Preface

Gold Bulletin offered to dedicate this special issue of June 2008 to the French network "Or-Nano" (for Gold-Nano or Groupement de Recherche or GdR Or-Nano (www.or-nano.org)).

The network "Or-Nano" arises from a French initiative taken by a group of scientists to gather the French community working on, or with gold nanoparticles in different scientific fields (physics, chemistry and biology). The goal of "Or-Nano" is to stimulate scientific relationships between researchers who do not often consider each others research because they work in different fields, and to promote creative collaborations, new concepts and ideas. Any researcher working on gold nanoparticles can join the network "Or-Nano".

This special issue of *Gold Bulletin* gathers a sampling of recent works performed in France on gold nanoparticles or review articles on the scientific activity of some French groups, some of them generated by collaborations induced by the network "Or-Nano". The issue covers several aspects: for instance, the synthesis of gold nanoparticles of non-spherical shape, high-tech *in situ* techniques of characterisation (HRTEM and GISAXS) during catalytic reactions, optical and photothermal properties of gold nanoparticles (in assemblies or single particles), and the consequence of these properties for biological issues: biosensors, live cell imaging and radiotherapy. Concerns with the risks and toxicity associated with gold nanoparticles is also addressed in this issue.

The network "Or-Nano" was officially created in 2006 for a four year term, under the auspices of the Centre National de la Recherche Scientifique (CNRS), which offers financial support for the organization of scientific meetings. Three annual meetings have been organized to date: a pre-GdR conference in June 2005 (reported in *CatGoldNews* ***10*** (2006) 3), the first official conference in November 2006 in Paris (reported in *GB* ***40/1*** (2007) 86) and the second one in December 2007 in Lyon (reported in *GB* ***41/1*** (2008) 71).

"Or-Nano" also addresses an important challenge for our community by interacting with the general public. CNRS sponsored on-line press coverage and communication of the benefits of gold nanoparticles and their promising applications (see http://www2.cnrs.fr/presse/communique/989.htm). Agence France Presse (AFP) also produced a press release covered by several daily popular newspapers, such as "Le Monde" which published a full article on gold nanoparticles. Several radio and TV broadcasts were also dedicated to the topics.

A reflection on the social issues as well as human consequences deriving from these research activities has been initiated and was developed during the Summer School "Gold Nanoparticles and plasmon resonance: from physics phenomena to biology applications" that "Or-Nano" has just organised June 9-13 in Porquerolles island, France (in French).

At its creation in 2006, the network "Or-Nano" gathered around 30 French research groups. Now, the cumulative number of groups which have participated in meetings is around 50, and the total number of participants is around 200. "Or-Nano" has a strong impact on younger researchers with 30% of PhD students and postdocs as participants.

The network's website, in French and English, (www.or-nano.org) provides free access to information and announcements on the events organised by the network "Or-Nano", and also information on world-wide events related to gold, such as meetings organized by the World Gold Council. It also provides announcements on vacant positions for PhD and post-doc and for candidates who are looking for a new post. A section of the website provides information to the general public.

On behalf of the scientific committee of the network "Or-Nano", I would like to warmly thank the World Gold Council for offering us this great opportunity to report the experience of our French national network, which to my knowledge, is still unique in its kind.

Yours, truly,

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