

Armando I. Baca

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EDUCATION

El Paso Community College, El Paso, TX

Associates of Science in Chemistry

Fall 2021- August 2023

University of Texas at El Paso, El Paso, TX

Bachelor of Science in Chemistry

Fall 2023- May 2025

University of Texas at El Paso, El Paso, TX

PhD in Chemistry

Spring 2025- Current

Anticipated graduation date: Fall 2030

UPCOMING SCIENTIFIC PUBLICATIONS

Interception of a Uranium Alkyl-Carbene Complex Utilizing Bulky Phosphaylide

Frank MacGregor, Armando I. Baca, Alejandro Metta-Magana, and Skye Fortier

December 2025

RESEARCH SKILLS

Computer skills: Proficient in data processing and analysis using MS Word, Excel, PowerPoint, Canva, ChemDraw, Mestrenova, Topspin, Origin 64.

Purification Techniques: vacuum filtration, recrystallization, liquid-liquid extraction

Handling of Pyrophoric: Schlenk line experience and glovebox experience.

Handling of radio nuclei: Experience handling and working with Uranium-238

Spectroscopic Techniques: Multinuclear NMR spectroscopy, UV-Vis spectroscopy, IR spectroscopy, single crystal X-ray diffraction.

Languages: Bilingual - Fluent in Spanish and English (speaking, reading and writing).

SCHOLARSHIPS & AWARDS

University of Texas at El Paso, LSMAP, Research academy, El Paso, TX, August 2024 – May 2025

University of uOttawa, LSAMP, Summer Research Academy Abroad, Ottawa Canada, May 2024-August 2024

University of Texas at El Paso, Louis Strokes Alliance for Minority Participation, Summer Research Academy, El Paso, TX, June 2023-August 2023

El Paso Community College, Bridges to the baccalaureate research training program, El Paso, TX, June 2022-May 2023.

EPCC SGA scholarship, Fall 2022, Fall 2023.

Stars Scholarship fund 2022-2023.

PRESENTATIONS

Armando Baca, Frank Macgregor, Skye Fortier
Kinetic & Thermodynamic Studies of Uranium Mediated C-H Activation, Evidence of σ -H Abstraction
2026 April, ABCD Chemistry and Biochemistry symposium, El Paso Texas
Poster Presentation

Armando Baca, Frank Macgregor, Skye Fortier
Strategic ligand substitution in pursuit of high valent uranium carbenes.
2025 May, Couri symposium, El Paso Texas
Poster Presentation

Armando Baca, Diogo Alves Galico, Muralee Murugesu
Influence of magnetic field on energy-transfer based ratio metric thermometry.
2024 August, LSAMP conference, El Paso, Texas
Poster Presentation

Armando Baca, Frank Macgregor, Skye Fortier.
Synthesis and characterization of substitute ylide adducts of U(IV) halides.
2023 November, SACNAS conference, Portland, Oregon
Poster Presentation

Armando Baca, Frank Macgregor, Skye Fortier.
Synthesis and characterization of substitute ylide adducts of U(IV) halides.
2023 August, LSAMP conference, El Paso, Texas
Poster Presentation

Armando Baca, Samuel Castillo, Andrik Perez, Marcela Tinajero, Carolina Amaya, Ennis Galaz, Bruce Cushing
Exposure to chronic social defeat stress induces depression-related behavior and associated neuronal activation patterns in male prairie voles.
2023 April, COURI Symposium, El Paso, Texas
Poster Presentation