



UNIVERSITY
OF SOUTHERN
QUEENSLAND
AUSTRALIA

Glass: More than Meets the Eye

NO WASTE pilot precinct team
Centre for Future Materials
22nd June 2022

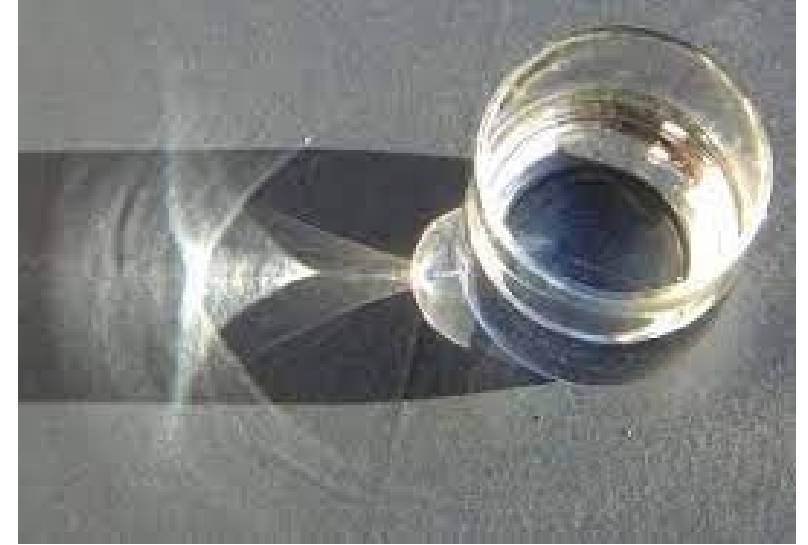


USQ **Approximate USQ Schedule**

9:45am	Arrive at H102 USQ (room near bus stop)
9:50am	Intro to the day and team (Room H102)
10:35am	Rotation 1
11:20am	Morning tea break (in the quad)
11:50am	Rotation 2
12:35pm	Lunch break (in the quad)
1:05pm	Rotation 3
1:50pm	Meet at the buses to get name marked off
2:00pm	Coaches depart USQ

It is likely that Rotation 1 may start earlier. Hopefully this will give some time to see the lab in person before the end of the day.

 **USQ** **Through the Looking Glass**
AUSTRALIA



Activity 1: Small Materials Recovery Facilities (SMRFS) – Rm G421A



- You will be introduced to what a Materials Recovery Facility is (hint: where the material in your yellow lid wheelie bin goes).
- You will do a hands on activity to understand some of the sorting challenges that occur at a MRF
- You will try out an app which can identify colour characteristics to understand automated sorting (and some of the challenges!)



Dr Jessica Pahl
NO WASTE pilot precinct
Centre for Future Materials
Specialties: Math modelling, data visualisation, Biomedical Science. Sensor analysis of materials (including food)



Dr Matt Flynn
NO WASTE pilot precinct
Centre for Future Materials
Specialties: Materials Development and Analysis, Chemistry. New polymers from sustainable feedstock.

Activity 2: Advanced manufacturing using glass – technical braiding - Rm G414A

- You will do a hands on activity focusing on 3 key aspects
 - Determining if something is made of glass (or not) when it is not obvious!
 - Hands on activity with small scale multi-strand braiders undergoing 1) Commissioning (usually done by a field technician), 2) Production of an initial braid product and 3) prep of samples for Quality Control testing. Using a safer fibre than glass to avoid injury
 - Finally we hope to take you to the large scale braider at the end of the day!



A/Prof Polly Burey

School of Agriculture and
Environmental Sciences
Centre for Future Materials

Specialties: Materials Science and
Engineering, Food Science, Process
design and product development.

Activity 3: Glass | Ancient to Modern | Every Day and Industrial Uses - - Rm G414B

- You will be introduced to a range of different glass types and applications.....and the challenges associated with recycling or repurposing
- You will need to determine if everyday glass around you can have a purpose once it is damaged and can no longer serve its core function
- Some glass applications may surprise you!



A/Prof Andreas Helwig
School of Engineering
Centre for Future
Materials
Specialties: Electro-
mechanical engineering,
novel materials,
renewable energy



Prof Petrea Redmond
School of Education
Centre for Future
Materials
Specialties: Educational
Technology, ICT
integration, blended
learning



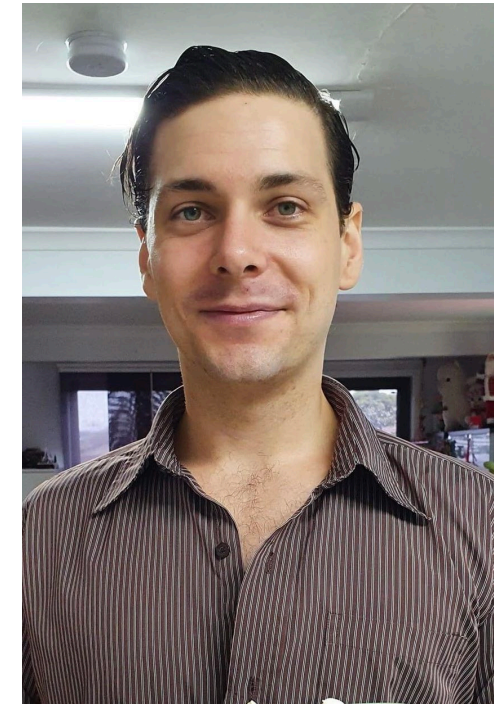
**Letecia
Quiles**

**NO WASTE Summer Program
Scholar 2021/2022**
**Masters student (Civil
Engineering)**
School of Engineering
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Lisa Hopkins

**Bachelor of Science
student (Food Science)**
School of Agriculture and
Environmental Science



Michael McDonald

**Bachelor of Science
student (Astro & Space
Science)**
School of Mathematics,
Physics and Computing



Any Questions?

Find out more:

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