

RESEARCH THEME

XXXIX cycle – a.y. 2023/2024

Title of the doctoral research

Circular material and design strategies for sustainable production

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Abstract

The core of the research is the development of new circular waste-based biomaterials and the definition of design strategies for the application in circular design concepts as to combine design for sustainability to Circular Economy

(CE) approach with decarbonization challenges. The project is built around 3 interconnected research pillars:

- 1) What is the role of design in contributing to a transition toward a CE?
- 2) How can design support productive reconversion for a more innovative and sustainable territorial economy?
- 3) How can local communities contribute to leveraging green technologies and what is the impact of such technologies on the territorial productions and identities of territories?

The challenge of the research is to develop effective methods and concrete tools to enable territorial dynamics toward sustainable development and support a transition toward a CE. A mix of theoretical and practical activities will be carried to co-design virtuous processes for the recirculation of local resources (materials and waste) in territorial production chains, their transformation and re-use in design of “circular material and products”. The re-use of local material resources in the territorial production systems will make a pair with the identity representation of the communities themselves, offering a new ransom opportunity towards a conscious updating of material culture practices in a sustainable, synergic, and inclusive perspective.

Keywords

New sustainable Materials, Circular Economy, Regeneration of territory