



CarbonInspired



2.0



Newsletter CarbonInspired 2.0

Welcome CarbonInspired 2.0

CarbonInspired 2.0 is a transfer network for the integration and dissemination of knowledge about high value added products based on nanoparticles for the industry from the SUDOE Space (Spain, Portugal and south of France).

To begin with

CarbonInspired 2.0 was born due to the need to capitalize the successful results obtained during the previous project called CarbonInspired, financed with ERDF funds.

The conclusions obtained in the previous project detected several fundamental facts which made the approach of nanotechnology to the business world more difficult:

- **The lack of specific training in this technological field.**
- **Existing fears and threats about the handling security and the use of derivative products.**
- **The lack of final products to show the technical viability of the nanotechnology application.**
- **The absence of successful stories in the most representative industrial fields in the whole**



Technical review: Prototypes developed by CarbonInspired 2.0

A heating seat



CTAG will develop a heating seat. The resulting prototype will reach a thermal leap of 15°C with consumption lower than the conventional electric resistances. **It will work with a 12V voltage**, similar to a car battery. This is considered to be a secure working voltage so it could be used in humid

environments or outside without any danger for the user. Moreover, the obtained heat will be uniform among the whole seat surface, which will significantly increase the comfort, achieving the desired thermal sensation with a temperature leap lower than previously thought.



An anti-fouling and anti-corrosion coating

The technology developed by AIMPLAS will consist in a polyurethane coating based on nanoparticles for strategically maritime components. Properties as antifouling and anticorrosion capacity will be desired in order to ensure a suitable useful life in a marine medium where action by chlorides, algae and other

organisms are critical.

For that purpose a synergistic effect from different nanoparticles will be considered pursuing also a hydrophobic surface.



A de-icing paint



Nowadays icing of a plane is a big issue that has not been solved so far. Some existing solutions mainly use two kinds of systems: avoiding the formation of ice or ensuring a continuous removing of ice.

ADERA is going to develop a technology based on the application of a heating paint. This paint is based on

conductive polymers and carbon nanotubes. Those new formulated paints will be able to conduct the electricity when a voltage is applied. **And thanks to an increase of heat, the ice formation could be avoided** on sensible zones of a plane and also, in case of icing, allows a fast de-icing

Water detoxification

IK4-TEKNIKER will develop a small prototype to show **the efficiency of nanotechnology in the water detoxification treatment**. The technology will consist in a combination of TiO_2 nanocoatings and TiO_2 nanoparticles which will be incorporated on surfaces with

different natures (plastic or glass). The treatment will be applied to a model colored solution. The application of the water detoxification treatment will remove the color of the water, apart from reducing its organic content.



MEMs

The University of Aveiro will develop a high performance molding tool for the injection of enhanced thermoplastic micro-components. The surface of the mold will be coated with nanocrystalline diamond, produced by chemical vapor deposition (CVD).

The nanocrystalline film is able to give to the **molding impression a higher wear resistance and a better cavity temperature control**, resulting in reduced maintenance needs of the tool and the production of better quality polymeric parts.



Events



Official launch of CarbonInspired 2.0 !!

The management authorities from the O.P. SUDOE arranged a Project Management Seminar in Santander, where the formal beginning of the approved projects was determined by the signature of the EFDR contract under the scope of the 4th project call.

CarbonInspired 2.0 launched in Galicia

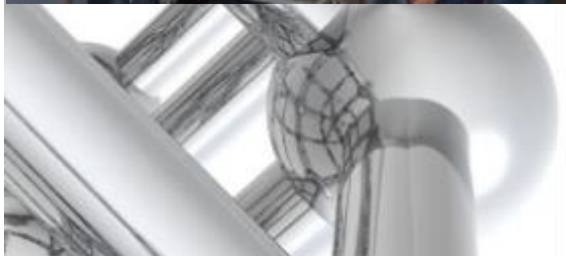
The kick off meeting of CarbonInspired 2.0 took place on **July 17th** in Galician Automotive Technology Centre (CTAG) facilities, located in O Porriño. One representative per partner attended this first project meeting. CarbonInspired 2.0 aims to capitalize the successful results obtained during the previous project, named CarbonInspired.

Along the meeting, the objectives, scope and work plan were introduced to the partners. Furthermore, the distribution of responsibilities and functions were refreshed and the next activities to be started during the following 6 months were established in order to properly settle the launch of the project.

CarbonInspired 2.0 participating to the K fair

Searching for the maximum impact of the transfer actions carried out by our network, CTAG organized a transfer expedition to the biggest worldwide trade fair about plastics and rubbers, the K Fair, which **took place in Düsseldorf on October 16th to 23rd**.

This fair gathered more than 3.000 expositors distributed along 19 pavilions. The transfer expedition was composed by two transfer managers from CTAG that visited the fair during two days. They got in contact with several enterprises from different sectors of activity (plastic transformers, machinery, additives, engineering, etc.) with the purpose of introducing CarbonInspired 2.0 network and bringing them information to allow them become a registered member with full rights, take profit of the virtual platform the debate community in LinkedIn, attend our own events, etc.



Our upcoming events

JEC Europe



ChemonTube 2014

ChemonTubes 2014

Nanospain



Moldplas



JEC is the largest composites industry organization in Europe and in the world with a network of 250,000 professionals from 100 different countries. It represents, promotes and expands composites markets by providing global and local networking as well as information services.

11-13 March 2014 Paris (France)

<http://www.jeccomposites.com/events/jec-europe-2014>

This "chemistry – certified " event will be the perfect place to share your latest results on chemistry at large on graphene, carbon nanotubes and other related nanoforms of carbon and hear about your colleagues' work in the area.

30 Mar-3 April 2014 Riva del Garda (Italy)

<http://chemontubes2014.crpp-bordeaux.cnrs.fr/>

NanoSpain, Spanish Nanotechnology Network, promotes the exchange of knowledge between Spanish groups working in different fields related to Nanotechnology and Nanoscience increasing collaboration among universities, research institutions and industry.

01 April 2014 Bilbao (Spain)

http://www.nanospain.org/nanospain_events.php?p=e

Located in one of the major industrial poles of the country, EXPOSALAO promotes MOLDPLÁS – a professional exhibition, aimed at presenting the technological solutions and industrial innovations.

7-10 May 2014 Batalha (Portugal)

<http://www.exposalao.pt/index.php?page=int&pageid=2&subpage=0&tf=1&fid=12>

Upcoming events

[NANOENERGY 2014](#)

Date: 19–21 February 2014

Location: London, United Kingdom

[NANOMED 2014](#)

Date: 26–28 February 2014

Location: London, United Kingdom

[Industrial Technologies 2014](#)

Date: 9–11 April 2014

Location: Athens, Greece

[IEEE 34th International Conference on Electronics and Nanotechnology](#)

Date: 15–18 April 2014

Location: Kyiv, Ukraine

[International Conference on Structural Nano Composites \(NANOSTRUC 2014\)](#)

Date: 20–21 May 2014

Location: Madrid, Spain

[GRAPHENE 2014](#)

Date: 6–9 May 2014

Location: Toulouse, France

[Nanofair 2014 - 10th International Nanotechnology Symposium](#)

Date: 1–2 July 2014

Location: Dresden, Germany

[22nd Annual International Conference on Composites/Nano Engineering \(ICCE-22\)](#)

Date: 13–19 July 2014

Location: Malta

[CNFA 2014 - 5th International Conference on Nanotechnology: Fundamentals and Applications](#)

Date : 11–13 August 2014

Location : Prague, Czech Republic

[9th NANOSMAT 2014](#)

Date: 8–11 September 2014

Location: Dublin 2, United Kingdom



Partners

CTAG

The Galician Automotive Technological Centre (CTAG) is an organization created to offer advanced technological solutions to the automotive sector. It supports the automotive industry in its permanent quest for continuous improvement and new technology. Its highly qualified human resources provide excellent service and customer dedication. CTAG's modern facilities incorporate cutting-edge technology designed to provide world class service to the customer.

AIMPLAS

AIMPLAS Valencia Spain, is a Centre for Innovation and Technology (CIT) recognized by the Spanish Ministry of Education and Science. Its field of activity falls within research applicable to the plastic transformation sector, to support, technological, development and innovation through integral solutions that can be adapted to the enterprises.

University of Aveiro

The University de Aveiro is organized in 14 research units and 4 laboratories associated to multidisciplinary and interdepartmental tasks lead in the frame of program and specific projects. As a result, international and institutional cooperation are considered as primary priorities.

TEKNIKER

TEKNIKER is a technological centre that helps the industrial sector to increase its innovative capacity by means of generating and applying technology and knowledge in order to be more competitive. It likes to define itself as a Mechatronics, Manufacturing Technologies and Microtechnologies centre. In commonly adopted terminology, TEKNIKER is a manufacturing or industrial production and design centre.

ADERA

ADERA is a non-profit private organization focusing on teaching and research between universities, research centres and companies in the Aquitaine region. ADERA develops and multiplies cooperation between technology providers and private companies. ADERA became a major actor in innovation coordinating over thirty technology transfer units providing engineering services in a wide range of industrial activities.



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