CURRICULUM VITAE

Randy William Larsen, PhD
Department of Chemistry
University of South Florida

Experience:

07/01/2017- Present	Co-Director USF Florida Center of Excellence- Center for Drug Discovery & Innovation University of South Florida
08/15-Present	Associate Dean for Research and Scholarship College of Arts & Sciences University of South Florida
08/08 to 08/15:	Professor & Chair Department of Chemistry University of South Florida
07/05 – 07/08	Professor Department of Chemistry University of South Florida
01/02-07/05	Associate Professor Department of Chemistry University of South Florida
7/99-1/02	Associate Professor Department of Chemistry University of Hawaii at Manoa Honolulu, HI
8/98-5/01	Temporary Faculty (Concurrent with UH-Manoa Appointment). Brigham Young University-Hawaii (Provided Temp. Course Coverage) Laie, HI
1/92-6/99	Assistant Professor Department of Chemistry University of Hawaii at Manoa Honolulu, HI
3/90-1/92	Postdoctoral Research Fellow California Institute of Technology Pasadena, CA.

Education:

Spring 1990:	Ph.D., University of New Mexico (Physical Chemistry)
1985-1990:	Graduate Student Department of Chemistry University of New Mexico
Fall 1985:	B.S., University of New Mexico (Chemistry)

Honors:

Elsevier top 2% of all chemists cited, 2023 ranking.
Fellow of the American Academy for the Advancement of Science (AAAS Fellow)
Member of Sigma Xi Scientific Honor Society

Professional Membership:

American Chemical Society
Inter American Photochemical Society
American Photochemistry Society

Other Service Activities:

- Secretary, Hawaii Section of the American Chemical Society, 1994/1995
- Chair Elect, Hawaii Section of the American Chemical Society, 1997
- Chair, Hawaii Section of the American Chemical Society, 1998

Other Professional Activities:

- Reviewer, Research Associateship Programs, National Academy of Sciences.
- NSF SSMC CAREER Panel Member, 2019.
- American Cancer Society Institutional Research Grant Committee, 1996-1999.
- American Heart Association, National Peer Review Study Group member, Basic Cell, 2000-2004, 2012, 2013.
- American Heart Association, Southeast Affiliate Peer Review Study Group Member, 2008-2010.
- American Heart Association Hawai'i Section Research Council Member, 1998-2000.
- NIH SSP Study Section, November, 2001.
- NIH, MFSA Temporary Study Section Memebr, 2008.
- NIH, MSFE Temporary Study Section Memebr, 2009.
- Co-Chair, Protein Folding and Stability Symposium, 2009 Meeting of the Biophysical Society.
- NSF- Ad-Hoc Grant Reviewer

Administrative Activities:

- USF System Wide Research Core Facility Enhancement committee.
- USF System Wide Research Strategic Planning Committee.
- Establishment and Lead Coordinator of a USF system wide Highly Integrative Basic and Responsive Research (HIBAR) program for developing collaborative research networks.
- Lead, USF Federal Legislative Budget Request (LBR) for a National Security Human Dynamics program now funded through NIST.
- Academic Advisor USF Global and National Security Institute.
- Governance Committee, USF Institute for Applied Engineering, 2022-present.
- USF Office of Corporate Partnerships steering committee.
- USF Office of Corporate Partnership Inventory Committee.
- USF System Consolidation Committee for Research (consolidated research across three campuses).
- USF Representative to the national HIBAR Research Alliance.
- USF representative to the SUS National Security Innovation Network (NSIN).
- Member of the Presidential Task Force on F&A.
- Member of the Presidential Work Group on USF Research Budgeting.
- Presidential Work Group on USF Research and Innovation Strategic Budgeting.

- Co-Coordinator of the USF Task Force on Blackness and Anti-Black Racism.
- Lead coordinator of the USF Pandemic Response Research Network Task Force,
- Chair of the initial USF Vice President for Research Search Committee.
- Secured and serve as lead coordinator, US CENTCOM Human Dynamics (J8) program ($10M Blanket Purchase Agreement).
- Liasson for Command Strategies LLC (USF contractor liaison with DoD).
- Co-coordinator CENTCOMs Great Power Competition contract.
- Liasson for Acertus/Senturian Forecasting LLC (defense contractor with CENTCOM J8)
- Coordinator for WW Consultants (defense contractor).
- Chair, USF ADR workgroup on research infrastructure and core facilities.

Funding Summary

Current:

- College of Arts & Sciences Research Support, PI, "Metal Organic Materials Development", $300,000, 8/1/15-8/2024.
- Federal Legislative Budget Request-National Institutes of Standards and Technology, PI, "USF Human Dynamics Program", $1.625M, 2024.
- National Institutes of Standards and Technology, PI, "
- US Central Command, PI, "Bilateral Influence Capacity Index Development", $150,000, 8/1/23-7/31/2024.
- US Central Command, PI, Great Power Competition Conference, $166,000, 2/2024-5-2024.

Planned/Pending:

- *Pending*- National Science Foundation-DMR-EPM, PI, "Understanding Cavity Modulated Guest Photophysics in Metal Organic Framework Materials for Light Harvesting Applications", $520,306, 2024.
- Bilateral Influence Capacity Index Development- Part 2, USF-USCENTCOM Blanket Purchase Agreement, $150K, 2024.
- Climate Change Conflict Index Development, USF-USCENTCOM Blanket Purchase Agreement, $300K, 2024.
- *Planned*- National Institutes of Health R03, PI, "Photoresponsive Metal Organic Frameworks for Wound Healing Applications", $149,500, 2024 (to be matched with Florida High Tech Corridor Funding).

Past Funding:

- DOD Defense Threat Reduction Agency, PI (three CoPIs) "Functionalized Photocataolytic Materials for Threat Detection and Decontamination", $2,000,000, 06/01/08-5/31/12.
- Draper Laboratory-URAD, PI (two CoPIs), "Development of Novel Porphyrin Based Chemical/Biological Threat Agent Sensors", $181,816, 7/1/09-6/30/10.
- Florida High Tech Corridor (Draper Match), PI (two CoPIs), "Development of Novel Porphyrin Based Chemical/Biological Threat Agent Sensors", $91,600, 7/1/09-6/30/10.
- American Chemical Society-Petroleum Research Fund Type AC, PI, "Thermodynamic Profiles of Protein Folding", $120,000, 8/31/05-8/31/07.
- National Science Foundation-MCB, PI, "Energy Coupling in Cytochrome c Oxidase", $337,920, 10/1/03-9/30/07.
- American Heart Association Grant in Aid, PI, "Thermodynamic Profile of Dioxygen Reduction by Cytochrome c Oxidase", $120,000, 7/1/02-6/30/04.
- National Science Foundation-MCB, PI, "Energy Coupling in Quinol Oxidase", $353,604, 8/1/99-3/31/02.
- National Science Foundation-Research Experience for Undergraduates, CoPI, **"**Research Experiences for Undergraduates in Chemistry at the University of Hawaii", $135,000, 3/1/96-8/31/99.
- American Heart Association-Beginning Grant in Aid, PI, "Conformational Dynamics in Cytochrome c Oxidase", $77,942, 7/1/97-6/31/99.
- American Chemical Society-Petroleum Research Fund-Type G, PI, "Conformational Dynamics of Intermolecular Electron Transfer in Proteins", $20,000, 9/1/92-12/31/96.
- American Cancer Society-Seed Grant, PI, "Photodynamics of Cationic Porphyrins Associated with Nucleotides and Nucleosides", $15,000, 12/15/95-12/15/96.

Peer Reviewed Publications: 132
Peer Reviewed Book Chapters: 11
Lectures/Presentations: 193
h-index: 26 (Web of Science), 29 (SCOPUS, Google Scholar); i10 Index 75 (Google Scholar)

Peer Reviewed Publications

146. "Novel Zinc Metalloporphyrin Based Metal-Organic Framework for Quantitative & Reusable Sensing of Nitrobenzene" Z. Magnuson, B. Wolfe, J.M. Mayers, L. Wojtas, W. Zhang, S. Ma, R.W. Larsen, *J. Phys. Chem. C* (2024), *in preparation*.

145. "Photophysical study of the heteroliptic ruthenium (II) bis-(2,2'-bipyridine) (1,10-phenanthroline) templated cadmium-benzene dicarboxylate metal organic framework, RWLC-7", J.M. Mayers, L. Wojtas and R.W. Larsen, *Dalton. Trans..* (2024), *Submitted*.

144. "Modulation of Ruthenium (II) Tris-(2,2'-bipyridine) Photophysics through Cavity Size in Zn (II) and Zr (IV) Metal Organic Frameworks" J.M. Mayers, L. Wojtas and R.W. Larsen, *Inorg. Chem.* (2024), *Submitted*.

143. "Photoacoustic Calorimetry Studies of Carbon Monoxide Photodissociation from Sinorhobium meliloti FixL", A. Mokdad, A. Ang, A. Castonguay, A. Desciak, C. Ott, J. Shadt, A. Vilbert, R.W. Larsen and M.F. Reynolds, *Biochemistry* (2023), *in Press.*

142. " Photophysics of Iridium(III)(2-phenylpyridine)(2,2',6,2"-terpyridine) Chloride Encapsulated within the Zn(II)-polyhedral Metal Organic Framework, USF-2", J. M. Mayers and R.W. Larsen, *Eur. J. Inorg. Chem.* (2023), 26, e202300088(1 of 6). (IF: 2.3)

141. "Peroxidase-Like Biomimetic Epoxidation and Subsequent Alcoholysis of Olefins by Fe(II)tetrakis(4-sulphonatophenyl)porphyrin (Fe4SP) Encapsulated in the Metal-Organic Framework HKUST-1". Z. Magnuson, L. Wojtas, and R.W. Larsen. *Inorg. Chim. Acta* (2023), 552, 121483. (IF: 2.8)

140. "MOFs for solar photochemistry applications", J. Mayers, Z. Magnuson and R.W. Larsen in *Metal-Organic Framework-based Nanomaterials for Energy Conversion and Storage,* R. Gupta, Ed, CRC Press, 2022. (Book Chapter)

139. "Photophysical Cmparison of Zn(II)Phthalocyanine Tetrasulfonate and Zn(II) Tetrakis(4-Sulphonatophenyl)Porphyrin Encapsulated within the Zn(II)-Polyhedral Metal Organic Framework, HKUST-1(Zn), R.W. Larsen and L. Wojtas, *Dalton Trans.* (2022), 51, 12729-12735. (IF: 4.36)

138. "Photoactive Guest Encapsulation in Metal Organic Frameworks", C. R. McKeithan, J. Mayers, A. Alanzi, and R.W. Larsen, *Dyes and Photoactive Molecules in Microporous Systems- Structure and Bonding*, V. Martínez-Martínez, F. López Arbeloa, Eds, Springer Verlog, 2022. (Book Chapter)

137. "Porphyrin-Encapsulating Metal-Organic Materials as Solid-State Mimics of Heme Enzymes", R.W. Larsen, Royal Society of Chemistry's Monographs in Supramolecular Chemistry Series, *Porphyrin-Based Supramolecular Architectures: from Hierarchy to Functions",* S. Ma and G. Verma, Eds, Royal Society of Chemistry, 2022 . (Book Chapter)

136. "USF Pandemic Response Research Network (USF PRRN): A Highly Integrative Basic and Responsive Research Approach to COVID-19", R.W. Larsen, K. Bradley-Klug, M. Bloom, H. Goldstein and P. R. Sanberg, *Tech. Innov. J.* (2022), 22, 165-171. (IF: N/A)

135. "The Effects of Cavity Size on Ruthenium(II) tris-(2,2'-Bipyridine) Photophysics", J.M. Mayers and R.W. Larsen, *Inorg. Chim. Acta* (2021), 526, 120537. (IF: 2.8)

134. "Two Manganese Metalloporphyrin Frameworks Constructed from a Custom-Designed Porphyrin Ligand Exhibiting Selective Uptake of CO2 over CH4 and Catalytic Activity for CO2 Fixation", Z. Magnuson, Q. Cheng, W. Zhang, Y-S. Chen, L. Wojtas, A. Nafady, A. Al-Enizi, R.W. Larsen, X.P. Zhang, S. Ma, *Cryst. Grwth & Des.* (2021), 21, 2786-2792. (IF: 4.01)

133. "Confinement-Guided Photophysics in MOFs, COFs, and Cages", G.A. Leith, C.B. Martin, J.M. Mayers, P. Kittikhunnatham, R.W. Larsen and N.B. Shustova, *Chem. Soc. Rev.* (2021), 50, 4382-4410 (Invited Review). (IF: 54.6)

132. "Photophysical properties of Zirconium-oxide metal organic frameworks containing transition metal polyimine guests: A mini-review", J. M. Mayers and R. W. Larsen, *Trends in Phys. Chem.* (2020), 20, 51-65.

131. "Framework induced deformation modulates the photophysical properties of ZnTetra(4-pyridyl)porphyrin incorporated within a new metal-organic framework, RWLAA-1", A.A. Alanazi, L. Wojtas, J. M. Mayers, J. Miksovska, R.W. Larsen, *Dalton Trans.* (2020), 49, 11668-11674. (IF: 4.05)

130. "Modulation of osmium (II) tris-(2,2'-bipyridine) photophysics through encapsulation within zinc (II) trimesic acid metal organic frameworks", J. Mayers and R.W. Larsen, *Inorg. Chem.* (2020), 59, 7751-7767. (IF: 4.85)

129. "Pore Modulation of Guest Photophysics in Metal Organic Frameworks: Photophysical Studies of meso-Tetra (N-Methyl-4-pyridyl) Porphine Encapsulated within MOM-11 and MOM-12", A. A. Alanazi, L. Wojtas, C. R. McKeithan and R. W. Larsen, *J. Photochem. Photobiol. A: Chem* (2020), 391, 112329. (IF: 3.261)

128. "Raman Spectroscopic Study of Fe tetrakis(4-sulphonatophenyl) porphyrin Encapsulated within the Metal Organic Framework HKUST-1" J. Mayers and R.W. Larsen, *Inorg. Chem. Comm.* (2019), 107, UNSP 107457. (IF: 1.76)

127. "Photophysical Properties of the $[Ru(2,2'\text{-bipyridine})_3]^{2+}$ Templated Metal Organic Framework, RWLC-6" by C. R. M^{c}Keithan, L. Wojtas and R.W. Larsen, *Inorg. Chim. Acta* (2019), 496, UNSP 119034. (IF: 2.43)

126. "Photophysical study of $[Ru(2,2'\text{-bipyridine})_3]^{2+}$ and $[Ru(1,10\text{-phenanthroline})_3]^{2+}$ encapsulated in the Uio-66-NH_2 Metal Organic Framework" J. Mayer and R.W. Larsen, *Polyhedron*, (2019), 171, 382-388. (IF: 2.28)

125. "Photophysical Studies of Ru(II)tris(2,2'-bipyridine) Encapsulated within the ZnHKUST-1 Metal Organic Framework", C. R. McKeithen, L. Wojtas, and R.W. Larsen, *Inorg. Chim. Acta* (2018), 483, 1-5. (IF: 2.43)

124. "Guest to Framework Photoinduced Electron Transfer in a Cobalt Substituted RWLC-2 Metal Organic Framework", C. R. McKeithen, L. Wojtas, and R.W. Larsen, *Dalton Trans* (2018), 47(28), 9250-9256 (Cover). (IF: 4.05)

123. "Synthesis, characterization, and cellular localization of a fluorescent probe of the antimalarial 8-aminoquinoline primaquine", A. McQueen, L, D. Blake, A. Azhari, M. T. Kemp, T. W. McGaha Jr., N. Namelikonda, R. W. Larsen, R. Manetsch and D. E. Kyle, *Bioorg. Med. Chem. Lett.* (2017), 27, 4597-4600. (IF: 2.45)

122. "Novel Photo-Active Cd:1,4-Benzene Dicarboxylate Metal Organic Framework Templated by $[Ru(II)(2,2'\text{-bipyridine})_{31}]^{2+}$: Synthesis and Photophysics of RWLC-5", R. W. Larsen, J. M. Mayers and L. Wojtas, *Dalton Trans.* (2017), 37, 12711-12716. (IF: 4.05)

121. "Photo-Physical studies of Ruthenium(II) tris(1,10-phenanthroline) Confined within a Polyhedral Zinc(II)-Trimesic Acid Metal Organic Framework", R. W. Larsen and L. Wojtas, *Inorg. Chim. Acta* (2017), 466, 243-248. (IF: 2.433)

120. "Photophysical studies of $[Ru(2,2'\text{-bipyridine})_3]^{2+}$ Encapsulated within the Uio-66 Zirconium Based Metal Organic Framework", R.W. Larsen and L. Wojtas, *J. Solid State Chem.,* (2017), 247, 77-82. (IF: 2.291)

119. "Time Resolved Calorimetry of Photo-Induced Folding in Horse Heart Cytochrome c", T. A. Word and R. W. Larsen, *Arch. Biochem. Biophys.* (2017), 615, 10-14. (IF: 3.559)

118. “Photoacoustic calorimetry study of CO photo-dissociation from chloramine-T modified horse heart cytochrome-*c*”, T. A. Word and R.W. Larsen, *Arch. Biochem. Biophys.,* (2016), 612, 17-21. (IF: 3.559)

117. “Photoacoustic calorimetry study of the cis to trans photoisomerization of the [Ru(II)(2,2’-bipyridine)2(H2O)2]2+ complex in aqueous solution” T. A. Word, A. Karolak, C. R. Cioce, A. van der Vaart, R. W. Larsen *Comm. Inorg. Chem.,* (2016), 36, 343-354. (IF: N/A)

116. "Molecular mechanism of protein kinase recognition and sorting by the Hsp90 kinome-specific cochaperone Cdc37", D. Keramisanou, A. Aboalroub, Z. Zhang, W. Liub, D. Marshall, A. Diviney, R. W. Larsen, R. Landgraf, and I. Gelis, *Mol. Cell*, (2016) 62, 260-271. (IF: 15.548)

115. “Hybrid-state emission in a polythienylenevinylene derivative with an electron deficient moiety”, E. Lafalce, C. Whittington, R. W. Larsen, J. Pan, L. Sanow, C. Zhang, and X. Jiang, *J. Chem. Phys.,* (2015), 142, 164702. (IF: 1.822)

114. “A New Photoactive Ru(II)tris(2,2’-bipyridine) Templated Zn(II) Benzene-1,4-dicarboxylate Metal Organic Framework: Structure and Photophysical Properties”, C. L. Whittington, L. Wojtas, W. Gau, S. Ma and R. W. Larsen, *Dalt. Trans.* (2015), 44, 5331-5337. (IF: 4.052)

113. “Fixed Distance Photoinduced Electron Transfer between Fe and Zn Porphyrins Encapsulated within the Zn HKUST-1 Metal Organic Framework”, R. W. Larsen and L. Wojtas, *Dalt. Trans. Comm.* (2015), 44, 2959-2963. (IF: 4.052)

112. “Sulfono-γ-AApeptides as a new class of unnatural helical foldamer”, H. Wu, Q. Qiao, Y. Hu, P. Teng, W. Gao, X. Zuo, L. Wojtas, R. W. Larsen, S. Ma, and J. Cai, *Chem. Eur. J.* (2015), 21, 2501-2507. (IF: 5.160)

111. “Photoacoustic calorimtery studies of ligand photo-release from the Ru(II)bis(2,2’ bipyridine)(6,6’ dimethyl 2,2’ bipyridine) complex”, T. Word, A. Karolak, M. T. Kemp, C. L. Whittington, A. van der Vaart, and R. W. Larsen, *Chem. Phys. Lett.* (2014), 619, 214-218. (IF: 1.90)

110. “Ruthenium(II)tris(2,2’-bipyridine) templated zinc(II)1,3,5-tris(4-carboxyphenyl)benzene metal organic frameworks: Structural characterization and photophysical properties”, C. L. Whittington, L. Wojtas and R. W. Larsen, *Inorg. Chem.* (2014),53, 160-166. (IF: 4.850)

109. “Spectroscopic Investigation of the Noncovalent Association of the Nerve Agent Simulant Diisopropyl Methylphosphonate (DIMP) with Zinc(II)porphyrins”, W. A. Maza, C. M. Vetromile, C. Kim, X. Xu, X. P. Zhang and R. W. Larsen, *J. Phys. Chem. A.* (2013), 117, 11308-11315. (IF: 2.61)

108. “Photo-Induced Inter-Cavity Electron Transfer between Ru(II)tris(2,2’ bipyridine) and Co(II)tris(2,2’ bipyridine) Co-Encapsulated within a Zn(II)-Trimesic Acid Metal Organic Framework”, R.W. Larsen and L. Wojtas, *J. Mat. Chem. A*, (2013), 1, 14133-14139. (IF: 10.733)

107. “Electronic Spectra of Porphyrins in the Solid State: Newly Observed Transitions, Collective and Structural Effects, and Protein Mimicing Environments”, R.L. Musselman, R.W. Larsen, and B.M. Hoffman, *Coord. Chem. Rev.* (2013), 257, 369-380. (IF: 13.476)

106. “Mimicking Heme Enzymes in the Solid State”, R. W. Larsen, V. 30 *Handbook of Porphyrin Science,* K. Kadish, K. Smith, R. Guilard G. Ferreira, Eds., World Scientific Publishing, 2013, 221-244. (Book Chapter)

105. " Exploring Biomolecular Thermodynamics in Aqueous and Non-Aqueous Environments using Time Resolved Photothermal Methods", R. W. Larsen, C. M. Vetromile, W. A. Maza, K. Pham and J. Miksovska, *Proteins in Solution and at Interfaces: Methods and Applications in Biotechnology and Materials Science*, J. M. Ruso and Angel Pineiro, Eds., Wiley and Sons, New York, 2012. (Book Chapter)

104. “Applications of Photoacustic Calorimetry in Chemistry and Biology”, R. W. Larsen, W. A. Maza, T. A. Word and C. M. Vetromile, *Invited Review, Trends in Photochemistry and Photobiology (*2012), 14, 47-68. (IF: N/A)

103. “Fluorescent Properties and Resonance Energy Transfer of 3,4-Bis(2,4-difluorophenyl)-maleimide”, K P. Nacheva, W. Maza, D. Z. Mayer, F. Fronczek, R. W. Larsen, R. Manetsch, *Org. Biom. Chem.* (2012), 10(48), 7840-7846. (IF: 3.490)

102. “How can Proteins Enter the Interior of a MOF: Investigation of Cytochrome *c* Translocation into a MOF Consisting of Mesoporous Cages with Microporous Windows” Y. Chen, V. Lykourinou, C. Vetromile, T. Hoang, L-J. Ming, R. W. Larsen, and S. Ma, *J. Am. Chem. Soc.* (2012), 134, 13188-13191. (IF: 14.695)

101. “Photo-Physical Studies of Ru(II)tris(2,2’-bipyridine) Confined within a Zn(II)-Trimesic Acid Metal Organic Framework”, R. W. Larsen and L. Wojtasz, *J. Phys. Chem. A* (2012), 116. 7830-7835. (IF: 2.64)

100. “Understanding Ion Sensing in Zn(II) Porphyrins: Spectroscopic and Computational Studies of Nitrite/Nitrate Binding", C. Whittington, W. A. Maza, H. Woodcock, and R. W. Larsen, *Inorg. Chem* (2012), 51, 4756-4762. (IF: 4.850)

99. "The Interplay of Turn Formation and Hydrophobic Interactions on the Early Kinetic Events in Protein Folding", J. J-T. Huang, R. W. Larsen and S. I. Chan, *Chem. Comm.* (2012), 48, 487-497. (IF: 6.164)

98. "Ground and Excited State Properties of Zn(II) tetrakis(4-tetramethyl pyridyl) Porphyrin Specifically Encapsulated within an Zn HKUST Metal Organic Framework", R. W. Larsen, J. Miksovska, R. L. Musselman and L. Wojtas, *J. Phys. Chem. A* (2011), 115, 11519-11524. (IF: 2.64)

97. "Solution Stability of Cu(II) Metal Organic Polyhedra", C. M. Vetromile, A. Lazano, S. Feola, and R. W. Larsen, *Inorg. Chim. Acta*, (2011), 378, 36-41. (IF: 2.43)

96. "Mimicking Heme Enzymes in the Solid State: Metal-Organic Materials with Selectively Encapsulated Heme ", R. W. Larsen, L. Wojtas, J. Perman, R. K. Musselman, M. J. Zaworotko, and C. M. Vetromile, *J. Am. Chem. Soc.* (2011), 133, 10356-10359. (IF: 14.695)

95. “Solid State X-Ray Structural Characterization and Solution Spectroscopy of a Dodecyloxy Copper Nanoball”, J. J. Perry, V. Kravstov, M. J. Zaworotko, and R. W. Larsen, *Cryst. Grwth. Design* (2011), 11, 3183-3189. (IF: 4.153)

94. "Time Resolved Thermodynamics Associated with Ligand Photorelease in Heme Peroxidases and Globins: Open Access Channels versus Gated Ligand Access", C. M. Vetromile, J. Miksovska and R.W. Larsen, *Biochim. Biophys. Acta* (2011), Invited Review, 1814, 1065-1076. (IF: 2.54)

93. “Sub-Nanosecond Photolysis Studies of Fe^{2+}Protoporphyrin IX Solubilized in Neat Dimethyl Sulphoxide”, R. W. Larsen, *Inorg. Chim. Acta* (2011), 370, 45-49. (IF: 2.43)

92. “Excited State Properties of 9-Amino Acridine Adsorbed onto Zr-Phosphate Galleries”, C. Vetramile, J. Permon, M. Cheney, M. J. Zaworotko, and R.W. Larsen, *Spectrochim. Acta A Mol. Biomol. Spectr.* (2011), 78, 648-652. (IF: 2.931)

91. “Photothermal Studies of the Room Temperature Photoinduced Spin State Change in Fe(III)(Salten)(Mepepy) Complex”, A. Mokdad and R. W. Larsen, *Inorg. Chimica. Acta* (2010), 363, 3338-3344. . (IF: 2.43)

90. “Temperature and Concentration Control over Interpenetration in a Polymorphic Metal-Organic Material”, J. Zhang, L. Wojtas, R. W. Larsen, M. Eddaoudi and M. J. Zaworotko, *J. Am. Chem. Soc.* (2009), 131, 17040-17041. (IF: 14.695)

89. “Co-crystal controlled solid-state synthesis of a thermally stable nicotinate analogue that sustains an isostructural series of porous metal-organic materials”, J. A. Perman, K. Dubois, F. Nouar, S. Zoccali, L. Wojtas, M. Eddaoudi, R. W. Larsen and M. J. Zaworotko, *Cryst. Growth. Des.* (2009), 9, 5021-5023. (IF: 4.153)

88. “Kinetic and Thermodynamic Characterization of Dihydrotestosterone-Induced Conformational Perturbations in Androgen Receptor Ligand Binding Domain” R. Jasuja, J. Ulloor, C. M. Yengo, K. Choong, D. Jacobs, R. Swerdloff, J. Miksovska, R. W. Larsen, and S. Bhasin, *Mol. Endo* (2009), 23, 1231-1241. (IF: 3.628)

87. “Photothermal Studies of CO Photodissociation from Horse radish and Soybean Peroxidases”, A. Mokdad, J. Miksovska, R. W. Larsen, *Biochim. Biophys. Acta* (2009), 1794, 1558-1563. (IF: 3.67)

86. “How Well Should the Active Site and the Specific Recognition Be Defined for Proficient Catalyses? —Effective and Cooperative Polyphenol/Catechol Oxidation and Oxidative DNA Cleavage by a Copper(II)-Binding and H-bonding Copolymer”, V. Lykourinou, A. I. Hanafy, G. F. Z. da Silva, K. S. Bisht, R. W. Larsen, B. T. Livingston, A. Angerhofer,and L-J. Ming, *Eur. J. Inorg. Chem.* (2008), 16, 2584-2592. (IF: 2.578)

85. “Zeolite-Like Metal-Organic Frameworks (ZMOFs) as Platforms For Applications: On Metalloporphyrin-Based Catalysis”, M. H. Alkordi, Y. Liu, R. W. Larsen, J. F. Eubank and M. Eddaoudi, *J. Am. Chem. Soc.* (2008), 130, 12639-12641. (IF: 14.695)

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Meeting Abstracts/Invited Seminars

193. "Photophysical Studies and nitroaromatic sensing associated with the porphyrinic metal-organic framework PCN-222" J.T. DeMatteo, R.W. Larsen, ibid.

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191. "Photophysical comparison between Tetra-N-Methyl-Pyridyl Porphyrin (TMPyP) and Meso-

tetra(4-N,N,N-trimethylanilinium) porphyrin (4TANP)" Q. Maqbool, R.W. Larsen, ibid.

190. "Photophysical studies of MOF encapsulated ruthenium polyimines for light activated drug Delivery" M.N. Senn, R.W. Larsen, ibid.

189. "Spectroscopic studies of mineralized horse heart cytochrome c within a zeolitic imidazole Framework" B. Wolfe, D. Lund, R.W. Larsen, 2023 Florida Inorganic and Materials Symposium (FIMS), University of Florida, Sept. 29-30.

188. "Photophysical Studies and nitroaromatic sensing associated with the porphyrinic metal-organic framework PCN-222" J.T. DeMatteo, R.W. Larsen, ibid.

187. "Photophysical studies of ligand photorelease associated with ruthenium-based complexes encapsulated within polyhedral zinc metal organic frameworks" D. Sellers, R.W. Larsen, ibid.

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185. "Photophysical studies of MOF encapsulated ruthenium polyimines for light activated drug Delivery" M.N. Senn, R.W. Larsen, ibid.

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183. "Photoinduced inter-cavity energy and electron transfer in a mixed-guest metal organic framework." R.W. Larsen, Z.L. Magnuson, 2023 Southeast Regional Meeting of the American Chemical Society (SERMACS), Durham, NC, Oct. 25-28.

182. "Novel two-dimensional metal metalloporphyrin framework films for the photocatalytic degradation of mustard simulant via singlet oxygen generation", Z.L. Magnuson, R.W. Larsen, ibid.

181. "Modulation of Ruthenium (II) Tris-(2,2'- bipyridine) Photophysics through Cavity Size in Zn(II) and Zr (IV) Metal Organic Frameworks" R.W. Larsen, J.M. Mayers, 2022 Southeast Regional Meeting of the American Chemical Society (SERMACS), San Juan, Puerto Rico, Oct. 18-22.

180. "Custom-designed zinc metalloporphyrin based metal-organic frameworks (MOFs): Applications toward reusable nitroaromatic detection and structural modification through post-synthetic metal exchange", Z. Magnuson, S. Ma and R.W. Larsen, ibid.

179. "Spectroscopic studies of horse heart Cytochrome c mineralized in the MOF ZIF-8", B. Wolfe, J. Mayers, and R.W. Larsen, ibid.

178. "Modulating guest photophysics in metal organic frameworks", R.W. Larsen, Spring 2022 Meeting of the American Chemical Society, San Diego, CA March 20-24, 2022.

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28. "Structure and Dynamics of CO-Fe(II)Protoporphyrin IX complexes in Dimethyl sulphoxide", R. W. Larsen and E. W. Findsen, American Chemical Society Annual Meeting, August 1995, Chicago, IL.

27. "Time-Resolved Optical Studies on the Electron Transfer Structural Dynamics of Ruthenium Polypyridine Modified Microperoxidase", B. Fan, R. W. Larsen, L. Matrinez, and M. R. Ondrias, ibid.

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25. "*In Situ* Photo-Reduction of Bovine Cytochrome *c* Reductase using a Novel Ru(II)*tris*(bipyridine)/EDTA/Ubiquinone Reducing System", S.-L. Niu and R. W. Larsen, ibid.

24. "Effect of Porphyrin Electronic Environment upon Electron Transfer Characteristics in Anionic Porphyrin-Cytochrome c Complexes", D. H. Omdal and R. W. Larsen, ibid.

23. "Ligand Photolysis and Recombination of Fe(II) Protoporphyrin IX complexes in dimethyl sulphoxide" R. W. Larsen, E. W. Findsen, and R. E. Nalliah, Thirty Ninth Annual Biophysical Society National Meeting, San Francisco, CA, March 1995.

22. "Nonplanar Heme Distortions in Cytochromes c Investigated Using Resonance Raman Spectroscopy", K. K. Anderson, L. Lou, K. D. Stanely, R. W. Larsen, J. M. Quirke, and J. A. Shelnutt, 1994 International Conference on Raman Spectroscopy, Hong Kong.

21. "A Molecular Mechanics and Resonance Raman Investigation of the Conserved Nonplanar Heme Distortions in Cytochromes c", J. D. Hobbs, K. K. Anderson, L. Lou, J. M. E. Quirke, R. W. Larsen, and J. A. Shelnutt, ibid.

20. "Protein:Porphyrin Interactions and Electron Transfer Activity of Anionic Porphyrin: Myoglobin Complexes", R. W. Larsen and D. H. Omdal, ibid.

19. "Molecular Modeling Studies of Caffeine Complexes with DNA-Intercalating Drugs", R. W. Larsen, R. K. Hetzler, P. T. Muraoka, V. and G. Andrada, Thirty Eigth Annual Biophysical Society National Meeting, New Orleans LA, March 1994.

18. "Conformational Effects of Hydrogen Peroxide Binding to Cytochrome c Oxidase", R. W. Larsen and D. H. Omdal, ibid.

17. "Resonance Raman Spectra of Cytochrome c Oxidase with Q-Band Excitation", B.S. Lou, R. W. Larsen, S. I. Chan, and M. R. Ondrias, Thirty Seventh Annual Biophysical Society National Meeting, Washington D. C., February 1993.

16. "Electron Transfer Studies in the Membrane Bound C552 from Paracoccous denitrificans", M H. B. Stowell, R. W. Larsen, D. C. Rees, and S. I. Chan, ibid.

15. "Non-Covalent Complexation between Cytochrome c Peroxidase with Cytochrome c Shows Changes in Protein Structure. not in Heme Environment", J. L. Wang, R. W. Larsen, S. J. Moench, J. D. Satterlee, and M. R. Ondrias, ibid.

14. "Conformational Dependance of Carbonmonoxide Ligation in Cytochrome c Oxidase", B. S. Lou, R. W. Larsen, S. I. Chan, and M. R. Ondrias, ibid.

13. "Photo-Induced Elelctron Transfer between Cytochrome c and Cytochrome c Oxidase using a Novel NADH/Uroporphyrin Reducing System", R. W. Larsen, J. R. Winkler, and S. I. Chan, ASBM/Biophysical Society Joint Meeting, Houston, TX, February, 1992.

12. "Resonance Raman Spectroscopy of Photoinduced Electron Transfer Reactions in a Ruthenium Bis-Bipyridine Dicarboxybipyridine Cytochrome c (Lys 72) Derivative" J. D. Hobbs, D. J. Nunez, R. W. Larsen, L. P. Pan, F. Millet, and M. R. Ondrias, ibid.

11. "The Effects of pHMB-Modification and Heat Treatment on the Cu_A Reduction Potential of Cytochrome c Oxidase", Z. Li, R. W. Larsen, L. P. Pan, and S. I. Chan, ibid.

10. "The Nature of Cu_X in Cytochrome c Oxidase", L. P. Pan, Z. Li, R. W. Larsen, and S. I. Chan, ibid.

9. "Structure and Reactivity of Heme a Reconstituted Myoglobin and Heme a Reconstituted Horseradish Peroxidase", R. W. Larsen, D. J. Nunez, J. MacLeod, M. R. Ondrias, and S. I. Chan, Thirty Fourth Annual Biophysical Society National Meeting, San Fransisco, California, February 1991.

8. "Resonance Raman Study of the Non-Covalent Complex Formed by Cytochrome c and Cytochrome c Peroxidase", J. L. Wang, R. W. Larsen, S. J. Moench, J. D. Satterlee, and M. R. Ondrias, ibid.

7. "Resonance Raman Studies of the Interaction of Mesoheme and Copper with Histidine-Rich Glycoprotein", B. B. Muhoberac, R. W. Larsen, D. J. Nunez, W. T. Morgan, and M. R. Ondrias, Thirty Third Annual Biophysical Society Meeting, Baltimore, Maryland, February 1990.

6. "Resonance Raman Characterization of the Dioxygen Intermediates in Cytochrome c Oxidase", R. W. Larsen, W. Lei, R. A. Copeland, S. I. Chan, and M. R. Ondrias, ibid

5. "The Structural Basis for Cross Linking Induced Functional Effects in HbXL99 : A Resonance Raman Study", R. W. Larsen, M. D. Chavez, J. M. Friedman, and M. R. Ondrias, Thirty Second Annual Biophysical Society Meeting, Cincinati, Ohio, February 1989.

4. "Resonance Raman Characterization of Two Room Temperature Dioxygen Intermediates of Cytochrome c Oxidase", R. W. Larsen, W. Li, R. A. Copeland, S. I. Chan, and M. R. Ondrias, American Chemical Society, Southwest Regional Meeting, Corpus Christi, Texas, December 1988.

3. "Resonance Raman Characterization of the Equilibrium and Transients Species of Cytochrome c' from C. vinosum", J. D. Hobbs, R. W. Larsen, T. E. Meyer, M. A. Cusanovich, and M. R. Ondrias, ibid.

2. "Resonance Raman Studies of Cu_A Modified Cytochrome c Oxidase", R. W. Larsen, P. M. Li, R. A. Copeland, S. I. Chan, and M. R. Ondrias, Thirty First Annual Biophysical Society Meeting, Pheonix, Arizona 1987.

1."Resonance Raman Studies of the Structure and Dynamics of pHMB Modified Cytochrome c Oxidase", R. W. Larsen, P. M. Li, S. I. Chan, and M. R. Ondrias, American Chemical Society, Southwest Regional Meeting, Little Rock Arkansas, December 1987.
115. “Probing the Thermodynamics and Kinetics of Surfactant Protein Folding in Cytochrome c using CO Photo-Initiation Methods”, T. Word, R. W. Larsen, ibid.

Summary of Teaching Accomplishments at the University of Hawaii

Course	Avg Enrollment	Avg. Evaluation
Chemistry 171 (Introductory Chemistry)	35	4.16
Chemistry 171A/181A (Honors Introductory Chemistry)	45	4.25
Chemistry 333/333L (Instrumental Analysis/Lab)	21	4.11
Chemistry 352L (Physical Chemistry Laboratory)	10	N/A
Chemistry 601 (Graduate, Chemical Bonding)	7	4.45
Chemistry 602 (Graduate, Survey of Spectroscopy)	7	4.20
Chemistry 751 (Graduate, Special Topics: Spectroscopy of Biological Molecules)	5	4.67

- Evaluation scores are on a scale of 1 to 5 with 5 being the highest rating.

Dept. of Chemistry Nominee for the 1996/1997, 1997/1998, 1998/1999, 1999/2000 University of Hawaii Excellence in Teaching Award.

Courses Taught at BYU-Hawaii (Visiting Instructor, to ensure BYU-Hawai’i American Chemical Society accreditation)

Course	Avg. Enrollment
Chemistry 361/361L Physical Chemistry I/Physical Chemistry I Laboratory	10
Chemistry 362/362L Physical Chemistry II/Physical Chemistry II Laboratory	10
Chemistry 421 Intermediate Inorganic Chemistry I	8
Chemistry 422	8

Summary of Teaching Accomplishments at the University of South Florida

Course	Avg Enrollment	Avg Evaluation
Chemistry 3610/L (Intermediate Inorganic Chemistry)	120	3.8
Chemistry 3400/4410 (Physical Chemistry I)	35	4.2
Chemistry 3401/4411 (Physical Chemistry II)	5	4.25
Chemistry 3402L (Physical Chemsitry Lab)	6	3.75
Chemistry 4413 (Biophysical Chemistry)	25	4.2
Chemistry 4131 (Methods of Chemical Analysis)	10	4.2
Chemistry 6398- Special Topics (Graduate, Spectroscopy)	12	4.7
Chemistry 6398- Special Topics (Graduate, Photochemistry and Photobiology)	7	4.1
Chemistry 6938- Special Topics (Graduate, Advanced Bioinorganic Chemistry)	10	4.5
Chemistry 6648 (Graduate, Advanced Quantum Chemistry I	6	
Chemistry 6938- Special Topics (Graduate, Advanced Quantum Chemistry II)	8	

Received 2004 Undergraduate Teaching Award in Chemistry