

Austin Moore

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Analytical Synthetic Scientist

Highly dedicated and qualified professional with PhD in Organic Chemistry complemented by a track record of contributing to impactful research projects focused on small molecule synthesis and catalytic methods development. Proven ability to leverage extensive expertise in organic chemistry with a solid proficiency in a wide array of analytical techniques including FT-IR, GC-MS, HPLC, LC-MS, NMR, and UV-Vis spectroscopy. Skilled in laboratory management, including air/moisture sensitive techniques, glovebox maintenance, separation techniques, and Schlenk-line operations. Able to optimize experimental procedures, achieving high product yields and contributing to scientific advancements. Experienced in presenting research findings and collaborating effectively in interdisciplinary teams.

Technical Expertise

Design of Experiment (DoE) | Microsoft Office | Instrumental Skills: Fourier Transform-Infrared Spectroscopy (FT-IR)

Gas Chromatography-Mass Spectrometry (GC-MS) | High Performance Liquid Chromatography (HPLC)

High Resolution Mass Spectrometry-Electrospray Ionization (HRMS-ESI) | Liquid Chromatography-Mass Spectrometry (LC-MS)

Nuclear Magnetic Resonance (NMR) | Ultra Performance Liquid Chromatography-Mass Spectrometry (UPLC-MS)

Ultraviolet-Visible Spectroscopy (UV-Vis) | Laboratory Skills: Air/Moisture Sensitive Techniques

Flash Column Chromatography | Glovebox Techniques and Maintenance | Schlenk-line Techniques

Education

Doctor of Philosophy (Ph.D): Organic Chemistry, 2023

Iowa State University - Ames, IA

Research Advisor: Dr. Levi Stanley, Ph.D. Areas of Expertise: Small Molecules Synthesis, Catalytic Methods Development

- Member of Graduate Student Liaison Committee
- Publications: Moore, A. S.; Stanley, L. M. "Nickel-Catalyzed Formation of α -Substituted γ -Amino Ketones via Alkene Carboacylation." *Org. Lett.* 2022, 24 (49), 8959–8963
- To-be Published: Youmans, D. D.; Moore, A. S.; Stanley, L. M. "Straightforward Synthesis of Highly Substituted Oxaboroles from Oxaboranes via a Selective Petasis Borono-Mannich Reaction"

Bachelor of Science (BS): Chemistry, 2018

Butler University - Indianapolis, IN

Professional Experience

Iowa State University

June 2018 — December 2023

Graduate Research Assistant

Steered 5+ research projects, ensuring adherence to timelines and laboratory safety protocols. Conducted routine maintenance on essential laboratory equipment. Compiled and maintained laboratory notebooks and records, adhering to standard operating procedures. Synthesize weekly reports and presentations to convey complex research findings to interdisciplinary teams.

- Executed laboratory experiments and optimizations, testing hypotheses and advancing scientific knowledge.
- Designed synthetic pathways to novel small organic molecules using transition metal catalysis, achieving product yields of 92%.
- Analyzed complex mixtures utilizing both chromatography and spectrometry techniques such as HPLC, GC, GC-MS, and LC-MS
- Presented research findings at various conferences and interdisciplinary meetings, enhancing the visibility of research efforts.
- Led laboratory optimizations to refine experimental procedures, contributing to increased accuracy in research outcomes.

Iowa State University

August 2018 — December 2023

Teaching Assistant

Graded laboratory assignments and exams for over 150 students each semester, ensuring timely and constructive feedback to enhance their academic understanding. Coordinated documentation and managed laboratory settings, contributing to a structured and effective educational environment. Facilitated tutoring sessions and reviewed student work, reinforcing learning objectives and providing additional academic support where necessary.

- Established clear communication channels with professors to align course goals and student progress.
- Instructed and provided positive feedback to 300+ undergraduate students, significantly improving their academic performance.
- Collaborated with faculty to ensure consistent educational standards and student success across multiple courses.

Iowa State University

August 2021 — May 2023

Head Teaching Assistant

Developed and implemented undergraduate course materials, fostering an environment conducive to optimal learning outcomes in laboratory settings. Coordinated the development of course curricula, aligning with state educational standards and contributing to the enhancement of academic quality. Offered constructive feedback to peer instructors on achieving learning objectives and improving laboratory practices for undergraduate courses.

- Ensured consistent application of teaching methodologies across all lab sections.
- Organized and managed the daily responsibilities of 30+ peer instructors, maintaining strict adherence to academic standards.
- Facilitated training sessions for new teaching assistants, emphasizing effective teaching strategies and laboratory safety protocols.