

# **Department of Chemistry**

## Summary

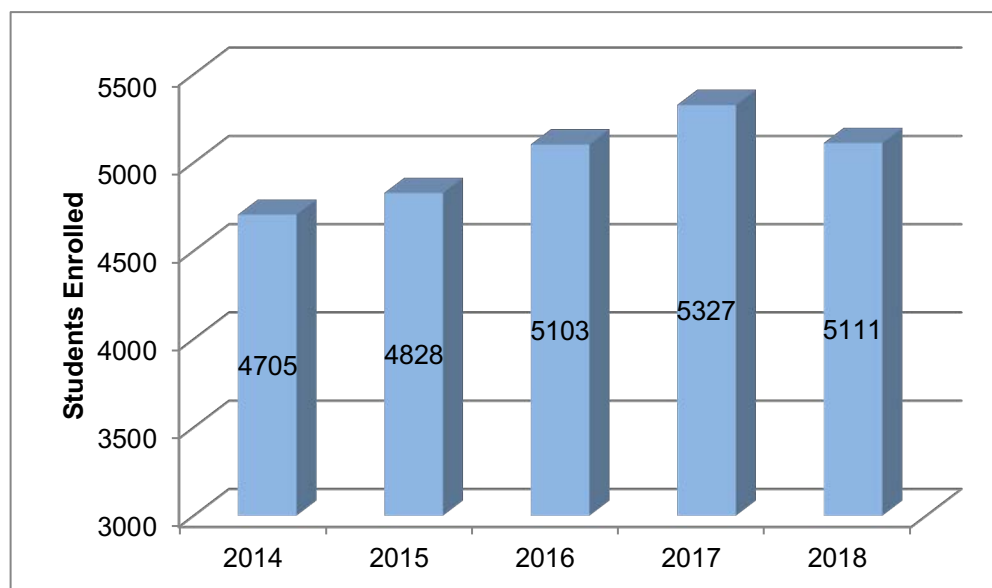
As a part of the Ray P. Authement College of Sciences, the UL Lafayette Department of Chemistry offers B.S. degrees in chemistry following three tracks: a track with American Chemical Society (ACS) certification, a non-certified track, and a pre-pharmacy track. In addition, the program offers minors in chemistry and forensics. As of Fall 2018, the Department of Chemistry employs of eleven tenured/tenure-track faculty, two instructors, two full time temporary emergency instructors, three adjunct faculty, and three staff members. Two full time instructor positions have remained unfilled for two years.

### Enrollments

Enrollment figures for students majoring in chemistry are shown below:

	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018
Freshman	60	63	39	56	66
Sophomore	30	30	28	19	36
Junior	38	39	32	39	30
Senior	33	37	41	29	30
<b>Grand Total</b>	<b>161</b>	<b>169</b>	<b>140</b>	<b>143</b>	<b>162</b>

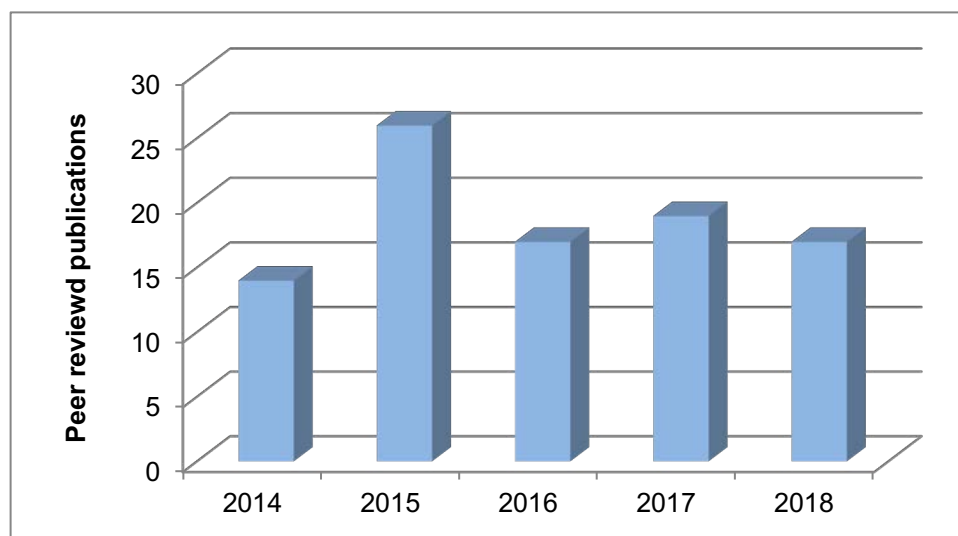
On average, we graduate 15-20 chemistry majors per year. Annual enrollments in departmental course offerings have returned to 2016 levels, from a high of 5,327 students in 2017 to 5,111 students in 2018 (Spring 2018: 2,292; Summer: 372; Fall: 2,447). This was primarily due to reduced enrollments in Spring 2018.



**Students Enrolled in Chemistry Classes by Calendar Year, 2014 - 2018**

## Peer-Reviewed Journal Publications

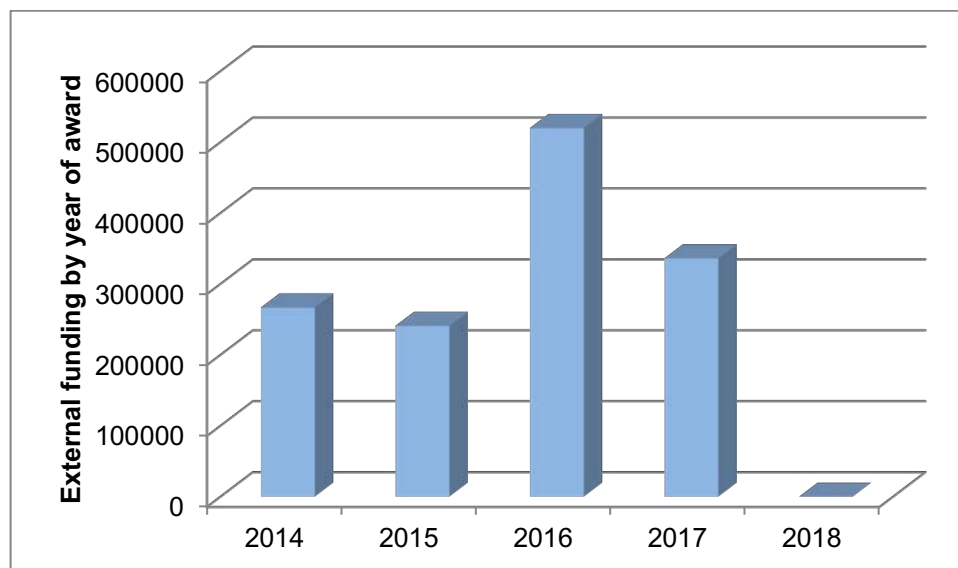
After one hire, the Department of Chemistry currently has eleven research-active faculty members (Gallo, Junk, Karsili, Knierim, Louka, Massoud, Srivastava, Taylor, Wang, Xu, Yan). Between 2014 and 2018, the Department of Chemistry produced 93 peer-reviewed publications, most of which appeared in prestigious journals. This amounts to 1.69 publications per research active faculty per year over the past five years. It should be noted that, in the absence of a graduate program during 2012-2018, virtually all research was accomplished with the participation of undergraduate students.



Peer-reviewed Publications by Calendar Year, 2014 - 2018

## External Funding

Members the faculty of the Department of Chemistry served as Principal Investigators (Project Directors) for \$1.36 M in external funding awarded between 2014 and 2018. 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. In addition, significant funding has been secured by faculty members in the past by co-authoring proposals with PI's external to the Department of Chemistry. Unfortunately, while there has been ongoing funding from multi-year projects in 2018, no new awards can be reported.



**Funding by Calendar year, 2013 - 2018, Reflecting Starting Dates of External Awards by Chemistry Faculty Acting as Lead-PI's**

### Presentations

Between 2014 and 2018, the faculty of the Department of Chemistry has given 74 presentations, or 1.35 presentations per research active faculty member per year. Many of these presentations were given to international audiences, 22 were by invitation.

### Noted Accomplishments

Three of our faculty (Louka, Xu, Massoud) hold Distinguished Professorships. In addition, members of our faculty serve as editors or members of the editorial board of 28 journals.

### Editorship

- **Louka, F.R.**, Editorial board member, *Environments*, 2018.
- **Louka, F.R.**, Editorial board member, *Advances in Chemistry*, 2018.
- **Louka, F.R.**, member of the Editorial Board, *International Journal of Chromatography & Separation Techniques*, 2017-Present.
- **Louka, F.R.**, member of the Editorial Board, *Journal of Medicinal Chemistry and Drug Design (JMCDD)*, 2017-Present.
- **Massoud, S.S.**, Reviewer and Editor, *Frontiers in Chemistry*, 2018.
- **Massoud, S.S.**, Editorial board member, *MAYFEB Journal of Chemistry*, 2018.
- **Massoud, S.S.**, Editorial board member, *Jacobs Journal of Structural Chemistry*, 2018.
- **Massoud, S.S.**, Editorial board member, *Journal of Advances in Chemistry*, 2018.
- **Massoud, S.S.**, Editorial board member, *Asian Chemistry Letters (ACL)*, 2018.

- **Massoud, S.S.**, Invited as Guest Editor, *Advances in Anticancer by Coordination Compounds*, [Special Issue] *Crystals*. 2017.
- **Massoud, S.S.**, Editor for an e-book series, *Material Science: Current and Future Developments* by Bentham Science Publishers, 2015.
- **Massoud, S.S.**, Editorial Board, *Magnetochemistry Journal*, 2015.
- **Massoud, S.S.**, Editorial Board, *Journal of Advances in Chemistry*, 2014.
- **Massoud, S.S.**, Editorial Board, *Journal of Modern Chemistry and Applications (JMCA)*, 2014.
- **Massoud, S.S.**, Editorial Board, *Dataset Papers in Materials Science*, 2011-Present
- **Srivastava, R.S.**, Editorial board member, *Pure and Applied Chemical Sciences*, 2018.
- **Srivastava, R.S.**, Editorial board member, *Peertechz*, 2018.
- **Srivastava, R.S.**, Editor, *Inorganic Journal of Chemistry*, 2006-Present.
- **Srivastava, R.S.**, Editor, *Electronic Journal of Chemistry*, 2004-Present.
- **Wang, Y.**, Editorial board member, *Journal of Bioanalysis & Biomedicine*, 2017-Present.
- **Wang, Y.**, Editorial board member, *Polymers*, 2018-Present.
- **Wang, Y.**, Editorial board member, *Journal of Bioanalysis & Biomedicine*, 2017.
- **Xu, W.**, Editorial board member, *Journal Modern Chemical Science*, 2018.
- **Xu, W.**, Editorial board member, *Journal of Materials*, 2012-Present.
- **Xu, W.**, Editorial board member, *Computational Biology and Bioinformatics*, 2012-Present.
- **Xu, W.**, Editorial board member, *Journal of Biological Medicine*, 2015-Present.
- **Xu, W.**, Editorial board member, *Journal of Molecular and Translational Medicine*, 2015-Present.
- **Yan, H.**, Editorial board member of *The Journal of Chemistry and Allied Research*, 2018-pres.

## **Publications, Presentations**

### **Journal Papers Published**

**2018**

1. Delavault, A., Fronczek, F.R., **Xu, W.**, & **Srivastava, R.S.** (2018). Ionic  $\square^5$ -Cp Ruthenium (II) complexes as potential anticancer agents. *Journal of Organometallic Chemistry*, **875**, 29-34. doi:10.1016/j.jorganchem.2018.08.027
2. Mieklejohn, V., Depan, D., Murru, S., Perkins, R.S., Fronczek, F.R., & **Srivastava, R.S.** (2018). Ru(III)-TMSO complexes containing azole-based ligands: synthesis and cytotoxicity study. *New Journal of Chemistry*, **42**(9), 6858-6866. doi:10.1039/C7NJ03267F
3. **Karsili, T.N.V.**, Thodika, M., Nguyen, L. & Matsika, S. (2018). The origin of fluorescence in DNA thio-analogues. [Special Issue] *Chemical Physics*, **515**, 434-440. doi:10.1016/j.chemphys.2018.08.049

4. **Karsili, T.N.V.**, Fennimore M.A., & Matsika, S. (2018). Electron-induced origins of prebiotic sugars: Self-reactions of methanol anion clusters. *Physical Chemistry Chemical Physics*, **20**(18), 12599-12607. doi:10.1039/C8CP00148K
5. **Karsili, T.N.V.**, Marchetti, B., & Matsika, S. (2018). Origins of Photodamage in pheomelanin constituents: Photochemistry of 4-hydroxybenzothiazole. *Journal of Physical Chemistry A*, **122**(8), 1986-1993. doi:10.1021/acs.jpca.7b09690
6. Gao, X., Xie, X.-J., Hsu, F.-N., Li, X., Liu, M., Hemba-Waduge, R.U.S., **Xu, W.**, & Ji, J.-Y. (2018). CDK8 mediates the dietary effects on developmental transition in *Drosophila*. *Developmental Biology*, **444**(2), 62-70. doi:10.1016/j.ydbio.2018.10.001
7. Ge, H., Fang, L., Huang, X., Wang, J., Chen, W., Zhang, Y., Wang, X., Sui, N., **Xu, W.**, He, Q. & Wang, Y. (2018). Activation of the oxidative pentose phosphate pathway is critical for photomixotrophic growth of a *hik33*-deletion mutant of *Synechocystis* sp. PCC 6803. *Proteomics*, **18**(20), 180004. doi:10.1002/pmic.201800046
8. Chen, W., Fang, L., Huang, X., Ge, H., Liu, Y., Wang, J., Wang, X., Zhang, Y., **Xu, W.**, & Wang, Y. (2018). Systematic identification of light-regulated cold-responsive proteome in a model cyanobacterium. *Journal of Proteomics*, **179**, 100-109. doi:10.1016/j.jprot.2018.03.006
9. **Taylor, E.R.** (2018). If technological intelligent extraterrestrials exist, what biological traits are *de rigueur*. *Life Sciences in Space Research*, **17**, 15-22. doi:10.1016/j.lssr.2018.01.004
10. Zhang, X., Zhao, R., Wu, Q., Li, W., Shen, C., Ni, L., **Yan, H.**, Diao, G., & Chen, M. (2018). Ultrathin WS<sub>2</sub> nanosheets vertically embedded in hollow mesoporous carbon framework - a triple-shelled structure with enhanced lithium storage and electrocatalytic properties. *Journal of Materials Chemistry A*, **6**(39), 19004-19012. doi:10.1039/c8ta05584j
11. Mautner, F.A., Traber, M., Fischer, R.C., Torvisco, A., Reichmann, K., Speed, S., Vicente, R. & **Massoud, S.S.** (2018). Synthesis and structural characterization of isothiocyanato-4-methoxypyridine-cobalt(II) complexes with diverse geometries and a bridged 1D coordination polymer showing metamagnetic transition. *Polyhedron*, **154**, 436-442. doi:10.1016/j.poly.2018.08.022
12. Kettenmann, S.D., **Louka, F.R.**, Marine, E., Fischer, R.C., Mautner, F.A., Kulak, N., & **Massoud, S.S.** (2018). Efficient Artificial Nucleases for Mediating DNA Cleavage Based on Tuning the Steric Effect in the Pyridyl Derivatives of Tripod Tetraamine-Cobalt(II) Complexes. [Special Issue] *European Journal of Inorganic Chemistry*, **2018**(20-21), 2322-2338. doi:10.1002/ejic.201800276
13. **Massoud, S.S.**, Henary, M.M., Maxwell, L., Martín, A., Ruiz, E., Vicente, R., Fischer, R.C., Mautner, F.A. (2018). Structure, magnetic properties and DFT calculations of azido-copper(II) complexes with different azido-bonding, nuclearity and dimensionality. *New Journal of Chemistry*, **42**(4), 2627-2639. doi:10.1039/c7nj04150k
14. **Massoud, S.S.**, **Louka, F.R.**, Ducharme, G.T., Fischer, R.C., Mautner, F.A., Vančo, J., Herchel, R., Dvořák, Z., & Trávníček, Z. (2018). Copper(II) complexes based on tripodal pyrazolyl amines: Synthesis, structure, magnetic properties and anticancer activity. *Journal of Inorganic Biochemistry*, **180**, 39-46. doi:10.1016/j.jinorgbio.2017.11.023

15. **Massoud, S.S.**, Fischer, R.C., Mautner, F.A., Parfait, M.M., Herchel, R., & Trávníček, Z.J. (2018). Pentacoordinate Cobalt(II) complexes with neutral tripodal *N*-donor ligands exhibiting slow relaxation of magnetism. *Inorganica Chimica Acta*, **471**, 630-639. doi:10.1016/j.ica.2017.11.036
16. Mautner, F.A., Berger, C., Fischer, R.C., **Massoud, S.S.**, & Vicente, R. (2018). Synthesis, structural characterization and magnetic properties of Mn(II) isothiocyanate complexes based on pyridine-*N*-oxide derivative co-ligands. *Polyhedron*, **141**, 17-24. doi:10.1016/j.poly.2017.11.022
17. Klerks, P.L., Kascak, A., Cazan A.M., Deb Adhikary, N., Chistoserdov, A., Shaik, A., Osman, S. Y. & Louka, F.R. (2018). Effects of the razor clam *Tagelus plebeius* on the fate of petroleum hydrocarbons; a mesocosm experiment. *Archives of Environmental Contamination and Toxicology*, **75**(2), 306-315. doi:10.1007/s00244-018-0515-0

## 2017

18. **Massoud, S.S.**, Fischer, R.C., Mautner, F.A., Kettenmann, S.D., Kulak, N.J. (2017). Development of Efficient Artificial Nucleases for DNA Cleavage Based Pyridyl Tripod Cobalt(II) Complexes. *Journal of Biological Inorganic Chemistry*, **22**(Sup1), 247. doi:10.1007/s00775-017-1475-y
19. **Louka, F.R.**, **Massoud, S.S.**, Haq, T.K., Koikawa, M., Mikuriya, M., Omote, M., Fischer, R.C., & Mautner, F.A. (2017). Synthesis, Structural Characterization and Magnetic Properties of One-dimensional Cu(II)-azido Coordination Polymers. *Polyhedron*, **138**, 177-184. doi:10.1016/j.poly.2017.09.035
20. Mautner, F.A., Traber, M., Fischer, R.C., **Massoud, S.S.**, & Vicente, R. (2017). Synthesis, Crystal Structures, Spectral and Magnetic Properties of 1-D Polymeric Dicyanamido Metal(II) Complexes. *Polyhedron*, **138**, 13-20. doi:10.1016/j.poly.2017.09.004
21. Mautner, F.A., Berger, C., Fischer, R.C., **Massoud, S.S.**, & Vicente R. (2017). Synthesis, Structural Characterization and Magnetic Properties of Polymeric Azido Mn(II) Complexes Based on Methylpyridine-*N*-oxide Co-ligands. *Polyhedron*, **134**, 126-134. doi:10.1016/j.poly.2017.06.025
22. Mautner, F.A., Berger, C., Gspan, C., Sudy, B., Fischer, R.C., & **Massoud, S.S.** (2017). Pyridyl and Triazole Ligands Directing the Assembling of Zinc(II) into Coordination Polymers with Different Dimensionality Through Azides. *Polyhedron*, **130**, 136-144. doi:10.1016/j.poly.2017.04.012
23. **Massoud, S.S.**, Williams, G.F., **Louka, F.R.**, Henary, M.M., Herchel, R., Trávníček, Z., Fischer, R.C., & Mautner, F.A. (2017). Croconato-bridged copper(II) complexes: synthesis, structure and magnetic characterization. *New Journal of Chemistry*, **41**, 3846-3856. doi:10.1039/C6NJ03943J
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25. Sanford, G., Walker, K.E., Fronczek, F.R., & **Junk, T.** (2017). Novel organotellurium heterocycles derived from bis(2-Aminophenyl) ditelluride. *Journal of Heterocyclic Chemistry*. **54**, 575-579. doi:10.1002/jhet.2624

26. Liu, Y., Tzeng, N., Liu, Y.C., & **Junk, T.** (2017). Normal mode analysis of isotopic shifts in Raman spectrum of TNT-d5. *Journal of Molecular Structure*, **1143**, 438-443. doi:10.1016/j.molstruc.2017.04.111
27. Ge, H., Fang, L., Huang, X., Wang J., Chen, W., Liu, Y., Zhang, Y., Wang, X., **Xu, W.**, He, Q., & Wang, Y. (2017). Translating Divergent Environmental Stresses into a Common Proteome Response through Hik33 in a Model Cyanobacterium. *Molecular & Cellular Proteomics*, **16**, 1258-1274. doi:10.1074/mcp.M117.068080
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29. Fang, L., Ge, H., Huang, X., Liu, Y., Lu, M., Wang, J., Chen, W., **Xu, W.**, & Wang, Y. (2017). Trophic Mode-Dependent Proteomic Analysis Reveals Functional Significance of Light-Independent Chlorophyll Synthesis in *Synechocystis* sp. PCC 6803. [Special Issue] *Molecular Plant*, **10**(1), 73-85. doi:10.1016/j.molp.2016.08.006
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39. Herchel, R., Dvořák, Z., Trávníček, Z., Mikuriya, M., **Louka, F.R.**, Mautner, F.A., **Massoud, S.S.** (2016). Cobalt(II) and Copper(II) Covalently and Non-covalently Dichlorido-bridged Complexes of an Unsymmetrical Tripodal pyrazolyl-pyridyl Amine Ligand: Structures, Magnetism and Cytotoxicity. *Inorganica Chimica Acta*, **451**, 102-110. doi:10.1016/j.ica.2016.06.030
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  45. Mautner, F.A., Berger, C., Fischer, R.C., & **Massoud, S.S.** (2016). Synthesis, Characterization and Luminescence Properties of Zinc(II) and Cadmium(II) Pseudohalide Complexes Derived from Quinoline-*N*-oxide. *Inorganica Chimica Acta*, **439**, 69-76. doi:10.1016/j.ica.2015.10.004
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  48. Galhenage, R.P., Xie, K., **Yan, H.**, Seuser, G.S., & Chen, D.A. (2016). Understanding the Growth, Chemical Activity, and Cluster-Support Interactions for Pt-Re Bimetallic Clusters on TiO<sub>2</sub>(110). *Journal of Physical Chemistry C*, **120**, 10866-10878. doi:10.1021/acs.jpcc.6b01041
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  50. Hill, R., **Xu, W.**, & Yoshimura, M. (2016). Role of an Adonolyl Cyclase Isoform in Ethanol's Effect on cAMP Regulated Gene Expression in NIH 3T3 Cells. *Biochemistry and Biophysical Reports*, **8**, 162-167. doi:10.1016/j.bbrep.2016.08.025

51. Liu, J.-Z., **Xu, W.**, Christoserdov, A., & Bajpaj, R.K. (2016). Glycerol Dehydratases: Biological Structures, Catalytic Mechanisms and Industrial Applications in 1,3-Propanediol Production by Naturally Occurring and Genetically Engineered Bacterial Strains. *Applied Biochemistry Biotechnology*, **179**, 1073-1100. doi:10.1007/s12010-016-2051-6
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## 2015

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### Book Chapters

1. **Xu, W.** & **Wang, Y.** (2017). Function and Structure of Cyanobacterial Photosystem I. In: Hou, H., Najafpour, M., Moore, G., Allakhverdiev, S. (eds). *Photosynthesis: Structures, Mechanisms, and Applications*, 111-168. Cham, Switzerland: Springer.  
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2. **Junk, T.** (2016). Chapter 2: Recent Advances in the Preparation and Characterization of Te, N-Containing Heterocycles. In: Grey, D. (ed). *Tellurium: Properties, Uses and Research*. 107-136. Hauppauge, NY: Nova Science Publishers.

### Conference Papers (Published)

1. **Louka, F.R.**, **Junk, T.**, & **Massoud, S.S.** (2017). DNA Cleavage by Bicompartamental Dinuclear Metal(II) Complexes. *18<sup>th</sup> International Conference on Biological Inorganic*

- Chemistry, Florianópolis, Brazil, July 31-August 4, 2017. Journal of Biological Inorganic Chemistry*, **22**(Sup1).
2. Nazaretski, E., **Yan, H.**, Lauer, K., Huang, X., Xu, W., Kalbfleisch, S., Yan, H., Li, L., Bouet, N., Zhou, J., Shu, D., Conley, R., & Chu, Y. S. (2016). Nm-scale spatial resolution x-ray imaging with MLL nanofocusing optics: Instrumentational requirements and challenges. In: Thieme, J. & Siddons, D.P. (eds). *ICXOM23: International Conference on X-ray Optics and Microanalysis. AIP Conference Proceedings*, **1764**, 040001. doi:10.1063/1.4961143
  3. **Massoud, S.S.** (2015). Recent Developments of the Fixation of Atmospheric CO<sub>2</sub> by Transition Metals and Lanthanide Complexes (Invited Plenary Lecture). *The 2<sup>nd</sup> International Conference on Past and Present Research Systems of Green Chemistry. Organic Chemistry: Current Research*, **4**(2). doi:10.4172/2161-0401.C1.007
  4. **Massoud, S.S., Louka, F.R., Perkins, R.**, Mautner F.A., Terenzi H. (2015). Cobalt(II) Complexes as Efficient Artificial Nucleases for Hydrolytic Cleavage of DNA. In: *249<sup>th</sup> ACS National Meeting & Exposition, Denver, CO, March 22-26, 2015*.
  5. **Louka, F.R.**, Mautner, F.A., **Massoud, S.S.** (2015). Carbonato-bridged Copper(II) Complexes formed via Fixation of Atmospheric CO<sub>2</sub>. In: *249<sup>th</sup> ACS National Meeting & Exposition, Denver, CO, March 22-26, 2015*.
  6. Jefferson, A., **Srivastava, R.S.** (2015). Re-catalyzed deoxydehydration of diols to olefins using hydroaromatic as reducing agent. In: *The 6<sup>th</sup> Joint Great Lakes/Central Regional Meeting of the American Chemical Society, Grand Rapids, MI, May 27-30, 2015*. ID:51
  7. Murru, S., **Srivastava, R.S.** (2015). Synthesis of Organo Nitrogen Compounds and N-Heterocycles via Allylic C-H Amination. In: *249<sup>th</sup> ACS National Meeting & Exposition, Denver, CO, March 22-26, 2015*. ID:2125317
  8. Murru, S., Lott, C.S., McGough, B., **Srivastava, R.S.** (2015). Fe-Catalyzed Synthesis of 3-Aryl-4-Propenyl Oxazolidines and N-Aryl Aminoalcohols. In: *ACS Joint Southeastern/Southwest Regional Meeting, Memphis, TN, November 4-7, 2015*.
  9. Kascak, A., Klerks, P.L., **Louka, F.R.**, Satbhai, K.M., Graziano, A., Osman, S. (2015). The interaction between benthic bioturbators and microbes on the fate of hydrocarbons in sediment - 1, sediment characteristics and PAH levels. In: *Gulf of Mexico Oil Spill & Ecosystem Science Conference, Houston, TX, February 16-19, 2015*.
  10. Morandi, P., Osman, S., Klerks P.L., **Louka, F.R.** (2015). Investigating the effect of bioturbators vs. ecofriendly adsorbents on pyrene concentrations. In: *Society of Environmental Toxicology and Chemistry (SETAC), South Central Regional Annual Meeting, Lafayette, LA, May 28-30, 2015*.
  11. **Louka, F.R.**, Osman, S., Morandi, P., Klerks, P.L. (2015). Comparing the effect of ecofriendly adsorbents and bioturbators on the concentration pyrene. In: *The 2<sup>nd</sup> International Conference on Past and Present Research Systems of Green Chemistry, Orlando, FL, September 14-16, 2015*.

### Colloquia and Seminar Talks

1. **Karsili, T.N.V.** *Modelling the photophysics and photochemistry of biological chromophores*. University of Louisiana at Lafayette. Lafayette, LA, February 20, 2018.

2. **Karsili, T.N.V.** *Modelling the photophysics of biological chromophores: As step towards cancer therapy and prevention.* University of Louisiana at Lafayette. Lafayette, LA, August 29, 2018.
3. **Karsili, T.N.V.** *Mechanistic insights into the photoinduced DNA and RNA damage in the gas phase and in bulk solution.* Faraday Discussions: Photoinduced processes in nucleic acids and proteins. Kerala, India. January 13, 2018.
4. **Leonard, A.D.** *Growing New Online Courses with Sapling Learning.* Macmillan Ed. Tech Week. New York, NY, July 12, 2018.
5. **Yan, H.** *Research activities in Yan's energy and environment Surface Lab (YeeS Lab)* (Invited Talk). 2017 Faculty Retreat-IMRI. Lafayette, LA, October 26, 2017.
6. **Louka, F.R.** *Comparing the effect of ecofriendly adsorbents and bioturbators on the concentration pyrene.* International Conference of Green Chemistry, Invited talk. Orlando, FL. September 14-16, 2015.
7. **Xu, W.** Invited talk on undergraduate student research. LS-LAMP/UBMS Program, University of Louisiana at Lafayette. Lafayette, LA, February 27, 2014.
8. **Taylor, E.R.** *How not to Burn Brownies.* Smart Festival (UL Lafayette Sponsored). Lafayette, LA, October 25, 2013.
9. **Gallo, A.A.** *Biodiesel Synthesis from Alligator Fat.* Beifang University of Nationalities. Yinchuan, China, June 2013.
10. **Massoud, S.S.** *Development of Efficient Artificial Nucleases for Dna Cleavage. Mononuclear Cobalt(II) Complexes Based Pyridyl Tripod Amines.* Kumamoto University. Kumamoto, Japan, October 14, 2013.
11. **Massoud, S.S.** *Metal-Ion Binding Properties in Nucleoside Monophosphates and Their Constituents.* Shimane University. Matsue, Japan, October 16, 2013.
12. **Massoud, S.S.** *Metal-Ion Binding Properties in Nucleoside Monophosphates and Their Constituents.* Okayama University of Science. Okayama, Japan, October 17, 2013.
13. **Massoud, S.S.** *Metal-Ion Binding Properties in Nucleoside Monophosphates and Their Constituents.* Kwansei Gakuen University. Sanda, Japan, October 18, 2013.

#### Invited Conference and Workshop Talks

1. **Yan, H.** *Probing mesoporous ceria surfaces with VT-DRIFT.* Faculty Retreat-IMRI. Lafayette, LA, December 10, 2018.
2. **Massoud, S.S.** *DNA cleavage by efficient artificial nucleases and role of the steric effect.* Regional Center of Advanced Technologies and Materials, Palacký University Olomouc. Olomouc, Czech Republic, September 12, 2018.
3. **Massoud, S.S.** *DNA Cleavage by efficient artificial nucleases and role of the steric effect.* Institute of Physical and Theoretical Chemistry, Graz University of Technology. Graz, Austria, September 10, 2018.
4. **Massoud, S.S.** *Cancer and Cu(II) complexes as potential anticancer agents.* Department of Chemistry, Alexandria University. Alexandria, Egypt, July 18, 2018.
5. **Massoud, S.S.** *DNA Cleavage by efficient artificial nucleases and role of the steric effect.* The American University at Cairo (AUC), Department of Chemistry, Cairo-Egypt, July 4, 2018.



6. **Massoud, S.S.** *Development of Efficient Artificial Nucleases for DNA Cleavage by Metal(II) Complexes.* Invited Speaker, Alexandria University. Alexandria, Egypt, September 23-27, 2017.
7. **Massoud, S.S.** *Development of Efficient Artificial Nucleases for DNA Cleavage Based on Pyridyl Tripod Cobalt(II) Complexes.* Invited Speaker, 18<sup>th</sup> International Conference on Biological Inorganic Chemistry, ICBIC-18. Florianópolis, Brazil, July 31-August 5, 2017.
8. **Wang, Y.**, *Controlled polymer synthesis towards higher level of perfection.*, Invited by Prof. John Pojman, Department of Chemistry, Louisiana State University. Baton Rouge, LA, 2017.
9. **Masoud, S.S.** *Development of Efficient Artificial Nucleases for DNA Cleavage by Metal(II) Complexes.* Invited Speaker, Louisiana State University. Baton Rouge, February, 2017.
10. **Louka, F.R.**, Malinski, T. *Assessing nano-sensors in determination of the degree of endothelial dysfunction and lifespan of the cardiovascular system.* Invited speaker, Chair of a session, World Congress and Expo on Nanotechnology and Nanoengineering. Dubai, UAE, March 25-29, 2017
11. **Yan, H.** *STEM-my journey, my research, and you?* Invited talk, LS-LAMP. Lafayette, LA, October 26, 2017
12. **Xu, W.** *Function and Structure of CBP and NCOA.* Beifang University of Nationality. Yinchuan, China, June 23, 2016.
13. **Srivastava, R.S.** *Metal-catalyzed asymmetric allylic amination.* Keynote speaker, International Conference on Industrial Chemistry. New Orleans, LA, June 27-28, 2016.
14. **Srivastava, R.S.** *Metal-catalyzed asymmetric C-H amination of alkenes.* 27<sup>th</sup> International Conference on Organometallic Chemistry (ICOMC). Melbourne, Australia, July 17-22, 2016.
15. **Massoud, S.S.** Keynote lecturer. International Conference of Polymer Chemistry. Atlanta, GA, November 14-16, 2016.
16. **Massoud, S.S.** *Artificial nucleases for efficient DNA cleavage by mono- and dinuclear metal(II) complexes.* The 6<sup>th</sup> International Conference on Nuclei Acid-Protein Chemical and Structural Biology for Novel Drug Discovery. Chingdu, China, May 26-28, 2016.
17. **Massoud, S.S.** *Recent Developments of the Fixation of Atmospheric CO<sub>2</sub> by Transition Metals and Lanthanide Complexes.* 2<sup>nd</sup> International Conference on Past and Present Research Systems of Green Chemistry. Orlando, FL USA, September 14-16, 2015.
18. **Xu, W.** *Function and Structure of c-Myb and CBP.* Invited talk, Ningxia Medical School. Yinchuan, China, July 1, 2015.
19. **Xu, W.** *Function and Structure of Cyanobacterial Photosystem I Complex.* Beifang University of Nationality, Invited talk. Yinchuan, China, June 28-July 3, 2015.
20. **Xu, W.** *Proteins from Fundamentals to Function.* Poster Presentation, Gordon Research Conferences. Holderness, NH, June 14-19, 2015.
21. **Massoud, S.S., Louka, F.R.,** Mautner, F.A., Naka, Y., Mikuriya, M. *Squarato-Bridging Copper(II) Complexes Derived from Polypyridyl Amine Ligands.* Symposium

- on Coordination Compounds as Molecular Magnetic Materials. Kwansai Gakuin University - School of Science and Technology. Sanda, Japan, October 11, 2014.
22. M. Mikuriyaa, Y. Naka, **Junk, T.**, **Massoud, S.S.**, F.A. Mautner. *Dinuclear Copper(II) Complexes of 2,6-Bis[bis(pyridine-2-ylmethyl)aminomethyl]-4-methylphenol*. Symposium on Coordination Compounds as Molecular Magnetic Materials. Kwansai Gakuin University - School of Science and Technology. Sanda, Japan, October 11, 2014.
  23. **Massoud, S.S.** *Development of Efficient Artificial Nucleases for DNA Cleavage. Mononuclear Cobalt(II) Complexes Based Pyridyl Tripod Amines*. Invited, Kumamoto Seminar on Complex-based Supramolecule. Kumamoto University - Graduate School of Science and Technology. Kumamoto, Japan, October 9, 2013.
  24. **Xu, W.** *Biochemistry research and education*. Beifang University of Nationality. Yinchuan, China, June 3-8, 2013.
  25. **Massoud, S.S.**, Mautner, F.A. *1D and 2D Cadmium Polymers with Alternative Bridged Azido Bonding Modes*. Invited, Symposium on Coordination Compounds as Molecular Magnetic Materials. Kwansai Gakuin University - School of Science and Technology. Sanda, Japan, October 20, 2013.

## Contributed Presentations

### 2018

1. Perdrier, C., Tran, P., Nguyen, V., Huynh, B. Nelson A. & **Gallo, A.A.** *Studies in the synthesis of L-fructose from L-arabinose*. 92<sup>nd</sup> Louisiana Academy of Sciences Meeting. Alexandria, LA, March 16, 2018.
2. Fox, E., Luo, L., Rodriguez, S., & **Yan, H.** *Synthesis of mesoporous metal oxides-an example for undergraduate research*. Southwest Catalysis Society and North American Catalysis Society. Baton Rouge, LA, December 13, 2018.
3. Chen, D., Galhenage, R.P., **Yan, H.**, Le, D., Rawal, T.B., & Rahman, T.S. *Understanding the growth and chemical activity of titania-supported MoS<sub>x</sub> clusters*. AVS International Symposium. Long Beach, CA, October 22-26, 2018.
4. **Yan, H.** *Synthesis and characterization of mesoporous ceria-based materials as potential catalysts for LT-WGSR*. Catalysis Gordon Research Conference. New London, NH, June 26, 2018.
5. LaCoste, J., Khamidullina, N.G., Luo, L.A., & **Yan, H.** *Synthesis and characterization of mesoporous CeO<sub>2</sub>*. Louisiana Academy of Sciences. Alexandria, LA, March, 2018.
6. Arcement, A., **Louka, F.R.**, & Konur, C.L. *The relation between algae and natural antioxidant*. 256<sup>th</sup> ACS National Meeting. Boston, Massachusetts, August 2018.
7. **Louka, F.R.** & Malinski T. *Nano- and micro-sensors in determination of cardiovascular system lifespan*. International Conference on Nanomedicine and Nanotechnology. Rome, Italy, August 21-22, 2018.
8. Silar, N.L., Larson, B.A., Fronczek, F.R. & **Junk, T.** *Advances in the synthesis of Te, N-containing heterocycles: Potential building blocks for supramolecular frameworks*. 255<sup>th</sup> National Meeting of the American Chemical Society. New Orleans, LA, March 18-22, 2018.
9. Franklin, D.V., Goutierrez, K.L., Sandhu, H.S., Fronczek, F.R., & **Junk, T.** *Synthesis and self-assembly of benzo-1,3-tellurazoles*. 73<sup>rd</sup> Annual Southwest Regional Meeting

of the American Chemical Society. Little Rock, AR, November 7-10, 2018.

## 2017

10. Walker, K.E., Silar, N.L., Froczek, F.R., & **Junk, T.** (Presenter). *Synthesis of Organotellurium Precursors for Supramolecular Frameworks*. 90<sup>th</sup> Meeting of the Louisiana Academy of Sciences. Ruston, LA, March 11, 2017.
11. **Louka, F.R.** (Presenter), **Junk, T.**, & **Massoud, S.S.** *DNA Cleavage by Bicompartamental Dinuclear Metal(II) Complexes*. International Conference on Biological Inorganic Chemistry. Florianópolis, Brazil, July 31-August 5, 2017.
12. K. E. Walker, N. L. Silar, F.R. Froczek, & **Junk, T.** (Presenter). *Advances in the Synthesis of Organotellurium Heterocycles: Towards Novel Supramolecular Frameworks*. 73<sup>rd</sup> Annual Southwest Regional Meeting of the American Chemical Society. Lubbock, TX, October 29-November 1, 2017.
13. **Srivastava, R.S.** *Transition metal-catalyzed C-H amination of alkenes*. 18<sup>th</sup> Tetrahedron Symposium. Budapest, Hungary, June 26-30, 2017.
14. **Louka, F.R.**, Malinski, T. *Endothelial Cells Dysfunction and Cardiovascular System Life Span*. International Conference on Chemistry Progress for Sustainable Development (ICCPSD 2017) and Swedish Institute. Alexandria, Egypt, 2017.
15. **Yan, H.** *Nanoporous materials and their applications*. Proctor Academy, Gordon Research Conference. Andover, NH, August 2017.
16. Barbier, N., LaCoste, J., **Yan, H.** *Spectroscopic studies on CTAB-lysozyme-Vitamin C*. 253<sup>rd</sup> American Chemical Society National Meeting. San Francisco, CA, April 2017.

## 2016

17. Murru, S., **Srivastava, R.S.** *Pd-catalyzed synthesis of 2-acylindolines via intramolecular Heck-coupling and C-H oxidation*. ACS Southwest Regional Meeting (SWRM). Galveston, TX, November 10-13, 2016.
18. Odoux, A., Jindal, D., Tamas, T.C., Lim, B.W.H., Pollard, D., **Xu, W.** *Experimental and molecular dynamics studies showed the CBP KIX mutation affects the stability of CBP:c-Myb complex*. 90<sup>th</sup> Annual Meeting of Louisiana Academy. Alexandria, LA, April 23, 2016.
19. Luo, L., Chistoserdov, A., Savikhin, S., Golbeck, J.H., **Xu, W.** *A hydrogen bond to the A0 chlorophyll a molecule of Photosystem I influences the spectral properties of A0*. American Society of Microbiology South Central Branch Annual Meeting. Lafayette, LA, October 28-29, 2016.
20. **Gallo, A.A.**, Davis, J. *Selective reduction of carbonyl and nitro groups by fruits and vegetables*. The 89<sup>th</sup> Meeting of the Louisiana Academy of Sciences. Alexandria, LA, April 23, 2016.
21. Martin, K., **Gallo, A.A.**, **Junk, T.** *Development of a Supercritical Flow Reactor and its Application for Biodiesel Preparation*. The 89<sup>th</sup> Meeting of the Louisiana Academy of Sciences. Alexandria, LA, April 23, 2016.
22. **Gallo, A.A.**, **Junk, T.** *Biodiesel from alligator fat using supercritical methanol via laboratory scale flow reactor*. International Conference on Industrial Chemistry. New Orleans, LA, June 27-28, 2016.

23. Klerks, P.L., Osman, S., Hoag, M.E., Fazal-Ur-Rehman, F., Kascak, A., **Louka, F.R.** *Sediment Bioturbation Affects the Fate of Pyrene in Laboratory Mesocosms*. Gulf of Mexico Oil Spill & Ecosystem Science Conference. Tampa, FL, February 2, 2016.
24. **Louka, F.R.**, Osman, S., Cazan, A.M., Morandi, P., Hoag, M., Klerks, P.L. *Investigating pyrene levels in water and sediment samples in presence of bioturbators*. 251<sup>st</sup> American Chemical Society National Meeting. San Diego, CA, March 13-17, 2016.
25. **Louka, F.R.**, Osman, S., Shaik, A., Carme, T. *Investigating the efficiency of economical adsorbents in removal of polycyclic aromatic hydrocarbons*. International Conference of Green Chemistry. Las Vegas, NV, September 19-21, 2016.
26. **Louka, F.R.**, Shaik, A., Terracina, T., Khamidullina, N. *Effective Ecofriendly Adsorbents for Removal of Individual Polycyclic Aromatic Hydrocarbons*. Honors Meeting. Lafayette, LA, November 18, 2016.
27. Klerks, P.L., Cazan, A., Kascak, A., Shaik, A., Adhikary, N., Chistoserdov, A., **Louka, F.R.** *Effects of razor clams and ghost shrimp on the distribution and fate of hydrocarbons in nearshore environments*. Society of Environmental Toxicology and Chemistry (SETAC) World Congress / SETAC North America 37<sup>th</sup> Annual Meeting. Orlando, FL, November 6-10, 2016.

## 2015

28. Fronczek, F.R., Liu, Y., **Junk, T.** *Tellurium-containing heterocycles: Tellurazoles, tellurazinones, tellurazepinones*. 88<sup>th</sup> Meeting of the Louisiana Academy of Sciences. Thibodeaux, LA, March 14, 2015.
29. Sanford, G., Walker, K.E., Fronczek, F.R., **Junk, T.** *Organotellurium Chemistry: Synthesis and Characterization of Te, N-Containing Heterocycles*. 71<sup>st</sup> Southwest Regional Meeting of the American Chemical Society. Memphis, TN, November, 4-7, 2015.
30. Klerks, P.L., Cazan, A.M., Kascak, A., Osman, S., Hoag, Y.M., Morandi, P., **Louka, F.R.** *The interplay between biota and pollutants: Ghost shrimp affect environmental conditions and aromatic hydrocarbon distribution in laboratory mesocosms*. Society of Environmental Toxicology and Chemistry (SETAC) Meeting. Salt Lake City, UT, November 1-5, 2015.
31. **Louka, F.R.**, Mautner, F.A., **Massoud, S.S.** *Carbonato-bridged copper(II) complexes formed via fixation of atmospheric CO<sub>2</sub>*. 249<sup>th</sup> American Chemical Society National Meeting. Denver, CO, March 22-26, 2015.

## 2014

32. Dupont, C., Spiller, P., Bajpai, R., **Gallo, A.A.**, **Junk, T.** *Biodiesel from alligator fat. A comparison between supercritical and conventional transesterification conditions*. ENFL Paper: 289. 247<sup>th</sup> ACS National Meeting, Dallas, TX, March 16-20, 2014.
33. Spiller, P., **Junk, T.**, **Gallo, A.A.** *Biodiesel from alligator fat*. Louisiana Academy of Sciences. Alexandria, LA, March 12, 2014.
34. **Louka, F.R.**, Klerks, P.L., Deb Adhikary, N., Kascak, A., Felder, D.L., Oguma, A., Ducharme, G., Chistoserdov, A. *The interaction between sediment bioturbators and sediment microbes on the distribution and degradation of oil in sediment*. Gulf of Mexico Oil Spill & Ecosystem Science Conference, Mobile, AL, January 26-30, 2014.

35. **Louka, F.R.**, Satbhai K.M., Klerks, P.L. *Effects of petroleum hydrocarbons and their interactions on mate guarding behavior in the amphipod Hyalella Azteca*. South Central Society of Environmental Toxicology and Chemistry (SC-SETAC). San Marcos, TX, May 30-June 1, 2014.
36. **Louka, F.R.**, Chistoserdov, A., Deb Adhikary, N., Kascak, A., Satbhai, K.M., Louviere, C., Klerks, P.L. *Effect of bioturbators on the degradation and distribution of polycyclic aromatic hydrocarbons in sediment*. 248<sup>th</sup> American Chemical Society National Meeting. San Francisco, CA, August 10-14, 2014.
37. **Louka, F.R.**, **Massoud, S.S.**, Mautner, F.A., Naka, Y., Mikuriya, M. *Squarato-Bridging Copper(II) Complexes Derived from Polypyridyl Amine Ligands Symposium on Coordination Compounds as Molecular Magnetic Materials*. Kwansai Gakuin University - School of Science and Technology. Sanda, Japan, October 11, 2014.
38. **Louka, F.R.**, Kascak, A., Deb Adhikary, N., Chistoserdov, A., Klerks, P.L. *The effect of bioturbation by the Ghost shrimp *Lepidophthalmus louisianensis* on hydrocarbon degradation and distribution*. SETAC North America 35<sup>th</sup> Annual Meeting. Vancouver, Canada, November 9-13, 2014.
39. **Massoud, S.S.** *Efficient Hydrolytic Cleavage of Plasmid DNA by Chloro-cobalt(II) Complexes*. Kwansai Gakuin University - School of Science and Technology. Sanda, Japan, October 10, 2014.
40. Murru, S., **Srivastava, R.S.** *Iron-Catalyzed Selective Allylic C-H Amination of Substituted 1,3-Dienes*. Paper ID:19103. 247<sup>th</sup> ACS National Meeting. Dallas, TX, March, 2014.
41. **Xu, W.** *Ethanol Adenylyl Cyclase Pathway*. NIH Workshop on Protein 3-D Structure and Function. Pittsburgh, PA, May 19-23, 2014.

## 2013

42. Myers, J.P., Albuquerque, P.R., **Junk, T.** *Unusual halogen exchange reactions in near-critical water*. Poster presentation, 68<sup>th</sup> Southwest Regional Meeting of the American Chemical Society. Baton Rouge, LA, November 4-7, 2013.
43. **Gallo, A.A.**, Dartez, M., Mautner, F.A., **Massoud, S.S.** *Dinuclear Copper (II) Complexes of Imidazole-4,5-Dicarboxylate*. Poster presentation, Southwest ACS Meeting. Waco, TX, November 16-19, 2013.
44. Dupont, C., **Gallo, A.A.**, Bajpai, R., **Junk, T.** *Biodiesel from alligator fat using supercritical solvent conditions*. Poster presentation, Southwest ACS Meeting. Waco, TX, November 16-19, 2013.
45. Murru, S., **Gallo, A.A.**, **Srivastava, R.S.** *Novel synthesis of beta-alkyl N-aryl Aza Baylis-Hillman adducts*. Poster presentation, Louisiana Academy of Sciences. Grambling, LA, March 2013.
46. **Junk, T.**, Rallon, E., Spell, M., Mautner, F.A., **Massoud, S.S.** *Binucleating Phenolic Compounds*. Southwest Regional ACS Meeting. Waco, TX, November 16-19, 2013.
47. **Louka, F.R.**, Nguyen, Q.L., Mautner, F.A., **Massoud, S.S.** *Cadmium(II) Polymers Bridged Azide with Different Dimensionality*. General Inorganic SWRM 465, Southwest Regional ACS Meeting (SWRM). Waco, TX, November 16-19, 2013.
48. **Gallo, A.A.**, Dartez, M.J., Mautner, F.A., **Massoud, S.S.** *Dinuclear Copper(II) Complexes of Imidazole-4,5-Dicarboxylate*. General Inorganic SWRM 466, Southwest Regional ACS Meeting. Waco, TX, November 16-19, 2013.

49. **Massoud, S.S.** *Development of Efficient Artificial Nucleases for DNA Cleavage. Mononuclear Cobalt(II) Complexes Based Pyridyl Tripod Amines.* Invited Lecture, Kumamoto Seminar on Complex-based Supramolecule. Kumamoto University - Graduate School of Science and Technology. Kumamoto, Japan, October 9, 2013.
50. **Massoud, S.S.**, Mautner, F.A. *1D and 2D Cadmium Polymers with Alternative Bridged Azido Bonding Modes.* Invited Lecture, Symposium on Coordination Compounds as Molecular Magnetic Materials. Kwansai Gakuin University - School of Science and Technology. Sanda, Japan, October 20, 2013.
51. **Srivastava, R.S.**, *Metal catalyzed group transfer reactions: Allylic amination vs. heteroDiels-Alder reaction of 1,3-butadienes.* Smolenice, Slovakia, June 2-7, 2013.
52. Klerks, P.L., Oguma, A., Blankson, E., Curtis, C., Goodwin, M., **Louka, F.R.**, Chistoserdov, A. *The effect of sediment bioturbators on the hydrocarbon distribution in hydrocarbon-dosed mesocosms.* The Society of Environmental Toxicology and Chemistry North America 34<sup>th</sup> Annual Meeting. Nashville, TN, November 17-21, 2013.

#### Patents

- **Xu, W.**, Method and System for Comparing Proteins in Three Dimensions. U.S. Non-Provisional Patent Application No. 15/725,663. October 5, 2017.
- **Srivastava, R.S.** & Murru, S. Method of Producing Chiral N-substituted Allyl Amine Compounds. US Patent No. 1,418,540. 2016.

#### Journal Referees

- **Junk, T.** *Journal of Hazardous Materials*, 2018
- **Knierim, K.D.** *Journal of Chemical Education*, 2018.
- **Gallo, A.A.** *New Journal of Chemistry*, 2017.
- **Gallo, A.A.** *Asian Journal of Organic Chemistry*, 2017.
- **Wang, Y.** *Bioanalysis & Biomedicine*, 2017.
- **Louka, F.R.** *Environments*, 2017-Present.
- **Louka, F.R.** *Advances in Chemistry*, 2017-Present.
- **Louka, F.R.** *International Journal of Chromatography and Separation Techniques*, 2017.
- **Xu, W.** *Inorganica Chimica Acta*, 2017.
- **Xu, W.** *EMBO Journal*, 2017.
- **Xu, W.** *International Journal of Biochemistry and Biophysics*, 2017.
- **Xu, W.** *Frontiers in Science, Technology, Engineering, and Mathematics*, 2017.
- **Xu, W.** *International Journal of Genetics and Genomics*, 2017.
- **Massoud, S.S.** *Dalton Transactions*, 2017.
- **Massoud, S.S.** *New Journal of Chemistry*, 2017.
- **Massoud, S.S.** *Inorganic Chemistry*, 2017.
- **Massoud, S.S.** *Inorganics*, 2017.
- **Massoud, S.S.** *Journal of Coordination Chemistry*, 2017.
- **Massoud, S.S.** *Inorganic Chemistry Communications*, 2017.
- **Massoud, S.S.** *Inorganica Chimica Acta*, 2017.
- **Massoud, S.S.** *Transition Metal Chemistry*, 2017.

- **Massoud, S.S.** *Crystals*, 2017.
- **Massoud, S.S.** *Communications in Inorganic Synthesis*, 2017
- **Srivastava, R.S.** *Journal of Organic Chemistry*, 2017.
- **Srivastava, R.S.** *Transition Metal Chemistry*, 2017.
- **Srivastava, R.S.** *Asian Journal of Organic Chemistry*, 2017.
- **Junk, T.** *Heteroatom Chemistry*, 2017.
- **Junk, T.** *Current Catalysis*, 2017.
- **Massoud, S.S.** *Chemistry - A European Journal*, 2016.
- **Massoud, S.S.** *Chrystals*, 2016.
- **Massoud, S.S.** *Journal of Molecular Structure*, 2016
- **Massoud, S.S.** *Journal of Cluster Chemistry*, 2016
- **Junk, T.** *Journal of Thermal Analysis and Calorimetry (JTAC)*, 2015.
- **Junk, T.** *Journal of Hazardous Materials*, 2015.
- **Massoud, S.S.** *Inorganic Chemistry*, 2015.
- **Massoud, S.S.** *Dalton Transactions*, 2015-2016.
- **Massoud, S.S.** *RSC Advances*, 2015-2016.
- **Massoud, S.S.** *Journal of Inorganic Biochemistry*, 2015-2016.
- **Massoud, S.S.** *New Journal of Chemistry*, 2015-2016.
- **Massoud, S.S.** *Zeitschrift für Anorganische und Allgemeine Chemie (ZAAC)*, 2015.
- **Massoud, S.S.** *Comments in Inorganic Chemistry*, 2015-2016.
- **Massoud, S.S.** *Inorganic Chemistry Communications*, 2015-2016.
- **Massoud, S.S.** *Inorganic Chimica Acta*, 2015-2016.
- **Massoud, S.S.** *Polyhedron*, 2015-2016.
- **Massoud, S.S.** *Spectroscopic Letters*, 2015.
- **Massoud, S.S.** *Chemical Papers*, 2015.
- **Srivastava, R.S.** *JACS*, 2015-2016.
- **Srivastava, R.S.** *Organometallics*, 2015-2016.
- **Srivastava, R.S.** *Organic & Biomolecular Chemistry*, 2015-2016.
- **Srivastava, R.S.** *Catalysis Science & Technology*, 2015-2016.
- **Yan H.** *Applied Catalysis*, 2015-Present.
- **Gallo, A.A.** *Universal Journal of Chemistry*, 2015.
- **Gallo, A.A.** *Chemosphere*, 2015.
- **Massoud, S.S.** *European Journal of Medicinal Chemistry*, 2014.
- **Massoud, S.S.** *Journal of the Chemical Society of Pakistan*, 2014.
- **Massoud, S.S.** *Journal of Nanoparticle Research*, 2014.
- **Massoud, S.S.** *Phosphorus, Sulfur, and Silicon and the Related Elements*, 2014.
- **Massoud, S.S.** *RSC Advances*, 2014.
- **Massoud, S.S.** *Zeitschrift für Anorganische und Allgemeine Chemie*, 2014.
- **Massoud, S.S.** *Australian Journal of Chemistry*, 2014.
- **Massoud, S.S.** *Inorganic Chimica Acta*, 2014.
- **Massoud, S.S.** *International Journal of Inorganic Chemistry*, 2014.
- **Massoud, S.S.** *Arabian Journal of Chemistry*, 2014.
- **Louka, F.R.** *Advances in Chemistry*, 2014.
- **Xu, W.** *Journal of Plant Physiology*, 2014.

- **Xu, W.** *Chemical Research in Toxicology*, 2014.
- **Xu, W.** *Frontiers in Genetics*, 2014.
- **Xu, W.** *Cellular Physiology and Biochemistry*, 2014.
- **Xu, W.** *International Journal of Biochemistry and Biophysics*, 2014.
- **Xu, W.** *Bioorganic & Medicinal Chemistry Letters*, 2014.
- **Junk, T.** *Heteroatom Chemistry*, 2014.
- **Junk, T.** *Thermal Analysis and Calorimetry*, 2014.
- **Junk, T.** *Moroccan Journal of Chemistry*, 2014.
- **Xu, W.** *Inorganica Chimica Acta*, (2013).
- **Xu, W.** *Inorganica Chimica Acta*, (2013).
- **Xu, W.** *Optical Materials*, (2013).
- **Xu, W.** *PLOS ONE*, (2013).
- **Junk, T.** *Phosphorus, Sulfur, and Silicon and the Related Elements*, (2013).
- **Massoud, S.S.** *Inorganic Chemistry* (2013).
- **Massoud, S.S.** *RSC Advances* (2013).
- **Massoud, S.S.** *Journal of Electroanalytical* (2013).
- **Massoud, S.S.** *Polyhedron* (2013).
- **Srivastava, R.S.** *Applied Catalysis A*, (2013).
- **Srivastava, R.S.** *European Journal of Medicinal Chemistry*, (2013).
- **Srivastava, R.S.** *ChemMedChem*, (2013).

## Other

### Organized Special Sessions and Conferences

- **Massoud., S.S.** Chair of the Coordination Chemistry Session of the 249<sup>th</sup> ACS National Meeting. Denver, CO, March 23-26, 2015.
- **Knierim, K.** Vice-Chair of Mechanisms of Pitting Corrosion symposium at the NACE Corrosion 2013 Conference. Orlando, FL, March 2013.
- **Gallo, A.A.** Chair of the Chemistry Division of the Louisiana Academy of Sciences, (2000-Present).

### Undergraduate - Notable Figures

- **Massoud, S.S.** supervised 18 undergraduate students in Chemistry 362/462 (2015).
- **Louka, F.R.** supervised 70 undergraduate students in Chemistry 362/462 - undergraduate research (2008-2015).
- **Louka, F.R.** supervised S. Y. Osman, student, and winner of the American Chemical Society (ACS) Outstanding Undergraduate Analytical Chemist Award, 2015.
- **Gallo, A.A.** supervised over 40 undergraduate students during the period 2008-2013 in Chemistry 362/462 - undergraduate research.
- **Massoud, S.S.** supervised over 34 undergraduate students during the period 2008-2013 in Chemistry 362/462 - undergraduate research.
- **Louka, F.R.** supervised 14 undergraduate students during the period 2008-2013 in Chemistry 362/462 - undergraduate research.



## Awards and Honors

- **Leonard, A.D.** Office of Distance Learning Faculty Fellowship Award, 2018. This award supported the purchase of \$15,000 in specialized teaching related software.
- **Leonard, A.D.** University of Louisiana at Lafayette Advising Award, 2018.
- **Louka, F.R.** Outstanding Faculty of Universities of Louisiana System, 2017.
- **Louka, F.R.** Awardee of Royal Society of Chemistry Books for Contents. Organization and presentation in ICBIC 18<sup>th</sup>, Florianópolis, Brazil, 2017.
- **Srivastava, R.S.** Research Excellence Award, UL Lafayette, 2017.
- **Srivastava, R.S.** Innovator Award, UL Lafayette, 2017.
- **Xu, W.** Boudreaux/BoRSF Professorship, 2017-2020.
- **Yan, H.** Achievement in Sponsored Research Award, University of Louisiana at Lafayette, 2017.
- **Louka, F.R.** Outstanding Teaching Award, Ray Authement College of Sciences, 2016.
- **Massoud, S.S.** Outstanding Contribution in Reviewing Papers for *Inorganica Chimica Acta*, Elsevier, 2015
- **Louka, F.R.** Marvin and Warren Boudreaux / BoRSF Professorship in Chemistry Awardee, 2015-Present.
- **Louka, F.R.** Undergraduate Research Mentoring award, 2014.
- **Srivastava, R.S.** Distinguished Professor Award, R.A.P. College of Sciences, 2013.
- **Massoud, S.S.** Boudreaux/BoRSF Professorship, 2002-Present.
- **Xu, W.** Candidacy on the Fulbright Specialists Roster, the J. William Fulbright Foreign Scholarship Board, the U.S. Department of State's Bureau of Education and Cultural Affairs, and the Council for International Exchange of Scholars, 2012-2017.
- **Xu, W.** Boudreaux/BoRSF Professorship, 2008-2014
- **Srivastava, R.S.** Boudreaux/BoR Distinguished Professor, 2001-Present.

## Other Professional Activities

### 2018

- **Highland, Z.L. & Leonard, A.D.** *Acquisition of Vernier Lapquest for Analytical Chemistry*. UL Lafayette STEP Fund, \$19,015 (2018).
- **Simon, R.S. & Gallo, A.A.** Electric Thermometers Grant Proposal. UL Lafayette STEP Fund, \$15,540. (2018).
- **Xu, W.** Member of Committee: Titli Sarkar, Ph.D., LSU, 2018.
- **Xu, W.** Member of Committee: Aniruddha Acharya, Ph.D., LSU, 2018.
- **Xu, W.** Member of Committee: Venkata Sarika Kondra, Ph.D., LSU, 2018.
- **Xu, W., Gallo, A.A., Knierim, K.D., & Srivastava, R.S.** *Purchase of Micropipettes for Chemistry Laboratory Courses*. UL Lafayette STEP Fund, \$15,540. (2018).

## 2017

- **Gallo, A.A.** Acquisition of a Polarimeter for Chemistry Laboratories, STEP Fund of University of Louisiana at Lafayette, \$525, 2017.
- **Junk, T.** ChemDraw chemical structure drawing software for student use and training, STEP Fund of University of Louisiana at Lafayette, \$4,460, 2017.
- **Knierim, K.D.** Secretary of Faculty Senate, 2017.
- **Knierim, K.D.** Director of Louisiana Region 2 Science Olympiad, 2017.
- **Simon R.L.** White Boards for Montgomery Hall. STEP Fund of University of Louisiana at Lafayette, \$6372, 2017.
- **Simon, R.L., Wang, Y.** Maker Lab for Montgomery Hall. STEP Fund of University of Louisiana at Lafayette, \$3650, 2017.
- **Xu, W. & Wang, Y.** Purchase of an Incubator and a shaker for Biochemistry Laboratory Courses. STEP Funds of University of Louisiana at Lafayette, \$8,768.30, 2017.
- **Xu, W. & Yan, H.** Purchase of Fluorescence Gel Documentation for Chemistry Laboratory Courses. STEP Fund of University of Louisiana at Lafayette, \$13,986, 2017.
- **Yan, H. & Louka, F.R.** Bringing Rotary Evaporators for Sample Preparation to Analytical Chemistry Laboratory Courses. STEP Fund of University of Louisiana at Lafayette, \$8700, 2017.
- **Yan, H.** Improving Precision and Accuracy in Analytical Chemistry Laboratory Courses. STEP Fund of University of Louisiana at Lafayette, \$5,138, 2017.

## 2016

- **Junk, T., Gallo, A.A.** Purchase of an Attenuated Total Reflectance (ATR) Tool for Chemistry to Conduct Infrared Spectroscopy on Solids, UL STEP Fund, \$5,602.
- **Kierim, K.D.** director of regional Science Olympiad.
- **Leonard, A.D.** Classified the entire Library of EZTest questions (more than 2000 questions from Carey, *Organic Chemistry* 10<sup>th</sup> ed. McGraw Hill, 2017, by Bloom's Taxonomy, difficulty level, topic, and subtopic.
- **Louka, F.R.** Economical Micro-scale Vacuum Assisted DigiFILTER Assembly in Chemistry Labs. STEP Technology grant, \$13,901.
- **Louka, F.R.** Economical Micro scale Equipment in Chemistry Labs. STEP Technology grant, \$16,843.
- **Simon, R.L. (PI), Gallo, A.A.** Organic Chemistry Laboratory Equipment Grant. STEP Technology Fund, \$3666.
- **Simon, R.L. (PI).** Purchase of Chemistry Laboratory and Demonstration Equipment, STEP Technology grant, \$501.64
- **Xu, W.** Structural and Functional Studies of Photosystem I to Enhance Undergraduate Education through Research. UL Undergraduate Research Mini-Grant, \$2,000.

## 2015

- **Junk, T.** Raman Spectroscopy in Chemistry Labs, UL STEP program, \$10,655.

- **Leonard, A.D.**, Langley, C.S, Roy, J. Achieving A Successful Online STEM Class. Presentation at Student Retention Summit, University of Louisiana at Lafayette. March 2015.
- **Louka, F.R.** Member of Committee: A. Kascak, Ph.D. student, "Determining the Interactions Between the Ghost shrimp *Lepidophthalmus louisianensis* and Crude Oil." 2015.
- **Louka, F.R.** (PI). Applying New Techniques in Analytical Chemistry Laboratories: UL Instructor Mini-grant, \$700.
- **Massoud, S.S.** External Examiner: N.S.M. Ahmed. Kinetics and Electrochemical Studies on Some Ion-Pairs in Mixed Solvents. Ph.D. thesis submitted to Alexandria University, Alexandria, Egypt, 2015.
- **Srivastava R.S.** Thesis Evaluation: A.K. Visvesvaraya. Technological University, Belagavi, Karnataka, India, 2015.
- **Srivastava R.S.** Thesis Evaluation: M. Ganesh. Indian Institute of Technology. Guwahati, Assam, India, 2015.
- **Xu, W.** Member of Committee: S. Singh, Title of the Final Defense: Spatial relationships based protein structure representation for alignment free comparison, local structural motif discovery and hierarchical classification, 2015.
- **Xu, W.** Member of Committee: R. Hill, Ethanol-Adenylyl Cyclase Pathway. Ph.D., LSU, 2015.
- **Xu, W.** Judge for Junior Division of Biochemistry Louisiana Region VI Science and Engineering Fair.
- **Xu, W.** Judge for High School Senior Division on Protein Modeling. Louisiana Region II 26<sup>th</sup> Annual Science Olympiad.
- **Xu, W.** Judge for the Graduate Student Research & Project Symposium. University of Louisiana at Lafayette.

## 2014

- **Gallo, A.A.** served as Chemistry Section Chair of the Louisiana Academy of Sciences.
- **Leonard, A.D.** 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.
- **Louka, F.R.** (PI). Enhancement of Instrumental Analysis Laboratory Techniques: UL Instructor Mini-grant, \$849 (2014).
- **Srivastava, R.S.** Member of committee: S. Guin. Transition Metal Catalyzed C-C and C-O Bond Formation via C-H Activation. Indian Institute of Technology, Assam, India, Ph.D., 2014.
- **Srivastava, R.S.** served as Graduate faculty representative on the committee of C. U. Chukwunonye, M.S. candidate, Department of Physics.
- **Wellman, D.L. (PI), Xu, W.** (co-PI), **Gallo, A.** (co-PI). Installation of a Smart Classroom. UL STEP program, \$30,000, (2014).
- **Xu, W.** Member of Committee: V.K. Chaitanya Nune. Interplay between Structure and Cell-Biomaterial Interactions in Orthopedic Implants. Ph.D., UL, 2014.
- **Xu, W.** Member of Committee: P.K. Surya. Mechanical Property Anisotropy in High Strength Niobium Microalloyed Spiral-Welded Linepipe Steels. Ph.D., UL, 2014.

- **Xu, W.** Member of Committee: R. Hill. Ethanol-Adenylyl Cyclase Pathway. Ph.D., LSU, 2014.
- **Xu, W.** Member of Committee: G. Nakka. Crystallization phenomenon of various polymers on carbon nanotubes. M.S., UL, 2014.
- **Xu, W.** hosted Darren Jindal, a student from Stanford University, and two visiting professors from China: L. Huang and Y. Wei.

## 2013

- **Gallo, A.A.** visiting Professor, Beifang University of Nationalities, Yinchuan, China, May-June (2013).
- **Louka, F.R.** supervised French Interns Guénaëlle de Lorgeril and Gerard Ducharme, (2013).
- **Taylor, E.R.** interviewed by Lynda Edwards, Daily Advertiser, 10 September (2013), concerning use of chemical weapons by Syria, article appeared in print, 11 September (2013).
- **Taylor, E.R.** interviewed by Jim Hummel, KATC TV for segment on ammonium nitrate and its hazards to communities, aired at 22:00 hr news, 4 November (2013).
- **Taylor, E.R.** served as Acting Dept. Head, Summer Semesters, Summer 2008-(2013).
- **Srivastava, R.S.** Ph.D. Thesis evaluation report of V. Kalpana, University of Madras, India. Synthesis, Characterization and Application of Novel Dendrimers with Ether, Triazole as Branching and Benzoheteroazole, Thiazole as Surface and Synthesis of Heterocalxarenes, July (2013).
- **Srivastava, R.S.** Ph.D. Thesis evaluation report of Santosh Kumar Sahoo. Indian Institute of Technology, Guwahati, Assam, India. Development & Application of Transition Metal Catalysts for the Construction of Heterocycles, February (2013).
- **Xu, W.** Judge for the Graduate Student Research & Project Symposium, University of Louisiana at Lafayette, (2013).
- **Knierim, K.** Director of the Region II Science Olympiad, 1998-Present.
- **Knierim, K.** Secretary of the Faculty Senate, 2013-Present.
- **Taylor, E.R.** judge, Parish Regional Science Fair in Senior Biochemistry category, 1984-Present.
- **Xu, W.** reviewed Biochemistry book chapters (Tymoczko, Mckee & Mckee, Sandler, Voet, Miesfeld & Mcevoy), 2007-Present.

## Offices Held and Professional Memberships

- **Gallo, A.A.** member: American Chemical Society (1973-Present), Louisiana Academy of Sciences (1985-Present). Co- advisor, UL Student affiliates of the American Chemical Society (2008-2013).
- **Junk, T.** member: Phi Lambda Upsilon (1994-Present), American Chemical Society (1995-Present), Sigma Xi (1996-Present), Louisiana Academy of Sciences (2009-Present), American Association for the Advancement of Science (2005-Present).
- **Knierim K.** member: American Chemical Society (1975-Pres.), Sigma Xi (1983-Pres.), National Association of Corrosion Engineers (2010-Pres.); Director, Regional Science Olympiad (1998-Pres.)

- **Louka, F.R.** member, American Chemical Society (2007-Present)
- **Massoud, S.S.** member, American Chemical Society (2001-Present)
- **Perkins R.S.** member, American Chemical Society (1967-Present)
- **Srivastava, R.S.** member: American Chemical Society (1993-Present), Advisory Board, Asian Journal of Chemistry (2010-Present), Sigma Xi (2010-Pres.)

## External Funding

- **Knierim, K.D., Xu, W.** Expanding the Application of Computational Chemistry in Teaching and Research at UL Lafayette. Enhancement Program, Board of Regents Support Fund (LEQSF(2017-18)-ENH-TR-31), \$11,255 (2017 -2018).
- **Gallo, A.A., Simon, R.L., Junk, T., Xu, W.** Benchtop NMR Spectrometer for Integration into the Chemistry Curriculum: Board of Regents Support Fund, (LEQSF(2017-18)-ENH-TR-30), \$58,366 (2017-2018).
- **Yan, H.** Investigating reaction mechanism of water-gas shift reaction on mesoporous ceria-based catalysts, LA Board of Regents (BoR) Research Competitiveness Subprogram (RCS), \$121,383, (2017-2020).
- **Wang, Y.** Controlled Polymer Synthesis Towards the Precision of Biomacromolecules, \$145,500, BoRSF RCS (2017-2020).
- **Srivastava, R.S.** (PI), Murru, C. Studies on Catalytic Asymmetric C-H Amination of Alkenes. PI-NSF, \$375,000 (2016-2019).
- **Srivastava, R.S.** Enantioselective C-H Amination of Alkenes and Carbonyl Compounds and Novel Application Thereof. Natl. Institutes of Health, \$145,000 (2016-2019)
- **Raghavan, V., Xu, W.** Development of an Algorithm and a Tool for Accurate Comparison of Protein and Chemical 3-D Structures. Board of Regents Support Fund (LEQSF(2015-18)-RD-B-06), \$182,679, 2015-2018.
- **Xu, W., Bajpai, R.K., Chistoserdov, A.Y., Gallo, A.A., Junk, T., Perkins, R.S., Srivastava, R.S.** Integrating Analytical Ultracentrifugation into Chemistry Teaching and Research Laboratories for Undergraduates Majoring in Chemistry, Biology and Engineering. Board of Regents Support Fund (LEQSF(2015-16)-ENH-TR-34), \$58,366, 2015-2016.
- **Louka, F.R.** Co-PI of a proposal submitted to Gulf of Mexico Research Initiative (GoMRI). The effect of sediment bioturbators on the biological degradation of petroleum in coastal ecosystems. \$1,010,901, 2012-2015.
- **Xu, W.** (PI), **Gallo, A.A.** (Co-PI), **Perkins, R.S.** (Co-PI), **Junk, T.** (Co-PI), **Srivastava, R.S.** (Co-PI), **Bajpai, R.** (Co-PI). Integration of a Florescence spectrometer into chemistry and biochemistry. BoR- ENH, \$32,000, 2014.
- **Srivastava, R.S.** (PI). Transition-metal catalyzed asymmetric nitrogenation of hydrocarbons (olefins): Method development and its synthetic applications to valuable chemicals. BOR-ITRS, \$225,000, 2014-2017.
- **Xu, W.** (PI). Structure-function studies of ethylene-forming enzyme based on a theoretical 3-D model. National Science Foundation's EPSCoR Award (LEQSF-EPS(2015)-PFUND-425). BoRSF, \$10,000, 2014-2015.

- R. K. Bajpai, A. Y. Chistoserdov, **Gallo, A.A., Louka, F., Xu, W. (PI), Perkins, R.S., Srivastava, R.S., Taylor, E.R.** Enhancement Program, Board of Regents Support Fund. Enhancement of Spectroscopy and Macromolecule Characterization Techniques in Undergraduate Laboratories for Chemistry, Biology and Engineering Majors. \$38,261, 2012-2014.
- **Xu, W.** Principal Investigator. Research Competitiveness Subprogram, Board of Regents Support Fund. Biochemical and Spectroscopic Characterizations of the Site-directed Mutants around Accessory Chlorophylls, A<sub>0</sub>, A<sub>1</sub> and F<sub>X</sub> of *Synechocystis* sp. PCC 6803, \$150,917, 2013-2016.
- **Srivastava, R.S.** Principal Investigator. BoRSF-LEQSF (ITRS). Copper-Catalyzed Asymmetric Allylic Amination: Method development, Mechanistic studies and its Synthetic application. \$225,000, 2013-2016.
- Bajpai, R.K., Chistoserdov, A.Y., **Gallo, A.A., Louka, F., Xu, W. (PI), Perkins, R.S., Srivastava, R.S., Taylor, E.R.** Enhancement Program, Board of Regents Support Fund. Enhancement of Spectroscopy and Macromolecule Characterization Techniques in Undergraduate Laboratories for Chemistry, Biology and Engineering Majors. \$38,261, 2012-2014.
- **Louka F.R.** Co-PI of a proposal submitted to Gulf of Mexico Research Initiative (GoMRI). The effect of sediment bioturbators on the biological degradation of petroleum in coastal ecosystems. \$1,010,901, 2012-2015.