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#### SUMMARY

Panyawut is an analytical chemist pursuing a PhD in Analytical Chemistry from Nanyang Technological University (NTU), Singapore. He has a strong foundation in analytical and synthetic inorganic chemistry, with a current focus on electrochemical approaches to environmental applications. His professional journey includes a stint as a research assistant at Thailand's National Metal and Materials Technology Centre (MTEC) working on the development of novel organic transistor devices. Outside the research lab, he has served as the President of the NTU Graduate Students' Association, honing his interpersonal and leadership skills.

#### **EDUCATION**

#### Nanyang Technological University, Singapore

Doctor of Philosophy (Chemistry)/ CGPA: 4.80/5.00

- Concentration in Analytical Electrochemistry and Catalytic Inorganic Chemistry.
- Relevant course work: Advanced Chemical Instrumentation, Graduate Reaction Mode Organic Chemistry, Graduate Basic & Technical Inorganic Chemistry.

#### Korea Advanced Institute of Science and Technology (KAIST), South Korea

Bachelor of Science (Chemistry)/ CGPA: 3.85/4.30

- magna cum laude in honor program (Advanced major in Chemistry) at Department of Chemistry, College of Natural Science.
- Concentration in Organic and Inorganic Chemistry.

#### **RESEARCH PROJECTS**

#### Nanyang Technological University (NTU), Singapore PhD Candidate

- PhD Dissertation: Electrochemical Approaches to Environmental Applications.
- Developed sensitive analytical methods for detecting aquatic pharmaceutical species using GC-MS and optimized voltammetry, design novel energy storage system based on organic electrochemistry, elucidated novel pathway of biologically relevant organic compounds using electrochemistry.
- Experienced in synthesis and analysis of inorganic catalytic systems aiming to decompose plastics.

#### Korea Advanced Institute of Science and Technology (KAIST), South Korea Undergraduate Research Assistant

- Final Year Project Title: Computational investigation on effects of different substituents on carbazole moiety of novel copper(I) emitters employing s-complexation.
- Developed organometallic complex with special photophysical property for OLED applications.

#### **PROFESSIONAL EXPERIENCE**

## National Metal and Materials Technology Centre, Pathum Thani, Thailand Research Assistant

• Assisted researchers in interdisciplinary research in applying natural and synthetic dyes to organic field-effect transistor applications and device characterizations.

#### TEACHING AND MENTORING EXPERIENCE

#### Nanyang Technological University - Teaching Assistant, Singapore

• Teach fundamental concepts and applications of analytical and physical chemistry to undergraduate students, and supervise undergraduate research interns on laboratories skills, applications, and project management. Received Best TA award in Semester 1 AY 2021/22.

Sep 2014 - Aug 2018

Aug 2019 - Aug 2024

# Jan 2018 - Aug 2018

#### Oct 2018 - Jun 2019

Aug 2019 – Aug 2021

Aug 2019 – Aug 2024

antimized

#### Agilent University Customer Training Certificate

• Agilent 7700 ICP-MS Techniques and Operation with Mass Hunter

#### INTERNSHIPS

#### Nanyang Technological University, Research Intern

• Developed organometallic complex with special photophysical property for OLED applications.

#### LEADERSHIP / CO-CURRICULAR ACTIVITIES / COMMUNITY INVOLVEMENT ACTIVITIES

#### NTU Graduate Students' Association, President

• Elected spokesperson for graduate students of NTU, and chairperson of graduate students' council and 10th executive committee, leading a team of 300s graduate students with various cultural and academic backgrounds.

#### KAIST International Student Association (KISA), General Secretary and Head of Finance Jan 2015 - Dec 2015

• Managing administration works and finance for association representing international students at KAIST, together with a team of international students.

#### PUBLICATIONS

- **Tonanon, P.** and Webster, R. D. Probing the Molecular Interactions of Electrochemically Reduced Vitamin B<sub>2</sub> with CO<sub>2</sub>. The Journal of Physical Chemistry B Article ASAP. DOI: 10.1021/acs.jpcb.4c05952
- **Tonanon, P**.; Jalando-On Agpoon, K.; Webster, R. D. A Comparison of the Detection and Quantification of Praziquantel via Electrochemical and Gas Chromatography Methods in Freshwater and Saltwater Samples. Anal. Methods 2024, 10.1039.D3AY01905E.
- **Tonanon, P.**; Webster, R. D. Recent Electrode and Electrolyte Choices for Use in Small Scale Water Treatment Applications—A Short Review. Current Opinion in Electrochemistry 2023, 38, 101211.
- Liangdy, A.; Lee, W. J.; Tonanon, P.; Webster, R. D.; Snyder, S. A.; Lim, T.-T. Unravelling the Synergism of Catalytic Oxidation and Filtration in Co-Mn-Oxide Impregnated Ceramic Membrane for Intensified Degradation of Recalcitrant Micropollutant with Peroxymonosulfate. Chemical Engineering Journal 2023, 454, 140075.
- Kongcharoen, H.; Coester, B.; Yu, F.; Aziz, I.; Poh, W. C.; Tan, M. W. M.; Tonanon, P.; Ciou, J.-H.; Chan, B.; Webster, R. D.; Lew, W. S.; Lee, P. S. Magnetically Directed Co-Nanoinitiators for Cross-Linking Adhesives and Enhancing Mechanical Properties. ACS Appl. Mater. Interfaces 2021, 13 (48), 57851–57863.

#### AWARDS AND ACHIEVEMENTS

Honors: KAIST College of Natural Science Dean's List (2016), NTU-TUM-Imperial Global Fellows Program (2023). Scholarship: Undergraduate Research Scholarship (2016), Singapore International Graduate Award (2019). Awards: Best TA award (Semester 1 AY2021/22).

#### SKILLS/ COMPETENCIES

Instrumentation: ICP-MS (trained and certificed) – method development, troubleshooting, routine analysis; GC-MS – separation, identification, and quantification of organic compounds; NMR, IR, UV-Vis spectroscopy – structural and mechanistic analyses; Electrochemical techniques – analytical methods development and mechanistic elucidation; EPR spectroscopy – free radical and transition metal complex characterization

Technical: Python – statistical analysis, visualization, instrument control; Microsoft Office suite (advanced proficient); Chemical drawing programs (ChemDraw)

Interpersonal: Technical writing and presentation; Proven team leadership and project management abilities; Fluent in English and Thai

#### Feb 2023

Jul 2017 - Sep 2017

### Apr 2020 - Apr 2021