CORNELL AAP	ELECTIVE SEMINAR	INSTRUCTOR	TIME/LOCATION
Department of Architecture	Fall 2021 ARCH 4605/6605 /4408/6408	Marta H. Wisniewska mh2226	TBD IP

Image: Mycelium-composite growth tests, various substrates; University of Tasmania.

Home:Grown

The construction sector is one of the biggest contributors of greenhouse gas emission globally (39%)[1] and responsible for half of the waste in landfills[2]. In 2018, the US alone produced 600 million tons of construction and demolition debris[3], an amount that is expected to continue growing exponentially while catering to a rapidly increasing world population.

In search of solutions to those horrifying trends and the linear economic system driving its development, this seminar on alternative materials–consequential to the two previous electives (*Home is where the Toxins are* and *Fantastic Materials and where to find them*)–will look into **mycelium based materials** within the biological metabolism. The framework of the ***Home:Grown*** seminar will be divided into two modules: First, each student will gain hands-on experience in growing their own mycelium pieces in the material laboratory environment. The second will incorporate a design component and will comprise of digital and physical form-finding in pursuit of innovative mycelium joinery system, aiming to answer the important question of how to scale biological growth processes in architectural production.

Incorporated into the Atkinson AVF Grant ***MycoBuilt***, this seminar will draw on the expertise and passion of our collaborators at the Cornell Departments of Microbiology and Material Science as well as leading mycelium material producers in form of input lectures, workshops and reviews.

This seminar calls for very motivated participants, manually and digitally well-versed, with strong interest in novel materials and green architecture. Students must attend the first class to request enrollment.

1 and 2_ UN Environment and International Energy Agency (2017): Global Status Report 2017

3_ Environmental Protection Agency