



Open menu

Beyond AFM Topography

More Accurate Tools for Nanomechanics



Home

News

Nano Databases

Nano Business

Nano Jobs

Resources

Introduction to Nanotechnology

Park NX20

The Most Accurate AFM For
Failure Analysis (FA) & Quality
Assurance (QA)



1

CleanTech News

The latest news about environmental and green
technologies – renewables, energy savings, fuel cells



Click for Information



Capturing
Biological
Dynamics
with Ease

Functionalized Nano

The smallest, strongest & fastest Magnetic nanoparticles. Buy online!

www.TurboBeads.com

Posted: Mar 7th, 2013

Doped carbon material produces low-cost energy and reduces CO2

nanowerk.com/news2/green/newsid=2013030701.html

At present, power stations run using renewable energies (wind, solar or wave) produce energy peaks that are wasted, since they do not coincide with the energy needs. Storing this energy in batteries for its later use would be a very costly process that requires huge amounts of very expensive pure metals, such as nickel or copper, which is why this process is currently hardly ever used.



Agustin F. Perez Cadenas operating the reactor.

The doped carbon gel developed by the UGR acts as a highly-dispersed (it is made up of 90% carbon and a small quantity of heavy metals) and effective electro-catalyst, which means it enables CO₂ to be turned into hydrocarbons at a low cost. This new material, developed entirely at the UGR, following more than 10 years of research into carbon gels, has recently been patented by the Institution's Office for the Transfer of Research Results (OTRI).

As the project's principal researcher, Agustin F. Perez Cadenas, explains, the doped carbon gel "is not a magical solution to prevent CO₂ emissions into the atmosphere and stop the contamination caused by the greenhouse effect, but it does enable them to be reduced considerably, as well as reducing energy costs". At the moment, this system is in its laboratory phase and has still not been applied in actual power stations, though the tests carried out at the UGR have led to some

“highly promising” results.

The research team currently working in this line of investigation is formed by the UGR lecturers Agustin F. Perez Cadenas, Carlos Moreno Castilla, Francisco Carrasco Marin, Francisco J. Maldonado Hodar and Sergio Morales Torres, along with Maria Perez Cadenas from the UNED. Initially, there was also another collaborator, Freek Kapteijn, from the TUDelft (Netherlands).

Source: *University of Granada*

Check out these other trending stories on Nanowerk:

[Nano-sensors for listening to the 'conversation' of bacteria](#)

[Replacing antibiotics with graphene-based photothermal agents](#)

[High-performance computing on flexible and transparent monocrystalline silicon](#)

[A new generation of programmable shape-memory micro-optics](#)

[Designing nanogenerators for large-scale energy harvesting](#)

[New plastic electronics can greatly reduce food waste worldwide](#)

[Nano-sensors for listening to the 'conversation' of bacteria](#)

Powered by [AddThis](#)

Subscribe to a free copy of one of our daily
[Nanowerk Newsletter Email Digests](#)
with a compilation of all of the day's news.