

# 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

2017, **Create Change Achievement Award**

Awarded by UQ to Grade 12 students 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

Awarded 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

### 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 Homo Junction 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 homo junction 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** *In Press*
8. **McAnally, S.**; Brooks, E.; Lindsay, O.; Shaw, P. E.; Gentle, I. R.; Burn, P. L. High-efficiency Y6 homo junction organic solar cells enabled by a secondary hole transport layer. *Small* **2025** *Under Review*

## **Extracurricular**

**2016, Minister for Community & Social Services**

Queensland Youth Parliament

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

**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 for 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

## **Leadership & Mentorship**

**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

## ***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, High-performance Y6 homojunction organic solar cells*

*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.*