



**UNSW**  
SYDNEY



## Microrecycling with MICROfactorie™ technology

**UNSW SMaRT Centre MICROfactories™ are an innovation designed to transform problematic waste materials, such as glass, textiles and plastics, into new value-added materials and products such as engineered ceramic-style tiles, building panels and filament for feedstock and 3D printing, benefiting the environment and creating new economic and social opportunities.**

### Competitive advantage

- Developed new manufacturing and recycling solutions addressing urgent problems and deficiencies around waste and recycling
- Addresses the need for more sovereign manufacturing capability and job creation.
- Microfactories are a new industrial concept that have engineered modules to transform difficult waste that might have been considered non-recyclable, into new green products and materials for advanced manufacturing

### Impact

- Reduce waste going to landfill, reduce the loss of valuable resources to the Australian economy, generate local employment, and create products that are highly sustainable compared to most comparable products in the furniture and built environment industries
- Filament product enables decentralised production and 3D printing in closed loops across the country

### Successful outcomes

- High quality 'green' ceramic tiles for display apartment developments
- Flat panels for building applications
- Filament made from waste plastic and made various items from 3D printing

### Capabilities and facilities

- The SMaRT Centre operates a number of MICROfactories™ on site at UNSW, and is partnering with a number of businesses to help them develop the capability

### Our partners

- Kandui Technologies
- MolyCop
- TES AMM
- Spark Furniture
- MRA

### More Information

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