Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related, Risks
iNTeg-Risk
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iNTeg-Risk: Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related Risks

Partner 36: Imperial College London

Prof. Aldo R. Boccaccini

Department of Materials
Imperial College London
South Kensington Campus
London SW7 2AZ, UK

Imperial College London

a.boccaccini@imperial.ac.uk

Brief Description

- Imperial College London
  - embodies and delivers world class scholarship, education and research in science, engineering and medicine, with particular regard to their application in industry, commerce and healthcare. Imperial College London has an international reputation for excellence, being ranked the ninth best university in the world by the Times Higher Education Supplement.
- Department of Materials
  - The oldest and largest department of its kind in the UK. Departmental research and teaching in materials science and engineering are exceptionally broad; both in terms of the materials studied - metals, ceramics, polymers, glasses, composites, semiconductors, nanomaterials and biomaterials, and in terms of the disciplines embraced
  - New materials, including nanomaterials, nanparticles and composites containing carbon nanotubes are being researched and developed. The Department comprises several Research Groups, with over 120 staff and about 250 undergraduate and postgraduate students.
  - The Department has world-class experimental facilities in areas of processing and characterisation of a wide range of materials.
  - Feature in Nature Materials: (http://www3.imperial.ac.uk/portal/pls/portallive/docs/1/18511698.PDF).

Imperial College London – Dept. of Materials

Main interests and tasks in the project

Analysis of the health/medical and occupational impacts of nanoparticles containing products, (e.g. composite materials), both laboratory materials and commercial products, with the aim to assess the dependencies and correlation of material composition/microstructure with potential toxicity hazards and their possible impacts. Specific interest / expertise include ceramic (e.g. TiO_2, SiO_2) nanoparticles and carbon nanotubes.

Expectation from the project/intended exploitation of project results

Development of protocols for nanoparticle physicochemical characterisation, including crystallinity, shape, size and surface condition of nanoparticles, and establishment of (quantitative) links with toxicity potential.

Exploitation in terms of scientific publications and reports of industrial relevance

Participant in: T1.3.1, T1.3.3, T3.1.4, T3.1.8, T5.3.2