Curriculum Vitae

Huynh Tam Minh Hieu | University of Kentucky

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EDUCATION

2025 – Present	**Ph.D. in Chemistry** University of Kentucky (UK)
2019 – 2024	**B.S. in Integrated Science (Graduated with Honor)** Fulbright University Vietnam (FUV) **Advisors:** Profs. Hung Phan and Trang Nguyen
2016 – 2019	**High school certificate specialized in Physics** Quoc Hoc – Hue High School for the Gifted, Thua Thien Hue, Vietnam

AWARDS & FELLOWSHIP

2022:	TPBank STEM Scholarship (Research Grant) Project: *'Synergy of Machine Learning and Density Functional Theory Calculations for Predicting Experimental Lewis Base Affinity and Lewis Polybase Binding Atoms'*
2020:	Dow Chemical Fund Project: '*Analysis of Factors in e-Vehicle Sustainability at FUV*'
2018, 2019:	Second & Third Prizes in National Contest for High School Student in Physics
2017, 2018:	Gold and Silver Medals in Olympic Science Contest for High School & Collegiate Students in Physics

PUBLICATIONS

(1) **Huynh, H.**; Le, K.; Vu, L.; Nguyen, T.; Holcomb, M.; Forli, S.; Phan, H. Synergy of Machine Learning and Density Functional Theory Calculations for Predicting Experimental Lewis Base Affinity and Lewis Polybase Binding Atoms. *Journal of Comp. Chemistry, 2024*. (IF: 3.4)

(2) **Huynh, H.**; Kelly, T. J.; Vu, L.; Hoang, T.; Nguyen, P. A.; Le, T. C.; Jarvis, E. A.; Phan, H. Quantum Chemistry–Machine Learning Approach for Predicting Properties of Lewis Acid–Lewis Base Adducts. In *The 10th Conf. of the Asia-Pacific Association of Theoretical and Computational Chemists; APATCC-10, poster. ILCS, 2023.*

(3) **Huynh, H.**; Kelly, T. J.; Vu, L.; Hoang, T.; Nguyen, P. A.; Le, T. C.; Jarvis, E. A.; Phan, H. Quantum Chemistry–Machine Learning Approach for Predicting Properties of Lewis Acid–Lewis Base Adducts. *ACS Omega* **2023**, *8* (21), 19119–19127. (IF: 3.7)

(4) Phan, H.; Kelly, T.; **Huynh, H.**; Nguyen, A.; Zhugayevych, A.; Tretiak, S.; Nguyen, T.-Q.; Jarvis, E. Tuning Optical Properties of Conjugated Molecules by Lewis Acids: Insights from Electronic Structure Modeling and Machine Learning. In Proc. SPIE, 11810, *Organic and Hybrid Sensors and Bioelectronics XIV*; 2021.

RESEARCH EXPERIENCE

2024 – 2025: Intern in Organic Optoelectronics Unit of Prof. Ryota Kabe at Okinawa Institute of Science and Technology (OIST)

- Density functional theory approach for designing cationic thermally activated delayed fluorescence molecules.

2020 – 2024: Research Assistant, Prof. Hung Phan's lab, Fulbright University Vietnam (FUV)

- Quantum chemistry – machine learning approach for predicting optoelectronic properties of Lewis acid – Lewis base adducts.
- Synergy of machine learning and density functional theory calculations for predicting experimental Lewis base affinity and Lewis polybase binding atoms.

2019 – 2023: Battery Research Team of *'Analysis of Factors in e-Vehicle Sustainability'* project, Fulbright University Vietnam (FUV)

- Collecting lithium-ion batteries' lifespan data with Arduino UNO & Raspberry Pi.
- Machine learning approach for predicting lifespan of lithium-ion batteries with battery specifications and charge – discharge characteristics.

WORKING EXPERIENCE

2024 – 2025:	Intern in Organic Optoelectronics Unit of Prof. Ryota Kabe Okinawa Institute of Science and Technology (OIST)
2023 – 2024:	Teaching Assistant of *'Scientific Inquiry'* course Fulbright University Vietnam (FUV)
2022:	Student Mentor of STEAM Summer Internship Fulbright University Vietnam (FUV)

SKILLS

Computational Skills:

- Quantum calculations (Gaussian 16), data-driven models (Machine learning, Deep learning, feature engineering), data analysis and visualization skills
- Programming Languages: Python (rdkit, scikit-learn, pytorch, deepchem, etc), C++, C#, Bash, SQL

Experimental Skills: FTIR, CV, GC-MS, HPLC-UV/VIS

ENGLISH PROFICIENCY

IELTS: 8.0 (R: 8.0, W: 6.5, L: 8.5, S: 8.5)

REFERENCES

Prof. Ryota Kabe	PI of Organic Optoelectronics Unit Okinawa Institute of Science and Technology ryota.kabe@oist.jp
Prof. Hung Phan	Visiting Assistant Professor of Chemistry Soka University hphan@soka.edu
Prof. Trang Nguyen	Faculty of Integrated Science Major Fulbright University Vietnam trang.nguyen@fulbright.edu.vn