

CURTIS LEE

Pasadena, CA • +1 (917) 816-4099 • hcclee@caltech.edu
linkedin.com/in/curtislee0617 • curtis-lee.com

EDUCATION

California Institute of Technology (Caltech), Pasadena, CA 2024 – 2028

B.S., dual major in Chemical Engineering (Process track) and Business Economics & Management (BEM)

- GPA: 3.8 / 4.0. Relevant coursework: Econometrics (EC 122) and Hedge Funds (BEM 114).

The King's School Canterbury, Kent, UK 2019 – 2024

A-Levels: Mathematics, Further Mathematics, Physics, Chemistry

- Gold awards: RSC UK Chemistry Olympiad (2024), Cambridge Chemistry Challenge (2023), BPhO Senior Physics Challenge (2023).

EXPERIENCE

The Hong Kong and China Gas Company (Towngas) — Green Fuels & Chemicals Summer 2026

Process Engineering Intern — Foshan, Guangdong & Jungar Banner, Inner Mongolia, China

- Authored a ten-section pre-FEED design report converting two waste streams, bauxite residue and soybean processing waste, into light olefins via supercritical water gasification, bi-reforming, and OXZEO synthesis; closed mass and carbon balances to 100% on a 300 t/d train and sized a five-train, 19.3 kt/y complex.
- Built the 20-year techno-economic model (RMB 1.9B capital, RMB 160M/y operating cost), found no positive IRR on commodity olefin value, and identified waste gate fees rather than product price as the decisive commercial lever.
- Designed the heat-integration scheme recovering 637 GJ/d per train, cutting net purchased energy to 207 GJ/d, and replaced calcium desulfurization with a Rectisol wash to reach the 0.1 ppm sulfur specification.
- Supported day-to-day engineering work on a new \$30M green-fuels plant in Foshan, and used the operating Jungar Banner green-methanol plant as a reference case, working through each process unit with its engineers to ground the design in how a plant actually runs.

UC Davis — Robert Mondavi Institute, iCAMP (Alternative Meat & Protein) Jul – Aug 2025

Cultivated Meat Research Intern — Davis, CA

- Screened fetal-bovine-serum-free growth media to cut the cost and animal dependence of cultivated-meat culture.
- Built and tested 32 scaffold combinations, using Texture Profile Analysis to judge how closely each reproduced real meat texture.

National University of Singapore — Institute for Functional Intelligent Materials Mar – Apr 2024

Research Intern — Singapore (invited by Prof. K. Novoselov, 2010 Nobel Laureate in Physics)

- Grew graphene by Chemical Vapour Deposition under Dr. Maxim Rybin, tuning growth conditions and characterizing the resulting films.

cook.enterprise — Young Enterprise UK Competition Nov 2022 – Apr 2023

General Manager — Kent, UK

- Led a 17-person team to the Kent Finals Best Company award, running product, budget, and a student cookbook that earned £5,850 in revenue.

Michelin-Starred Restaurants — Stages | Caltech Cooking Class — Teaching Assistant 2021 – Present

The Fat Duck • Core by Clare Smyth • The Clove Club • Écriture (HK) — chefs totalling 42 stars

- Ran full service in high-pressure, zero-error kitchens; teach food-science demonstrations at Caltech.

PROJECTS

- Long/short equity strategy (BEM 114): built a market-neutral, event-driven strategy scoring earnings-call transcripts with FinBERT sentiment, long the weakest-sentiment names and short the strongest while controlling for Fama–French factors. Portfolios held near-zero beta and produced a statistically significant 1.18% monthly alpha ($p = 0.022$).
- Greener biodiesel: tested ethanol as a substitute for methanol in producing biodiesel from used cooking oil via acid- and base-catalyzed esterification and transesterification, reaching 75%+ conversion.

SKILLS & LANGUAGES

Languages: English, Cantonese, Mandarin (native); French (elementary).

Technical: Python, process and techno-economic modelling, DWSIM, NMR, IR, mass spectrometry.