ISO TC 229 – Nanotechnologies

Standards development

JWG* 1
Terminology and Nomenclature
(Convened by Canada)

ISO/TS 27687: Terminology and definitions for nanoparticles – Published August 2008

Terminologies under development:
- *Framework and core terms*
- *Carbon nanomaterials*
- *Nanostructured materials*
- *Nanoscale measurement and instrumentation*
- *The bio-nano interface.*

New areas under ballot:
- *Medical, health and personal care applications of nano;*
- *Nanomanufacturing*

Committee resource document:
- *Outline of Nanomaterials Classification ("Nano tree")*

**JWG – Joint Work Group (with IEC TC 113)*

Other structures:

Task Groups on:
- ***Nanotechnology and sustainability***
- ***Business Planning***
- ***Material specifications***

Study Groups on:
- ***Metrology***
- ***Measurement and characterization strategy***

JWG 2
Measurement and characterization
(Convened by Japan)

Characterization of single walled carbon nanotubes by:
- *Transmission Electron Microscopy;*
- *Scanning Electron Microscopy and Energy Dispersive X-ray Analysis;*
- *UV-Vis-NIR absorption spectroscopy;*
- *NIR-Photoluminescence (NIR-PL) Spectroscopy*
- *Thermo Gravimetric Analysis;*
- *Evolved Gas Analysis-Gas Chromatograph Mass Spectrometry (EGA-GCMS);*
- *Raman Spectroscopy;*

Characterization of Multi-Walled Carbon Nanotubes;
Meso-scopic shape factors of multiwalled carbon nanotubes;
Determination of Nanoparticle Content in Nanomaterials by Generation of Aerosols;
Joint developments with CEN (CEN lead) -Guides to:
- *nanoparticle measurement*
- *nano-tribology measurements*

WG 3
Health, Safety and Environment
(Convened by USA)

ISO/TR: Safe Practices in Occupational Settings Relevant to Nanotechnologies – completed

Endotoxin test on manomaterial samples for in vitro systems;
Standards for Generation and characterization of Metal Nanoparticles for inhalation toxicity testing;
Guidance on physico-chemical characterization of engineered nanoscale materials for toxicologic assessment.

New work under ballot:
Guide to safe handling and disposal of manufactured nanomaterials

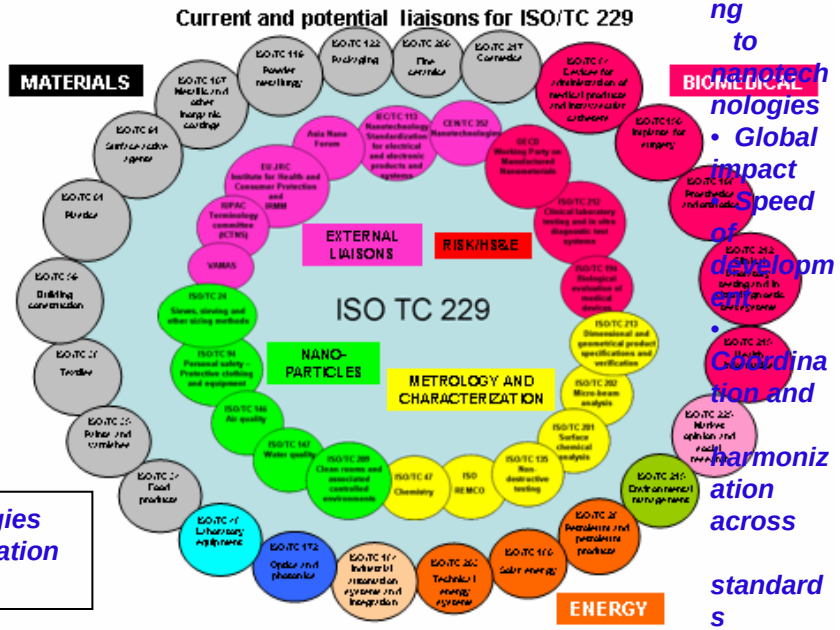
WG 4
Material Specification
(Convened by China)

Guide to specifying manufactured nanomaterils

Specifications for Titanium Dioxide and Calcium Carbonate.

TC 229 has:
30 "P" members
10 "O" members and
20 liaison members

Nanotechnologies Liaison Coordination Group

Challenges:
- ***Diversity of disciplines impacted by and contributing to nanotechnologies***
- ***Global impact***
- ***Speed of development***
- ***Coordination and harmonization across standards***

Current and potential liaisons for ISO/TC 229