Michael Strafford Scholz

Location: London, UK Phone: (+44) 7728 249157 Website: www.scholz.moe
Email: m@scholz.moe Github: @scholzy Linkedin: @scholzy

Summary

I am a highly motivated scientist whose research involves a mixture of lab work, data analysis, physical simulation, and software development. My background is in physical chemistry and I am passionate about solving physical problems using both experiment and theory. As a proponent of reproducible science, I strongly support open access to papers and use of software notebook tools.

Experience

| 2020– | Postdoctoral Research Fellow , <i>University College London</i> , <i>London</i> , <i>United Kingdom</i> . Currently, I am employed as a postdoctoral researcher using lasers and electron spectroscopy to study how chemicals in animals like jellyfish and fireflies glow so efficiently. |
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| 2016–2021 | Graduate Research Assistant , <i>University of Melbourne</i> , <i>Melbourne</i> , <i>Australia</i> . During my PhD, I used lasers and custom-built mass spectrometers to study how molecular machines and switches change shape after absorbing light, and to investigate how molecular symmetry affects what colours of light they absorb. |

Education

| 2016–2021 | Doctor of Philosophy in Chemistry , University of Melbourne, Parkville. Thesis: <i>Electronic spectroscopy and structure of gas-phase ions</i> Advisor: Professor Evan Bieske. |
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| 2012–2015 | Bachelor of Science (Honours) in Chemistry , University of Melbourne, Parkville. Thesis: <i>Collisional activation of ions in a tandem drift tube ion mobility mass spectrometer</i> |

Publications and talks

- **Academic papers:** 22 publications, 2 as first author, *h*-index of 10, journals such as Physical Review Letters, Angewandte Chemie, and the Journal of Physical Chemistry Letters
- Talks and seminars: 3 conference talks, 6 university seminars, 5 conference posters

Skills and knowledge

- Programming languages: Julia, Python (inc. Numpy, Scipy, Matplotlib), LabVIEW, (ba)sh
- Lab hardware: Nanosecond and femtosecond lasers, mass spectrometry, ion and molecular beams, electron spectroscopy, ultrafast delay lines
- Other software: Data analysis (inc. Jupyter), high-performance computing, quantum chemistry packages (inc. Gaussian, PySCF), molecular dynamics, lab hardware interfacing, git, Github, and version control
- Soft skills: Team management, academic paper and technical report writing
- **Spoken languages:** English (native), German (A2), Japanese (A1)
- Other interests: Cycling, cooking, hiking, camping