ISO Technical Committee 229 “Nanotechnologies”
ISO Technical Committee 229, Nanotechnologies

- Established in June 2005
- Led by the British Standards Institute (BSI)
  - Chaired by Dr. Simon Holland, UK, GSK
- 34 participating member bodies and 11 observers
- Approximately 37 Liaison members, including external organizations such as OECD, VAMAS and IUPAC
- 36 ISO Documents published as of December 4, 2013
How Is ISO TC 229 Organized?

ISO/TC 229 Nanotechnologies

- **Secretariat:** United Kingdom
  - Chair: Dr. Simon Holland

ISO/TC 229 Chairman’s Advisory Group (CAG)

- 34 Participating Countries
  - 11 Observing Countries

Nanotechnology and Sustainability TG
(Chaired by the U.S.)

Consumer and Societal Dimensions TG
(Chaired by the U.S.)

Nano-bio SG
(Chaired by S. Korea)

JWG 1
Terminology and Nomenclature
Leadership:
Canada (SCC)

JWG 2
Measurement and Characterization
Leadership:
Japan (AIST)

WG 3
Health, Safety and the Environment
Leadership:
United States (ANSI)

WG 4
Materials Specifications
Leadership:
China (SAC)
ISO TC 229 Joint Working Group 1
Terminology and Nomenclature

- Working Group Convenorship assigned to Canada (Dr. Clive Willis)
- 80004 Vocabulary Series
  - Developed by collaboration between ISO/TC 229 and IEC/TC 113
    - Core terms
      - Nanotechnology, nanoscience, nanomaterial
    - Nano-objects
      - Nanoscale, nanoparticle, nanofibre
    - Carbon nano-objects
    - Nano/Bio interface
      - JWG 1 currently revising the Core Terms and Nano-objects documents
      - Work item recently added to develop vocabulary on Graphene and other 2d Materials
ISO TC 229 Joint Working Group 2
Measurement and Characterization

- Working Group Convenorship assigned to Japan (Dr. Toshi Fujimoto)
- Published: 11 ISO characterization protocols
  - Carbon Nanotubes; both single and multiwall
  - Generic dimensional metrology
- Strongly support other working groups, esp. WG3 and WG4
- New Areas of development:
  - Graphene
  - Nanocellulose
- Study Groups
  - Tiered approach to identification of nanomaterials
  - TEM to assess particle size distribution
ISO TC 229 WG 3  
Health, Safety and Environment

- Working Group Convenorship assigned to United States (Dr. Laurie Locascio, NIST)
- Priority areas:
  - Establishing the foundations for responsible development of nanotechnology, including:
    - Controlling occupational exposures
    - Determining relative toxicity/hazard potential
    - Measuring nanomaterial release from products
ISO TC 229 WG 4
Materials Specifications

- Working Group Convenorship assigned to China (Dr. Guanglu Ge)

- Approach:
  - By consensus, Identify characteristics required for specification of nanomaterials in intermediate stages of the supply chain
  - Use existing standards in terminology, metrology and HSE.
ISO/TC 229 Task Groups and Study Groups

- Nanotechnology and Sustainability
  - Mr. Chris Bell, United States

- Consumer and Societal Dimensions of Nanotechnologies
  - Dr. Shaun Clancy, United States / Dr. Francoise Roure, France, Co-Chair

- Nanotechnology and Biological Systems
  - Dr. Tae G. Lee, South Korea
  - Originally under WG 2, but has participation from all ISO/TC 229 Working Groups