



17 Project Partners
10 European States
11 Major Objectives
64 Deliverables
11 Milestones



R-NANO



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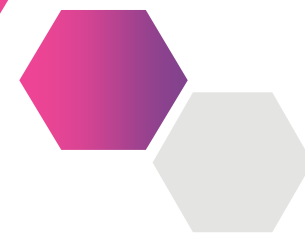
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Novel engineered Fibre-Based materials

“ Modified Cost Effective Fibre Based Structures with Improved Multi Functionality and Performance

MODCOMP „

<http://modcomp-project.eu/>





We Effectively Follow:

- ☑ Development of CF-based composites with multi-functionalities (i.e. a combination of enhanced mechanical properties, electrical conductivity, thermal stability, flexibility) by the incorporation of nanomaterials.
- ☑ Development of cost-effective manufacturing processes which consider sustainability, recycling of new bio precursors, energy of bioresins and life cycle and safety, such as safe-by-design and toxicology.
- ☑ Evaluation of new configurations in lighter structural composites taking advantage of nanotechnology to sustain damage from lightning strike for Zone 2A of the Horizontal Tail Plane.
- ☑ Looking for the optimum processes and the best multiscale reinforcement combinations, using synergistically experimental testing and analytical techniques, together with computational modelling.
- ☑ Promotion of the exploitation of industrial-preferred composite materials and standardized activities throughout the production chain.
- ☑ Dissemination of outputs for raising the profile of the new MODCOMP technologies.



We Improve Functionality and Safety!

NEXT GENERATION

MODCOMP develops the next generation of CF-based materials for structural and electronics applications. Demonstrators are designed to fulfill scalability towards industrial needs and market needs.

DEMONSTRATING

The aim of MODCOMP project is to demonstrate the influence of different surface enhancing and modification techniques on carbon fibre (CF)-based materials for high value and high performance applications.

NEW APPROACHES

MODCOMP provides new approaches to improve functionality in particular electrical and thermal properties as well as structural performance of fibre-based materials, by integrating nanostructures and/or using environmentally-benign surface treatment technologies.



ADVANTAGES OF CF

CF based materials have particular advantages due to their lightweight, good mechanical, electrical and thermal properties.

“NEXT GENERATION OF CF-BASED MATERIALS”

- ☑ Use of the CF-based materials developed from MODCOMP to re-design final products with reduced weight (>20%), increased stiffness (>20%) and enhanced performance (faster response to driver actions and improved safety).
- ☑ Identification of new potential market for the developed fibre-based composite materials in avionics, construction, and electronics industry.
- ☑ Evaluation of the industrial impact of MODCOMP-concept with respect to economic as well as technical aspects.
- ☑ Opening a new field of innovation, based on materials and technologies development and push for the industrial leadership of Europe in strategic domains (electronics, defence, aerospace).



Through the selection, development and optimization of promising laboratory-level techniques, including surface functionalization of fibres and integration of carbon-based nanomaterials, we enable a scale-up production of fibre-based structures with enhanced mechanical, thermal and electrical properties that can meet the demands of a wide range of industrial applications.

