JERMAINE O'BRYAN JOHNSON
Organic Chemist and Educator
jjhnsn26@memphis.edu

EDUCATION

Ph. D. **Organometallic Photochemistry**
2009-2015 University of Memphis
Memphis, TN 38152

- Research Advisor: Prof. Theodore J. Burkey
- Dissertation: Design and synthesis of photochromic organomanganese systems based on ultrafast linkage isomerization

B. S. **Chemistry**
2004-2008 Morehouse College
Atlanta, GA 30314

- Advisor: Prof. Lance Shipman-Young
- Senior Project: 1,4-Addition reactions of organocuprates

EXPERIENCE

Assistant Professor of Teaching/Coordinator, University of Memphis Department of Chemistry

Aug 2021 – present

- Teach courses in General Chemistry, Organic Chemistry, and Biochemistry
- Design, prepare, and coordinate laboratory courses in General and Organic Chemistry
- Advise undergraduate majors and pre-health students in preparation for medicine and dentistry entry exams, personal statement writing, graduate program applications, and interviews.

Adjunct Professor, Lane College

Jan 2020 – Aug 2021

- Teach courses in General Chemistry
- Design and prepare laboratory courses in General Chemistry

Adjunct Instructor, University of Tennessee Health Science Center

Jun 2017 – Aug 2021

Teach review courses in General Chemistry, Organic Chemistry and Biochemistry to pre-health summer interns through the Tennessee Institute for Pre-Professionals (TIP) program

Senior Lecturer, University of Memphis Lambuth Campus Department of Chemistry

Aug 2015 – Aug 2021

- Teach courses in General Chemistry, Organic Chemistry, and Biochemistry
- Design and prepare laboratory courses in General and Organic Chemistry
- Supervise campus-wide laboratory safety and hazardous waste disposal protocol
- Advise pre-health students in preparation for medicine and dentistry entry exams, personal statement writing, graduate program applications, and interviews.
- Co-organize and co-direct undergraduate research symposiums for local campus

Teaching Assistant, Rhodes College Department of Chemistry
Aug 2013 – Dec 2013

- Taught General Chemistry laboratory course to undergraduate students
- Lectured during course recitation and graded course exams

Graduate Assistant, University of Memphis Department of Chemistry
Aug 2009 – Aug 2015

- Designed, synthesized, and characterized organometallic photochromes that exhibit optimized properties
- Managed the research projects and daily activity of undergraduate and high school researchers
- Taught General and Organic Chemistry laboratory courses to undergraduate students
- Facilitated supplemental instruction sessions
- Proctored lecture courses and graded course exams

Quality Assurance Chemist, Barrow-Agee Laboratories
Feb 2009 – Aug 2009

Prepared and analyzed time-sensitive agricultural feed and imported meats for calcium, sodium, potassium, phosphorus and heavy metals

SKILLS

- Proficiency in student preparation for MCAT, DAT, and GRE entry exams
- Experience in closed-caption video production and editing
- Knowledge in lab safety and chemical waste management
- Ability to work and communicate technical research in a multidisciplinary research and development environment
- Proficiency in air-sensitive projects relying on glovebox operation and Schlenk techniques
- UV-Vis spectroscopy
- FTIR and Time-Resolved IR spectroscopy
- NMR spectroscopy
- GC-MS spectrometry
- ICP Optical Emission spectroscopy
- Actinometry

AFFLIATIONS

- American Red Cross (2019 – 2021)
- Remote Area Medical (RAM) Volunteer Corp (2018 – present)

- Tennessee Achieves Mentor (2015 – present)
- American Chemical Society Member (2012 – present)

AWARDS

University of Memphis Distinguished Teaching Award (2018)
W. Russell and Audrey E. Nesossi-Smith Award for Teaching Excellence (2020)

PRESENTATIONS

- 41st NOBCChE Annual Conference, 2014, "Design and synthesis of organometallic photochromes based on (η^5-pentalenyl)$Mn(CO)_3$ complexes" Jermaine O. Johnson, Roger G. Letterman, Edwin J. Heilweil, Charles Edwin Webster, and Theodore J. Burkey
- 247th ACS National Meeting and Exposition, 2014, "Synthesis and Characterization of Organometallic Photochromes Based on (η^5-Pentalenyl)$Mn(CO)_2$ Complexes with Tethered Functional Groups" Jermaine O. Johnson, Roger G. Letterman, Edwin J. Heilweil, Charles Edwin Webster, and Theodore J. Burkey
- 245th ACS National Meeting and Exposition, 2013, "Synthesis and Properties of Organometallic Photochromes Based on (η^5-Cyclopentadienyl)$Mn(CO)_3$ and (η^5-Pentalenyl)$Mn(CO)_3$ Complexes" Jermaine O. Johnson, Karen L. Mosley, Roger G. Letterman, Philippe P. Lubet, Charles Edwin Webster, and Theodore J. Burkey
- 243th ACS National Meeting and Exposition, 2012, "Preparation and Photochemistry of Cyclopentadienyl Manganese Tricarbonyl Derivatives with Pendant Hydrazone and Pyridine Groups" Theodore J. Burkey, Edwin J. Heilweil, Jermaine O. Johnson, Roger G. Letterman, Karen L. Mosley, Philippe P. Lubet, Charles Edwin Webster
- Mid-South Inorganic Chemistry Conference, 2011, "Design of Bicyclic, Photochromic Organomanganese Systems Undergoing Ultrafast and Efficient Linkage Isomerization" Jermaine O. Johnson, Roger G. Letterman, Karen L. Mosley, Thomas C. McFadden, Charles Edwin Webster, and Theodore J. Burkey

PUBLICATIONS

- S. Bhana, R. O'Connor, J. Johnson, J.D. Ziebarth, L. Henderson, and X. Huang. "Photosensitizer-loaded gold nanorods for near infrared photodynamic and photothermal cancer therapy" *J. Colloid. Interface Sci.* **2016**, *469*, 8-16.
- C. B. Duke; R. G. Letterman; J. O. Johnson; J. Barr; S. Hu; C. R. Ross; C. E. Webster; T. J. Burkey "The Photochemistry of Arene Chromium Tricarbonyl Complexes with Tethered Pyridinyl and Propenyl Groups: Investigations of Ring Size on Chelate Formation, Structure, and Linkage Isomerization" *Organometallics* **2014**, *33*, 485-497
- F. Ren; S. Bhana; D. D. Norman; J. Johnson; L. Xu; D. L. Baker; A. L. Parrill; X. Huang "Gold Nanorods Carrying Paclitaxel for Photothermal-Chemotherapy of Cancer" *Bioconjugate Chem.* **2013**, *24*, 376-386
- E.J. Heilweil; J.O. Johnson; K.L. Mosley; P.P. Lubet; C.E. Webster; T.J. Burkey "Engineering Femtosecond Organometallic Chemistry: Photochemistry and Dynamics of

Ultrafast Chelation of Cyclopentadienylmanganese Tricarbonyl Derivatives with Pendant Benzene carbonyl and Pyridinecarbonyl Groups" *Organometallics* **2011**, *30*, 5611-5619

SERVICE

- Green Fee Committee (Spring 2022-present)
- Department Emergency Response Committee (Spring 2022-present)
- Undergraduate Curriculum Council (Spring 2022-present)
- Undergraduate Studies Committee (Fall 2021-present)
- Pre-health Advising Committee (Fall 2021-present)
- Pre-health Scholarship Committee (Fall 2021-present)
- Distinguished Teaching Award Selection Committee (Fall 2020-present)
- Lambuth Research Symposium Committee (Fall 2015-Spring 2022)
- Instructor/Instructor Coordinator Search Committee Chair (Spring 2022)

OUTREACH

- Tennessee Achieves (Spring 2016-present)
- West Tennessee Stem Hub (2016-present)
- Battle of the Brains: Germantown High vs Houston High (Spring 2022-present)
- Cummings Middle School STEM Labs (Fall 2021-present)
- Booker T. Washington High School (Fall 2021-present)
- Pope Elementary School STEM Labs (Fall 2019-Spring 2021)