

'e-Co-mposites' in an investigation into ecological construction materials from local resources to support bioclimatic design strategies in Queensland conducted at the Comparative Construction Research Centre at the Faculty of Society and Design, Bond University. The research project intends to investigate the potentials of local resources as ecological building materials to support bioclimatic design strategies for subtropical climates zones. Thereby we are looking into potentials of natural resources but also industrial by-products (in particular agricultural fibrous waste products) as resources (per region) according to climate zone. A seed grant has enabled pilot studies for material experiments and further document as well as investigations into potential ecological building materials in Queensland. The outcome of the survey and initial testings are further combined with aspects of current international material research results and suggestions can be made for future applications. Initial experiments and tests (incl Robotics Lab) around natural fibre reinforced geo-polymer and renewable thermoplastics investigate lightweight 3-d structural positioning of the composite as well as layering into panels.

eComposites

ECOLOGICAL COMPOSITE MATERIALS

Research Period August 2018 - ongoing

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AN INVESTIGATION INTO ECOLOGICAL COMPOSITE CONSTRUCTION MATERIALS FROM LOCAL AGRICULTURAL WASTE AND LOW EMISSION MATRICES TO SUPPORT BIO-CLIMATIC DESIGN AND CONSTRUCTION IN THE SUBTROPICS.

TAED

TECTONIC ARCHITECTURE x ECOLOGICAL DESIGN

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