

Bridging the materials gap through radical Innovations

Lars Montelius
DIRECTOR GENERAL
Prof, Dr, Dr hc

INL - International Iberian Nanotechnology Laboratory
Avda. Mestre José Veiga s/n
4715-330 Braga, Portugal
T:+351 253 140 112
M:+351 915 176 967
lars.montelius@inl.int
www.inl.int

Nanotechnology is a Key Enabling Technology with promises for making solid contributions to the grand challenges of today, such as sufficient sustainable energy supply, access to clean water, care of the elderly population and making cities ready for the globalization.

At INL, the International Iberian Nanotechnology Laboratory, we are implementing a full ecosystem for nanotechnology innovation and science. I will discuss about our offers and describe the possibilities that exist for collaboration with university and institutions and companies.

Then I will discuss about how nanotechnology could be of importance to bring added value to products and services. I will also review some areas of nanotechnology that recently has been deployed giving rise to radical innovation and business development.

In particular, I will address the accelerated development of LEDs and the consequences on lighting. Lighting is increasingly becoming an integral part of the Digital Age. The lighting of the future will be more attractive, individually tailored and integrated into Smart Buildings and Smart Cities. Even today, you can access the Internet via LED luminaries.

By creating working and living environments with situation-specific forms and levels of sensory stimulation, we can improve the conditions for productivity, learning, health, comfort and well-being. Ever more people talk about Smart Lighting, i.e. a lighting that is adaptive (on demand), interactive (by control) and dynamic (color & intensity). The main basis for Smart Lighting is that the LED and ICT of today creates a more or less unlimited flexibility to deliver a dynamic user adapted light - the right light, at the right place, at the right time, for each and everyone.

In the end I will discuss about the need for articulation in science and innovation actions.