David Tan

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EDUCATION

BSc Chemistry, University of Bristol — Sep 2024–Jul 2027

- First-year average: **80%**
- Second-year average: **76.5%** (Core Chemistry I: **85%**; Core Chemistry II: **82%**)

The College of Richard Collyer — Sep 2022–Jul 2024

- A Levels: Chemistry: **A*,** Mathematics: **A***, Biology: **A**, AS Further Mathematics: **A**

RESEARCH EXPERIENCE

Undergraduate Research, Noble Group, University of Bristol

- **Aerobic Skeletal Editing of Cyclic Ketones** — Jan 2026–Jun 2026
  - Worked under the supervision of a PhD student, gaining experience in literature research, experimental planning, reaction setup, purification and data analysis.
  - Investigated unexpected product formation using GC–MS and Reaxys, and designed alternative approaches based on reported mechanisms to promote the competing pathway.
  - Awarded an **RSC Undergraduate Research Bursary (£3,558)** for this proposed research project in the Noble Group.
- **Photoinduced Radical-Anion Coupling Methodology** — Jun 2026–Present
  - Working independently on photoinduced radical-anion chemistry, which will continue as my Year 3 research project.
  - Optimised the methodology from conditions adapted from previous group work, screening base identity, water loading, reagent equivalents and catalyst loading, increasing the qNMR yield from **43% to 84%**.
  - Improved the reproducibility of hygroscopic reagent loading by preparing a standard solution in the glovebox and using a Gilson pipette for accurate dosing.
  - Used GC–MS to confirm product formation across 6 substrates, followed by qNMR for yield determination and flash chromatography for purification.

SELECTED AWARDS & ADDITIONAL EXPERIENCE

Chemistry Competition — 2023–2024

- UK Chemistry Olympiad (UKChO): **Gold Awards**, 2023 and 2024.
- Cambridge Chemistry Challenge (C3L6): **Roentgenium Award**, 2023.

Independent Chemistry Tutor — 2024–present

- Delivered **more than 300 hours** of one-to-one online chemistry tuition to **18 students**, specialising in UKChO and C3L6.
- Students achieved **10 Gold Awards and 5 Silver Awards** across UKChO and C3L6.
- Developed students' mechanistic understanding of organic chemistry by teaching curly-arrow mechanisms and reinforcing concepts of reactivity using HOMO–LUMO theory.