



RESEARCH CONFERENCES

ESF Conference

Nanocarbons: From Physicochemical and Biological Properties to Biomedical and Environmental Effects

Hotel Villa del Mare, Acquafredda di Maratea • Italy
8-13 September 2009

Chair: Sophie Lanone, INSERM University Paris 12, FR

Co-Chairs:

Jorge Boczkowski - INSERM University Paris 12, FR;

Philippe Lambin - University of Namur, BE;

Pascale Launois, CNRS-University Paris 11, FR

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Preliminary Programme

Carbon Nanotubes (CNT), discovered in 1991, have amazing mechanical, thermal and electrical conductivity, as well as excellent field emission properties. Actual uses of CNT are already about to be numerous (car industry, sport accessories, etc.), and future applications are foreseen to be in constant development. Right now, the very same properties that make CNT very attractive raise questions about their potential toxicity, possible long-term secondary effects, and/or biodegradability. Physico-chemical properties of CNT seem to be critical not only for their potential applications, but also for their biological and toxicological effects. However, a comprehensive and systematic understanding of this subject still needs to be acquired, particularly when considering the very promising biomedical applications of CNT.

The general aim of this conference is, thanks to its pluridisciplinary approach, to give the different actors of CNT research (physicists, chemists, biologists) the proper level of knowledge required to discuss with the other participants and understand each other correctly. Therefore, the conference will propose lectures accessible to scientists of different fields, as well as more specialized lectures in each domain of interest, including the most recent advances on the subject. Particular attention will be given to accessibility and exchange of competences between the disciplines. Specifically, the programme of this conference focuses on four general topics that are considered by the scientific committee as major axes of CNT research:

- 1) Synthesis/characterization of CNT
- 2) CNT chemistry
- 3) Biomedicine
- 4) Biological and environmental effects of CNT

Invited Speakers will include

Synthesis and Characterization of Nanotubes

- **M.H. Gass**
SuperSTEM, UK
Observation of nanotubes in the biological environment
- **Nicole Grobert**
Oxford U., UK
- **Esko Kauppinen**
TKK Helsinki, FI
Characterisation of carbon nanotubes with microscopic and optical methods
- **Wolfgang Maser**
CSIC, ES
Present and prospective applications of nanotubes
- **Martine Mayne-L'Hermite**
CEA, FR
Synthesis and growth of carbon nanotubes by chemical vapour deposition

Biomedicine

- **Kostas Kostarelos**
London U., UK
- **Amanda Schrand**
Dayton U., US
Medical applications of nanodiamonds

CNT Chemistry

- **Alberto Bianco**
CNRS Strasbourg, FR
Functionalization of carbon nanotubes for biomedical applications
- **Eric Doris**
CEA, FR
Chemical functionalization of carbon nanotubes
- **Diego Mantovani**
Laval U., CA
- **Wim Wenseleers**
Antwerp U., BE

Biological and Environmental Effects of CNT

- **Steve Klaine**
Clemson U., US
Ecotoxicity: introduction and methods; Ecotoxicity of nanotubes
- **Dominique Lison**
UCL Louvain, BE
Toxicity of carbon nanotubes
- **Jérôme Rose**
CNRS, FR
Life cycle of nanoparticles and ecotoxicity of nanoparticles
- **Lang Tran**
IOM, UK
- **Tian Xia**
UCLA, US
Toxicity of metallic nanoparticles

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