

LINH PHAM

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EDUCATION

Ph.D., University of Florida, Gainesville, FL (2014)

- **Major: Chemistry**
- **Minor: Biochemistry and Molecular Biology**

Certificate in Effective Use of Technology in Teaching, University of Florida (2013)

Certificate in Effective Teaching, University of Florida (2011)

B.Eng., Hanoi University of Technology (HUT), Hanoi, Vietnam (2007)

- **Major: Chemical Engineering**, Honor thesis, graduated #1 in the 2007 class

POSITIONS AND EMPLOYMENT

- **Assistant Professor of Chemistry** – Texas A&M University – Central Texas (08/2015-Present)
- Postdoctoral Associate – University of Florida – Prof. Gail Fanucci (2014-2015)
- Graduate Research Assistant – University of Florida – Prof. George Christou (2009-2014)
- Visiting Scholar–University of New Orleans (08/2007-12/2007)
- Research Scientist – Vietnam Academy of Science and Technology (2007-2009)

RESEARCH EXPERIENCE

Visiting Research Scholar, University of Florida, Gainesville, FL (5/2017-7/2017)

- Project: developed research on two molecular nanoscience projects involving single molecule magnets (Cu-Ln) and vanadium supramolecular chemistry.

Visiting Research Scholar, University of Florida, Gainesville, FL (6/2016-8/2016)

- Project: developed new methods for the expression, purification and crystallography of HIV-1 proteases and investigated the conformation changes and autoproteolysis in HIV-1 proteases through the use of site-directed spin labeling, X-ray crystallography, mass spectrometry, EPR and NMR spectroscopies.

Research Assistant (2009 – 2014), Professor George Christou, Department of Chemistry, University of Florida, Gainesville, FL: conducted research on synthesis, physical and magnetic characterization of multinuclear metal complexes including homometallic Fe, Mn, lanthanide (Ln), heterometallic Mn-Ln, Fe-Ln, Co-Ln and Cr-Ln, and bio-inorganic clusters containing Mn, Ni, Fe.

Research Scientist (2007 – 2009), Laboratory for Materials and Engineering of Fiber Optics, Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam, conducted research on synthesis, characterization methods and bio-medical applications of quantum dots (CdSe, CdSe/ZnS, CdS/CdSe/CdS) and metal oxide nanoparticles (SiO₂, ZnO, TiO₂).

Visiting Scholar (2007), Department of Mechanical Engineering, University of New Orleans, LA: Conducted research on mechanical behavior of composites materials and nano-materials under high or low temperatures, flammability and growth under thermal and mechanical loadings.

TEACHING EXPERIENCE

Assistant Professor of Chemistry, Texas A&M University – Central Texas (08/2015-Present)

Main tasks: developed class materials, design laboratory manuals, instructed three-hour lecture and three-hour laboratory per week, facilitated discussions, graded the quizzes and exams, maintained the class materials online, held six office hours each week.

List of courses: All of them are **new preps**.

- *Biochemistry I: CHEM 4430- Lecture and Lab (Spring 2016, Fall 2016, Fall 2017)*
- *Biochemistry II: CHEM 4431- Lecture and Lab (Spring 2018)*
- *Analytical Chemistry: CHEM 3415 - Lecture and Lab (Fall 2016, Fall 2017)*
- *Instrumental Analysis: CHEM 4415 - Lecture and Lab (Spring 2018)*
- *Special Topics in Biology: BIOL 4389 – Lecture and Lab (Fall 2017, Spring 2018)*
- *Research Method: CHEM 3390 (Springs 2016, 2017, 2018): This is the first Service-Learning course offered by the Department of Sciences and Mathematics.*

Temporary Lecturer, University of Florida (2014-2015)

- **Hybrid/Online Introductory Chemistry for Nurses: CHM 1013:** one section with about 70 students, developed class materials and instructed one lecture per week, facilitated discussions, graded the quizzes and exams, maintained the class materials online, held three office hours each week.
- **General Chemistry II Lecture:** CHM 2046: one section with about 100 students, develop class materials, facilitate lectures/discussions, grade quizzes, hold three office hours each week, substitute faculty leave.
- **Biochemistry and Molecular Biology Lab:** CHM 4300L: instruct 20 students working on the “cloning, expression and characterization of human carbonic anhydrase II” project.

Teaching Assistant, University of Florida (2009 – 2014)

- **Biochemistry Lecture:** CHM 3217 (1 semester), 60 students, facilitated discussions, graded homework and quizzes, held three office hours each week.
- **Inorganic Chemistry Lecture and Lab:** CHM 3610 (2 semesters): 45 students each semester, facilitated discussions, graded homework and quizzes, held three office hours each week
- **General Chemistry II Discussion:** CHM 2046D (4 semesters), 3 sections and 45 students each semester, facilitated discussions, graded the quizzes and exams, held three office hours each week.
- **General Chemistry I Lab:** CHM 2045L (4 semesters), 3 sections and 60 students each semester, instructed student to do experiments and graded the lab reports, held three office hours each week.

Teaching Assistant, University of New Orleans (2007)

- **Composite Materials Lab (Fall 2007),** 15 students, designed and set up experiments, instructed students to do experiments and write lab report, graded lab reports and evaluated students.

MENTORING EXPERIENCE

Undergraduate Research, Texas A&M University – Central Texas (2017 – 2018)

- **BIOL 4389: Special Topics in Biology:** mentored two undergraduate students to do research on home distilled alcohol and vanadium supramolecular chemistry
- Resulted in:
 - ✓ 1st place poster ward in “Best poster in Chemistry and Biochemistry”
 - ✓ 2nd place poster ward in “Overall in the Undergraduate Poster Section”

Undergraduate Research, University of Florida (2013 – 2015)

- **CHM 4910: Special Problems:** mentored three undergraduate students to do research using synthesis and characterization techniques on a daily basis
- Resulted in:
 - ✓ one poster presented at the 2014 Florida Annual Meeting and Exposition conference (FAME)
 - ✓ one poster presented at the 2014 Florida Inorganic and Materials Symposium (FIMS).

Graduate Research, University of Florida (2011 – 2013)

- **Mentored a master student to design the reaction system:** instructed advanced chemical synthesis and characterization techniques on a daily basis
- Resulted in the 3rd place poster at the 2012 Florida Annual Meeting and Exposition (FAME) conference.

AWARDS AND GRANTS

- **R.E.C.K.E.D Award for Excellence, Creativity, Knowledge, and Engaging Diversity at TAMU-CT, 2018**
- **IAB approved project “Big Data and PV Characterization Use for LED/Solar Microsystems” under National Science Foundation (NSF) Grant # 1624539, \$50,000, 2017**

- *CIBA Young Scientist Award, American Chemical Society, 2017*
- *Research Innovation Grant, \$2000, Texas A&M University-Central Texas, 2017-2018*
- *The College of Arts and Science Research Grant, \$4600, Texas A&M University-Central Texas, 2017-2018*
- *Service-Learning Fellow, Texas A&M University-Central Texas, 2016-2017*
- *Service-Learning Grant, Texas A&M University-Central Texas, 2015*
- *Grant Submission, Eastern Apicultural Society. Investigating the Role of the Bee Honey Stomach Microbiome in the Composition and Quality of Honey. Allyson Martinez, Laura Weiser-Erlandson, and Linh Pham, 2015 (\$10,000) (Not funded)*
- *Best Teaching Award, Chemistry Department, University of Florida, 2014 (5/150 applicants)*
- *Outstanding Teaching Award, 2011, 2012, 2013 (15/150 applicants)*
- *American Chemical Society (ACS) Travel Grant, 2014 (awarded to only 20 inorganic students nationwide)*
- *Graduate Student Council Travel Grant, University of Florida, 2014*
- *Graduate Assistantship, stipends of \$21,000/year, University of Florida, 2009 - 2014*
- *Graduate Student Council Travel Grant, University of Florida, 2013*
- *Graduate Poster Award: 3rd place, Florida Annual Meeting and Exposition, Tampa, FL, 2012 (3/100 applicants)*
- *Grinter Award: \$3000, for outstanding graduate students at University of Florida, 2009, 2010, 2011 (10/250 applicants)*
- *Graduate Poster Award: 2nd place, Florida Annual Meeting and Exposition, Tampa, FL, 2010 (3/100 applicants)*
- *Visiting Scholar Grant: \$10,000, University of New Orleans, 2007 (3/200 applicants)*
- *Odon Vallet Award for Outstanding Young Vietnamese Researcher, 2008 (awarded to only 10 young researchers in Northern Region of Vietnam)*
- *Honor Undergraduate Scholarship: \$1000, Hanoi University of Technology, Hanoi, Vietnam, 2006-2007 (awarded to top 5% undergraduate students)*

PUBLICATIONS

A. Publications at Texas A&M University – Central Texas

In Preparation:

- **Linh Pham**, Coady Lapierre, John Barber, Randy Stonerod II, *Characterization of Texas Home Distilled Alcohol Using Flame Atomic Spectroscopy and Gas Chromatography*, **2018**, Manuscript under preparation.

Accepted:

- **Pham, L.**, Abboud, K. A., Wernsdorfer, W., Christou, G., *Family of Mn_8Ln_4 ($Ln = Gd, Tb, Dy, Ho$) and Mn_8Y_4 Single-Molecule Magnets From The Use of 2-(Pyridine-2-yl)propan-2-ol*, Polyhedron, **2018** – Accepted

Peer-Reviewed Journal Papers:

1. Zhanglong Liu, Xi Huang, Lingna Hu, **Linh Pham**, Katye Poole, Yan Tang, Brian Mahon, Wenxing Tang, Kunhua Li, Nathan Goldfarb, Ben Dunn, Robert McKenna, Gail Fanucci, *Effects of Hinge Region Natural Polymorphisms on Human Immunodeficiency Virus -1 Protease Structure, Dynamics and Drug – Pressure Evolution*, J. Biol. Chem., **2016**, 291, 22741
2. Zhanglong Liu, Thomas M Casey, Mandy E Blackburn, Xi Huang, **Linh Pham**, Ian M. S. de Vera, Jeff D Carter, Jamie L. Kear-Scott, Angelo M Veloro, Luis Galiano, Gail Fanucci, *Pulsed EPR Characterization of HIV-1 Protease Conformational Sampling and Inhibitor-Induced Population Shifts*, Phys. Chem. Chem. Phys., **2016**, 18 (8), 5819
3. Maria Manoli, Sofia Alexandrou, **Linh Pham**, Giulia Lorusso, Wolfgang Wernsdorfer, Marco Evangelisti, Prof. George Christou, Anastasios J. Tasiopoulous, *Magnetic “Molecular Oligomers” Based on Decametallc Supertetrahedra: A Giant Mn_{49} Cuboctahedron and its $Mn_{25}Na_4$ Fragment*, Angew. Chem. Int., **2016**, 128, 689-694

B. Prior Publications:

4. Simon Muche, Irina Levacheva, Olga Samsonova, **Linh Pham**, George Christou, Udo Bakowsky, Malgorzata Holynska, *An unprecedented spin-frustrated, low-cytotoxic [Ni₁₅]-wheel complex with a novel Schiff-base ligand*, Inorg. Chem, **2014**, 53 (14), 7642
5. Dimitris I. Alexandropoulos, Luis Cunha-Silva, **Linh Pham**, Vlasoula Bekiari, George Christou, and Theocharis C. Stamatatos, *Tetranuclear Lanthanide (III) complexes with a Zigzag Topology from the Use of Pyridine-2,6-dimethanol: Synthetic, Structural, Spectroscopic, Magnetic and Photoluminescences Studies.*, Inorg. Chem, **2014**, 53 (6), 3220
6. **Linh, Pham**, Abboud, K. A., Wernsdorfer, W., Christou, G. *Synthesis, Structure and Magnetic Properties of [Fe^{III}₄Ln^{III}₂] (Ln = Gd, Tb, Dy, Ho) and [Fe^{III}₄Y^{III}₂] Clusters*. Polyhedron, **2013**, 66, 205
7. Q. M. Ngo, S. Kim, H. Lim, P. T. Nga, **P. T. Linh**, N. X. Nghia, F. Rotermund, K. Kim, A. Avoine, A. Maitre; *A Quantitative Analysis of the Optical Reflection Properties of Self-Assembled Opal Films*, Current Applied Physics, **2011**, 11, 643
8. Hai Le Ba, Nghia Nguyen Xuan, Nga Pham Thu, Chinh Vu Duc, **Linh Pham Thuy** and Trang Nguyen Thi Thu. *Preparation and Spectroscopic Investigation of CdS/CdSe/CdS Quantum-Dot Quantum-Well Heterostructures*. Journal of Nanoscience and Nanotechnology, **2009**, 9, 679-683
9. Celine Vion, Carlos Barthou, Laurent Coolen, Paul Bennaloul, Vu Duc Chinh, **Pham Thuy Linh**, Vu Thi Bich, Pham Thu Nga and Agnes Maitre. *Luminescence Properties of II/VI Semiconductor Colloidal Nanocrystals at Collective and Single Scales*. Journal of Physics, **2009**, 187, 012018

CONFERENCE PRESENTATIONS

A. Oral Presentations:

- American Democracy Project Lecture Series, Invited Talk, Killeen, Texas (2016)
- SERMACS Chemical Society Southeastern Regional Meeting, Memphis, TN (2015)
- Florida Inorganic and Materials Symposium (FIMS), Gainesville, FL (2013)
- Florida Annual Meeting and Exposition (FAME-ACS), Tampa, FL (2013)
- International Workshop Photonics and Applications, NhaTrang, Vietnam (2008)

B. Poster Presentations:

- 121st Texas Academy of Science Annual Meeting, Midland, TX (2018)
- 253rd ACS National Meeting and Exposition, San Francisco, CA (2017)
- Florida Annual Meeting and Exposition (FAME-ACS), Tampa, FL (2015)
- 248th ACS National Meeting and Exposition, San Francisco, CA (2014)
- 245th ACS National Meeting and Exposition, New Orleans, LA (2013)
- Florida Annual Meeting and Exposition (FAME-ACS), Tampa, FL (2014, 2012, 2011, 2010)
- Florida Inorganic and Materials Symposium (FIMS), Gainesville, FL (2012, 2011)
- Current Trends in Nanoscale and Molecular Magnetism (CTMNM), Orlando, FL (2010)

COMMITTEES & SERVICE

- Served in the University Curriculum Committee at Texas A&M University – Central Texas (2018-2020)
- Served in the Service-Learning Advisory Board at Texas A&M University – Central Texas (2016-present)
- Served as an active member of the following committees at Texas A&M University – Central Texas (2015-2018):
 - Biology Laboratory Coordinator I
 - Chancellor's Research Initiatives Purchase Planning
 - Research Faculty Position Search (The Chancellor's Research Initiatives)
 - Biology Adjunct Professor Search
 - Faculty and Staff Holiday Party
 - Environmental Health and Safety Council
 - TAMU-CT Multipurpose Building
- Served on the **Organizing Committee** of the 2013 *Florida Inorganic and Materials Symposium (FIMS)* as the **Symposium Coordinator**: designed and made the agenda and the book of abstracts, invited presenters, coordinated the program and worked with others to arrange accommodations.

- Served as the **Judge Committee** for posters at the Graduate Student Research Symposium, University of Florida, 2013-2014
- Served as a **Board Member** for the *Molecular Mania Chemistry Day* at Oak Mall, Gainesville, FL (2010- 2014): designed and conducted demonstrations to convey chemistry concepts to the young audience of Gainesville community.
- Served as a **Board Member** for the Sunflower Mission fundraiser: coordinated volunteers, prepared and sold the food to collect funds that benefit elementary and secondary schools in poor regions in Vietnam. (2011-2013)

SKILLS

Experimental Techniques:

- Superconducting quantum interference device (SQUID)
- Nuclear Magnetic Resonance Spectroscopy (NMR)
- High Performance Liquid Chromatography (HPLC)
- Gas Chromatography-Mass Spectrometry (GC-MS)
- Column Chromatography (Q-Column, desalting column and size column)
- Single-Crystal X-ray Crystallography
- Electrochemistry
- Electron Paramagnetic Resonance (EPR)
- Differential Scanning Calorimetry (DSC)
- Circular Dichroism (CD)
- Dynamic Light Scattering (DLS)
- Differential Scanning Fluorimetry (DSF)
- Infrared Spectroscopy (IR)
- Photoluminescence Excitation Spectroscopy
- Absorption Spectroscopy
- Atomic Absorption Spectroscopy

Computational Techniques: Sigma Plot, MagPack, Shelxtl, Magnet, MatLab, AutoCad, Origin, Diamond, Mercury, Omnic, Photoshop.

RESEARCH PROJECTS

- Big data and PV characterization use for LED/Solar Microsystems
- Analysis of home-distilled alcohol using AA and GC
- Molecular nanoscience chemistry involving single molecule magnets (Cu-Ln) and vanadium supramolecular complexes
- Investigation of the conformation changes and autoproteolysis in HIV-1 proteases using Site-directed Spin Labeling, X-ray Crystallography, Mass Spectrometry, EPR and NMR Spectroscopies
- Synthesis of organic ligands (bulkier derivatives of 2-(hydroxymethyl)pyridine and 2,6-Pyridinedimethanol) employing air-free Schlenk line techniques and column chromatography. Employment of techniques such as 1D, 2D NMR, elemental analysis and mass spectrometry for characterization
- Design, synthesis, and characterization of 3d transition metal single-molecule magnets (SMMs), hybrid 3d-4f and 4f lanthanide (Ln) based SMMs. Main focus is on high nuclearity complexes for numerous applications including homometallic iron/manganese/lanthanide (Fe/Mn/Ln) and heterometallic manganese-lanthanide (Mn-Ln), iron-lanthanide (Fe-Ln) and chromium-lanthanide (Cr-Ln) clusters
- Computational fit and simulation of dynamic magnetic properties of SMMs using Sigma Plot, Magnet and MagPack programs

- Design, synthesis, and characterization of II/VI semiconductor quantum dots (CdSe, CdSe/ZnS, CdS, CdS/CdSe/CdS) and metal oxide nanoparticles (SiO₂, ZnO, TiO₂). Conduct tests for their potential biomedical applications