

Curriculum Vitae

Dr Gary Beane

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WORK EXPERIENCE

FLEET Research Fellow

Monash University, Clayton, VIC, Australia Nov 2018 – Present

In my role at Monash, I have led and supported several projects with project design, management, instrument control and data analysis.

Key skills and achievements include:

- Co-supervised two PhD students to final submission of their theses in the field of condensed matter physics.
- Co-supervised two summer students, two Honours students in condensed matter physics.
- Designed, built and commissioned a world-class ultrafast laser optics laboratory for investigating carrier dynamics.
- Chair of the Faculty of Science Early Career Research Network where I manage finances, organise Faculty-wide research symposia and events for the Early Career researcher community.
- As the Faculty of Science representative to the Monash Early Career Network committee I have helped craft small grant guidelines and organised seminars/workshops and events.

Scientific Consultant

Freelance 2020

- Consulted for a biomedical company who required optics expertise for the design of light-based sensors.

Postdoctoral Research Fellow

University of Notre Dame, Notre Dame, IN, USA Nov 2016 – Nov 2018

- Supervised one PhD student and actively involved in the management of the laboratory.
- Designed and built a Fourier imaging microscope which led to high impact publications.
- Conducted transient absorbance microscopy measurements that led to the publication of several high impact papers.
- Representative for the Postdoctoral Research Advisory Committee, University of Notre Dame.
- Vice President of Notre Dame Toastmasters, University of Notre Dame.

Postdoctoral Research Fellow

University of California, Merced, CA, USA Mar 2014 – Nov 2016

- Supervised PhD and Masters by research students on projects related to the solvothermal synthesis of high-quality core-shell Quantum dots and their characterisation using transient absorbance spectroscopy.
- Published several high-impact papers on the role of interfacial defects in core-shell quantum dots.
- Managed the laboratory and optimised the performance of the ultrafast transient absorbance spectroscopy setup.
- Member of the University of California, Merced Staff Toastmasters chapter and gave several well-received presentations.

EDUCATION

Doctor of Philosophy – Chemistry *University of Melbourne 2010 – 2014*

- Performed time-resolved and steady-state spectroscopy on Quantum Dot - dye hybrid systems to test the validity of the point-dipole approximation for nanoscale fluorescent particles.
- Manual and automated peptide synthesis, purification (HPLC), characterisation (ICP-MS) and fluorophore tagging.
- Received a Commonwealth PhD scholarship.

Bachelor of Science (Honours) – Physical Chemistry *University of Melbourne 2009 - 2009*

- Graduated with First Class Honours
- Completed research project on energy transfer between Quantum Dots and dye molecules in which I tested the validity of the static quenching mechanism.

Bachelor of Science – Chemistry / Mathematical Physics *University of Melbourne*
2004 - 2008

- Graduated with First Class Honours

Bachelor of Arts – Political Science *University of Melbourne* 2004 - 2008

- Graduated with First Class Honours

PRESENTATIONS AND WORKSHOPS

- “Science Meets Parliament” program, March 2021, met with Member for Jagajaga, Ms Kate Thwaites
- “CSIRO STEM Professionals in Schools”, 2022-2023
- “Probing ultrafast carrier dynamics in advanced materials with broadband few-cycle terahertz waveforms”, Beane, G.; Nguyen, T.P.; Oldfield, M.; Schiffrin, A., Australia-New Zealand Ultrafast Symposium, University of Sydney, February, 2024
- “RT2 & RT3 THz-TDS Overview of Results”, Beane, G., FLEET Legacy Meeting, Surfers Paradise, November 2023
- “Shining a Light on Tomorrow’s Materials”, Beane, G.; Nguyen, T.P.; Oldfield, M.; Schiffrin, A., ECN Symposium, Monash University, 2022
- “Using Light to Probe and Manipulate Topologically Non-trivial States”, Virtual, Monash University, 2022
- “National Science Week 2020 Virtual Quiz”, Panelist
- “Surface Plasmon Polaritons in Gold Nanoplates”, Beane, G.; Yu, K.; Devkota, T.; Johns, P.; Wang, G.P.; Hartland, G.V. College of Science Joint Annual Meeting (COS JAM), Notre Dame, Indiana, USA, 2017
- “Auger Dynamics in Type I CdSe/ZnSe Quantum Dots with Graded Interfaces”, Beane, G.; Gong, K.; Kelley, D.F. The 63rd Pacific Conference on Spectroscopy and Dynamics, Asilomar Conference Center, Pacific Grove, California, USA, 2016
- “Defect Mediated Energy Transfer in ZnO-dye conjugates”, Beane, G.; Morfa, A.; Funston, A.; Mulvaney, P. Materials Research Society (MRS), San Francisco, USA, 2013

References

Available upon request