

Materials and Nanotechnologies for Energy Applications Cluster

1st meeting planned for Nov 23,

Postponed to undefined time
because of terrorism warning

There was a Questionnaire from the EU concerning the
***materials and nanotechnologies
for energy applications cluster***

- **Topics** of the questionnaire
 - Identifying R&D Priorities:
 - What are the latest materials and nanotechnology developments that could significantly improve products in your application area?
 - What materials and nanotechnology innovations are most needed in the energy application that you are targeting?
 - Are there common challenges and issues that should be addressed by future research and development?
 - Funding
 - Sharing knowledge
 - Exploitation

Ad R & D Priorities - Answers

- Graphene – nanoparticles and microplatelets, nano-fibers (carbon, but also other materials; conductive and non-conductive); group 14 based nanoparticles (Si, Ge, Sn), organic-inorganic composite materials, Cellulose-nano-crystals and cellulose nano-fibers; thin film technologies – ordered and disordered, spraying techniques, Multiphase-nanoparticles (e.g. core-shell); Block-copolymers. Solid nano-electrolytes
- Molecular design, design of precursors, design of nano-phases – mixed crystal phases, composites and multiphase-systems
- Ad funding:
- Ad Sharing Knowledge

A Plan to support a new COST-Action ?

- Concerning a COST-Action
 - Materials/Methods/Systems for
 - Energy harvesting
 - Energy storage
 - Energy transformation
 - Energy transport
- Related Fields:
 - Materials Sciences (Development on molecular level, Characterization, small scale → large scale, chemical/thermal/mechanical/electro-physical properties, etc.)
 - Electrical Engineering (Grid systems,)
 - Chemistry / Physics (new materials,)
 - Mechanical Engineering
 - Alternative Energies (winds, sun, tides, water in general)
 - (??) Biotechnological systems (end of pipe technologies – CO₂ capture & sequestration, ...)
- Should we include „bioenergies“ ?
- Needed: Partners from all fields (universities, research institutions, industry, energy agencies, etc.)
- Collaboration with e.g. EUA

- If „Yes“ - who does the work ?

(like driving forward the proposal, writing, workshops,
etc.)