

Randall D. Maples, PhD
Assistant Professor of Chemistry
East Central University

Business Address:
East Central University
244 Physical and Environmental Sciences
Ada, OK 74820
Office: 580-559-5417
Cell phone: 918-530-7275
rmaples@ecok.edu

Academic Preparation:

- Doctor of Philosophy, Chemistry (PhD)
 - May 2012, Oklahoma State University
Department of Chemistry, Stillwater, OK
 - Dissertation: Protocols for the size control of aqueous fullerene colloids and for the detection of nerve agent related compounds.
- Bachelor of Science, Chemistry (BS)
 - May 2007, Southwestern Oklahoma State University, Department of Chemistry and Physics, Weatherford, OK
 - Research focus on the synthesis and crystallographic studies of a series of analogs of a bicyclam compound exhibiting anti-HIV properties and stem cell mobilization.

PROFESSIONAL EXPERIENCE

- Assistant Professor of Chemistry
 - August 2016-present
 - East Central University
 - Teach General Chemistry lecture and lab, Quantitative Analysis and Instrumental Analysis
- Chemistry Department Chair/Chemistry Instructor
 - July 2013-July 2016
 - Eastern Oklahoma State College
 - Oversee Chemistry Department budget, course scheduling, laboratory supplies, hiring.
 - Offer lecture and laboratory courses in General and Organic Chemistry I and II at both Wilburton and McAlester campuses.

- Coordinated Eastern's hazardous waste disposal and chemical hygiene plan.
- Helped coordinate the Eastern Math and Science Club including scheduling, speaker arrangements, etc.
- Involved in various Eastern faculty committees including student assessment, chemical waste disposal
- Involved in various Eastern promotional activities including scholastic contests, Eastern Science Fair, Math Counts, college showcase expo.

- National Institutes of Health Post-Doctoral Fellow
 - July 2012-July 2013
 - Oklahoma State University Center for Veterinary Health Sciences
 - Neurotoxicology Research Laboratory- Dr. Carey N Pope
 - Research focus on the use of HPLC for the evaluation of brain regional levels of dopamine, serotonin and their corresponding metabolites after organophosphate exposure and modulation by endocannabinoids.
 - Research focus on comparing the effects of parathion and chlorpyrifos exposure on the brain regional levels of the endocannabinoid N-arachidonylethanolamine (anandamide) using GC-MS detection, identification and quantitation using radioisotope dilution method.

- Temporary Research Professional (basically "pre-doctoral postdoc")
 - October 2011-July 2012
 - Oklahoma State University Center for Veterinary Health Sciences
 - Neurotoxicology Research Laboratory- Dr. Carey N Pope
 - Research focus on the use of HPLC for the evaluation of brain regional levels of dopamine, serotonin and their corresponding metabolites after organophosphate exposure and modulation by endocannabinoids

- Graduate Research Assistant
 - June 2011-August 2011
 - Oklahoma State University Center for Veterinary Health Sciences
 - Neurotoxicology Research Laboratory- Dr. Carey N Pope
 - Department of Defense/Homeland Security funded GC-MS method development for detection of chemical weapons precursors and degradation products

- Graduate Research Assistant
 - July 2010-June 2011
 - Oklahoma State University, Department of Chemistry
 - Dr. Kevin D Ausman, Dr. Carey N Pope
 - Department of Defense/Homeland Security funded method development for detection of chemical weapons precursors and degradation products

- Graduate Teaching Assistant
 - August 2007-July 2010
 - Oklahoma State University, Department of Chemistry, Stillwater, OK
 - Taught General Chemistry I, General Chemistry II, Honors General Chemistry I, II laboratory sections.

- Prepared short lectures, presentations, graded assignments, proctored student tests, graded student tests, held office hours for student help.
- Voluntary and paid student tutoring.
- Graduate Research Assistant
 - June 2007-August 2007
 - Oklahoma State University, Department of Chemistry, Stillwater, OK
 - Nanomaterials laboratory- Dr. Kevin D Ausman
 - Research involved protocol development for the size control of aqueous fullerene colloids leading to my graduate project and dissertation.
- Research Assistant
 - June 2005-June 2007
 - Southwestern Oklahoma State University, Department of Physics and Chemistry, Weatherford, OK - Dr. Timothy J Hubin
 - Research focus on the synthesis and crystallographic studies of a series of analogs of a bicyclam compound exhibiting anti-HIV and stem cell mobilization properties.

HONORS AND AWARDS

- Robberson Award
 - Travel grant- Spring 2008
 - Oklahoma State University, Stillwater, OK
- Skinner Chemistry Fellowship
 - August 2007
 - Department of Chemistry
 - Oklahoma State University, Stillwater, OK
- Cronin Fellowship
 - 2006
 - Department of Physics and Chemistry
 - Southwestern Oklahoma State University, Weatherford, OK
- Incoming Freshman Scholarship
 - 2001-2002
 - Northeastern Oklahoma State University, Tahlequah, OK
- Freshman Scholarship
 - 2001-2002
 - Northeastern Oklahoma State University, Tahlequah, OK

PROFESSIONAL SOCIETIES

- Journal of Nanotoxicology and Nanomedicine (JNN) Review Board. IGN Global (8-16-16)
- American Chemical Society (ACS)
 - 2010-Present
- Oklahoma Association of Community Colleges
 - 2013-2016
- SCIEX Innovation Advisory Board
 - 2015-Present
- Oklahoma Journal of Undergraduate Research
 - 2014-Present
- Eastern Oklahoma Regional Science and Engineering Fair
 - 2013-2016
- AT&T Online Research Panel
 - 2013-Present
- American Association for the Advancement of Science (AAAS)
 - 2010-2012
- American Chemical Society (ACS Student Member)
 - 2006-2007
- SWOSU Chemistry Club
 - 2005-2007

PUBLICATIONS

Peer Reviewed Journal Publications:

- **Maples, R. D. , et al;** Aspartate-Based CXCR4 Chemokine Receptor Binding of Cross-Bridged Tetraazamacrocyclic Copper(II) and Zinc(II) Complexes, *Chemistry A European Journal*, **2016**.
- Patel, V. R.; Dumancas, G. G.; Viswanath, L.; **Maples, R. D.**; Subong, B.J., Castor oil: Properties, uses, and optimization of processing parameters in commercial production, *Lipid Insights*, **2016**.

- Khan, M. O.; Keiser, J.; Amoyaw, P.; Hossain, M.; Vargas, M.; Le, J.; Simpson, N.; Roewe, K.; Freeman, T.; Hasley, T.; **Maples, R. D.**; Archibald, S.; Hubin, T., Discovery of antischistosomal drug leads based on tetraazamacrocyclic derivatives and their metal complexes. *Antimicrobial Agents and Chemotherapy*, **2016**.
- **Maples, R. D.**; Dumancas, G. G., Health Benefits of Virgin Coconut Oil, *Vegetable Oil: Properties, Uses and Benefits*, Nova Science Publishers, **2016**.
- **Maples, R. D.**; Ramasahyam, S.; Dumancas, G. G. Supercomputers in modeling of biological systems under *Research and Applications of Global Supercomputing*, NY, Nova Science Publishers, **2015**.
- Prior, TJ, **R.D. Maples**, et al. Crystal structures of two cross-bridged chromium(III) tetra-aza-macrocycles, *Acta Crystallographica Section E*, **2014**.
- TJ Hubin, TJ, PN Amoyaw, KD Roewe, NC Simpson, **Maples, R. D.**, TN Carder Freeman, AN Cain, JG Le, SJ Archibald, SI Khan, BL Tekwani, MO Khan, Synthesis and antimalarial activity of metal complexes of cross-bridged tetraazamacrocyclic ligands. *Bioorganic Medicinal Chemistry*, **2014**.
- **Maples, R. D.**, Propazine, *Encyclopedia of Toxicology, 3rd edition*, Elsevier, **2014**, 1096-1098.
- **Maples, R. D.**, Arachidonic Acid Food Sources and Recommendation for the Vegetarian. *Arachidonic Acid: Dietary Sources and General Functions* **2013**, Nova Publishers, 21-32, Nova Science Publishers, Inc. Hauppauge, NY 11788-3619 ISBN: 978-1-62257-481-0
- Murdianti, B. S.; Damron, J. T.; Hilburn, M. E.; **Maples, R. D.**; Hikkaduwa Koralege, R. S.; Kuriyavar, S. I.; Ausman, K. D., C60 oxide as a key component of aqueous C60 colloidal suspensions. *Environ Sci Technol* **2012**, 46 (14), 7446-53.
- Hilburn, M. E.; Murdianti, B. S.; **Maples, R. D.**; Williams, J. S.; Damron, J. T.; Kuriyavar, S. I.; Ausman, K. D., Synthesizing aqueous fullerene colloidal suspensions by new solvent-exchange methods. *Colloid Surface A* **2012**, 401, 48-53.
- **Maples, R. D.**; Hilburn, M. E.; Murdianti, B. S.; Koralege, R. S.; Williams, J. S.; Kuriyavar, S. I.; Ausman, K. D., Optimized solvent-exchange synthesis method for C60 colloidal dispersions. *J Colloid Interface Sci* **2012**, 370 (1), 27-31
- Maples, D. L.; **Maples, R. D.**; Hoffert, W. A.; Parsell, T. H.; van Asselt, A.; Silversides, J. D.; Archibald, S. J.; Hubin, T. J., Synthesis and Characterization of the Chromium(III) complexes of Ethylene Cross-Bridged Cyclam and Cyclen Ligands. *Inorganica Chim Acta* **2009**, 362 (6), 2084-2088.

- Khan, A.; Nicholson, G.; Greenman, J.; Madden, L.; McRobbie, G.; Pannecouque, C.; De Clercq, E.; Ullom, R.; Maples, D. L.; **Maples, R. D.**; Silversides, J. D.; Hubin, T. J.; Archibald, S. J., Binding optimization through coordination chemistry: CXCR4 chemokine receptor antagonists from ultrarigid metal complexes. *J Am Chem Soc* **2009**, *131* (10), 3416-7.
- McClain, J. M., 2nd; Maples, D. L.; **Maples, R. D.**; Matz, D. L.; Harris, S. M.; Nelson, A. D.; Silversides, J. D.; Archibald, S. J.; Hubin, T. J., Dichloro(4,10-dimethyl-1,4,7,10-tetraazabicyclo[5.5.2]tetradecane)iron(III) hexafluorophosphate. *Acta Crystallogr C* **2006**, *62* (Pt 11), m553-5.

Scientific meeting oral and poster presentations:

- **Maples, R. D.**; Liu, J.; Pope, C. N.; Dopamine and serotonin signaling after acute diisopropylfluorophosphate (DFP) Intoxication: Modulation by endocannabinoids. *2013 ACS Oklahoma Pentasectional Meeting*; **2013**.
- **Maples, R. D.**; Liu, J.; Pope, C. N.; Dopamine and serotonin signaling after acute diisopropylfluorophosphate (DFP) Intoxication: Modulation by endocannabinoids. *2012 SCC-SOT Regional Meeting*; **2012**.
- Kuriyavar, S.; Damron, J.; **Maples, R. D.**; Hilburn, M.; Murdianti, B.; Ausman, K. D.; C60O: A Vital Component of Aqueous Fullerene Colloids *219th Electrochemical Society Meeting* **2011**.
- **Maples, R. D.**; Murdianti, B. S.; Hilburn, M. E.; Koralege, R. S. H.; Ausman, K. D.; Particle size study of an optimized solvent-exchange synthesis method for C60 colloidal dispersions in water. *45th ACS Midwest Regional Meeting* Wichita, KS **2010**.
- Koralege, R. S. H.; **Maples, R. D.**; Muridanti, B.; Hilburn, B.; Ausman, K. D.; Mechanism of oxidative damage by nC60 aggregates. *45th ACS Midwest Regional Meeting* Wichita, KS **2010**.
- Hilburn, M. E.; Murdianti, B.; **Maples, R. D.**; Williams, J.; Damron, J.; Kuriyavar, S.; Ausman, K. D.; Synthesizing aqueous fullerene colloidal suspensions by new solvent-exchange methods. *45th ACS Midwest Regional Meeting* Wichita, KS **2010**.
- Murdianti, B. S.; Damron, J. T.; Hilburn, M. E.; **Maples, R. D.**; Kuriyavar, S. I.; Ausman, K. D.; Dependence of nano-C60 formation on atmospheric condition. *45th ACS Midwest Regional Meeting* Wichita, KS **2010**.
- Kuriyavar, S.; Zhang, Y.; Damron, J.; **Maples, R. D.**; Murdianti, B.; Hilburn, M.; Pope, C. N.; Ausman, K. D. Cytotoxicity study of nanoengineered C60 colloidal suspensions. *237th ACS National Meeting*, Salt Lake City, Utah March; **2009**.
- Harvey, A.; Damron, J.; Hilburn, M.; Murdianti, B.; **Maples, R. D.**; Hasley, T.; Kuriyavar, S.; Ausman, K. D.; Investigations of oxidation species in nano-C60 colloidal suspensions. *237th ACS National Meeting*, Salt Lake City, UT; **2009**.
- **Maples, R. D.**; Kuriyavar, S.; Ausman, K. D.; Hilburn, M.; Murdianti, B.; Damron, J.; Hasley, T.; Harvey, A. Optimized Solvent-Exchange Synthesis Method for C60 Colloidal Dispersions in Water, *64th Southwest Regional Meeting of the American Chemical Society*, Little Rock, AR; **2008**.
- Hilburn, M.; Kuriyavar, S.; Murdianti, B.; Damron, J.; Harvey, A. Hasley, T.; **Maples, R. D.**; Ausman, K. D. Exploring New Synthetic Routes for Nano-C60

- Colloidal Suspensions, *64th Southwest Regional Meeting of the American Chemical Society*, Little Rock, AR; **2008**.
- Kuriyavar, S.; **Maples, R. D.**; Damron, J.; Hilburn, M.; Murdianti, B.; Ausman, K.; *Frontiers in the Synthesis of Colloidal Suspensions of C60 Aggregates. Nanofocus and NSF EPSCoR*; Cox Convention Center, Oklahoma City, OK; **2008**.
 - Hubin, T. J.; **Maples, R. D.**; Silversides, J. D.; Archibald, S. J.; *Synthesis and crystallographic studies of a series of AMD3100 analogues. 235th ACS National Meeting*, New Orleans, LA; **2008**
 - **Maples, R. D.**; Hubin, T. J.; Maples, D. L.; Khan, A.; Bridgeman, A.; Empson, C.; McRobbie, G.; Madden, L.; Archibald, S. J.; Greenman, J.; *Configurationally Restricted Bis-Azamacrocycles: Chemokine Receptor Antagonists. Research Day at the Capitol 2007*. Oklahoma City, OK; **2007**.
 - **Maples, R. D.**; Hubin, T. J.; Maples, D. L.; Khan, A.; Bridgeman, A.; Empson, C.; McRobbie, G.; Madden, L.; Archibald, S. J.; Greenman, J., *Configurationally Restricted Bis-Azamacrocycles: Chemokine Receptor Antagonists, SWOSU Research Day*, **2006**.
 - **Maples, R. D.**; Hubin, T. J.; Maples, D. L.; Khan, A.; Bridgeman, A.; Empson, C.; McRobbie, G.; Madden, L.; Archibald, S. J.; Greenman, J., *Configurationally Restricted Bis-Azamacrocycles: Chemokine Receptor Antagonists, 8th Annual Oklahoma Research Day*, University of Central Oklahoma; Edmond, OK; **2006**.