Pt and Comparison with their Ni Analog.: *Inorg. Chim. Acta*. 359, : 2798-2805.

Others

Tulay Atesin and Jingbo Liu and Sajid Bashir. Nanostructured Materials for Next-Generation Energy Storage and Conversion Photovoltaic and Solar Energy . (December)

Under Submission

Journal Article, Academic Journal

Yuxin Hao and Ozge Bozkurt and Samira Kurtoğlu-Öztulum and Melisa Yordanli and Adam Hoffman and Jiyun Hong and Jorge Perez-Aguilar and Aylin Saltuk and Deniz Akgül and Oktay Demircan and Tulay Atesin and Viktorya Aviyente and Bruce Gates and Simon Bare and Alper Uzun. Atomically Dispersed Zeolite-Supported Rhodium Complex: Selective and Stable Catalyst for Acetylene Semi- Hydrogenation.: *Angewandte Chemie*.

Media Contributions

Internet

The Next Platform (December 10, 2018)

Texas Advanced Computing Center (October 22, 2018)

Science Daily (July 30, 2018)

Texas Advanced Computing Center (July 30, 2018)

UTRGV The Newsroom (July 30, 2018)

Contracts, Grants and Sponsored Research

Tulay Aygan Atesin. Grant UTRGV Office of Faculty Success & Diversity Faculty Travel Support Program The University of Texas Rio Grande Valley (September 2019 - October 2019)

Javier Araiza and Tulay Aygan Atesin. Sponsored Research Engaged Scholar Award The University of Texas Rio Grande Valley , 2000\$ (May 2019 - July 2019)

Tulay Aygan Atesin. Grant Mechanistic Investigation of Palladium(0) Catalyzed Nazarov-Type Cyclization UTRGV Summer Writing Program , 500.00\$ (April 2018 - September 2018)

Tulay Aygan Atesin. Grant Palladium Complexes of Phosphoramidites ADVANCE Women of Color 2018 Summer Writing Retreat , 3000\$ (May 2018 - July 2018)

Tulay Aygan Atesin. Grant Mechanistic Investigation of Palladium(0) Catalyzed Nazarov-Type Cyclization UTRGV ADVANCE Summer Writing Retreat , 2000\$ (May 2018 - May 2018)

Tulay Aygan Atesin. Grant Palladium(0)-Catalyzed Intramolecular Allylic Alkylation of Diketoesters UTRGV Office of the Vice Provost for Faculty Affairs and Diversity Faculty Travel Support Program The University of Texas Rio Grande Valley , 800.00\$ (February 2018 - March 2018)

Tulay Aygan Atesin. Grant Rational Catalyst Design Research Enhancement Seed Grant Program, College of Sciences The University of Texas Rio Grande Valley , 11100.00\$ (May 2016 - November 2017)

Tulay Aygan Atesin. Grant Mechanistic Investigation of Palladium(0) Catalyzed Nazarov-Type Cyclization UTRGV Office of the Vice Provost for Faculty Affairs and Diversity Faculty Travel Support Program The University of Texas Rio Grande Valley , 600.00\$ (June 2017 - July 2017)

Tulay Aygan Atesin. Grant Rational Catalyst Design STEM/SBE ADVANCE Graduate Assistant Support Program The University of Texas Rio Grande Valley , 10000.08\$ (August 2016 - May 2017)

Tulay Aygan Atesin and Javier Vela and Reymundo Gonzalez. Grant Reliable Nanomanufacturing of Ge-Sn Alloys for Solar Energy Conversion Department of Energy, Visiting Faculty Program Federal , 19000.00\$ (April 2016 - August 2016)

Tulay Aygan Atesin. Grant Mechanistic Investigation of Palladium(0) Catalyzed Nazarov-Type Cyclization ADVANCE Women of Color 2016 Summer Writing Retreat (SWR) , 3000\$ (April 2016 - July 2016)

Tulay Aygan Atesin and Ernesto I Borrego and Sabrina Herrera. Grant Interaction Between Dye Molecules and TiO₂ in Dye-TiO₂ Nanoconjugates UTPA Undergraduate Research Initiative Grant The University of Texas Rio Grande Valley , 2000.00\$ (August 2014 - May 2015)

Tulay Aygan Atesin and Joseph A Felix. Grant UTPA Undergraduate Research Initiative Grant The University of Texas Rio Grande Valley , 2000.00\$ (December 2013 - August 2014)

Tulay Aygan Atesin. Grant Design and Synthesis of Metal Containing Molecular Therapeutics UTPA Office of the Provost-Junior Faculty Supplemental Travel Support , 500.00\$ (September 2013 - October 2013)

Tulay Aygan Atesin. Grant UW-Whitewater Academic Staff Development Grant , 1000.00\$ (August 2012 - August 2013)

Awards and Honors

Scholarship/Research

Young Investigator Award. American Chemical Society, Division of Inorganic Chemistry (2008)

Presentations

Jennifer Sanchez and Dominique C. Gallegos and Abdurrahman C. Atesin and William D. Jones and Tulay A. Atesin."Exploring the structure of [Ni(dippe)] fragment via molecular mechanical and quantum mechanical calculations".266th ACS National Meeting, American Chemical Society, San Francisco, CA & Hybrid. (August 13, 2023)

Jessica Meza and Jahid I. Chowdhury and Abdurrahman C. Atesin and William D. Jones and Tulay A. Atesin."Ortho effect or ortho-fluoro effect: A comparison of the C—CN bond activation of substituted benzonitriles with [Ni(dmpe)] fragment using DFT calculations".266th ACS National Meeting, American Chemical Society, San Francisco, CA & Hybrid. (August 13, 2023)

Jahid I. Chowdhury and Lubna C. Kader and Abdurrahman C. Atesin and William D. Jones and Tulay A. Atesin."Where is this transition state? Lewis acid assisted C—CN bond activation of benzonitriles with [Ni(dmpe)] fragment using DFT calculations".266th ACS National Meeting, American Chemical Society, San Francisco, CA & Hybrid. (August 13, 2023)

Tulay Atesin and William Jones and Abdurrahman Atesin and Juliana Rodriguez and Dominique Celine Gallegos."Update on the mechanistic investigation of the C—CN bond activation of fluorinated benzonitriles using a zerovalent nickel complex ".264th ACS National Meeting, American Chemical Society, Chicago, IL & Hybrid. (August 22, 2022)

Juliana Rodriguez and Abdurrahman Atesin and William Jones and Tulay Atesin."DFT Investigation of para-substitution Effects on the C-CN Bond Activation of Benzonitrile by a Zerovalent Nickel Complex".Southwest Regional Meeting , American Chemical Society, Austin, TX. (November2021)

Jennifer Sanchez and Lubna Kader and Juliana Rodriguez and Abdurrahman Atesin and William Jones and Tulay Atesin."Conformational analysis of [Ni(dippe)] fragment using molecular mechanical and quantum mechanics

calculations ".261st ACS National Meeting, American Chemical Society, (April2021)

Tulay Atesin and Abdurrahman Atesin and Sébastien Lachaize and William Jones and Elizabeth Gomez and Juliana Rodriguez and Orion Nguyen."C—CN bond activation of fluorinated benzonitriles using a zerovalent nickel complex".261st ACS National Meeting, American Chemical Society, (April2021)

Dominique Celine Gallegos and Lubna Kader and Orion Nguyen and Abdurrahman Atesin and William Jones and Tulay Atesin."DFT investigation of the C—CN bond activation of fluorinated benzonitriles with [Ni(dippe)] fragment ".261st ACS National Meeting, American Chemical Society, (April2021)

Tulay Atesin and Abdurrahman Atesin and Lili Ma."Mechanistic investigation of palladium-catalyzed heteroarylation of acetophenone with 3-Bromopyridine ".259th ACS Spring 2020 National Meeting & Expo, American Chemical Society, Philadelphia, PA. (March2020)

Abdurrahman Atesin and Tulay Atesin and Cassandra Ibarra and Valerie Morales and Juan Reyna and Javier Araiza."Conformational Analysis of (hetero)aryl-Palladium(II)-enolate Isomers using Molecular Mechanics and Density Functional Theory".259th ACS National Meeting, American Chemical Society, Philadelphia, PA. (March 22, 2020)

Tulay Atesin."Mechanistic Investigation of Palladium-Catalyzed Heteroarylation of Acetophenone with 3-Bromopyridine".2019 Southwest Theoretical & Computational Chemistry Conference, University of Oklahoma, Norman, OK. (October2019)

Abdurrahman Atesin and Tulay Atesin and Cassandra Ibarra and Valerie Morales and Juan Reyna and Javier Araiza."Conformational Analysis of (hetero)aryl-Palladium(II)-enolate Isomers using Molecular Mechanics and Density Functional Theory".2019 Southwest Theoretical and Computational Chemistry Conference, University of Oklahoma, Norman, OK. (October 25, 2019)

Tulay Atesin and Abdurrahman Atesin and oscar Rodriguez and Diego Rivera and Lili Ma."Mechanistic Investigation of Palladium-Catalyzed Heteroarylation of Acetophenone with 3-Bromopyridine".2019 TACC Symposium for Texas Researchers, Texas Advanced Computing Center , Austin, TX. (September2019)

Abdurrahman Atesin and Tulay Atesin and Cassandra Ibarra and Valerie Morales and Juan Reyna and Javier Araiza."Conformational Analysis of (hetero)aryl-Palladium(II)-enolate Isomers using Molecular Mechanics and Density Functional Theory".2019 TACC Symposium for Texas Researchers, TEXAS ADVANCED COMPUTING CENTER, Austin. (September 26, 2019)

Alexander Rosen and Matt Neiser and Quynh Nguyen and Lili Ma and Tulay Aygan Atesin."Palladium-catalyzed direct α -C(sp³) heteroarylation of ketones under microwave irradiation".257th ACS National Meeting, Orlando, FL. (April 1, 2019)

Tulay Aygan Atesin."Mechanistic Studies on Palladium(0)-Catalyzed Cyclization of Diketoesters".Southwest Theoretical & Computational Chemistry 2018, UTRGV, UTRGV. (October 19, 2018)

Tulay Aygan Atesin."Mechanistic Studies on Palladium(0)-Catalyzed Cyclization of Diketoesters".TACC Symposium for Texas Researchers, UT-Austin, Austin. (September 20, 2018)

Tulay Aygan Atesin and Diego Rivera."Palladium(0)-catalyzed Intramolecular Allylic Alkylation of All-aliphatic Diketoesters".UTRGV Engaged Scholar Symposium, (April2018)

Tulay Aygan Atesin and Oscar Rodriguez."Palladium(0)-catalyzed Intramolecular Asymmetric Allylic Alkylation of Diketoesters".UTRGV Engaged Scholar Symposium, (April2018)

Tulay Aygan Atesin."Palladium(0)-Catalyzed Intramolecular Allylic Alkylation of Diketoesters".255th ACS National Meeting, New Orleans, LA. (March2018)

Tulay Aygan Atesin."It is not just up to the Substrate: Palladium(0) Cyclizes Nazarov Substrates through Intramolecular Allylic Alkylation".Organometallic Chemistry Gordon Research Conference, Newport, RI. (July2017)

Tulay Aygan Atesin."It Is Not Just up to the Substrate: Palladium(0) Cyclizes Nazarov Substrates Through Intramolecular Allylic Alkylation".Organometallic Chemistry Gordon Research Conference, Newport, RI. (July2017)

Tulay Aygan Atesin."Mechanistic Investigation of Palladium(0) Catalyzed Nazarov-Type Cyclization".UTRGV COS Conference, Edinburg, TX. (March 31, 2017)

Beatriz Gamez and Gabriela M Martinez and Marcus A Tius and Tulay Aygan Atesin."A Comparison of Aliphatic and Aromatic Group Substitutions at the C2, C5 and C6 Positions in the Palladium (0)–Catalyzed Nazarov-Type Cyclization".252nd ACS National Meeting, Philadelphia, PA. (August2016)

Gabriela M Martinez and Beatriz Gamez and Marcus A Tius and Tulay Aygan Atesin."The Effect of Substitution at the Critical C5 Position on the Palladium (0)–Catalyzed Nazarov-Type Cyclization".252nd ACS National Meeting, Philadelphia, PA. (August2016)

Sarah Stegall and Robert Dearth and Amy Weimer and Suad Ghaddar and Tulay Atesin and Nicholas Weimer."An effective model of undergraduate research for hispanic-serving institutions".Excellent Practices in Mentoring Undergraduate Research , Elon, North Carolina. (July2016)

Sarah Stegall and Robert Keith Dearth and Amy Weimer and Suad Fayez Ghaddar and Tulay Aygan Atesin and Nicholas Weimer."Implementing an Institutional Program that Increases Research Experiences in the Undergraduate Curriculum".Excellence in Mentoring Undergraduate Research Conference, Elon University, Elon, NC. (July 24, 2016)

Tulay Aygan Atesin."Investigation of Coordination Chemistry of Transition Metals Used in Catalysis, Medicine and Energy Related Research".Iowa State University, Ames, IA. (June2016)

Sabrina Herrera and Abdurrahman Cagri Atesin and Eric Brown and Tulay Aygan Atesin."Investigation of the Interaction Between Dye Molecules and TiO₂ in Dye-TiO₂ Nanoconjugates".National Conference on Undergraduate Research, Spokane, WA. (April2015)

Sabrina Herrera and Oscar Rodriguezvargas and David Eggert and Kara Kamps and Abdurrahman Cagri Atesin and Eric Brown and Tulay Aygan Atesin."Interaction Between Dye Molecules and TiO₂ in Dye-TiO₂ Nanoconjugates".Texas Undergraduate Research Day at the Capitol, Austin, TX. (March2015)

Tulay Aygan Atesin."Investigation of Coordination Chemistry of Transition Metals Used in Catalysis, Medicine and Energy Related Research".ACS South Texas Local Section Meeting, STC, McAllen, TX. (November2014)

Lohany Y Garcia and Abdurrahman Cagri Atesin and Marcus A Tius and Tulay Aygan Atesin."A Computational Modeling to Study the Palladium Catalyzed Nazarov Cyclization".UTPA Third Annual Undergraduate Research Conference , Edinburg, TX. (November2014)

Tyler Smith and Rosa L Esparza and Ernesto I Borrego and Sebastien Lachaize and Abdurrahman Cagri Atesin and William D Jones and Tulay Aygan Atesin."Activation of Fluorinated of Benzonitriles by Nickel Diphosphine Fragment".UTPA Third Annual Undergraduate Research Conference , Edinburg, TX. (November2014)

Sabrina Herrera and Abdurrahman Cagri Atesin and Eric Brown and Tulay Aygan Atesin."Interaction Between Dye Molecules and TiO₂ in Dye-TiO₂ Nanoconjugates".UTPA Third Annual Undergraduate Research Conference , Edinburg, TX. (November2014)

Tulay Aygan Atesin and Marcus A Tius."Mechanistic investigation of Nazarov cyclization reaction catalyzed by palladium(0) complexes".247th ACS National Meeting, Dallas, TX. (March2014)

Tulay Aygan Atesin."Design and Synthesis of Metal Containing Molecular Therapeutics".2nd International Conference on Medicinal Chemistry and Computer Aided Drug Designing, Las Vegas, NV. (October2013)

Tulay Aygan Atesin."Investigation of Coordination Chemistry of Transition Metals Used in Catalysis, Medicine and Energy Related Research".University of Texas-Brownsville, Department of Chemistry, Brownsville, TX. (October2013)

Tulay Aygan Atesin."Investigation of Coordination Chemistry in Transitional Metal Complexes Used as a Catalyst, Small Molecule Therapeutics and Cancer Theranostics".University of Wisconsin System Chemistry Faculties Meeting, Whitewater, WI.2012)

Tulay Aygan Atesin."Selectivity in Strong Carbon-Element Bond Activation Reactions by Transition Metal Compounds".University of Hawaii-Manoa, Department of Chemistry, Manoa, HI. (May2012)

Tulay Aygan Atesin."Mechanistic studies on the inhibition of enzymes and zinc finger transcription factors with cobalt(III) Schiff base complexes".240th ACS National Meeting, Boston, MA. (August2010)

Tulay Aygan Atesin."Kinetic and Thermodynamic Aspects of the C-S Bond Activation Reactions of Asymmetrically Substituted Thiophenes with Rhodium and Platinum Metal Complexes".236th ACS National Meeting, Philadelphia, PA.2008)

Tulay Aygan Atesin."Experimental and Theoretical Interpretation of C-C and C-H Bond Activations of Acetonitrile Using Zerovalent Nickel".233rd ACS National Meeting, Chicago, IL.2007)

Tulay Aygan Atesin."Oxidative Addition of C-H and C-S Bonds of Substituted Thiophenes to Cp*RhPMe₃ Fragment: Experimental and Theoretical Study".233rd ACS National Meeting, Chicago, IL.2007)

Tulay Aygan Atesin."Studies on Carbon-Sulfur Bond Activation of Substituted Thiophenes with Platinum(0)".232nd ACS National Meeting, San Francisco, CA.2006)

Teaching

Teaching Experience

- CHEM 1101, General Chemistry Lab I, 7 Course(s)
- CHEM 1111, General Chemistry I Lab, 6 Course(s)
- CHEM 1112, General Chemistry II Lab, 1 Course(s)
- CHEM 1301, General Chemistry I, 4 Course(s)
- CHEM 1311, General Chemistry I, 11 Course(s)
- CHEM 3101, Inorganic Chemistry Lab, 1 Course(s)
- CHEM 3202, Inorganic Chemistry Lab, 4 Course(s)
- CHEM 3301, Inorganic Chemistry, 29 Course(s)

CHEM 4201, Chemistry Problems I, 2 Course(s)
CHEM 4305, Chemistry Capstone, 1 Course(s)
CHEM 4307, Adv Inorganic Chem, 3 Course(s)
CHEM 6315, Inorganic Chemistry I, 3 Course(s)
CHEM 6340, Sp Top in Inorganic Chem, 1 Course(s)
CHEM 7101, Seminar I, 4 Course(s)
CHEM 7102, Seminar II, 4 Course(s)
CHEM 7103, Seminar III, 5 Course(s)
CHEM 7300, Thesis I, 3 Course(s)
CHEM 7301, Thesis II, 4 Course(s)
CHEM 7302, Seminar, 4 Course(s)

Directed Student Learning

Undergraduate Capstone/Senior Project, Andre Ramos and Roberto Escobar. Department of Chemistry. (January 2023 - May 2023)

Undergraduate Capstone/Senior Project, Lucia Zamora Legoff and Azucena Trevino. Department of Chemistry. (August 2022 - December 2022)

Master's Thesis Committee Chair, Lubna Kader. Department of Chemistry. (January 2021 - December 2022)

Undergraduate Capstone/Senior Project, Andres Benavides and Stephanie Oyervides. Department of Chemistry. (January 2022 - May 2022)

Master's Thesis Committee Chair, Jennifer Lee Sanchez. Department of Chemistry. (August 2020 - May 2022)

Undergraduate Capstone/Senior Project, Juliana Antonio Santiz. Department of Chemistry. (August 2021 - December 2021)

Undergraduate Capstone/Senior Project, Julissa Rodriguez. Department of Chemistry. (August 2021 - December 2021)

Master's Thesis Committee Chair, Dominique C. Gallegos. Department of Chemistry. (January 2021 - May 2021)

Undergraduate Capstone/Senior Project, Juliana Antonio Santiz. Department of Chemistry. (January 2021 - May 2021)

Undergraduate Capstone/Senior Project, Orion Nguyen. Department of Chemistry. (January 2021 - May 2021)

Undergraduate Capstone/Senior Project, Elizabeth Gomez. Department of Chemistry. (August 2020 - December 2020)

Undergraduate Capstone/Senior Project, Orion Nguyen. Department of Chemistry. (August 2020 - December 2020)

Undergraduate Capstone/Senior Project, Nicholas Segura. Department of Chemistry. (January 2020 - August 2020)

Undergraduate Capstone/Senior Project, Valerie Morales. Department of Chemistry. (January 2020 - August 2020)

Undergraduate Capstone/Senior Project, Andrew Atisa. Department of Chemistry. (January 2020 - May 2020)

Undergraduate Capstone/Senior Project, Erik Hinojosa. Department of Chemistry. (January 2020 - May 2020)

Undergraduate Capstone/Senior Project, Jennifer Sanchez. Department of Chemistry. (January 2020 - May 2020)

Undergraduate Capstone/Senior Project, Juan Farias. Department of Chemistry. (January 2020 - May 2020)

Undergraduate Capstone/Senior Project, Andrew Atisa. Department of Chemistry. (August 2019 - December 2019)

Undergraduate Capstone/Senior Project, Daniela Martinez. Department of Chemistry. (August 2019 - December 2019)

Undergraduate Capstone/Senior Project, Juan Reyna. Department of Chemistry. (August 2019 - December 2019)

Undergraduate Capstone/Senior Project, Moises Olivos. Department of Chemistry. (August 2019 - December 2019)

Undergraduate Capstone/Senior Project, Cassandra Ibarra. Conformational Analysis of the Pd-catalyzed Cycle of the Heteroarylation of Acetophenone with 3-Bromopyridine, Department of Chemistry. (June 2019 - August 2019)

Undergraduate Capstone/Senior Project, Javier Araiza . Investigation on the Mechanism of Palladium-Catalyzed Heteroarylation of Acetophenone with 3-Bromopyridine, Department of Chemistry. (January 2019 - May 2019)

Undergraduate Supervised Research, Diego Rivera. (2017 - 2018)

Undergraduate Supervised Research, Oscar Rodriguez . (2017 - 2018)

Undergraduate Supervised Research,Reymundo Gonzalez. (2017 - 2018)

Undergraduate Capstone/Senior Project,Diego Rivera . Department of Chemistry. (January 2017 - May 2018)

Undergraduate Capstone/Senior Project,Jose Pena. Department of Chemistry. (January 2017 - May 2018)

Undergraduate Capstone/Senior Project,Oscar Rodriguez . Department of Chemistry. (January 2017 - May 2018)

Undergraduate Capstone/Senior Project,Reymundo Gonzalez . Department of Chemistry. (January 2017 - May 2018)

Undergraduate Honors Activities,Carolina Venturi . (August 2017 - December 2017)

Undergraduate Supervised Research,Raisa Ramirez. (June 2017 - August 2017)

Undergraduate Supervised Research,Saba Suleman. (June 2017 - August 2017)

Undergraduate Supervised Research,Steven Sargent. (January 2017 - August 2017)

Undergraduate Supervised Research,Reymundo Gonzalez. (September 2016 - August 2017)

Supervised Research,David Flores. (January 2015 - August 2017)

Master's Thesis Committee Chair,Ashlee Lopez. Formation of LiFePO₄-PAN Nanofibers via Forcespinning® for Battery Cathode Applications, Department of Chemistry. (May 2017)

Undergraduate Honors Activities,Saba Suleman. (January 2017 - May 2017)

Undergraduate Capstone/Senior Project,Beatriz Gamez. Department of Chemistry. (September 2016 - May 2017)

Undergraduate Capstone/Senior Project,John Schulz. Department of Chemistry. (September 2016 - May 2017)

Undergraduate Capstone/Senior Project,Sandra Gracia. Department of Chemistry. (September 2016 - May 2017)

Undergraduate Capstone/Senior Project,Valeria Alonso. Department of Chemistry. (September 2016 - May 2017)

Graduate Supervised Research,Gabriela Martinez. Department of Chemistry. (September 2016 - December 2016)

Undergraduate Supervised Research,Alvaro Venegas. (September 2016 - December 2016)

Internship Advisor,Beatriz Gamez. (June 2016 - August 2016)

Internship Advisor,Gabriela Martinez. (June 2016 - August 2016)

Internship Advisor,Reymundo Gonzalez. (June 2016 - August 2016)

Undergraduate Supervised Research,John Schulz. (January 2016 - August 2016)

Graduate Supervised Research,Ashlee Lopez. Formation of LiFePO₄-PAN Nanofibers via Forcespinning® for Battery Cathode Applications, Department of Chemistry. (January 2014 - August 2016)

Undergraduate Supervised Research,Reymundo Gonzalez. (September 2015 - June 2016)

Undergraduate Capstone/Senior Project,Andrea Contreras. Department of Chemistry. (January 2016 - May 2016)

Undergraduate Capstone/Senior Project,Beatriz Gamez. Department of Chemistry. (January 2016 - May 2016)

Undergraduate Capstone/Senior Project,Gabriela Martinez. Department of Chemistry. (January 2016 - May 2016)

Undergraduate Supervised Research,Diego Rivera. (September 2015 - May 2016)

Master's Thesis Committee Member,Padmini Kukkapalli. Facile Sol-Gel Molten alt Synthesis of A Double Perovskite La₂NiMnO₆ as a Electrocatalyst For Oxygen Evolution Reactions , Department of Chemistry. (December 2015)

Undergraduate Honors Activities,Miguel Serrato . (September 2015 - December 2015)

Undergraduate Supervised Research,Andrea Contreras. (September 2015 - December 2015)

Undergraduate Supervised Research,Beatriz Gamez. (September 2015 - December 2015)

Undergraduate Supervised Research,Gabriela Martinez. (September 2015 - December 2015)

Undergraduate Supervised Research,Sabrina Herrera. (January 2014 - December 2015)

Undergraduate Honors Activities,Andrea Contreras. (January 2015 - May 2015)

Undergraduate Capstone/Senior Project,Tyler Smith. Chemistry (UTPA). (September 2014 - May 2015)

Undergraduate Supervised Research,Rosa Esparza. (June 2014 - May 2015)

Undergraduate Supervised Research,Lohany Garcia. (September 2014 - December 2014)

Undergraduate Supervised Research,Ernesto Borrego. (June 2014 - December 2014)

Undergraduate Supervised Research,Tyler Smith. Chemistry (UTPA). (June 2014 - August 2014)

Undergraduate Supervised Research,Joseph Felix. (November 2013 - August 2014)

Service

Department Service

Committee Member, Annual Review for Tenured Faculty Committee (September 2019 - May 2023)

Committee Member, Tenure and Promotion Committee (September 2019 - May 2023)

Committee Member, Master's Thesis Committee for Mitzy Penilla (September 2019 - May 2020)

Committee Chair, Chemistry Graduate Committee (December 2018 - November 2019)

Committee Member, Materials Chemistry Faculty Search Committee (September 2018 - May 2019)

Committee Member, Space Committee (September 2013 - May 2019)

Committee Member, Student Learning Assessment (SLO) (September 2017 - May 2018)

Committee Member, General Chemistry Committee (July 2017 - May 2018)

Committee Member, Library Committee (September 2013 - May 2018)

Committee Member, Publicity Committee (September 2013 - May 2018)

Committee Member, Strategic Plan/Program Review Committee (September 2013 - May 2018)

Committee Member, Annual Merit Evaluation Committee (September 2016 - May 2017)

Committee Member, Chemistry Department Chair Search Committee (September 2016 - May 2017)

Committee Member, Graduate Program Committee (April 2014 - May 2017)

Committee Member, Ad hoc General Chemistry I Laboratory Committee (January 2014 - May 2017)

Committee Member, Curriculum Committee (January 2014 - May 2017)

Committee Co-Chair, Annual Merit Evaluation Committee (September 2015 - May 2016)

Committee Member, Biochemistry Faculty Search Committee (June 2015 - July 2015)

Committee Member, Ad interim Chemistry Department Chair Search Committee (February 2015 - May 2015)

Committee Member, Annual Merit Evaluation Committee (September 2013 - May 2015)

Committee Member, Physical Chemistry Faculty Search Committee (September 2013 - May 2014)

College Service

Other, TT in Vector-Borne Disease Search Committee (September 2021 - May 2022)

Committee Member, Assessment Committee (December 11, 2018 - November 2019)

Committee Member, Dean of the College of Sciences Search (May 2018 - December 2018)

Committee Member, UTRGV COS Community Engagement Council (April 2015 - June 2015)

University Service

Committee Member, Women's Faculty Network, Tenure/ Promotion/ Annual Review Issues Committee (September 2022 - May 2023)

Committee Chair, Women's Faculty Network, Tenure/ Promotion/ Annual Review Issues Committee (September 2021 - May 2022)

Attendee, Meeting, Office of the Vice Provost for Faculty Affairs and Diversity (April 5, 2019)

Attendee, Meeting, Office of the Vice Provost for Faculty Affairs and Diversity Mentors Support Program (March 1, 2018)

Student Org Advisor (Professional Org), UTRGV American Chemical Society Student Chapter (April 2016 - August 2017)

Student Org Advisor (Non-Professional Org), Elliot Chemical Society (January 2016 - August 2017)

Committee Chair, Women's Faculty Network, Tenure/ Promotion/ Annual Review Issues Committee (September 2016 - May 2017)

Attendee, Orientation, Vaquero Round Up (August 27, 2016)

Guest Speaker, UTRGV Research Institute Panel Discussion (August 23, 2016)

Committee Member, Women's Faculty Network, Tenure/ Promotion/ Annual Review Issues Committee (March 2014 - May 2016)

Attendee, Meeting, Title V Grant Project Team Meeting (October 23, 2015)

Attendee, Meeting, Title V Evaluation Meeting (October 15, 2015)

Attendee, Meeting, Meeting with Dr. Kristin Croyle on Undergraduate Research (September 28, 2015)

Committee Member, ADVANCE Internal Advisory Committee (September 2014 - May 2015)

Program Organizer, Integrating Research into the Undergraduate Curriculum-UTB IV (May 8, 2015)

Program Organizer, Integrating Research into the Undergraduate Curriculum-UTB III (April 24, 2015)

Attendee, Meeting, Texas Undergraduate Research Day at the Capitol (March 4, 2015)

Program Organizer, Integrating Research into the Undergraduate Curriculum-UTB I (February 27, 2015)
 Attendee, Meeting, Provost and Academic Affairs Leadership Team (ALLT) (February 20, 2015 - February 20, 2015)
 Workshop Organizer, Integrating Undergraduate Research into the Curriculum IV (January 23, 2015)
 Attendee, Meeting, Meeting with Chancellor McRaven (January 14, 2015 - January 14, 2015)
 Committee Member, 3rd Annual UTPA Undergraduate Research Conference (September 2014 - November 2014)
 Attendee, Meeting, Provost and Academic Affairs Leadership Team (ALLT) (November 18, 2014)
 Workshop Organizer, Integrating Undergraduate Research into the Curriculum III (November 14, 2014)
 Workshop Organizer, Integrating Undergraduate Research into the Curriculum II (October 31, 2014)
 Workshop Organizer, Integrating Undergraduate Research into the Curriculum I (October 17, 2014)

Development Activities Attended

- Summer Mentorship Program, "Summer Research, Scholarship and Creative Works Mentoring Program", UTRGV (June 2023 - May 2024)
- Workshop, "2023 Summer NSF VPEr Fellows Workshop", (June 2023)
- Workshop, "Transforming Undergraduate Education in STEM Through Culturally Relevant Pedagogy and Community Engagement (NSF IUSE-HSI Program)", The University of Texas Rio Grande Valley (January 2023 - May 2023)
- Workshop, " First Year Student Success Academy 4th Conexión Cohort ", The University of Texas Rio Grande Valley (May 16, 2022 - May 24, 2022)
- Workshop, "Global Teaching Practices", The University of Texas Rio Grande Valley (January 14, 2022 - May 6, 2022)
- Workshop, "Zoom Room Professional Development ", The University of Texas Rio Grande Valley (July 15, 2021 - July 16, 2021)
- Workshop, "Teaching for Student Engagement in the Hybrid Classroom ", The University of Texas Rio Grande Valley (June 28, 2021 - July 2, 2021)
- Workshop, "Digital21 ", The University of Texas Rio Grande Valley (June 2020 - August 2020)
- Workshop, "NSF-PRIMERS Learning by Design ", The University of Texas Rio Grande Valley (September 2019 - November 2019)
- Workshop, "ACS Reviewer Lab (Peer-Review Training Course)", American Chemical Society (October 9, 2018)
- Workshop, "Texas Regional STEM Degree Accelerator- STEM Faculty Institute, Cohort III", (July 2017 - May 2018)
- Workshop, "Interactive Video (ITV) Training", (May 30, 2018)
- Workshop, "Learning Effective Assessment Techniques ", UTRGV Center for Teaching Excellence (September 13, 2017)
- Workshop, "Creating a Strong Teaching Philosophy and Research Narrative", UTRGV Center for Teaching Excellence (September 6, 2017)
- Workshop, "Moving from a Content-Focused to a Learner-Centered Syllabus: The Type of Document Matters", UTRGV Center for Teaching Excellence (August 17, 2017)
- Workshop, "Using Transparent Instruction to Improve Teaching Effectiveness", UTRGV Center for Teaching Excellence (August 17, 2017)
- Workshop, "Grant Writing Workshop", UTRGV Center for Teaching Excellence (July 20, 2017)
- Workshop, "Faculty Writing Support Program", (March 2017 - June 2017)
- Workshop, "Peer Observation", UTRGV Center for Teaching Excellence (June 7, 2017)
- Workshop, "Undergraduate Research Learning Community", (February 14, 2017 - April 11, 2017)
- Workshop, "American Chemical Society Leadership Institute ", (January 27, 2017 - January 29, 2017)
- Webinar, "Pre ACS Leadership Institute Webinar", (January 17, 2017)
- Workshop, "Challenge-based Instruction (CBI)", (October 21, 2016 - December 2, 2016)
- Workshop, "Academic Internships Initiative ", (January 2016 - May 2016)
- Workshop, "ADVANCE Women of Color 2016 Summer Writing Retreat (SWR)", (May 22, 2016 - May 28, 2016)
- Workshop, "Jumpstart your Research Career with a NSF CAREER Grant! ", (March 22, 2016 - April 19, 2016)
- Workshop, "Inquiry Based Learning (IBL) in Mathematics", (July 11, 2015)
- Faculty Fellowship, "2014-2015 ADVANCE Administrative Fellow in the Office of Undergraduate Research and Service Learning", (September 2014 - May 2015)

- Workshop, "Institute on Integrating UR in the Curriculum", Council on Undergraduate Research (CUR) (March 27, 2015 - March 29, 2015)
- Workshop, "Impact of Student's Prior Knowledge on Their Learning", (February 5, 2015)
- Workshop, "Project Sin Fronteras", (September 19, 2014 - September 20, 2014)
- Workshop, "UTPA Peer Instruction & Effective Question Design", (May 2014)
- New Faculty Support Program, (September 2013 - May 2014)
- Workshop, "ADVANCE Leadership Institute", (January 16, 2014 - April 25, 2014)
- Workshop, "Challenge-based Instruction (CBI)", (October 25, 2013 - February 14, 2014)

Professional Service

- Editorial Review Board Member, Organic Chemistry: Current Research. (2011)
- Other, American Chemical Society. (August 2023)
- Other, American Chemical Society. (June 2022 - August 2023)
- Reviewer, Journal Article, Organometallics. (May 28, 2023)
- Reviewer, Journal Article, The Journal of Organic Chemistry. (November 3, 2021)
- Reviewer, Journal Article, Polyhedron. (September 3, 2021)
- Reviewer, Journal Article, The Journal of Organic Chemistry. (June 30, 2021)
- Reviewer, Journal Article, Polyhedron. (October 18, 2020)
- Reviewer, Journal Article, Polyhedron. (August 2020)
- Officer, President/Elect/Past, American Chemical Society South Texas Local Section Chair. (January 2017 - December 2019)
- Reviewer, Journal Article, Polyhedron. (October 2019)
- Reviewer, Grant Proposal, National Science Foundation. (June 2019)
- Reviewer, Journal Article, ACS Catalysis . (April 14, 2019)
- Reviewer, Journal Article, The Journal of Organic Chemistry. (March 7, 2019)
- Program Organizer, American Chemical Society South Texas Local Section. (December 6, 2018)
- Program Organizer, American Chemical Society South Texas Local Section. (November 20, 2018)
- Reviewer, Journal Article, Polyhedron . (October 24, 2018)
- Reviewer, Journal Article, Journal of the American Chemical Society. (March 26, 2018)
- Session Chair, 255th American Chemical Society National Meeting. (March 20, 2018)
- Session Chair, 255th American Chemical Society National Meeting. (March 18, 2018)
- Reviewer, Grant Proposal, The Center for Research, College of Science and Health, William Paterson University of New Jersey. (January 21, 2018)
- Reviewer, Grant Proposal, National Science Foundation. (January 7, 2018)
- Reviewer, Journal Article, Australian Journal of Chemistry. (August 2017)
- Program Organizer, American Chemical Society Program-in-a-Box. (February 21, 2017)
- Program Organizer, DOE Ames Laboratories and Iowa State University Visit. (December 2, 2016)
- Program Organizer, American Chemical Society South Texas Local Section. (October 2016)
- Program Organizer, American Chemical Society Program-in-a-Box. (October 11, 2016)
- Reviewer, Journal Article, Chemical Biology & Drug Design. (September 2016)
- Program Organizer, American Chemical Society South Texas Local Section. (March 2016)
- Program Organizer, Department of Chemistry Seminar. (March 2016)
- Grant Proposal Reviewer, External, American Chemical Society Petroleum Research Fund. (February 2016)
- Grant Proposal Reviewer, External, Faculty Summer Research Award, The Center for Research, College of Science and Health, William Paterson University of New Jersey. (January 2016)
- Reviewer, Journal Article, Canadian Journal of Chemistry. (May 2015)
- Guest Speaker, American Chemical Society South Texas Local Section. (November 2014)
- Reviewer, Journal Article, Organic Chemistry:Current Research Journal. (December 2013)
- Committee Member, Organizing Committee Member at the 2nd International Conference on Medicinal Chemistry & Computer Aided Drug Designing. (October 2013)

Reviewer, Journal Article, Green Chemistry Letters and Reviews. (July 2012)

Reviewer, Journal Article, Journal of the American Chemical Society. (2010)

Professional Memberships

American Chemical Society, (ACS) (August 10, 2007)

Public Service

Other, 2023 UTRGV High Scholars Program. (June 2023 - July 2023)

Other, 2022 UTRGV High Scholars Program. (June 2022 - July 2022)

Judge, Fossum Middle School Science Fair. (November 2019)

Other, 2019 UTRGV High Scholars Program Haider Ahsan. (June 2019 - August 2019)

Other, 2019 UTRGV High Scholars Program Subash Jagadeesan. (June 2019 - August 2019)

Other, 2018 UTRGV High Scholars Program Juan Roman. (June 2018 - August 2018)

Other, 2018 UTRGV High Scholars Program Subash Jagadeesan. (June 2018 - August 2018)

Attendee, Meeting, UTRGV High Scholars Mandatory Mentor-Student-Parents Meeting. (May 15, 2018)

Guest Speaker, South Texas Preparatory Academy Career Day. Edinburg, TX (October 27, 2017)

Other, UTRGV High Scholars Program Ashley Giron . (June 2017 - August 2017)

Other, UTRGV High Scholars Program-Alexander Kaplan. (June 2017 - August 2017)

Other, HHMI Summer Research Jesus Alvarado. (June 2015 - August 2015)

Judge, Fossum Middle School Science Fair. (December 17, 2014 - December 17, 2014)

Other, HHMI Summer Research Mireya Almaraz. (June 2014 - August 2014)

Judge, Rio Grande Valley Regional Science and Engineering Fair. (February 22, 2014 - February 22, 2014)

Judge, Weslaco ISD Secondary District Science and Engineering Fair. (January 18, 2014 - January 18, 2014)