

GRADY BECKETT

PHYSICIST AND MATERIALS SCIENTIST

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PERSONAL STATEMENT

Motivated Warwick physics alumnus with graduate-level training in materials chemistry from the University of Birmingham. My interdisciplinary background has honed my problem-solving abilities while developing crucial cross-disciplinary communication skills. I am eager to apply my academic experience to develop innovative solutions to complex engineering problems.

PROFESSIONAL EXPERIENCE

Postgraduate Researcher of Materials Chemistry

University of Birmingham

Oct 2021 – Jan 2023

- Project investigated synthesis of metallic magnets and characterization of their material properties.
- Pivotal in setting up the Midlands Maglab, a facility providing advanced magnetometric characterization.
- Modelled neutron scattering data using reverse Monte-Carlo techniques.

Postgraduate Teaching Assistant

University of Birmingham

Jan 2022 – Dec 2022

- Received training in communication skills, inclusivity, and teaching of highly technical content.
- Supervised over 50 hours of laboratory experiments for undergraduates in a team of postgraduates and academics.
- Improved student performance by 15% by authoring supplementary educational material.

Bartender

Document House

Nov 2018 – Jan 2020

- Provided excellent customer service as part of the front-of-house team.
- Learned to prioritize tasks and developed my team skills in an energetic environment.

EDUCATION

MPhys (Hons) in Physics, 2:1

University of Warwick

Sept 2017 – July 2021

- **Thesis:** Effect of Chemical Substitution on the Skyrmion-hosting Van der Waals material Fe_3GeTe_2 .
- Published my masters project work as part of the Skyrmion Project, a multi-million pound national collaboration with Oxford, Cambridge, Durham, and Southampton universities.
- Relevant MPhys Modules: Nuclear Physics, Condensed Matter, and Plasma physics.

A-levels

Sixth Form

Sept 2015 – July 2017

- **A levels:** Mathematics (A), Further Mathematics (B), Physics (B), Chemistry (C).
- **GCSEs:** 13 A* – A including Mathematics and English.

LEADERSHIP POSITIONS

President

Warwick University Canoe Club

May 2019 – May 2021

- Achieved a Sports England grant proposal of over £6,000.
- Initiated public have-a-go sessions, leading 30 hours of sessions in total and collaborated with other sports clubs to arrange joint sessions. These events grew club membership by 23%.
- Negotiated a partnership with a local Sea Scout group, providing coaching in return for fundraising aid.
- Achieved **advanced leadership, coaching, and safety qualifications**.

Materials Chemistry Lecture Series Co-ordinator

University of Birmingham School of Chemistry

Apr 2022 – Jan 2023

- Organized 2 speakers and logistics for each of the monthly materials chemistry groups in the school.
- Championed the cause for first-year researchers to present in seminar series, developing important presentation skills early on and promoting a culture of intradepartmental collaboration.

LGBTQA+ Society Member

University of Birmingham

Jan 2022 – Dec 2022

- Strengthened the activism arm in the society, organized and advertised three events during my tenure.
- Coordinated with organizers of a national protest and recruited two University of Birmingham societies.

Student-Staff Liaison Committee

University of Warwick

Dec 2018 – May 2021

- Liaised between the staff and students to improve the computing stream. This resulted in drop-out rates decreasing from 72 % to below 40 % in the final year module.
- Engaged with senior academics in the STEM departments as well as other student bodies to negotiate requirements and allocations for the new STEM building at Warwick University.

SCIENTIFIC SKILLS AND PUBLICATIONS

- **Software:** Fullprof, TOPAS, GSAS I and II, Crystal Maker, Spinvert, Mantid, Origin.
- **Programming Languages:** Python, Matlab.
- **Lab Skills:** XRD, Neutron Scattering, DSC, TGA, Solid-state Syntheses, Flux Growth, Glassblowing, SEM-EDS.
- **Publications:** Effects of Fe Deficiency and Co Substitution in Polycrystalline and Single Crystals of Fe_3GeTe_2 .

EXTRACURRICULAR

- Expert White-water kayaker (4 years). Organised numerous kayaking trips across the UK and in the Alps.
- Experienced climber.
- Affiliate Member of the Royal Society of Chemistry.
- Attended the **University of Birmingham Postgraduate Writing Summer School**, a three-day intensive course on report writing and copy-editing.
- Attended the **Neutron and Muon Science and User Meeting**, a three-day Royal Society for Chemistry and the UK Neutron Scattering Group conference on myriad X-ray, neutron and muon techniques.
- Member of the organizing committee for **Pint of Science 2022**.