



# CERN Colloquium

SPEAKER: Prof. Marcel Van de Voorde (University of Technology Delft (NL))

TITLE: **Nanotechnology: “Revolutionary Developments in Future”**

DATE: Thu 24/04/2014 16:30

PLACE: Main Auditorium

## ABSTRACT

Introductory notes will be made on the definition, structures, phenomena, functions, synthesis, properties, and characterization at the nanoscale. Some indications on nanoMaterials research and markets in Europe will be given. The spectrum of structural and functional/smart nanomaterials: metallic and ceramic materials, coating, composites ....will be reviewed

Key challenges for nanomaterials design and engineering will be highlighted. The range of applications for nanotechnologies will be summarized: for nano-electronics (information and communication), health care, energy and transport, nuclear and accelerator technologies, security and safety etc

NanoMaterials and Technologies are key in future accelerator engineering: construction, operation and experimentation. Nanotechnology in next generation industries is a must. Nanometrology and standardisation (materials and equipment) are also an important items. Environmental and health implications of nanomaterials science and technology: Some guidance and safety rules in the manipulation with nanomaterials will be given together some words on impact, influence and benefits for society.

General conclusions and recommendations focused on accelerator engineering and experimental facilities will be made; including the challenges for education and training.

Organised by: Wolfgang Lerche /PH-TH.....\*\*Tea and coffee will be served at 16h00\*\*