

AIMPLAS

PLASTICS TECHNOLOGY CENTRE

+35

YEARS OF EXPERIENCE IN THE PLASTIC SECTOR

+260

HIGHLY QUALIFIED PROFESSIONALS

+12,000m²

OF SPACE AT OUR FACILITIES FOR CUTTING-EDGE TECHNOLOGY



R&D&I

At AIMPLAS, you will find the technological support you need to develop new products, enhance material properties, optimize transformation processes, or valorize waste.

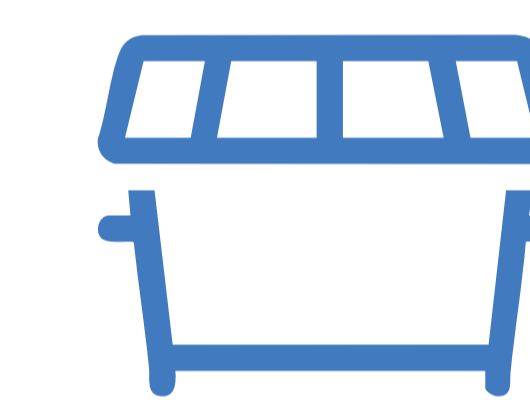


Assistance

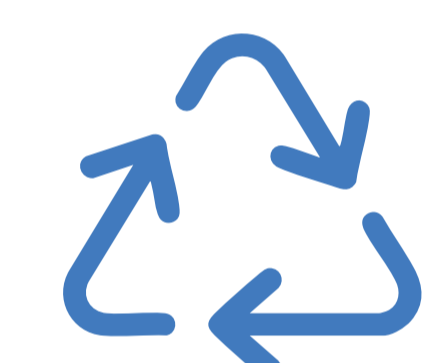
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Research Lines



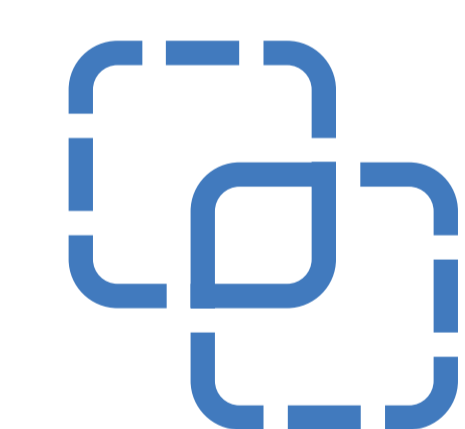
Waste Management



Mechanical Recycling



Chemical Recycling



Combined Chemical and Mechanical Recycling

We manage your project



Sustainable Mobility



Industry 4.0



Sustainable Energy



Agriculture and Aquatic Environment



Decarbonization



Circular Economy



Smart Construction



Packaging



Health and Wellbeing



Plastic Pilot Plants

We have over **35 pilot plants** for processing plastic materials dedicated to research, formulation of new materials, and improvement of various existing processes.

Synthesis

Mechanical-chemical recycling

Transformation processes



Materials from Renewable and Biodegradable Sources



Biotechnology



Use of Biomass

AI-TW

AI-TRANSPWOOD

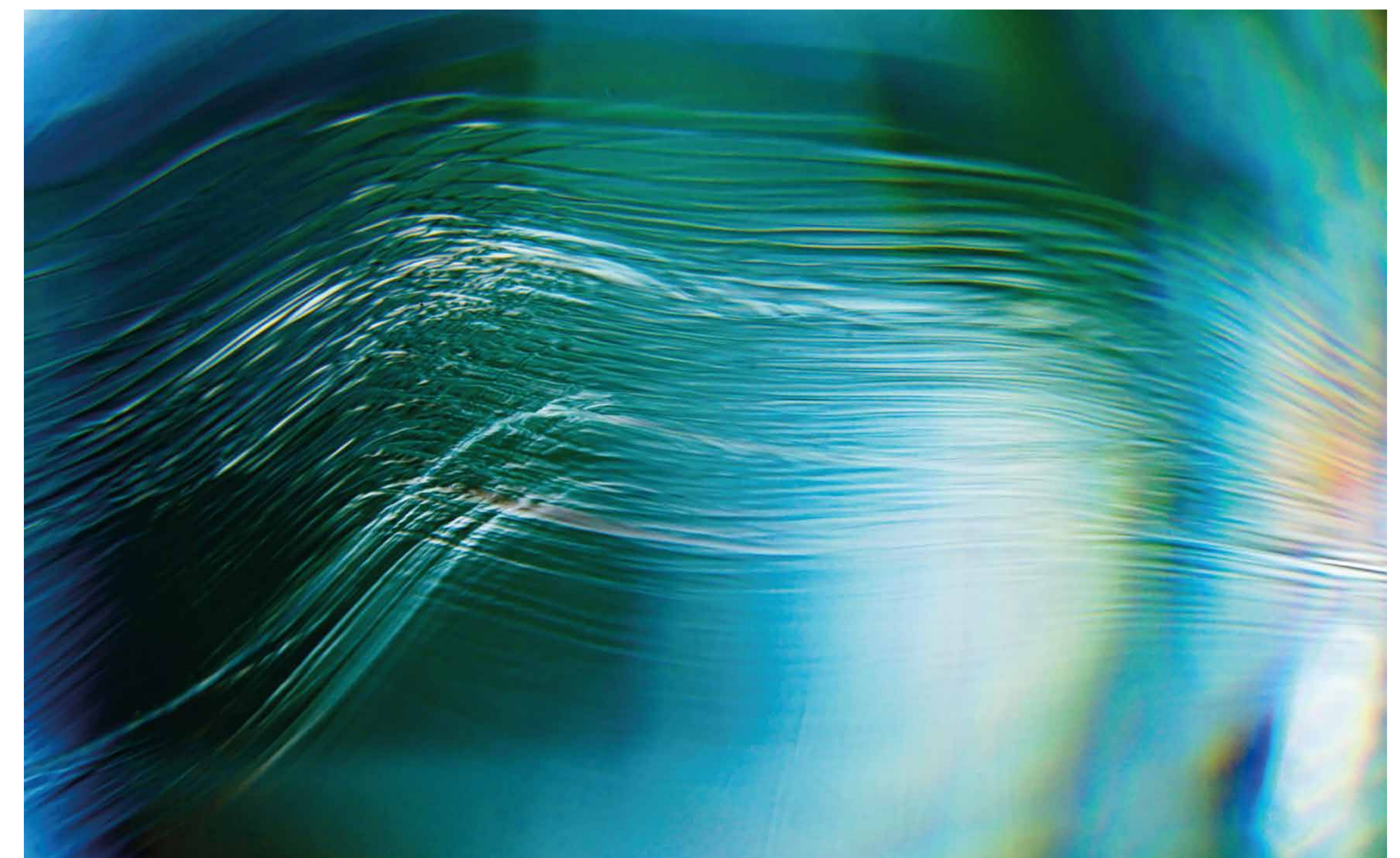


Objectives

The AI-TranspWood project aims at an efficient integration of advanced AI-driven computational models with the SSbD (Safe and Sustainable by Design) framework for wood-based composites. The project highlights this integration with the creation of new Transparent Wood composites, with the vision to integrate or even substitute concerning substances (plastic and glass) in construction, automotive, electronics, and furniture sectors. To support this aim, the project offers user-oriented tools, including surrogate modeling and focused LCA tools, to industrial partners within and outside the consortium

Impacts

The wood materials community will be provided with computational modelling software supported by AI for the design of new materials and products, integrating functionality and the SSbD framework. The models will include composite materials design tools for stiffness, strength, and hygro-thermal properties (a limitation with most current wood composites), and optical properties (optical transmittance and haze, a measure of light scattering properties). Importantly, the models allow the wood species and the chemicals used to be compared with respect to eco-design and physical properties.



Academic Partners



Politecnico
di Torino



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UNISS
UNIVERSITÀ
DEGLI STUDI
DI SASSARI

Industrial Partners - Research Centers



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PLASTICS TECHNOLOGY
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Oyak Renault
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Strane
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