

LINH PHAM
Texas A&M University-Central Texas

EDUCATION

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

- **Major: Chemistry**
- **Minor: Biochemistry and Molecular Biology**
- Advisor: George Christou, Ph.D., Distinguished Professor

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)
- Term Lecturer – University of Florida (2014-2015)
- Postdoctoral Associate – University of Florida – Gail Fanucci (2014-2015)
- Graduate Research Assistant – University of Florida – George Christou (2009-2014)
- Visiting Scholar–University of New Orleans–David Hu (08/2007-12/2007)
- Research Scientist – Vietnam Academy of Science and Technology– Nga Pham (2007-2009)

RESEARCH EXPERIENCE

Research/Postdoctoral Associate, University of Florida, Gainesville, FL (2014-present)

- Supervisor: Gail Fanucci, Ph.D., Associate Professor
- 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

Temporary Lecturer (2014-2015), Department of Chemistry, University of Florida, Gainesville, FL:

- **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 20461 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 (2009 – 2014), Department of Chemistry, University of Florida, Gainesville, FL:

- **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.

Adjunct Lecturer (2008 – 2009), Department of Chemical Engineering, Ha Noi University of Technology, Vietnam:

- **Fundamental of Technical Chemistry**, (Fall 2008, Spring 2009), 20 students each semester, classes met three times per week for 45' each, held 1.5 office hours per week, gave lectures and graded quizzes and exams.

Teaching Assistant (2007), Department of Mechanical Engineering, University of New Orleans, LA:

- **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 Supervisor (2013 – 2015), Department of Chemistry, University of Florida, Gainesville, FL:

- **CHM 4910: Special Problems:** mentored three undergraduate students to do research using synthesis and characterization techniques on a daily basis, worked with the students (co-author) on two posters presented at the 2014 Florida Annual Meeting and Exposition conference (FAME) and the 2014 Florida Inorganic and Materials Symposium (FIMS).

Graduate Research Supervisor (2011 – 2013), Department of Chemistry, University of Florida, Gainesville, FL:

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

INDUSTRIAL EXPERIENCE

Participated in four **internships**, each of which lasted 4 weeks, activities included daily factory visits, observations and submission of a comprehensive report (2005-2007).

- **Intern** at Thang Long Wine Company, Hanoi, Vietnam (3/2007)
- **Intern** at Lam Thao Fertilizers and Chemical Company, Phu Tho, Vietnam (12/2006)
- **Intern** at But Son Cement Packing Joint Stock Company, Hanam, Vietnam (5/2006)
- **Intern** at Ha Bac Nitrogenous Fertilizers and Chemical Company, Bac Giang, Vietnam (3/2005)

AWARDS AND GRANTS

- **Service-Learning Grant**, Texas A&M University-Central Texas, 2015
- **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)

SKILLS

Experimental Techniques:

- Superconducting quantum interference device (SQUID)

- Nuclear Magnetic Resonance Spectroscopy (NMR)
- Column Chromatography (Q-Column, desalting column and size column)
- Single-Crystal X-ray Crystallography
- Electrochemistry
- Electron Paramagnetic Resonance (EPR)
- Circular Dichroism
- Dynamic Light Scattering
- Differential Scanning Fluorimetry
- Infrared Spectroscopy (IR)
- Photoluminescence Excitation Spectroscopy
- Absorption Spectroscopy

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

COMMITTEES & OTHER ACTIVITIES

- 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)

PUBLICATIONS

PEER-REVIEW PAPERS:

1. Dr. Maria Manoli, Sofia Alexandrou, **Dr. Linh Pham**, Dr. Giulia Lorusso, Dr. Wolfgang Wernsdorfer, Dr. Marco Evangelisti, Prof. George Christou, Dr. Anastasios J. Tasiopoulous, *Magnetic "Molecular Oligomers" Based on Decametallic Supertetrahedra: A Giant Mn₄₉ Cuboctahedron and its Mn₂₅Na₄ Fragment*, *Angew. Chem. Int.*, **2015**, 55 (2), 679
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.*, **2015**, 18 (8), 5819
3. 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
4. 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
5. **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
6. 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
7. 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

- Celine Vion, Carlos Barthou, Laurent Coolen, Paul Benalloul, 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 ABSTRACTS:

- Linh Pham**, Khalil A. Abboud, Wolfgang Wernsdorfer and George Christou. *Structural and Magnetic Characterization of Mn/Ln (Ln = Gd, Tb, Dy, Ho) Single-Molecule Magnets Clusters From the Use of 2-(hydroxymethyl)pyridine and its Bulkier Derivatives*. 245th ACS National Meeting and Exposition, **2013**, New Orleans, LA
- Linh Pham**, Wolfgang Wernsdorfer, Khalil A. Abboud and George Christou. *A Family of Mn₈Ln₄ (Ln = Gd, Tb, Dy, Ho) Single-Molecule Magnets from the Use of 2-(Hydroxymethyl)pyridine, and Comparison with the Products from Bulkier Chelates*. Florida Annual Meeting and Exposition (FAME), **2013**, Tampa, FL
- Linh Pham**, Maria Ghicas, Khalil A. Abboud and George Christou. *A New Family of Mn₈Ln₄ (Ln = Gd, Tb, Dy, Ho) and Mn₈Y₄ Single-Molecule Magnets From The Use of 2-(Pyridine-2-yl)propan-2-ol*. Florida Annual Meeting and Exposition (FAME), **2012**, Tampa, FL
- Linh Pham**, Khalil A. Abboud, Wolfgang Wernsdorfer and George Christou. *Structural, Magnetic Properties and MagPack Simulation of a New Fe₄Ln₂ Hybrid Single-Molecule Magnets (Ln = Gd, Tb, Dy, Ho)*. Florida Annual Meeting and Exposition (FAME), **2011**, Tampa, FL
- Linh Pham**, Taketo Taguchi, Khalil A. Abboud and George Christou. *New Manganese Single-Molecule Magnets From The Use of 2-(hydroxymethyl)pyridine Derivatives with Bulky Substituents*. Current Trends in Nanoscale and Molecular Magnetism (CTMNM), **2010**, Orlando, FL
- Céline Vion, Carlos Barthou, Laurent Coolen, Paul Benalloul, Vu Duc Chinh, **Pham Thuy Linh**, Vu Thi Bich, Pham Thu Nga, Agnès Maitre. *Luminescence properties of II/VI semiconductor colloidal nanocrystals at collective and single scale*. Proceeding of the ASEAN Workshop on Advanced Materials Science and Nanotechnology, **2008**, 193, Nha Trang, Vietnam
- Pham Thu Nga, Nguyen Xuan Nghia, Vu Duc Chinh, **Pham Thuy Linh**, Dinh Hung Cuong, Vu Thi Hong Hanh, Vu Thi Bich, C. Barthou, C. Vion, P. Benalloul, A. Maitre. *Effects of the ZnS shell thickness and the temperature on the photoluminescence decay in CdSe/ZnS quantum dots*. Abstract and Program of Proceedings of the 5th National Conference on Optics and Spectroscopy, International Workshop on Photonics and Applications, **2008**, 55, Nha Trang, Vietnam
- Vu Duc Chinh, Le Ba Hai, **Pham Thuy Linh**, Dinh Hung Cuong, Pham Thu Nga, Nguyen Xuan Nghia, Pham Van Hoi, Vu Thi Hong Hanh, Pham Thai Cuong, C. Vion, A. Maitre, C. Barthou, P. Benalloul. *Temperature effects on the photoluminescence properties of colloidal CdSe/ZnS core/shell quantum dots*. Proceedings of the 1st International Workshop on Nanotechnology and Application (IWNA), Vungtau, **2007**, 165, Vietnam
- Le Ba Hai, Nguyen Xuan Nghia, Pham Thu Nga, Vu Duc Chinh, **Pham Thuy Linh**, Nguyen Thi Thu Trang. *Preparation and Spectroscopic Investigation of CdS/CdSe/CdS Quantum-Dot Quantum-Well Heterostructure*. International Conference on Nanoscience and Nanotechnology, **2007**, Beijing, China
- Le Ba Hai, Nguyen Xuan Nghia, Pham Thu Nga, Vu Duc Chinh, **Pham Thuy Linh**, Nguyen Thi Thu Trang. *Synthesis and optical properties of colloidal CdS/CdSe/CdS quantum wells*, The 10th German- Vietnamese Seminar on Physics and Technology (GVS10), **2007**, Bonn, Germany
- Nguyen Xuan Nghia, Le Ba Hai, Chu Viet Ha, **Pham Thuy Linh**, Vu Duc Chinh, Pham Thu Nga. *Optical properties of colloidal CdS/CdSe/CdS nanostructures*. Proceedings of the 1st International Workshop on Functional Materials and the 3rd International Workshop on Nanophysics and Nanotechnology, **2006**, 436, Halong, Vietnam

CONFERENCE PRESENTATIONS

ORAL PRESENTATION:

- 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)

POSTER PRESENTATION:

- Florida Annual Meeting and Exposition (FAME-ACS), Tampa, FL (2015)
- 248th ACS National Meeting and Exposition, San Francisco, LA (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)

RESEARCH SUMMARY

- Optimization of the expression, purification and crystallography of HIV-1 proteases.
- 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 bio-medical applications.