

# On Advanced Materials Standards development

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# Speaker



## Expert duties

- Chair of ISO TC229 (Nanotechnologies)
- Expert on ISO TC24/SC4 (Particle Characterisation)
- Expert on ISO TC281 (Fine Bubble Technology)
- Expert on CEN TC352 (Nanotechnologies)

## Positions of responsibility

- Director and Founder of BREC Solutions limited and Global BREC Expert Network
- Board member of Nanotechnology World Network

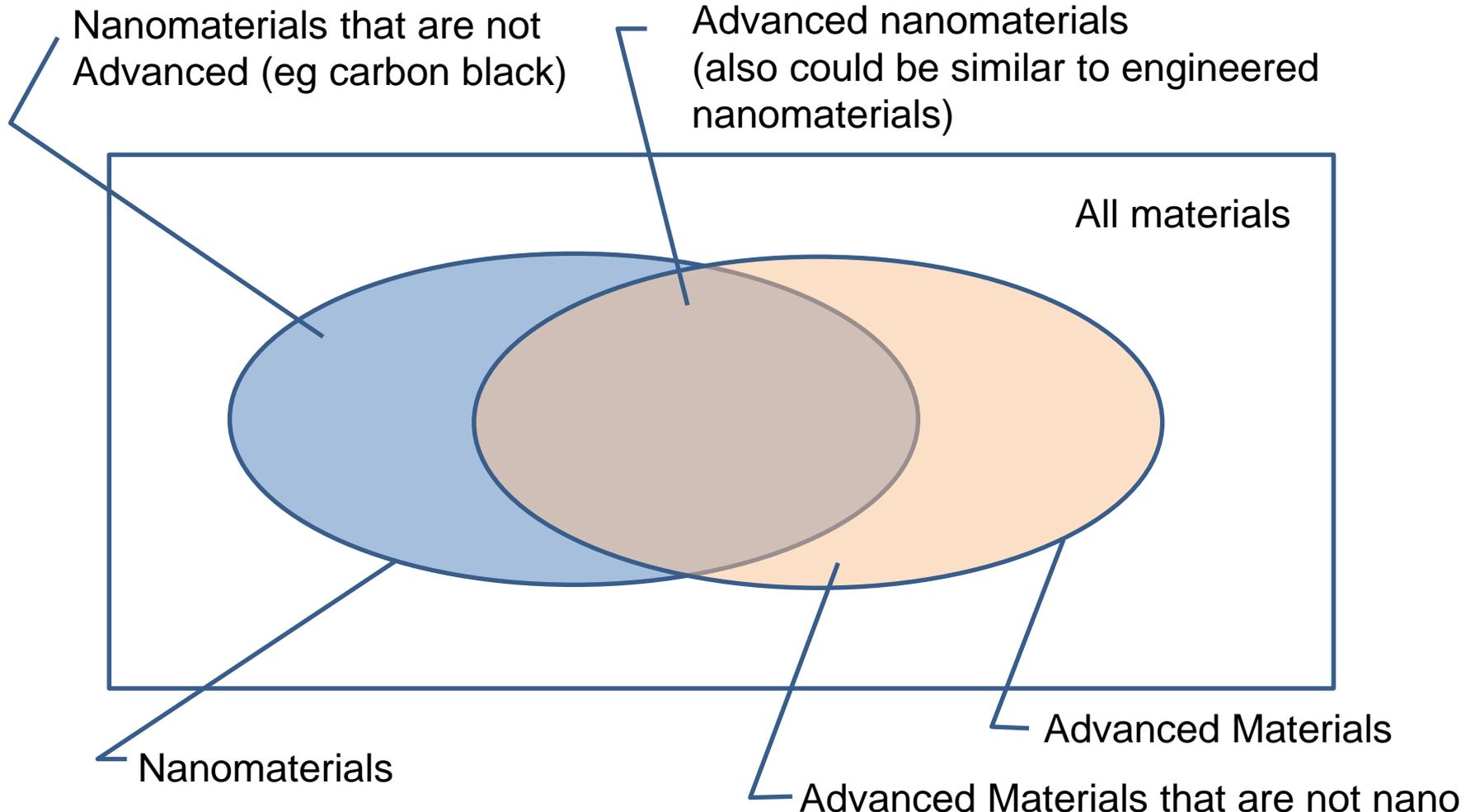
# Disclaimer

Some views and data presented during this talk are my own and do not represent an official ISO position.

# Overview

- What are they?
- How could we define them?
- Consensus and standards
- Guideline repurposing
- Sustainability
- Safety Concerns
- Political interest
- Restrictions

# What we may understand by Advanced Materials





# What are the amounts?

Material	Annual Use
All Advanced Materials	Approx 500 Bn USD
Advanced Alloys	~150 Bn USD
Advanced Ceramics	~12 Bn USD
Advanced Fibres	~24 Bn USD
Advanced Polymers	~20 Bn USD
Nanomaterials	~16 Bn USD

# What is a standard

- Here we really mean a “documentary standard”
- Standards represent current the best practice
- Standards are made by consensus of all stakeholders (countries and organisations)
- Standards allow compatibility and comparison of products, materials and services
- Safety standards for products facilitate consumer acceptance
- While it may seem costly to comply at first, businesses save a lot of time and money in the long run



# Guideline repurposing

- Depending on our understanding of AdMat some of existing
  - Expert groups
  - Committees
  - Guidelines
  - Standards

Could be re-used from Nano to AdMat with little adjustment.

# Sustainability

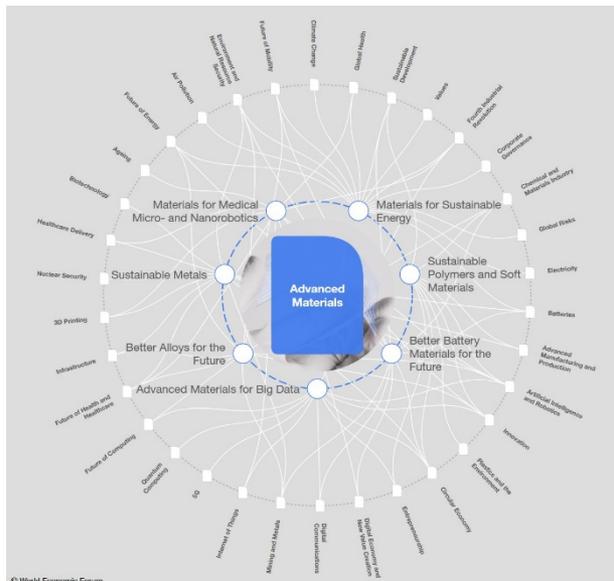
- There is a great interest in Sustainability of Nanomaterials.
  - A bit too early to make a conclusion
  - A bit too broad an area to draw the same conclusions
- For AdMat we will have bigger problem drawing conclusions due to breadth of the area and processes involved.

# Safety Concerns

- History repeats itself with AdMat
- Safety concerns are attached to the term and definition rather than real life safety data.
- What about Safer-by-Design?
- Are we asking “Nanotoxicologists” to become “AdMatotoxicologists” ?

# Political Interest

- WEF identified AdMat in their Global Reset map
- Various national funding initiatives not for “nano” but for “AdMat”
- EC shifted interest from “Nanomaterials” to “AdMat”



# Restrictions

- By using a term like “Advanced Materials” we run into a few restrictions:
  - Country ban on exports
  - Strategic consideration for funding and funding allocation
  - Dual use considerations

# Conclusions

- If we are to move forward we need a certain consensus about
  - What they are
  - What they do
  - How they do it
  - What we need to use them safely
- There are also adverse effects of using a “catch all” term like AdMat