Daphne Yee Ling En BSc. in Physics

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Summary

Final-year Physics undergraduate at the University of Malaya specializing in semiconductor materials and thin-film research. Currently conducting research on the exfoliation and characterization of sputtered MoS_2 nanosheets, with hands-on experience in Raman, AFM, and FESEM analysis. Demonstrated leadership through organizing academic programs and semiconductor outreach events. Seeking an R&D or Process Engineering **internship** (**Mar–Jul 2026**) to apply semiconductor fabrication knowledge, contribute to advanced research, and gain hands-on industry experience in the semiconductor field.

Education

University of Malaya (UM) — Kuala Lumpur, Malaysia
Bachelor of Science in Physics — 2022 - 2026 *(expected)*

- CGPA: 3.91/4.00

Malacca Matriculation College — Malacca, Malaysia
Life Sciences — 2021 - 2022

- CGPA: 4.00/4.00

Projects

Thesis: *Sonication-Assisted Liquid Exfoliation and Characterization of MoS_2 Nanosheets*
Advisor: Prof. Goh Boon Tong & Dr. Zarina Aspanut | University of Malaya 2025.07 -

- Investigating the feasibility of exfoliating MoS_2 nanosheets from magnetron sputtered thin films using ultrasonication and analyze their structural properties using advanced characterization techniques, such as FESEM, Raman spectroscopy, AFM and STEM.

Lightning Pitch: *How 2D Materials Could Extend Moore's Law*
Physics Open Week 2025 | University of Malaya 2025.11

- Presented an overview of 2D transition metal dichalcogenides (TMDs) and their potential to overcome the scaling limits of silicon-based electronics. Simplified advanced semiconductor concepts for a general audience and an interdisciplinary panel.

Workshop: *STEMikon Semiconductor Outreach Programme*
University of Malaya 2025.06

- Project leader. Organised a semiconductor-themed workshop for local secondary schools. The workshop covered semiconductor physics and its applications, including transistors, ICs, and logic gates. Led and designed the overall programme and course content.

Small Project*Growing NaCl Crystals and Observing Their Crystal Properties*
Solid State Physics Coursework 2024.12

- Conducted a 3-week Solid State Physics experiment to grow NaCl crystals and analyze their cubic crystal properties, documenting the methodology, observations, and scientific insights through an educational video published on YouTube to promote science engagement and outreach.

Activities

SEMI SEA Tech Zoomer Bootcamp 2025 | Singapore 2025.05

- Participant. Tackled the SSMC challenge on AI-powered smart sampling and pitched an AI/ML-based solution for predictive inspection. Engaged with industry leaders and explored semiconductor technology and its applications.

Industrial Visit to GlobalFoundries | Singapore 2025.05

- Participant. Visited advanced semiconductor fabs and engaged in technical discussions on manufacturing workflows, process integration, and defect control.

Activities

International Physics Summer School | Harbin, China 2025.08

- Participant and group leader. The school covered laser physics, photonics, optoelectronics, and naval technology.

Finite Element Analysis for Advanced IC Packaging | MIMOS Berhad 2024.11

- Participant. Completed a 3-day training on structural, thermal, and electromagnetic simulations for advanced IC packaging, gaining hands-on experience with ANSYS AEDT, HFSS FEM, and adaptive meshing for reliability and signal-integrity optimisation.

Experience

Head of Multimedia & Publicity | UM Physics Society (PerFUM) 2023.09 - 2024.11

- Initiated and launched PerFUM's official YouTube channel, leading a team to interview lecturers and produce virtual lab tour videos. Oversaw multimedia and social media publicity for more than 10 society events.

Protocol Committee Member | NPUPC 2024 2024.06 - 2024.10

- Assisted in planning and executing protocols for a 2-day National Physics Undergraduate Project Conference (NPUPC), a collaborative event between three universities.

Student Helper | Physics Open Week (STEM Day) 2025 2025.11

- Research lab tour coordinator. Led a team to curate lab tour experiences for school students and the public, coordinating visits to research centres at the UM Physics Department during the annual Physics Open Day.

Student Helper | ICPSA 2024 2024.11

- Student helper at the 17th International Conference on Plasma Science and Applications hosted by the Plasma Technology Research Centre, UM.

Assistant Project Director | The Starry Night: A Trip to Kuala Kubu Baharu 2024.05

- Organised an open-to-public stargazing trip to Kuala Kubu Bharu, Selangor in collaboration with the Universiti Malaya Optical Astronomy Research Laboratory (OpARL).

Awards

- **JPA PIDN Scholarship**, Malaysian Public Service Department (JPA) 2023 - 2026
- **Dean's List**, University of Malaya 2022 - 2026

Skills

Languages: English (CEFR B2, MUET Band 4.5) , Mandarin, Malay, Spanish (CEFR A2)
Scientific Visualization & Measurement Tools: Origin, ImageJ, Gwyddion, Labplot
Programming: Python, MySQL, C, C++
Math Typesetting: LaTeX, Markdown

Links

LinkedIn: www.linkedin.com/in/daphne-yee-ling-en
GitHub: https://github.com/daphneyee

References

Dr. Zarina binti Aspanut: zarinaaspanut@um.edu.my
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Prof. Dr. Goh Boon Tong: gohbt@um.edu.my
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