Summary

As a part of the Ray P. Authement College of Sciences, the UL Lafayette Department of Chemistry consists of eleven tenured/tenure-track faculty, four instructors, two adjunct faculty, and three staff members. As an ACS certified department, the department currently (for the fall semester of 2016) has 73 chemistry majors enrolled in a Bachelor of Science (B.S.) program, as well as 67 pre-pharmacy majors. In addition, we offer minors in chemistry and forensics.

Enrollments

We graduate from 15-20 chemistry majors per year. Annual enrollments in departmental course offerings have increased dramatically, notably in the recent past, from 3,668 students in 2011 to 5,103 students in 2016, or a 39% increase over the past six years. This increase in demand for chemistry courses results in significant increases in faculty teaching loads, as course offerings are expanded to accommodate increasing demands.

Peer-Reviewed Journal Publications

After one tenure-track hire in 2016, our faculty currently has eleven research-active members (Junk, Gallo, Knierim, Louka, Massoud, Perkins, Srivastava, Taylor, Wang, Xu, Yan). Between 2011 and 2016, the faculty of the Department of Chemistry produced 101 peer-reviewed publications, most of which appeared in prestigious journals. This amounts to 1.6 publications per research active faculty per year over the past six years (Dr. Wang only very recently joined our department). It should be noted that virtually all of this published research was accomplished with the active participation of undergraduate students.
External Funding

Between 2011 and 2016, members the faculty of the Department of Chemistry served as Principal Investigators (Project Directors) for $1.46 M in external funding. Most were multi-year awards; the graph below reflects starting years. It is noteworthy that a significant percentage of successful proposals resulted from intra- and interdepartmental collaboration, reflecting team effort and an interdisciplinary approach to research. In addition, significant funding was secured by faculty members co-authoring proposals with PI’s external to the Department of Chemistry. For example, an award of $1,010,901, co-authored by Dr. F.R. Louka in 2012, is noteworthy in this respect.
Presentations

Between 2011 and 2016, the faculty of the Department of Chemistry has given 80 presentations, or approximately 8 presentations per research active faculty member. Thirty-two of these presentations were given to international audiences, 23 were by invitation.

Noted Accomplishments

Three of our faculty (Louka, Xu, Srivastava) have held, or are still holding, Distinguished Professorships. In addition, members of our faculty serve as editors of eight prestigious journals.

Editorship

- W. Xu, Journal of Molecular and Translational Medicine, 2015.
- S.S. Massoud, Editorial Board of Journal of Modern Chemistry and Applications (JMCA), 2014.
- S.S. Massoud, Member, Editorial Board, Dataset Papers in Materials Science, 2011-pres.

Publications, Presentations, Editorships, and Talks

Journal Papers Published

2016


2015


34. Y. Sun, A. Fu, W. Xu, J.-R. Chao, S. Moshiach, S.W. Morris. Myeloid Leukemia Factor 1 interfered with Bcl-XL to promote apoptosis and its function was regulated by 14-3-3. *Journal of Physiology and Biochemistry, 71* (2015), 807-821.


2014


2013


2012


2011


Book Chapters


Conference Papers Published


Southeastern/Southwest Regional Meeting, Paper # 305; Nov 4-7, Memphis, TN (2015).


Colloquia and Seminar Talks


10. **S.S. Massoud.** DNA Cleavage by Cobalt(II) and Copper(II) Complexes Derived From Pyridyl Based Ligands. Factors Affecting DNA Cleavage. Okayama University of Science, Okayama-Japan, October 11 (2012).

11. **S.S. Massoud.** DNA Cleavage by Cobalt(II) and Copper(II) Complexes Derived From Pyridyl Based Ligands. Factors Affecting DNA Cleavage, Shimane University, Matsue-Japan, October 13 (2012).

**Invited Conference and Workshop Talks**

1. **W. Xu.** Function and Structure of CBP and NCOA. Beifang University of Nationality, Yinchuan, China, June 23 (2016).


3. **R.S. Srivastava.** Metal-catalyzed asymmetric C-H amination of alkenes. 27th International Conference on Organometallic Chemistry (ICOMC), Melbourne, Australia, July 17-22 (2016).

4. **S.S. Massoud,** Keynote lecturer at the International Conference of Polymer Chemistry, Atlanta, GA, USA, November 14-16 (2016).


7. **W. Xu.** Invited talk: Function and Structure of c-Myb and CBP. Ningxia Medical School, Yinchuan, China July 1 (2015).


12. **S. S. Massoud.** Kumamoto Seminar on Complex-based Supramolecule. Kumamoto University – Graduate School of Science and Technology, Kumamoto, Japan, (invited).


17. **W. Xu.** Biochemistry research and education. Beifang University of Nationality, Yinchuan, China, June 3-8 (2013).


**Contributed Presentations**

**2016**


2. A. Odoux, D. Jindal, T.C. Tamas, B.W.H. Lim, D. Pollard, **W. Xu.** Experimental and molecular dynamics studies showed the CBP KIX mutation affects the stability of CBP;c-Myb complex. 90th Annual Meeting of Louisiana Academy Alexandria, LA, April 23 (2016).
2014


2013


35. R.S. Srivastava. Metal catalyzed group transfer reactions: Allylic amination vs. hetero Diels-Alder reaction of 1,3-butadienes. Smolenice, Slovakia, June 2-7 (2013).


2012


2011


**Patents**


**Journal Referees**

- **S. S. Massoud**: Chrystrals, 2016.
- **S.S. Massoud**: J. Cluster Chem., 2016
- **S.S. Massoud**: RSC Advances, 2015.
- **S.S. Massoud**: Zeitschrift für anorganische und allgemeine Chemie (ZAAC), 2015.
• S.S. Massoud: *Chemical Papers*, 2015.
• R. S. Srivastava: *JACS*, 2015.
• R. S. Srivastava: *Organometallics*, 2015.
• Hui Yan: *Applied Catalysis*, 2015.
• August A. Gallo: *Chemosphere*, 2015.
• W. Xu: *Chemical Research in Toxicology*, 2014.
• S.S. Massoud: *RSC Advances* 2013.
• S.S. Massoud: *J. Electroanalytical* 2013.
• S.S. Massoud: *Polyhedron* 2013.
• R.S. Srivastava: *Applied Catalysis A*, 2013.
• **R.S. Srivastava:** ChemMedChem, 2013.
• **W. Xu:** Inorganica Chimica Acta, 2012.
• **W. Xu:** Biology, 2012.
• **W. Xu:** Chinese Journal of Chemistry, 2012.
• **W. Xu:** PLoS ONE, 2012.
• **S.S. Massoud:** Inorg. Chem. 2012.
• **S.S. Massoud:** Organometallic Chem. 2012
• **S.S. Massoud:** RSC Advances 2012.
• **S.S. Massoud:** New J. Chem. 2012.
• **S.S. Massoud:** Phosphorus, Sulfur, and Silicon and the Related Elements 2012.
• **S.S. Massoud:** Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 2012.
• **R.S. Srivastava:** RSC Advances, 2012.
• **W. Xu:** European Journal of Medicinal Chemistry, 2011.
• **S.S. Massoud:** J. Mol. Struct. 2011.
• **S.S. Massoud:** Polyhedron 2011.
• **S.S. Massoud:** Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2011.
• **R.S. Srivastava:** Inorganica Chimica Acta, 2011.
• **R.S. Srivastava:** Catalysis Communication, 2011.
• **R.S. Srivastava:** Polyhedron, 2011.
• **K. Knierim:** Journal of Chemical Education, 2010 - present
• **A.A. Gallo:** Journal of Chemical Education, 2010 - present

**Other**

**Organized Special Sessions and Conferences**

• **Salah S. Massoud:** Chair of the Coordination Chemistry Session of the 249th ACS National Meeting, Denver, CO, March 23-26 (2015).
• **K. Knierim:** Vice-Chair of Mechanisms of Pitting Corrosion symposium at the NACE Corrosion 2013 conference, Orlando, FL, March (2013).
• **K. Knierim:** Chair of Mechanisms of Pitting Corrosion symposium at the NACE Corrosion 2012 conference. Salt Lake City, UT, March (2012).
• **S.S. Massoud:** Organizer, Bioinorganic Sessions in SWRM-Regional Meeting. Baton Rouge, November 4-7 (2012).
• **A.A. Gallo**: Chair of the chemistry division of the Louisiana Academy of Sciences, (2000-pres).

**Undergraduate – Notable Figures**

- S.Y. Osman, student, and winner of the American Chemical Society (ACS) Outstanding Undergraduate Analytical Chemist Award, supervisor **F.R. Louka** (2015).
- **A.A. Gallo**, supervised over 40 undergraduate students during the period 2008-2013 in Chemistry 362/462- undergraduate research.
- **S.S. Massoud**, supervised over 34 undergraduate students during the period 2008-2013 in Chemistry 362/462- undergraduate research.
- **F.R. Louka**, supervised 14 undergraduate students during the period 2008-2013 in Chemistry 362/462- undergraduate research.

**Awards and Honors**

- **F.R. Louka**, Outstanding Teaching Award, Ray Authement College of Sciences (2016).
- **F.R. Louka**, Undergraduate Research Mentoring award 2014.
- **R.S. Srivastava**, Distinguished Professor Award, R.A.P. College of Sciences, 2013.
- **W. Xu**, Boudreaux/BORSF Professorship, 2008-2014
- **R.S. Srivastava**, Boudreaux/BoR Distinguished Professor, 2001-present.

**Other Professional Activities**

**2016**

- **F.R. Louka**, Economical Micro-scale Vacuum Assisted DigiFILTER Assembly in Chemistry Labs. STEP Technology grant, $13,901.
- **F.R. Louka**, Economical Micro scale Equipment in Chemistry Labs. STEP Technology grant, $16,843.
- **W. Xu**, Structural and Functional Studies of Photosystem I to Enhance Undergraduate Education through Research. UL Undergraduate Research Mini-Grant, $2,000.
- **R.L. Simon** (PI), **A.A. Gallo**. Organic Chemistry Laboratory Equipment Grant. STEP Technology Fund, $3666.
- **R.L. Simon** (PI). Purchase of Chemistry Laboratory and Demonstration Equipment”, STEP Technology grant, $501.64
- **T. Junk**, **A.A. Gallo**. Purchase of an Attenuated Total Reflectance (ATR) Tool for Chemistry to Conduct Infrared Spectroscopy on Solids, UL STEP Fund, $5,602.
- **K.D. Kierim**, director of regional Science Olympiad.

### 2015
- **T. Junk**, Raman Spectroscopy in Chemistry Labs, UL STEP program, $10,655.
- **W. Xu**, judge for Junior Division of Biochemistry Louisiana Region VI Science and Engineering Fair.
- **W. Xu**, judge for High School Senior Division on Protein Modeling. Louisiana Region II 26th Annual Science Olympiad.
- **W. Xu**, Judge for the Graduate Student Research & Project Symposium. University of Louisiana at Lafayette.

### 2014
- **W. Xu**, hosted Darren Jindal, a student from Stanford University, and two visiting professors from China: L. Huang and Y. Wei.
- **R.S. Srivastava**, served as Graduate faculty representative on the committee of C. U. Chukwunonye, M.S. candidate, Department of Physics.
- **A.D. Leonard**, classified the entire library of 2000+ questions from Smith, General, Organic, and Biological Chemistry, 2nd ed. for the McGraw Hill Connect Online Homework System by Bloom’s Taxonomy, difficulty level, topic, and subtopic.
- **A.A. Gallo**, served as Chemistry Section Chair of the Louisiana Academy of Sciences.
- **K. Knierim**, served as director of the regional Science Olympiad.
- **K. Knierim**, was elected secretary of the faculty senate.
2013

- **W. Xu**, Judge for the Graduate Student Research & Project Symposium, University of Louisiana at Lafayette, 2013.
- **E.R. Taylor**, interviewed by Jim Hummel, KATC TV for segment on ammonium nitrate and its hazards to communities, aired at 22:00 hr news, 4 Nov 2013.
- **A.A. Gallo**, visiting Professor, Beifang University of Nationalities, Yinchuan, China, May-June 2013.

2012

- **T. Junk, A.A. Gallo**, Step Grant Funding for Smart Classroom, 2012.
- **S.S. Massoud**, reviewed textbook: Inorganic Chemistry by Hagerman: Chapters 1, 2, 8, 9, 10 and 11, W.H. Freeman & Co, 2012.
- **S.S. Massoud**, editorial board of Dataset Papers in Materials Science, 2012-present
- **F.R. Louka**, upgraded the Analytical Lab, supervised procurement, installation, and methods development for new gas chromatograph and atomic absorption spectrophotometer funded by College, 2012.

2011

- **F.R. Louka**, Instructor Mini-Grant: Improvement of Teaching Techniques In Chemistry Lecture. $850, 2011.
- **F.R. Louka**, Instructor Mini-Grant: Enhancing The Analytical Chemistry Laboratories, $850, 2011.

**Pre-2009 and Continuing**

- **K. Knierim**, Director for Louisiana Region 2 Science Olympiad, 2000-Present.
- **E.R. Taylor**, judge, Parish regional science fair in Senior Biochemistry category, every year (generally March), 1984-present.
- **F.R. Louka**, advisor for pre-pharmacy students, between 40-50 students/semester. 2007-present.
- **F.R. Louka**, serves as a chair or member of several University and departmental committees, 2007-present.
- **F.R. Louka**, serves as a judge in the Science Olympiad, 2007-present.

**Offices Held and Professional Memberships**

- **F. R. Louka**, member, American Chemical Society (2007-Pres.)
- **S.S. Massoud**, member, American Chemical Society (2001-Pres.)
- **R.S. Perkins**, member, American Chemical Society (1967-pres.)

**Graduate Student Production**

**Graduate**

- A.K. Visvesvaraya, thesis evaluation. Technological University, Belagavi, Karnataka, India, 2015, **R.S. Srivastava**.
• R. Hill, Ethanol-Adenylyl Cyclase Pathway. Ph.D., LSU, 2015, Member of Committee: W. Xu.
• S. Singh, Title of the Final Defense: Spatial relationships based protein structure representation for alignment free comparison, local structural motif discovery and hierarchical classification, Member of Committee, 2015, W. Xu.
• A. Kascak, Ph.D. student, "Determining the Interactions Between the Ghost shrimp Lepidophthalmus louisianensis and Crude Oil." Member of committee, 2015, F.R. Louka.
• S. Sovine. Heterogeneous catalysis of glycerol to propylene glycol over copper chromite. Member of committee: MS, 2012, A.A. Gallo.

Funding

2016

2015
2014

- **W. Xu** (PI), **A.A. Gallo** (Co-PI), **R.S. Perkins** (Co-PI), **T. Junk** (Co-PI), **R.S. Srivastava** (Co-PI), R. Bajpai (Co-PI). Integration of a Fluorescence spectrometer into chemistry and biochemistry. BoR- ENH, $32,000, 2014.


2013


2012


2011