



NEWSLETTER

Oklahoma Section American Chemical Society

Volume 24 Number 3

<http://oklahoma.sites.acs.org/>

September 2019

Oklahoma ACS Family Night
Friday 20 Sep 2019

THE CHEMISTRY OF FORENSIC SCIENCE

Rhonda Williams, PhD, F-ABC
*Forensic Science Institute, UCO
and
Oklahoma State Bureau
of Investigation
Oklahoma City, OK*



Chemistry has a role in a variety of fields, including the field of forensic science. Whether you are using chemical properties to identify drugs (in and out of the body) or to enhance latent prints, chemistry plays a vital role. Chemistry is also extremely useful in the field of forensic biology. This talk will focus on all of the ways chemistry can be used in the different disciplines in forensic science and how it has helped improve the field as a whole. It will give an overview of the types of forensic careers and technologies available and the degrees necessary to obtain these positions. Dr. Rhonda Williams will also give a little insight into her career path as well.

continued on page 2 with the speaker's biographical sketch. →

Oklahoma Baptist University, Shawnee, OK

map: <http://www.okbu.edu>

6:00 pm Social Hour & Picnic

Wood Science Building [indoor/outdoor]
lawn games—volleyball & croquet

7:30 pm Presentation

Wood Science Building - large lecture hall



OBU map
QR code

Dinner Reservation Information

Cost

Picnic Menu

Hamburgers & hotdogs
potato chips
pickles
cookies
soft drinks

\$12 members
\$7 students
\$5 children under 12

RSVP Deadline

Tuesday 17 Sep 5 pm
Contact: Nathan Malmberg
nathan.malmberg@okbu.edu
405-585-4126

RSVP is NOT required to attend the presentation.

2019 Oklahoma Chemist Kenneth M. Nicholas

University of Oklahoma



Kenneth M. Nicholas of the University of Oklahoma's Department of Chemistry and Biochemistry has been selected as the 2019 recipient of the Oklahoma Chemist Award for his outstanding contributions to the discovery, fundamental understanding and applications of chemical reactions promoted by transition metal compounds. His research group's studies have centered on: 1) the stability and reactivity of metal-coordinated organic species; 2) carbon dioxide activation/conversion promoted by transition metals; 3) the metal-promoted nitrogenation of hydrocarbons; 4) bio-inspired transition metal catalysis; and 4) the catalytic deoxygenation and refunctionalization of renewable chemical resources. The results of these studies have been presented at numerous regional, national and international scientific conferences and published in approximately 200 peer-reviewed journal articles and book chapters and 3 U.S. Patents. These projects have been financially supported with approximately five million dollars from federal and state agencies and foundations including: the Research Corporation, the Oklahoma Center for the Advancement of Science and Technology, the Petroleum Research Fund of the American Chemical Society, the Office of Naval Research, the National Institutes of Health, the U. S. Department of Energy, and the National Science Foundation. Prof. Nicholas' research

OK Chemist continued on page 2 →

OK ACS OFFICER NOMINATIONS

We are seeking nominations for 3 positions

Chair Elect (3 year term—chair elect/chair/past chair)

Secretary (2 year term)

Councilor (3 year term)

Please send nominations to

Naga Rama Kothapalli (Section Chair) ramakn@ou.edu
or Nick Materer (Nominations chair) materer@okstate.edu

get involved • make a difference

ELECTION SCHEDULE

Nominations due 10 Oct • Ballot mailing 17 Oct

Cast Ballots due on or before 14 Nov

Councilor's Report

Allen W. Apblett (Oklahoma Section Councilor)

Council meeting was held on August 29 in San Diego. The meeting was mostly uneventful but there were a few items I would like to report to members of the Oklahoma Section.

2019 Fall National Election

Ballots for the 2019 fall national election will be distributed starting on September 30th, with a voting deadline of October 25th. ACS Members will vote for the President-Elect and on a constitutional amendment. The candidates for President Elect are H.N. Cheng (USDA Agricultural Research Service) and Carol A. Duane (D&D Consultants of Mentor). The objective of the constitutional amendment is to preserve the current governance structure and all current provisions while creating a third document: Standing Rules. Essentially this will allow rule changes without having to change the constitution. Members of Oklahoma section will also cast votes for a District IV director. The candidates are Rigoberto Hernandez (Johns Hopkins University, Baltimore, Maryland) and Lisa Houston (Petroleum Analyzer Company, L.P., Houston, Texas). If it is important to you, note that Baltimore is not in District IV while Houston is.

ACS members eligible to vote and who have an email address on file will receive an electronic ballot with the option to request a paper ballot. Those members with no email address on file will be sent a paper ballot with the option to vote electronically. The ACS election vendor, Survey & Ballot Systems, will send three email reminders during the voting period to those who have not voted as of the reminder dates.

I will be casting a vote on behalf of the Oklahoma Section for a Director at Large. The candidates are Harmon B. Abrahamson (University of North Dakota, Grand Forks, North Dakota) G. Bryan Balazs (Retired, Lawrence Livermore National Laboratory, Livermore, California) D. Richard Cobb (Retired, Eastman Kodak Company, Rochester, New York) and Dorothy J. Phillips (Retired, Waters Corporation, Milford, Massachusetts). I welcome any suggestions or comments from our membership concerning which of these candidates our section should cast a vote for.

Budget and Finance

The Society's 2019 financial performance through July 31st yielded a Net from Operations of \$30.1 million. This is \$10 million favorable to the Approved Budget, and \$1.7 million less than the same period in 2018. Total revenues are right on budget at \$338 million. Total expenses are \$308 million, which is \$10 million favorable to budget.

The committee considered two 2020 program funding reauthorization requests, and on its recommendations, the Board subsequently approved funding for the ChemIDP and the International Student Chapters Programs in the 2020 Proposed Budget.

The committee considered new program funding requests for 2020 as well. The Board subsequently approved funding for the Green and Sustainable Chemistry Education Resources pilot for inclusion in the 2020 Proposed Budget.

The Society is expected to end the year in compliance with each of the five Board-established financial guidelines. Additional information can be found at www.acs.org, at the bottom of the page, click 'About ACS', then 'Financial'.

(Speaker—continued from front page)

Rhonda Williams Biographical Sketch

Dr. Rhonda Williams is a graduate from the University of Oklahoma Health Sciences Center, with a Doctorate in Biochemistry/Molecular Biology. Her thesis project dealt with the genetics and evolution of Friedreich's ataxia. She started her forensic science career at the Harris County Institute of Forensic Sciences (Houston, TX). Dr. Williams worked as a DNA Analyst and Trace Evidence Analyst at crime scenes for 8 years. Dr. Williams published a book on DNA collection from crime scenes in 2014. She currently works for the Oklahoma State Bureau of Investigation as a Sr. Criminalist in the CODIS unit and has for the past 5 years. She is also an adjunct teacher at the University of Central Oklahoma.

(OK Chemist—continued from front page)

team is probably most well known for the invention and development of a chemical reaction (often referred to as the Nicholas reaction) that is facilitated by cobalt-coordination to alkynes, which enables their efficient conversion to diverse and useful products.

Dr. Nicholas has supervised and mentored approximately 60 undergraduate research assistants, 16 MS degree recipients, 26 PhDs and 38 postdoctoral research fellows, almost all of whom have enjoyed careers in industry, medicine, government, or academia. Professor Nicholas has organized a number of scientific conferences and workshops, served on the editorial board of the journal *Organometallics*, and he helped to establish the OU-Blaise Pascal U. (Fr) joint MS degree program. Prof. Nicholas was a popular, yet challenging instructor of organic chemistry to a few thousand undergraduates and of organic and organometallic chemistry to hundreds of graduate students, many of whom are engaged in successful careers in medicine, the corporate world, teaching, and government. Dr. Nicholas has been recognized for his teaching and research accomplishments by the A.P. Sloan Foundation, the University of Oklahoma Regents, by the American Chemical Society's A. C. Cope Scholar Award (for research excellence in organic chemistry), and as a George Lynn Cross Research Professor, the highest research award at OU. Dr. Nicholas earned a BS in Chemistry from Stony Brook University (NY), his PhD from the U. Texas (Austin), did postdoctoral research at Brandeis University, and was on the faculty at Boston College (1973-1984) before joining the Department of Chemistry and Biochemistry at the University of Oklahoma in 1984.

National Chemistry Week 2019 Oct 20–29

Theme: *Marvelous Metals*

2019 NCW event @ Science Museum Oklahoma
9:00 am — 2:00 pm Saturday 26 Oct

contact for details or to volunteer
Michael Ferguson (405-974-5391) jferguson@uco.edu

2019 Pentasectional Awards

Awards were given to the best posters presented at the 64th Annual Pentasectional Meeting. Awards were given in each of four categories: Undergraduate poster and graduate poster as well as graduate talk and undergraduate talk, with honorable mentions in the poster categories. Eight judges (from NWOSU-Alva, OU-OK, OUHSC, OSU-Stillwater, and Pittsburg State University) volunteered to judge the posters and select the winners. In each category, the first-place winner received monetary award of \$250 and honorable mentions received \$100. In the undergraduate category there were 2 Honorable Mentions. One talk was awarded the best among the undergraduate and graduate categories with the award prize of \$250 each.

POSTER AWARDS — GRADUATE CATEGORY

1st Place Winner

- Jennifer Minnick, *Pincer-Type N-Heterocyclic Carbene Copper (I) Complexes and Their Utilization in Transfer Hydrogenation Reaction* (OSU, Chemistry).

Honorable Mention

- Matthew Finneran, *Cloning ORP Protein Family Members for Novel Therapeutic Drug Development* (OU, Chemistry and Biochemistry).
- Joel K. Annor-Gyamfi, *Quinazolin-4(3H)-Ones and 5,6-Dihydropyrimidin-4(3H)-Ones from Beta-Aminoamides and Orthoesters* (OSU Chemistry).
- David Rogers, *Chlorination of Deactivated Arenes and Heteroarenes with Trichloroisocyanuric Acid under Visible-Light Photoredox Catalytic Conditions* (U Tulsa, Chemistry).

POSTER AWARDS — UNDERGRADUATE CATEGORY

Honorable Mention

- Sarah Hobson, *Dissolution of Mackinawite (FES) Facilitated by Dioic Acids under Oxidic Conditions* (OU School of Civil Engineering).
- Karina Flores, *Metabolomic Screening of the Effects of Carnitine Treatment during in Vitro T. Cruzi Parasite Infection* (OU Chemistry and Biochemistry).

TALK AWARD — GRADUATE/POSTDOC CATEGORY

- Dipendra Bhandari, *Molecular Dynamics Study of Protein Mortalin and Anti-Cancer Compounds Flex-Hets* (Department of Physics, OSU).

TALK AWARD — UNDERGRADUATE CATEGORY

- Johanna Masterson, *Chemoenzymatic Diversification of Daptomycin* (OU Chemistry and Biochemistry).

A Look Back at the 64th Annual Pentasectional Meeting

Saturday 13 April 2019
NCED, Norman, OK.

We had outstanding attendance and participation with over 267 registrants (76 full, 99 graduate students, 92 undergraduate students), 66 talks, 84 posters, 11 sponsors, and 3 exhibitors. There were over 12 technical sessions. The luncheon speaker was Kenneth M. Nicholas, the Oklahoma Chemist of the Year for 2019.

We thank the organizers of the conference, the session chairs, and the many student and staff volunteers for their work that made the conference a success. Special recognition goes to Lloyd A. Bumm (general chair), Naga Rama Kothapalli (program chair), and Nicholas F. Materer (web operations) for their tireless efforts. Lloyd Bumm took care of all the local arrangements with the venue and the overall organization of the meeting, as well as designing and formatting the program books and participant badges. Rama Kothapalli organized the talks, session chairs, poster session, as well as organize the judging and awarding the prizes. Nick Materer was the presence behind the web registration. He worked to adapt software for our purposes and then performed the non-trivial task of extracting the information for the conference program book. Both Rama and Nick worked countless hours proof reading abstracts and resolving anomalies.

Logistical details. Deadlines for Abstract Submission and Preregistration: 15 Mar (extended to 29 Mar). Registration Rates (pre-registration/late and on-site): Regular (\$60/75), Precollege Teachers (\$40/65), Graduate Student (\$30/40), Undergraduate & High School Students and High School Teachers (\$15/25).

The 65th Annual Pentasectional Meeting will be hosted by the MO-KAN-OK Section (Pittsburg, KS) in 2020. At the meeting of executive committees, the rotation for subsequent Pentasectional Meetings has been set—year (section): 2020 (MO-KAN-OK), 2021 (Northern), 2022 (Wichita-Falls-Duncan), 2023 (Tulsa), 2024 (Oklahoma). Because the Oklahoma section will be hosting the 2023 SWRM in Oklahoma City in the fall, the 2024 Pentasectional meeting, which would normally be held the following spring, will be combined with the SWRM. All the Oklahoma sections plan to participate in planning the SWRM.

SOLICITING NOMINATIONS

Oklahoma Section Awards for Undergraduate Students

- The Roger Baldwin Graduate Student Award provides \$500 for students entering graduate school in chemistry or a chemistry related field. The application deadline is May first every year.
- The Terrill Smith Travel Award is a grant of up to \$600 for travel to present a paper or poster at a national or regional ACS meeting. The application deadline is 4 weeks prior to the meeting start date.

For more information and forms please visit the web site:

<http://oklahoma.sites.acs.org/undergraduateawards.htm>

—Chuck Rice (Awards Committee)



2019 Oklahoma ACS Section Officers and Standing Committee Chairs

Naga Rama Kothapalli	Chair
Stephanie L. Skiles	Chair Elect
Allen Applebitt	Immediate Past Chair
Lloyd A. Bumm	Secretary + interim Newsletter ed.
Jason Wickham	Treasurer
Allen Applebitt	Councilor + Nominations Com.
Nicholas F. Materer	Alternate Councilor
Charles V. Rice	Awards Com.
Reza Latifi	Chemistry Olympiad Com.
John Michael Ferguson	National Chemistry Week Com.
Cheryl Frech	Public Relations
Nicholas F. Materer	Web Master



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Oklahoma ACS Calendar of Events.

Visit the Oklahoma ACS WWW site for the latest information.

<http://oklahoma.sites.acs.org/>



OK ACS web
QR code

CALENDAR OF EVENTS

2019 Dates & Speakers

Sep 20 (Fri) OBU, Family Night

Rhonda Williams, Forensic Science Inst, UCO, Edmond & OSBI, OKC, OK
The Chemistry of Forensic Science

Oct (16–18) MWRM 2019

Wichita, KS

Oct (20–26) National Chemistry Week

Marvelous Metals

Oct 26 (Sat) NCW Event at Science Museum Oklahoma

Nov (13–16) SWRM 2019

El Paso, TX

Nov 14 (Thu) OSU, OK Chemist

Kenneth Nicholas, Dept of Chem & Biochem, Univ Oklahoma, Norman, OK
TBA

2023 SWRM 2023

Oklahoma City, OK

hosted by the Oklahoma section