



nano²hybrids



A new way to communicate nanoscience

Problem

European scientific research is normally presented to the public *after the project is complete*. When clear *post-hoc* descriptions of the science are constructed, it can present a misleading impression - of the process of scientific research, the methods and skills used by the researchers, and the levels of uncertainty involved. This makes debate of scientific subjects in the public arena difficult, and blocks the public from actively engaging with the science. Furthermore many of the most challenging and exciting aspects of scientific research are often never seen by the public.

Challenge

To find a new way to involve the public in scientific research. To actively engage them in a two-way dialogue. To show that scientific research is not about cut-and-dried facts but is a dynamic process of discovery, surprise, occasional failure, and often the unexpected. To impart a deeper understanding of the scientific process, and hopefully transfer some of the excitement of involvement in cutting edge nanoscience research.

People

The nano²hybrids team includes a cross-section of researchers at many different stages of their careers; from PhD students to established group leaders, from academia and SMEs.



Jean-Jacques Pireaux, Namur
Project Coordinator
Team leader for synthesis of plasma treated nanotubes

Chris Ewels, Nantes
Science Communication Coordinator
Computer modelling of nanostructures



Gill Watson
The Vega Science Trust
Innovative Science Communication
via video and the Web

Jean-Christophe Charlier
Louvain-La-Neuve
Theoretical Modelling Coordinator
Computer modelling nanostructures



Carla Bittencourt, Namur
Synthesis of metal treated carbon nanotubes for gas sensor devices

Irene Martinez, Nantes
Theory of metal coated nanotubes



Eduard Llobet Tarragona
Universitat Rovira i Virgili

Alexandre Felten, Namur
Growth of hybrid nanomaterials



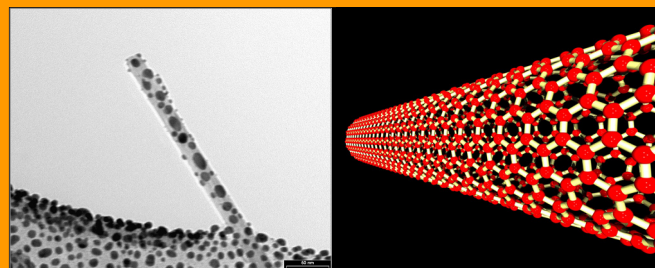
Gregory Van Lier, Louvain-La-Neuve
Simulation of nanotube defects

New Approach

One of the partners in our STREP consortium, *The Vega Science Trust*, is specialised in **science communication** and outreach.

Using the latest video and Internet technology, we will produce **documentary films** before and after the project, showing our aims, and eventual outcomes. Throughout the project, the participants will produce **video diaries** which will be available to **view over the Internet**, with a forum facilitating **discussion** between the scientists and the public.

The public will be able to follow the 3 year project as it unfolds, its successes and failures. Public feedback may even influence its progression.



At the end of the project, the two documentaries and video diary content will be combined into a DVD and made available to educational institutions, etc.

As far as we are aware, this is the **first** EU scientific research project to ever facilitate **genuine two-way dialogue** with the public, notably while the project is still underway.

This is an innovative pilot project operating on a modest budget. If successful there are a number of ways the communication model could be developed.

nano²hybrids project

We use a novel plasma treatment technique developed at Namur to modify the surface of carbon nanotubes. This makes it possible, in a single step, to apply precisely controlled amounts of metal to the nanotube surfaces. These metal-nanotube hybrid materials have great potential for use in gas sensors.

Combining detailed experiments with strong computer modelling support we will develop new insight into the fundamental interactions between metals and carbon nanotubes, as well as the behaviour of nanotubes in plasma treatments. At the same time we will develop industrial scale production techniques for synthesis, and design, test and optimise a gas sensing device using these metal-nanotube hybrid nanomaterials.

Contact

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