Singapore scientists create 'fungi tiles', eco-friendly thermo-insulation materials using plant biomaterials

A team of scientists led by Nanyang Technological University, Singapore (NTU Singapore) have developed 'fungi tiles' that could one day help to bring the heat down in buildings without consuming energy. These wall tiles are made from a new biomaterial combining fungi's root network – called mycelium – and organic waste. Earlier research has shown that mycelium-bound composites are more energy efficient than conventional building insulation materials such as expanded vermiculite and lightweight expanded clay aggregate. Building on this proven insulating property, the NTU Singapore team worked with local ecology and biomimicry design firm bioSEA to add a bumpy, wrinkly texture to the tile, mimicking an elephant's ability to regulate heat from its skin.