

They Grow Without Us

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They grow without us is a temporary public furniture installation grown from mushrooms. The project builds upon transdisciplinary research at the intersection of material science, mycology, and sustainable building technology. To fabricate the furniture, damp sawdust was sterilized and inoculated with a blend of *Pleurotus ostreatus* mushroom spores and nutrients and poured into aerated hexagonal molds. While in the mold, the fungus produces mycelium, a cross-linked matrix of polysaccharides in the pore spaces between sawdust particles. The process produces solid mycelium bio-composites objects that can be removed from the mould as little as five days. The white coating at the exterior is a hydrophobic material called chitin produced naturally by the mushrooms.

Mycelium bio-composites suggest a future in which biodegradable architectural components are grown rather than manufactured, adding valuable material to local ecosystems at the end of their life. Most architectural materials are discarded long before their

useful life is over, spending longer in landfills than they do in the form of a building. Sustainability in the context of rapid cycles of demolition and construction calls for flexible and radically biodegradable materials. The installation encodes organic decay into its basic structure, anticipating future demolition and using it as an opportunity to provide valuable material to local ecosystems. In contrast to relentless cycles of extractive consumption, the project suggests an alternate future in which regenerative architectural materials transform over their lifetime, adapting to change and serving needs that are simultaneously structural, aesthetic, and visceral.

