LEWIS D. WRIGHT

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I pride myself on being a problem solver with creative and pragmatic ideas, set apart further from the traditional academic with my outgoing personality and ability to engage at all skill levels.

WORK EXPERIENCE

CREST, Loughborough University

Research Associate *October 2019 - September 2020*

· **Project**

An infra-red reflecting coating for solar module cover glass: development of a demonstrator, funded by a Loughborough enterprise grant.

Aims

To further develop a solar module coating which is simultaneously anti-reflective to visible light and reflective to infra-red. This would boost module performance and also limit a loss mechanism to maintain performance throughout the day.

Achievements

- Used high-throughput deposition methodology developed from PhD to prepare samples.

- Supervised an MSc project student through practical work and dissertation writing.

- Assisted PhD student with day-to-day lab work and analysis.

- **Named as co-inventor on the patent, submitted December 2019.**

CREST, Loughborough University

Postgraduate Researcher *October 2015 - September 2020*

· **Project**

Thesis titled *Earth Abundant Photovoltaic Materials*, funded by the EPSRC Centre for Doctoral Training in New and Sustainable Photovoltaics.

Aims

To reduce the levelised cost of electricity from PV by using compounds made from abundant/widely mined/non-toxic elements, reducing the cost of production.

Achievements

- Built and programmed in LabVIEW a rig to automate wide area deposition by spray pyrolysis.

- Developed novel water-based solvent system and with it achieved an in-house record efficiency for material CZTSe.

- **Learned Python3 to object-oriented level. Built an extensive bespoke script for automating the reading, processing, plotting, and reporting of raw data files for further analysis.**

- Established a scalable digital filing system for the bespoke script to autonomously navigate through and read data files from.

- **Kingmaker in co-authoring a Nature Energy paper on correlating high-resolution measurements, thanks to programming knowledge.**

- Developed a high-throughput combintorial deposition methodology for maximising data extraction while minimising experimental time. Expedited analysis thanks to programming knowledge.

- Developed two novel alternative materials through combintorial materials discovery.

- Chaired and minuted weekly equipment meeting to keep shared lab items running smoothly and to delegate tasks. From the meeting spearheaded a deep-clean and reorganisation of the wet chemistry lab.

- Regularly on-boarded new PhD starters and trained users on equipment. Supervised a number of BSc and MSc projects.

- Attended and/or presented at a number of internal and external conferences.

Department of Physics, Loughborough University

Research Intern *June - Sept 2014*

· **Project**

Summer internship funded by a School of Science bursary

Aims

Assist with setup and calibration of equipment for 'Spin Seebeck Effect' experimentation.

Achievements

- **Learned control programming language LabVIEW.**

- Gained experience with cryostat and ultra-high vacuum systems, preparing thin film samples, and thermoelectrics.

POSITIONS OF RESPONSIBILITY

Loughborough University	Hall Chair, Hazlerigg-Rutland Hall, 2013-14
	E&E Vice Chair, LSU Exec Committee, 2012-13
	FREEC Chair, Hall Students Federation, 2012-13
	FREEC Vice Chair, FREEC Committee, 2012
	FREEC Rep Hazlerigg-Rutland Hall, 2011-12
Beauchamps High School	Head Boy (teacher elected)
	Senior Prefect (peer elected)

OTHER ACHIEVEMENTS

Outreach	Winner, *I'm A Scientist, Get Me Out Of Here!*
Committee member	Hall of the Year 2012-13
	Committee of the Year 2011-12
Loughborough Students Union	Over £4000 raised for Hall Rag
	Over 60 hours volunteered for Action

INTERESTS

Outside of work I enjoy vector-based graphic design, having produced a number of pieces such as t-shirts, posters, schematics, courseworks, etc. A selection of pieces are viewable on my personal website, which I designed and self-host on a Raspberry Pi from home. I regularly gym and swim, and have a keen interest in house/electronic dance music. I have also recently started playing games in Virtual Reality, and am so taken with the new technology I aim to start writing VR apps.