

Meet Dr. Nelson Y. S. Lam, Thieme Chemistry Journals Awardee 2026!



Dr. Nelson Y. S. Lam pursued doctoral research at University of Cambridge (UK) as a Woolf Fisher and Rutherford Scholar. In 2019, he received a Lindemann Postdoctoral Fellowship to work at Scripps Research (USA), and in 2021 was elected Research Fellow of Trinity Hall Cambridge (UK). In 2024, Nelson began his independent career as an assistant professor at the University of Victoria (Canada).

Thieme: Which field of organic chemistry are you interested in the most and why?

Dr. Lam: We develop new catalytic methods and apply them in complex molecule synthesis. Within this, we are especially interested in selective catalysis, i.e. controlling precise reactivity at exactly the right atoms, with the dream of being able to easily and reliably “compose, change and delete” specific atoms in organic molecules. We’re able to do this with words and even genes. I would love to see this developed for atoms, and to have a future where users can pick and choose which atoms to change in any molecule.

Thieme: Following that, what is the focus of your current research activity?

Dr. Lam: Our current research is inspired by a lot of the challenges I faced during my PhD, that is, being able to selectively manipulate abundant alcohols in polyketide natural products. In addition to being one of the most commonly found functional groups in nature, we remain tied to protecting group/redox tactics to build/diversify these motifs. A major motivating driver is to develop a suite of selective variants of common reactions that are generalizable across all small molecules; reactions that we are currently developing in our lab.

Thieme: What do you think about the modern role and prospects of organic chemistry?

Dr. Lam: It’s an exciting time to be a researcher in organic chemistry; molecular innovation remains indispensable to applied (e.g., drug discovery and materials) and fundamental discovery. As a field, organic chemistry has been inextricably linked with petroleum feedstocks, and is increasingly at odds with a sustainable future that we urgently need. Our role is to critically examine what we do (within and outside of our reaction/flask), engage in dialogue with domain experts (e.g., in sustainable engineering), and target innovations that minimize waste/energy footprints and maximize resource circularity.

Thieme: Which difficulties are there for young upcoming chemists in your field? Do you have any tips?

Dr. Lam: In a world where established paradigms and funding security are in flux, figuring out how to do meaningful and durable science can be a challenge. My perhaps unconventional tip is to actively talk to people well outside of your field, for example a historian, an artist, or a lawyer. The process of explaining what you do (and why) to someone with no shared vocabulary demands outstanding clarity and can help sharpen both your scientific identity and the bigger picture vision of why you are a chemist.

Thieme: What is your most important scientific achievement to date and why?

Dr. Lam: I am especially proud to be part of a team that developed a highly enantioselective H-atom abstraction of *meso* diols for their asymmetric catalytic epimerization and oxidation. From a reactivity perspective, these reactions are challenging to carry out, and from a selectivity standpoint, enantioselective H-atom abstraction remains exceptionally rare. We were thrilled to discover chiral cinchona alkaloid derivatives (following single-electron oxidation) can execute highly selective H-atom abstraction. It is also a satisfying example of taking a mechanistically distinct approach to a problem that classical two-electron chemistry had struggled with for decades.

Thieme: Could you tell us something about yourself outside the lab, such as your hobbies or extra-work interests?

Dr. Lam: Music is a huge part of my life. I completed a degree in music composition alongside my chemistry degree at the University of Auckland, and equally see organic chemistry as an art as well as a science. Outside of the lab, I sing with Vox Humana Chamber Choir in Victoria, go to electronic music gigs and dabble as an amateur DJ (making mixes of varying quality...!)