

Nanomaterials for Green Technology

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„Green technology“ is a buzzword nowadays. But similar to many buzzwords in current science, it has no straightforward, tight scientific definition. Various professional fields try to benefit from the positive connotation of „green“.

This presentation discusses potential definitions for the term “green” when used in nanotechnological materials (such as nanoparticles, nanorods, nanotubes, quantum dots, nanophotocatalysts, nanometals and further nanomaterials), structures (e.g., nanoporous structures, membranes) and devices (such as solar cells and sensors) and the benefits, pitfalls and challenges of nanoscience and nanotechnology for “green technology”.

The larger frame of reference for this presentation is that with our current way of doing engineering we brought the Earth on the verge of the 6th mass destruction of species and close to a tipping point that might make conditions to live way harsher than we experience now. Nanoscience and nanotechnology are fields with high potential for the development of completely new ways of doing engineering. Inspired by the way that living nature produces, uses and disposes of materials, structures, devices and processes can give valuable input to the development of a new way of doing engineering, a revolutionary way of applying nanoscience and nanotechnology, for the advancement of humanity and our environment.

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