

MATERIALS SCIENCE AND TECHNOLOGY

PNRR - Sustainable and recyclable polymeric thermosets

Funded By	MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [Piva/CF:97429780584] Dipartimento DISAT
Supervisor	SANGERMANO MARCO - marco.sangermano@polito.it
Contact	
Context of the research activity	<p>Development of sustainable and recyclable UV-Cured thermosets by exploiting vitrimeric properties.</p> <p>PNRR M4C2, Investimento 1.4 - Avviso n. 3138 del 16/12/2021 - CN00000022 National Research Centre for Agricultural Technologies (AgriTech) - CUP E13C22001010001</p>
Objectives	<p>This PhD project aims to face the complex challenge of the production of sustainable and recyclable polymeric thermosets. One possible strategy to address this issue is the exploitation of bio-based resources as precursors for polymers.</p> <p>Furthermore, the implementation of dynamicity in crosslinked polymeric materials with the introduction into the polymeric networks of labile noncovalent and dynamic bonds capable of undergoing reversible formation and cleavage, will give to the corresponding materials innovative recyclability properties.</p> <p>Therefore, the integration of vitrimer properties with bio-based materials appears a great combination of choice to achieve the expected aim.</p>
Skills and competencies for the development of the activity	<p>Knowledge on photopolymerization technique, on the synthesis and characterization of polymeric materials.</p>