

Shaun McAnally

Curriculum Vitae

Education

2018 – 2022, **Bachelor of Advanced Science (Physics, Honours – First Class)**

The University of Queensland (UQ)

2018 – 2022, **UQ Excellence Scholarship** – Recognised by the Deputy Vice Chancellor (Academic) for outstanding academic performance and leadership during secondary school.

Interdisciplinary Research

PhD – *More from Less*: Enhancing the efficiency of organic solar cells with simple active layers

April 2022 – Current, Centre for Organic Photonics & Electronics, The University of Queensland

Supervisors: Prof. Paul Burn & Assoc. Prof. Paul Shaw

Research Assistant (Staff Role)

January 2022 – March 2022, Centre for Organic Photonics & Electronics, The University of Queensland

Supervisors: Prof. Paul Burn & Assoc. Prof. Paul Shaw

Honours – High performance low donor content organic photovoltaic devices

2021, Centre for Organic Photonics & Electronics, The University of Queensland

Supervisors: Prof. Paul Burn & Assoc. Prof. Paul Shaw

Advanced Physics Undergraduate Research Project – Extending the light harvesting of organic solar cells towards the infrared with a non-fullerene acceptor

2020, Centre for Organic Photonics & Electronics, The University of Queensland

Supervisors: Prof. Paul Burn & Assoc. Prof. Paul Shaw

Perspectives in Science Undergraduate Research Project – Redshift effects in entangled quantum particles

2019, School of Mathematics and Physics, The University of Queensland

Supervisor: Dr Magdalena Zych

UQ Summer Research Program (with Scholarship) – Magic wavelength Faraday imaging

November 2018 – February 2019, School of Mathematics and Physics, The University of Queensland

Supervisor: Dr Mark Baker

Awards & Research Grants

2017, **T.J. Ryan Award & Bursary and the Certificate of Academic Commendation**

Queensland Certificate of Education Achievement Awards

Awarded by the Queensland Government for outstanding academic achievement and exemplary performance during secondary school, culminating in the highest final grade upon graduation (OP 1).

2017, **Create Change Achievement Award**

Awarded by UQ to Grade 12 students from Queensland, Australia for contributions to initiatives that drive positive change and successful outcomes in the local community.

2021, **Partnership & Collaboration Award**

Faculty of Science, The University of Queensland

Commendation for leading the Student Led Observations for Course Improvement (SLOCI) Team in over sixty partnerships with Faculty of Science academics.

2021, **ANFF-Q Student Award** – \$1000 *funding*

Awarded by the Australian National Fabrication Facility (Queensland) to Honours and PhD students, recognising research excellence and supporting advanced equipment training and usage.

UQ Student-Staff Partnership Grants – \$3000 *funding in each round*

Semester 2, 2018, Development of a resource suite for student members of academic committees

Semester 1, 2019, Development of a recruitment framework for student members of academic committees

Semester 2, 2019, Development of a guide for chairpeople for the inclusion of student committee members

2021, **Quantum Hackathon, Runner Up**

Awarded by the ARC Centre of Excellence for Engineered Quantum Systems for our pitch on a novel solution for a bidirectional smart grid for home solar and battery systems.

2025, **American Chemical Society – CAS Future Leaders Top 100**

Awarded by the American Chemical Society, this program provides PhD students and postdoctoral scholars opportunities to learn leadership skills, engage in scientific discourse and connect with peer scientists and innovators from around the world.

Publications

The Carbon Almanac, Penguin Random House, **2022**, *Developmental & Copy Editor*

1. Mallo, N.; **McAnally, S.**; Chu, R.; Babazadeh, M.; Jin, H.; Burn, P. L.; Gentle, I. R.; Shaw, P. E. The Effect of Fluorination on the Low and High Frequency Dielectric Constants of Non-Polymeric Organic Semiconductors – towards Homojunction Solar Cells. *J. Mater. Chem. C* **2023**, *11*, 14382-14394.
2. Mallo, N.; **McAnally, S.**; Jin, H.; Babazadeh, M.; Packman, L.; Chu, R.; Burn, P. L.; Gentle, I. R.; Shaw, P. E. The Effect of Fluorinated Benzothiadiazole-dicyanovinyl Acceptors on the Dielectric Constants of Organic Photovoltaic Materials. *ACS Appl. Energy Mater.* **2024**, *7* (8), 3393–3405.
3. **McAnally, S.**; Jin, H.; Chu, R.; Mallo, N.; Wang, X.; Burn, P. L.; Gentle, I. R.; Shaw, P. E. Dilute donor organic solar cells based on non-fullerene acceptors. *ACS Appl. Mater. Interfaces.* **2024**, *16* (22), 28958–28968.
4. **McAnally, S.**; Buczynski, J.; Kavanagh, L. Student Led Observations for Course Improvement (SLOCI): closing the loop in course enhancement. *International Journal for Students as Partners* **2024**, *8* (2), 95–106.
5. Gao, M.; **McAnally, S.**; Jin, H.; Burn, P. L.; Pivrikas, A.; Shaw, P. E. Free Carrier Generation Efficiency in Organic Photovoltaic Films Determined Using Photo-MIS-CELIV. *Organic Electronics* **2024**, *135*, 107137
6. Mallo, N.; **McAnally, S.**; Jin, H.; Brooks, E.; Chu, R.; Babazadeh, M.; Smyth, J.; Huang, D. M.; Hight-Huf, N.; Reid, O. G.; Rumbles, G.; Burn, P. L.; Gentle, I. R.; Shaw, P. E. Free-charge carrier

generation in homojunction non-polymeric organic semiconductor films – the role of the optical frequency dielectric constant. *Advanced Optical Materials* **2024**, 12 (36), 2401825.

7. Jin, H.; Mallo, N.; Zhang, G.; Lindsay, O.; Gao, M.; **McAnally, S.**; Etchells, I.; Burn, P. L.; Gentle, I. R.; Shaw, P. E. Switching from acceptor to FRET donor: How the organic solar cell architecture can change the role of a chromophore. *Advanced Functional Materials* **2025**, 2420416.
8. **McAnally, S.**; Brooks, E.; Lindsay, O.; Burn, P. L.; Gentle, I. R.; Shaw, P. E. High-Efficiency Y6 Homojunction Organic Solar Cells Enabled by a Secondary Hole Transport Layer. *Small* **2025**, 21 (8), 2409485.

Leadership & Mentorship

2016, Minister for Community & Social Services

Queensland Youth Parliament

Honoured as *Best Youth Parliamentarian* for exemplary leadership of my ministerial portfolio and mentorship of fellow Youth Members of Parliament throughout the program.

2019, President, UQ Physics Club

2019 – 2020, Student Mentor, UQ Science Mentor Program

2019 – 2022, Program Leader, Student Led Observations for Course Improvement (SLOCI)

Faculty of Science, The University of Queensland

Directed the Student-Led Observations for Course Improvement (SLOCI) program, a novel initiative in STEM education enhancement at the Faculty of Science (UQ). Coordinated partnerships with over 12 course coordinators each semester, managed a multidisciplinary team and developed training resources to improve learning design. Reviewed and refined over 60 reports, providing actionable insights that elevated course quality and student engagement across the Faculty.

2022 – 2024, Academic Advisor, International Baccalaureate Extended Essay in Chemistry

Queensland Academy for Science, Mathematics and Technology & The University of Queensland

2023, Lead Curator, TEDxUQ

Led the curatorial team for TEDxUQ 2023, overseeing the selection, mentoring and preparation of 12 speakers for a sold-out event attended by over 600 guests – the highest attendance in the event’s decade-long history. Organised and managed rehearsals, offering tailored feedback to refine talks and maximise their impact for a diverse audience.

2023 – Current, Deputy Theme Leader, Nanotechnology & Materials Chemistry Theme

School of Chemistry and Molecular Biosciences, The University of Queensland

Extracurricular

2017 – Current, National Evaluator, Global Issues Problem Solving & Future Scenario Writing

Future Problem Solving Program Australia Inc.

Recipient of the the E. Paul Torrance Award (2017) for outstanding contributions to the development of Future Problem Solving program within Australia.

2018, Undergraduate Student Representative, Teaching and Learning Committee

Faculty of Science, The University of Queensland

2018 – 2019, Volunteer Presenter, UQ Science Demo Troupe

2019, Volunteer Newsreader, Queensland Radio for the Print Handicapped

2019, *Treasurer, UQ Refugee Tutoring Club*

2019, *Team Member, Team Australia, International Physicists' Tournament*
EPFL, Lausanne, Switzerland

2020 – 2022, *Undergraduate Student Representative, Board of Studies*
Faculty of Science, The University of Queensland

2023, *Committee Member & MC, 19th Research Student Symposium Organising Committee*
School of Chemistry and Molecular Biosciences, The University of Queensland

Conferences & Seminars

12th Oct., 2019, Poster, *Redshift effects in entangled quantum particles*

Awarded *Best Poster*, *Science Student Research Conference*, The University of Queensland, Aus.

19th Nov., 2021, Seminar, *More from less: High efficiency low donor content solar cells*

Awarded Best Presenter, *Chemistry Research Student Symposium*, The University of Queensland, Aus.

30th Nov. – 2nd Dec., 2022, Poster, *More from Less: High efficiency organic solar cells with simple active layers*, *Asia-Pacific Solar Research Conference (APSRC)*, Newcastle, Aus.

7th – 9th Dec., 2022, Poster, *More from Less: High efficiency organic solar cells with simple active layers*
Australasian Community for Advanced Organic Semiconductors Symposium, Tweed Heads, Aus.

20th Oct., 2023, Seminar, *Fostering effective student-led partnerships*

Students as Partners Roundtable, Online, hosted by The University of Melbourne, Aus.

29th Nov. - 1st Dec., 2023, Seminar, *Dilute donor organic solar cells based on non-fullerene acceptors*
Australasian Community for Advanced Organic Semiconductors Symposium, Tweed Heads, Aus.

20th Nov., 2024, Seminar, *Y6 homojunction organic solar cells for enhanced performance*

Awarded Best Presenter, *Chemistry Research Student Symposium*, The University of Queensland, Aus.

27th – 29th Nov., 2024, Seminar, *High-performance Y6 homojunction organic solar cells*
Australasian Community for Advanced Organic Semiconductors Symposium, Tweed Heads, Aus.

4th – 7th Feb., 2025, Seminar, *Enhancing charge extraction in single-component organic solar cells through interface engineering*, Awarded Best Presenter

47th Annual Condensed Matter and Materials Meeting, The University of Queensland, Aus.