

***GE2309***

***NANO*** – The Interdisciplinary Science  
(*“The next big thing is really small”*)

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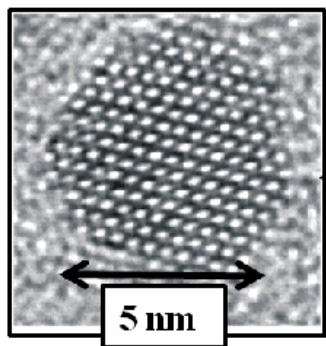


**“Nanotechnology is an enabling technology that will change the nature of almost every human-made object in the next century.”**

**- USA National Science and Technology Council**

# “More than just a size”

What is so special about *NANO* ?



× 60 000 000



× 60 000 000



Nanocrystal

Soccer ball

Earth



- Gold -



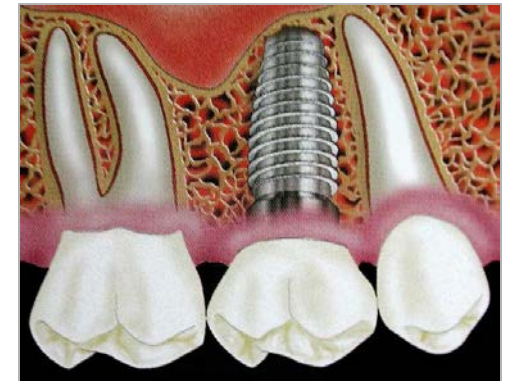
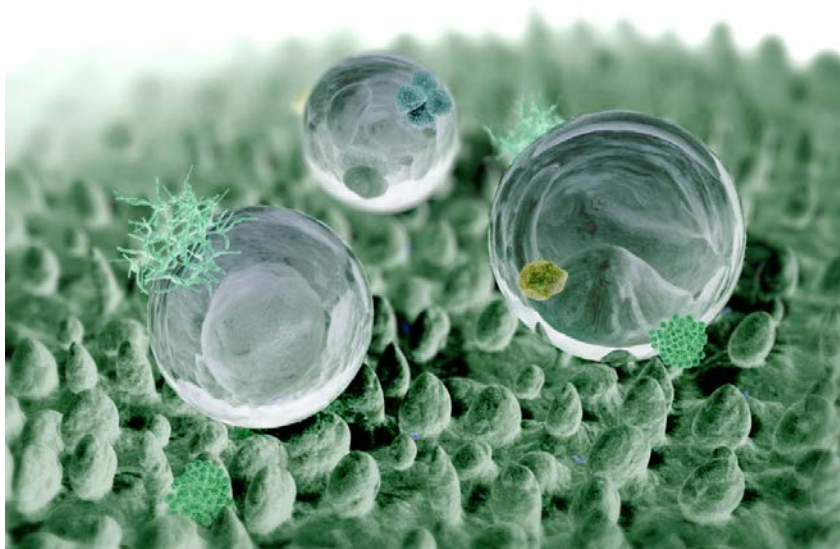
- Gold -



- Gold -

# *“NANO in our daily life”*

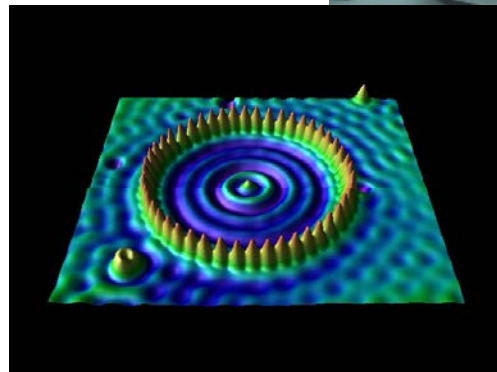
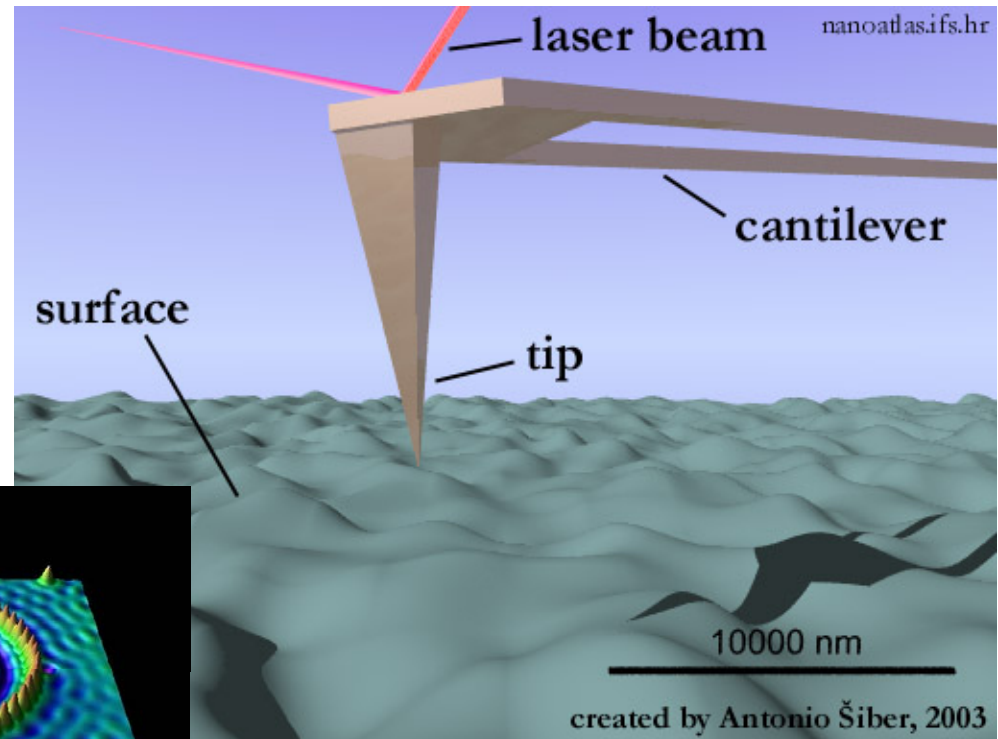
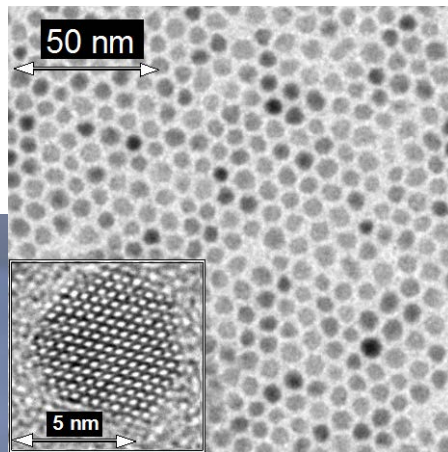
Examples of real-world applications and products utilizing nanomaterials





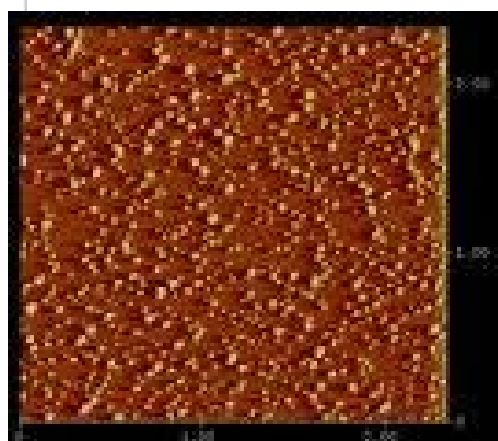
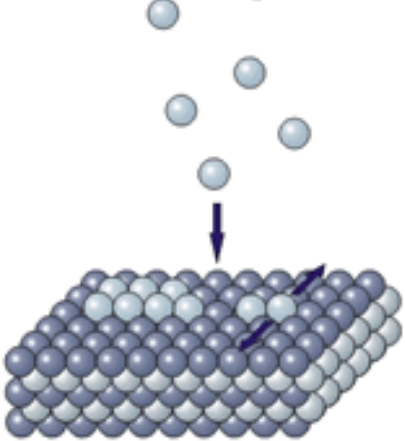
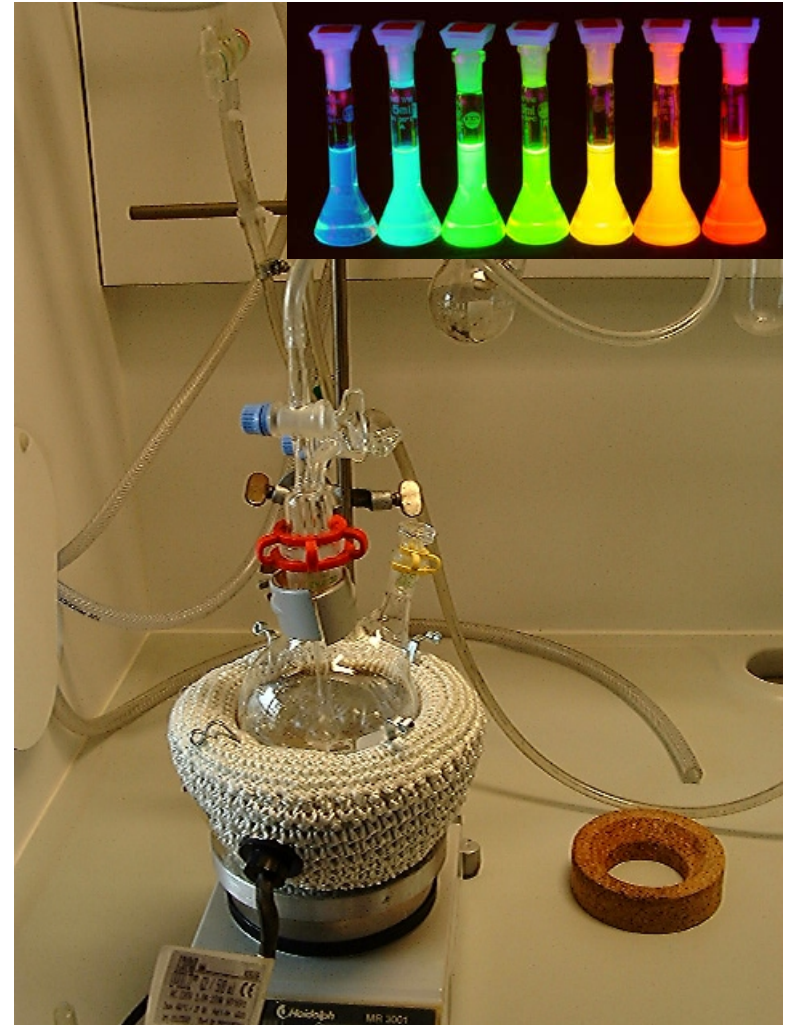
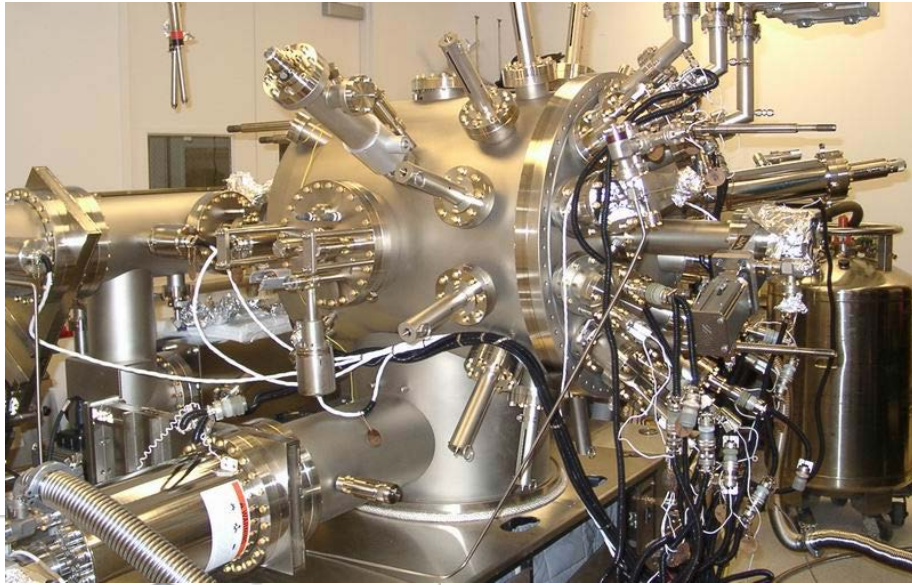
# *“How can we see NANO?”*

Operating principles and current status of modern methods and techniques enabling characterization of materials at the nanoscale



# *“How can we make NANO?”*

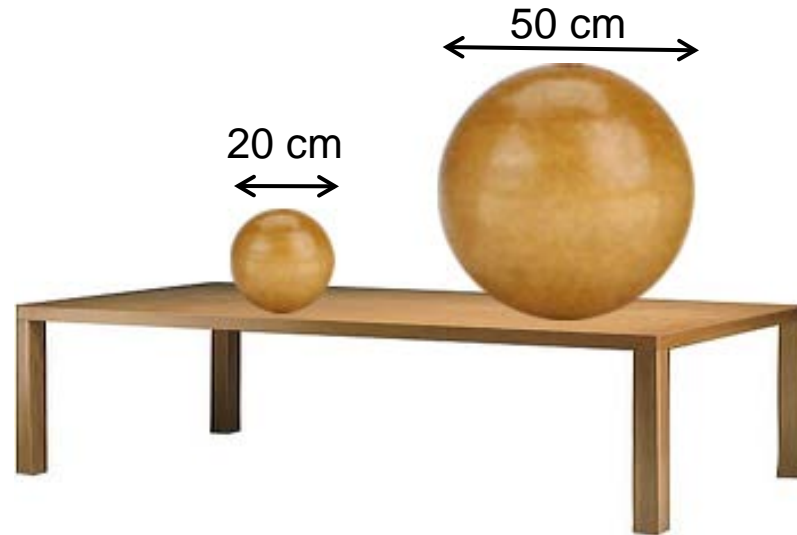
Introduction to modern approaches and techniques used by scientists to produce nanoscale materials



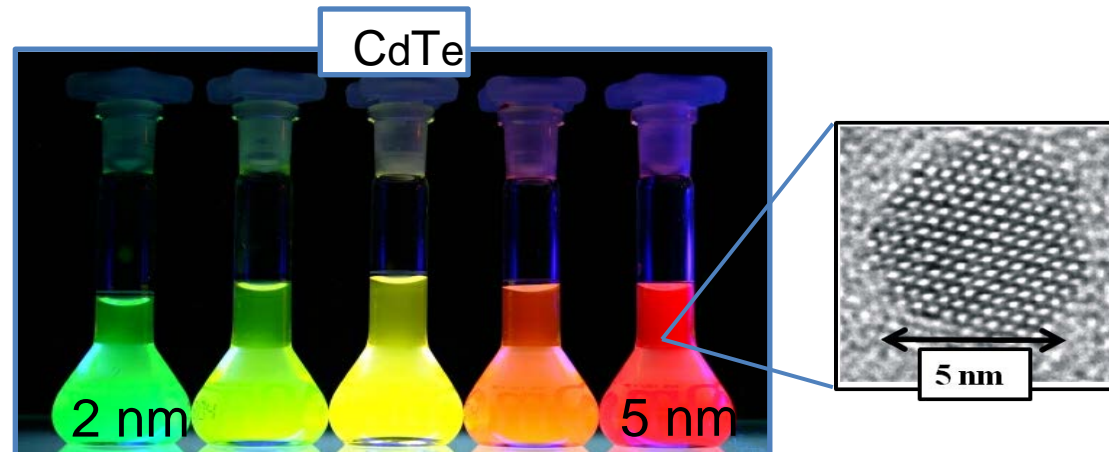
# *“Small is different”*

Overview of useful properties of nanomaterials different from the large objects with which we are all familiar

Macro-World



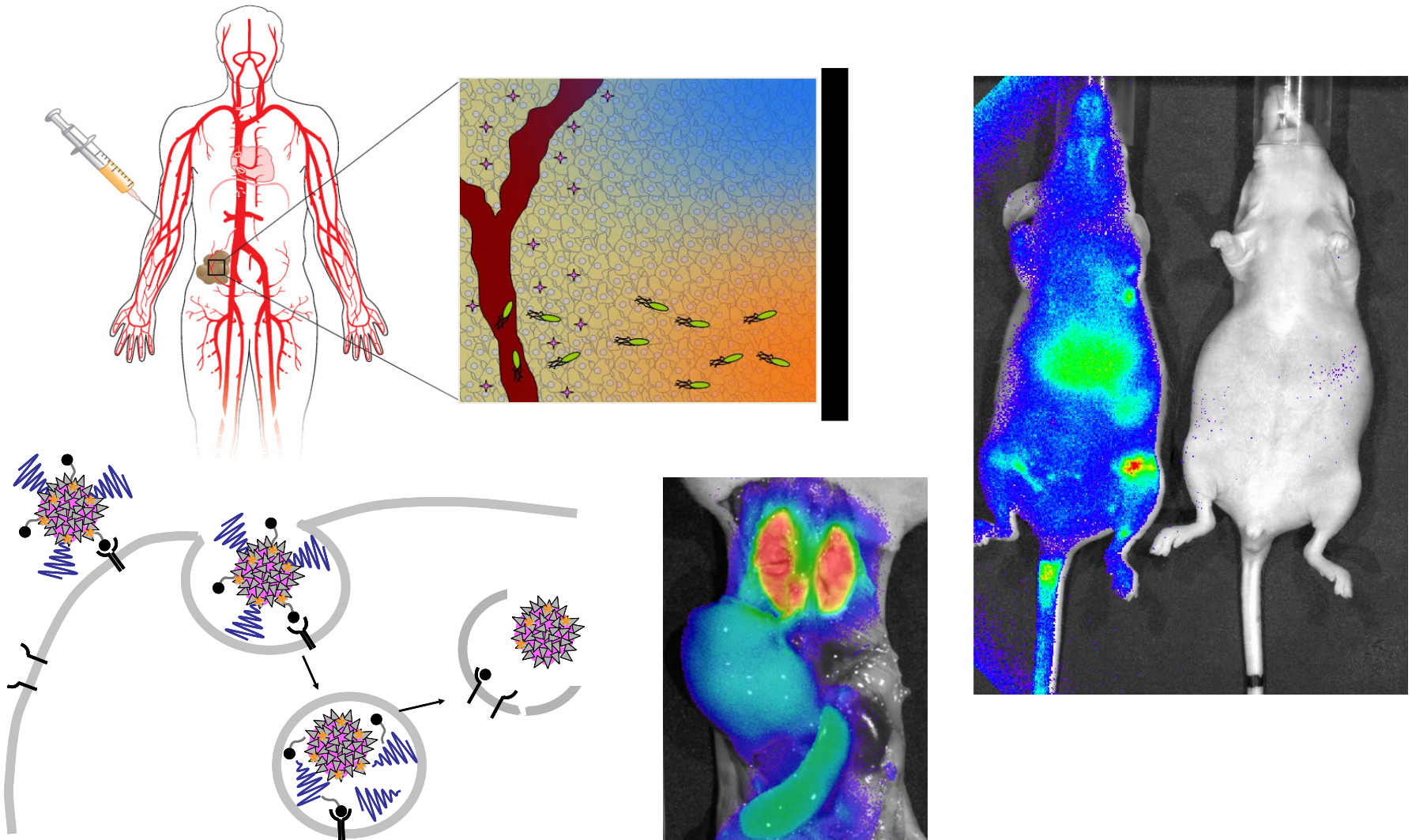
Nano-World





# *“NANO for health”*

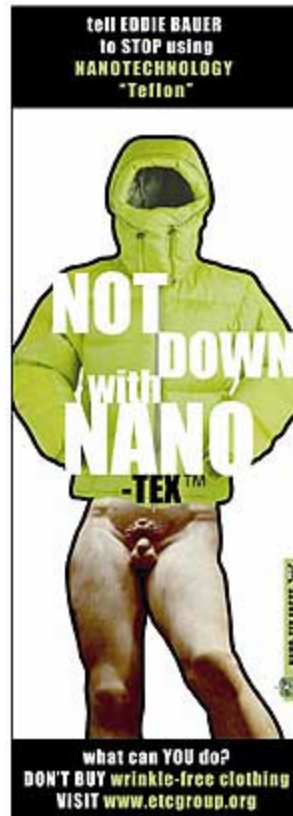
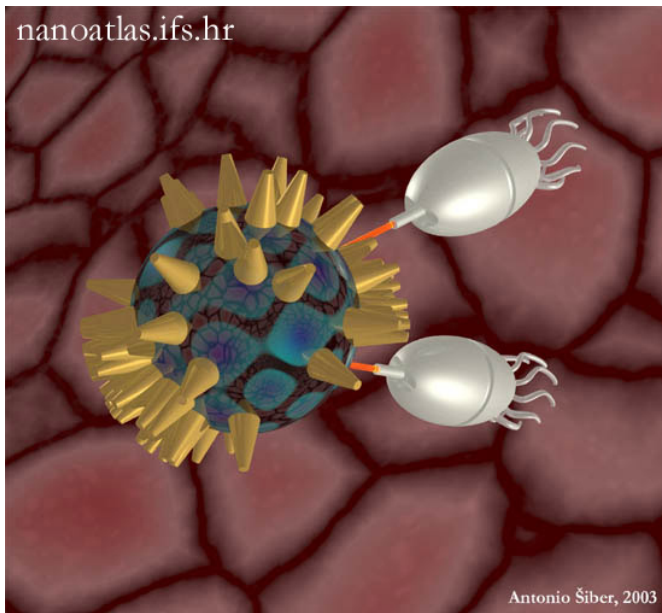
Overview of benefits of nanomaterials and nanoconcepts for biology and medicine





*“Nanotechnology fabricates self-replicating nanorobots which will overrun the earth...”*

Public perception of NANO, ethical issues and potential risks



# “What comes next?”

Future challenges, future developments, future successful investments

