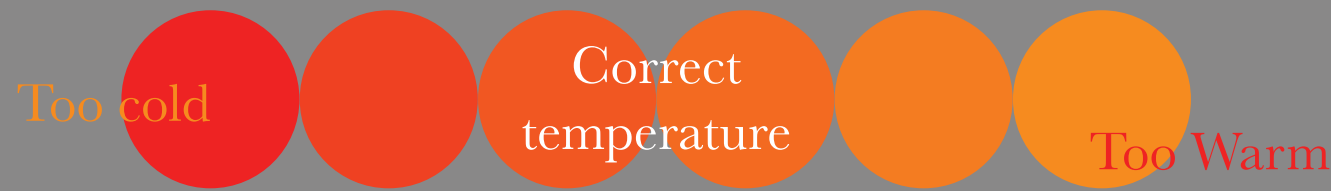


# Ripening Biopolymers for 4D Printed Products

Final Design Concept:

The research shows ways in which the 4D printing qualities may be used in high-end product design. The Thermochromic biopolymer became the key focus as the material was provided for experimentation on campus. The concepts that were produced have potential to sell in the market as companies are leaning more towards personal and customized design. 3D and 4D printing offers that unique ability, to easily alter designs at a low cost. These designs are only an example of how this biopolymer can be used in food and drink packaging.

Indicative sunscreen packaging concepts:



Indicates correct temperature



Indicates wine is too warm



The wine decanter (pg. 35), both indicates when the drink is ready to be served by changing colour, while also aerates the wine when poured. Aerating wine at the correct temperature is an error many people make, especially when drink red wines. This done as oxygen softens the taste, making it smoother and nice to drink.

Many thanks to the team who gave me this opportunity to take part in advanced 4D printing research.

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With help and guidance: Josh Harris Research Assignment 1 carried out by Sophia Neill

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Example of brand customisation