

CHARLES KOFI OFOSU

kofosu@utexas.edu || College of Natural Sciences, Department of Chemistry || University of Texas at Austin

EDUCATION

University of Texas at Austin, Department of Chemistry

Doctor of Philosophy, Chemistry

Expected 2025

Macalester College, Saint Paul, Minnesota

Chemistry || Minor: Data Science

May 2019

Lester B. Pearson College of the Pacific, British Columbia, Canada.

IB Diploma Program || HL Courses: Chemistry, Mathematics & Biology

May 2015

PUBLISHED RESEARCH ARTICLES

Andrew J. Greenlee, **Charles K. Ofosu**, Qifan Xiao, Mohammed M. Modan, Daron E. Janzen, and Dennis D. Cao
“Pyridinium- Functionalized Pyromellitic Diimides with Stabilized 2 Radical Anion States” *ACS Omega*, 2018, 3
(1), pp 240–245

RESEARCH

Milliron Research Group, McKetta Department of Chemical Engineering, UT Austin

October 2020 – Present

- Investigate the interactions between dispersed nanocrystals, with the goal of better understanding the factors that influence their assemblies and morphologies

The Sherwin Williams Company, Minneapolis, Minnesota

R&D Intern – Performance Coatings Group

May 2018 – December 2018

- Worked with analytical team to develop rapid electrochemical methods to screen the protective properties of packaging and general industrial (GI) coating
- Investigated the efficacy of corrosion inhibitor additives in mitigating cut-edge and scribe corrosion of coil and GI coatings, using modifications of Electrochemical Impedance Spectroscopy (EIS), Linear Polarization Resistance (LPR) and Potentiodynamic Polarization (PDP)

University of Florida Department of Pharmacology and Therapeutics, Gainesville, Florida

ASPET Research Fellow

May 2017 – August 2017

- Worked with Dr. Roger Papke to identify molecules in areca nut responsible for its addictive and carcinogenic properties
- Collaborated with UF's chemistry department to perform natural product extraction and assayed extracts on nicotinic acetylcholine receptors, and other cholinergic receptors
- Employed two-electrode voltage clamping, size exclusion chromatography, ultrafiltration, and dialysis to analyze prepared extracts of nut

Macalester College Chemistry Department, Saint Paul, Minnesota

Organic Materials Research Assistant

September 2016 – December 2017

- Synthesized mellitic triimides: planar organic compounds with potential use in electronic gadgets as conductors

- Characterized synthesized compounds using NMR, cyclic voltammetry, bulk electrolysis, and differential pulse voltammetry
- Assisted lab members with electrochemical characterization of synthesized compounds

SELECTED RESEARCH PRESENTATIONS

Charles Kofi Ofosu, Dr. Niteen Jadhav (May 2019 & August 2018). *Development of Electrochemical Methods for Screening Corrosion Resistance of Organic Coatings*. Summer work presented at the annual Sherwin-Williams R&D Intern Presentation, Minneapolis, MN.

Charles Kofi Ofosu, Dr. Roger Papke (November 2017). *WHAT IS IN ARECA? An investigation of the cholinergic and carcinogenic activities of molecules in the areca nut*. Summer work presented at the annual Midstate Consortium for Math and Science (MCMS), St. Louis, MO.

Charles Kofi Ofosu, Dr. Dennis Cao (April 2017). *Synthesis and Electrochemistry of Mellitic Triimides*. Poster presented at the 84th Winchell Undergraduate Research Symposium & 32nd MAS Annual Meeting, St. Paul, MN.

WORK EXPERIENCE

University of Texas at Austin, Department of Chemistry *September 2020 – Present*
Teaching Assistant

- Teach organic chemistry laboratory techniques and supervise safe operations in a weekly lab

The Sherwin Williams Company, Minneapolis, Minnesota *September 2019 – July 2020*
R&D Laboratory Technician – Protective and Marine Division

- Conducted research with the Pipe and Rebar groups to develop and test out variations of, primarily, fusion-bonded epoxy powder coatings for the pipe and rebar market
- Analyzed the glass transition temperatures of pre-cure powder and post-cure films using DSC
- Carried out rheological, mechanical, and electrochemical testing to investigate coating performance and durability in harsh external conditions

Breakthrough Twin Cities, Saint Paul, Minnesota *September 2018 – May 2019*
Teaching Fellow

- Guided 25 underprivileged Grade 9 students in setting and reaching academic and personal goals for the school year
- Monitored students' progress in achieving goals through regular meetings and mentorship
- Taught monthly lessons aimed at equipping students with both study and problem-solving skills

Macalester College Chemistry Department, Saint Paul, MN *September 2017 – May 2018*
Tutor and Laboratory Teaching Assistant

- Assisted Organic Chemistry students with assignments and concept clarification
- Taught laboratory techniques and supervised safe operations in a weekly lab
- Held regular office hours to support students' mastery of concepts and to build relationships with students

EXPLO @ Wheaton College, Boston, MA *June 2016 – August 2016*
Chemistry & Math Instructor and Residential Advisor

- Developed detailed lesson plans and taught chemistry and mathematics classes in a summer program for youth in grades 6 and 7
- Served as residential advisor and mentor to students enrolled in the program

RECOGNITION

Dr. Bennie F. Walker Endowment Recipient	2020
Phi Lambda Upsilon – Undergraduate Chemistry Honor Society	2019
Department of Multicultural Life’s Outstanding Senior Award	2019
Honors students whose works enabled a culture of social justice, diversity, and equity at Macalester College	
Macalester College Academic Affairs Committee Chair	2018 – 2019
Served as the liaison between the student body, and the college’s administration and board of trustees regarding students’ academic life. I managed a \$10,000 budget to purchase textbooks and other stationery for students who could not afford such items	
Speaker at Rites of Passage (ceremony for graduating students of color)	2019
Faculty-nominated Participant at the 3M Nobel Prize Inspiration Initiative	2018
American Society for Pharmacology and Experimental Therapeutics Fellowship	2017
Kofi Annan International Scholarship	2015 – 2019

COMMUNITY INVOLVEMENT & LEADERSHIP

- Macalester College Student Government, Executive Board Member *Sept 2018 – May 2019*
- Men of Color Collective, Member *Sept 2017 – May 2019*
- Macalester College African Music Ensemble, Lead Singer and Drummer *Sept 2015 – May 2019*
- Black Liberation Affairs Committee, Member *Sept 2015 – May 2019*
- Macalester Afrika! General Secretary *Sept 2015 – May 2019*