# Education

## Ph.D., Chemistry, The University of Akron, Akron, OH, USA 2003-2010

## B.S., Chemistry, Chulalongkorn University, Bangkok, Thailand 1998-2002

# Experience

## Domnern Somgiat & Boonma, Bangkok, Thailand

## Technical Assistant 2012-present

* Responsible for translation, drafting communication letters related to patent application filing and prosecution in Thailand and responding the examiner’s opinion.
* Responsibility also includes preparing amendments, giving technical opinion on law and chemistry related inquiries, checking the accuracy and patentability of the specification and claims of patent applications in the fields of chemistry, engineering and other related fields, reporting clients of the registration process and requirements, and reply to client’s inquiries and requests.

## Huachiew Chalermprakiet University, Samut Prakarn, Thailand

## Instructor 2011-2012

* Responsible for teaching organic chemistry laboratory, proof-reading organic chemistry exams, answering questions and explaining chemistry to students from diverse major.
* Responsibility also includes editing and reviewing science journal manuscripts, preparation for research.

## The University of Akron, OH, USA

## Postdoctoral fellow – Modarelli Research Group 2010-2011

* Responsible for modeling, synthesis, characterization and analysis of novel small molecules liquid crystalline compounds for improving organic photovoltaic devices and studies of electron transfers in these materials.
* Responsibility includes teaching new recruits, health and safety supervision and consult, and maintenances of laboratory instruments.

## Research assistant – Modarelli Research Group 2003-2010

* Responsible for modeling, developing new synthesis method, characterization and analysis of dimeric and oligomeric π-conjugated compounds to improve properties of organic photovoltaic devices and studies of electron transfers in molecular wires and photovoltaic materials to improve their efficiencies.
* Responsibility includes teaching new recruits and maintenances of laboratory instruments.

## Teaching assistant

## *The American Chemical Society’s (ACS) Project SEED* 2009-2010

* Responsible for educating and supervised high school students who interest in science related career for summer research opportunities.
* Research topics include modeling, synthesis, characterization and analysis of small molecules liquid crystalline compounds for the use in organic photovoltaic devices and studies of electron transfers in these materials.
* Responsibility includes teaching principles of chemistry, organic chemistry and advances topic needs for research topics, basic laboratory skills, and career path and opportunity consults.

## *Qualitative analysis Laboratory* 2005-2008

* Responsible for teaching and monitoring laboratory classes and experiments.
* Responsibility includes pre-lab and post-lab recitation lecture, proctoring each lab experiment, grading lab reports, answering lab and class related questions.

## *Organic Chemistry Laboratory* 2004-2008

* Responsible for teaching and monitoring laboratory classes and experiments.
* Responsibility includes proctoring lab experiment, grading lab reports, answering lab and class related questions.

## *Introduction to General, Organic and Biochemistry Laboratory* 2004

* Responsible for teaching and monitoring laboratory classes and experiments.
* Responsibility includes pre-lab and post-lab recitation lecture, proctoring each lab experiment, grading lab reports, answering lab and class related questions.

# Publications and Presentations

* Wongwit Wongwitwichote, Elvin A. Alemán, Juan Manríquez Rocha, Luis Arturo Godínez Mora-Tovar and David A. Modarelli. *Spectroscopy of Free-Base N-Confused Tetraphenylporphyrin Radical Anion and Radical Cation*. *J. Phys. Chem. A*, **2011**, *115* (24), 6456–6471.
* Wongwitwichote, W. *Synthesis and Characterizations of Self-Assembly Oligo-Phenylene-ethynylene Wires*. Conference on Undergraduate and Graduate Student Research, March 2009.
* Wongwitwichote, W.; Modarelli, D. A. *Synthesis and Characterizations of a Self-Assembled Oligo(phenyleneethynylene)*. The Central Regional Meeting of the American Chemical Society (CERMACS), May 2009.
* Wongwitwichote, W.; Smith, T. J.; Modarelli, D. A. *Synthesis and Photophysical Characterization of Asymmetrically Substituted oligo-(p-phenylenevinylenes)*. The Central Regional Meeting of the American Chemical Society (CERMACS), May 2007.
* Wongwitwichote, W.; Nguyen, T. A.; Wu, Y.; Aleman, E. A.; He, D.; Parquette, J. R.; Modarelli, D. A. Investigation of Photoinduced Electron Transfer and Energy Migration in a Series of Zinc Tetraphenylporphyrin Naphthalenediimide Triads. The Central Regional Meeting of the American Chemical Society (CERMACS), May 2007.
* Wongwitwichote, W.; Modarelli, D. A. *Synthesis of a Hydrogen-Bonded Oligophenylene Ethynylene Dimer*. 6th Annual Celebration of Excellence in Learning & Teaching, April 2007.
* Wongwitwichote, W.; Smith, T. J.; Modarelli, D. A. Synthesis and Photophysical Characterization of Asymmetrically Substituted oligo-(p-phenylenevinylenes). Annual Celebration of Excellence in Learning & Teaching, April 2007.
* Wongwitwichote, W.; Tuntulani, T. *Selective Synthesis of Calix[4]aldehyde as Precursor for Wide-rim Modification Using Friedel-Crafts Catalysts and Formylating Agents*. International Conference and Exhibition on Pure and Applied Chemistry, May 2002.

# Skills

* Understanding of international patent law and prosecution process (USPTO, WIPO, JPO), with more in-depth knowledge of Thai Patent law and prosecution process.
* Double manifold equipments and air sensitive compound handling techniques, Low and High temperature reaction techniques, High pressure reactions and photolysis techniques
* Transition metal-catalyzed reactions, SN1, SN2, SNAr, E1, E2 type reactions
* Proficient in crystallization, distillation, chromatographic purification
* Skilled in using and interpreting 1H-, 13C-NMR, FT-IR, UV-Vis instruments and spectra
* Proficient in English and Thai language
* General purpose programs; Microsoft Windows, Microsoft Office (Word, Excel, and Powerpoint)
* Semi-Empirical and ab initio electronic structure calculation programs: Spartan, Gaussian, and GAMESS