

Nanotech for Investors

S U M M I T

Impact of Nanotechnology on Global Investment

September 11, 2006
Zurich, Switzerland

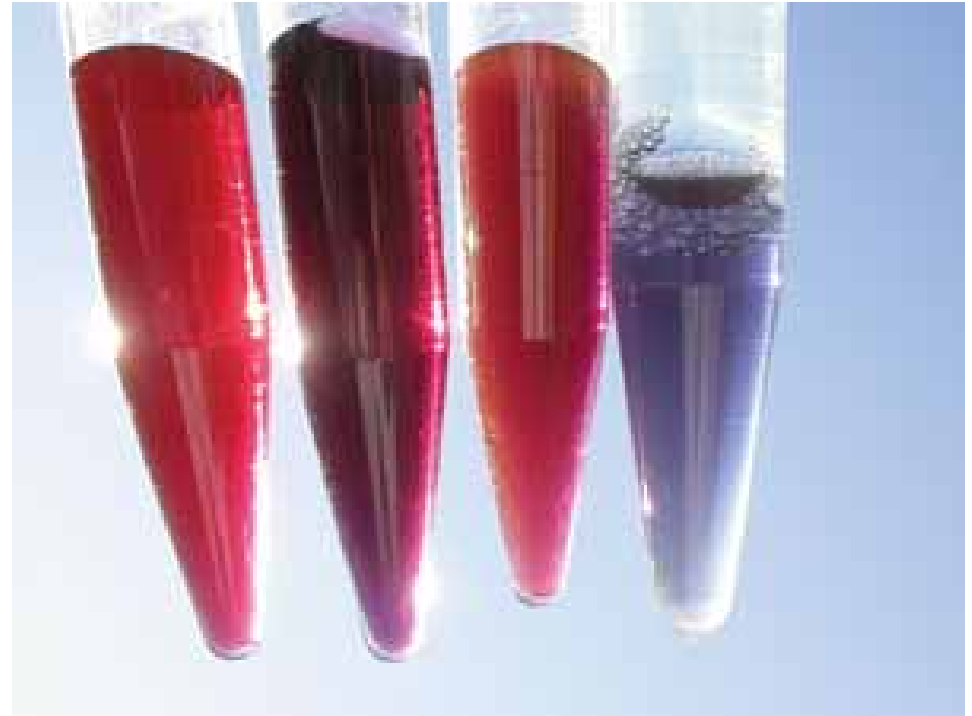


Nanotechnology For Investors Welcome and Introduction

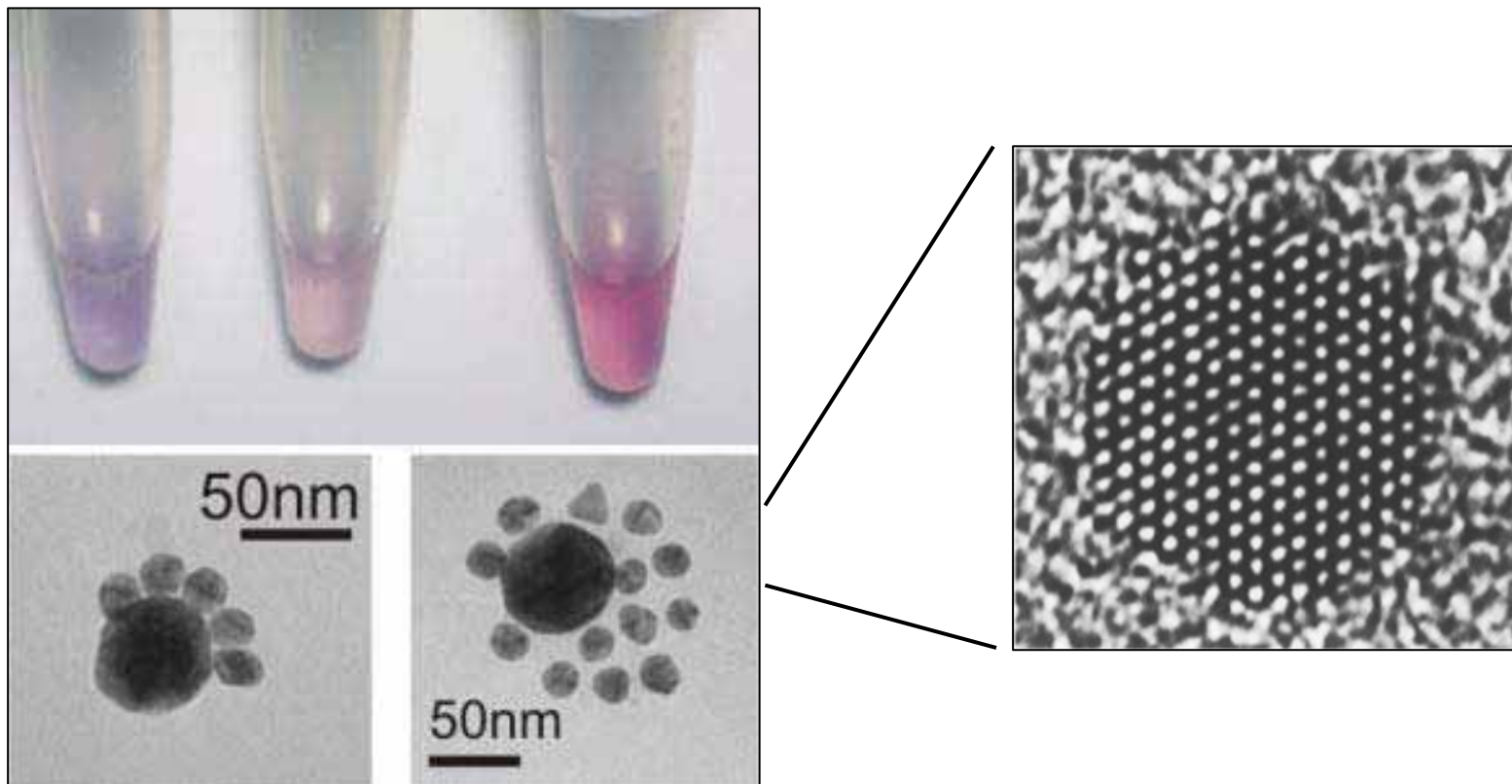
Aymeric Sallin - **NanoDimension** AG

Zurich, September 11th 2006

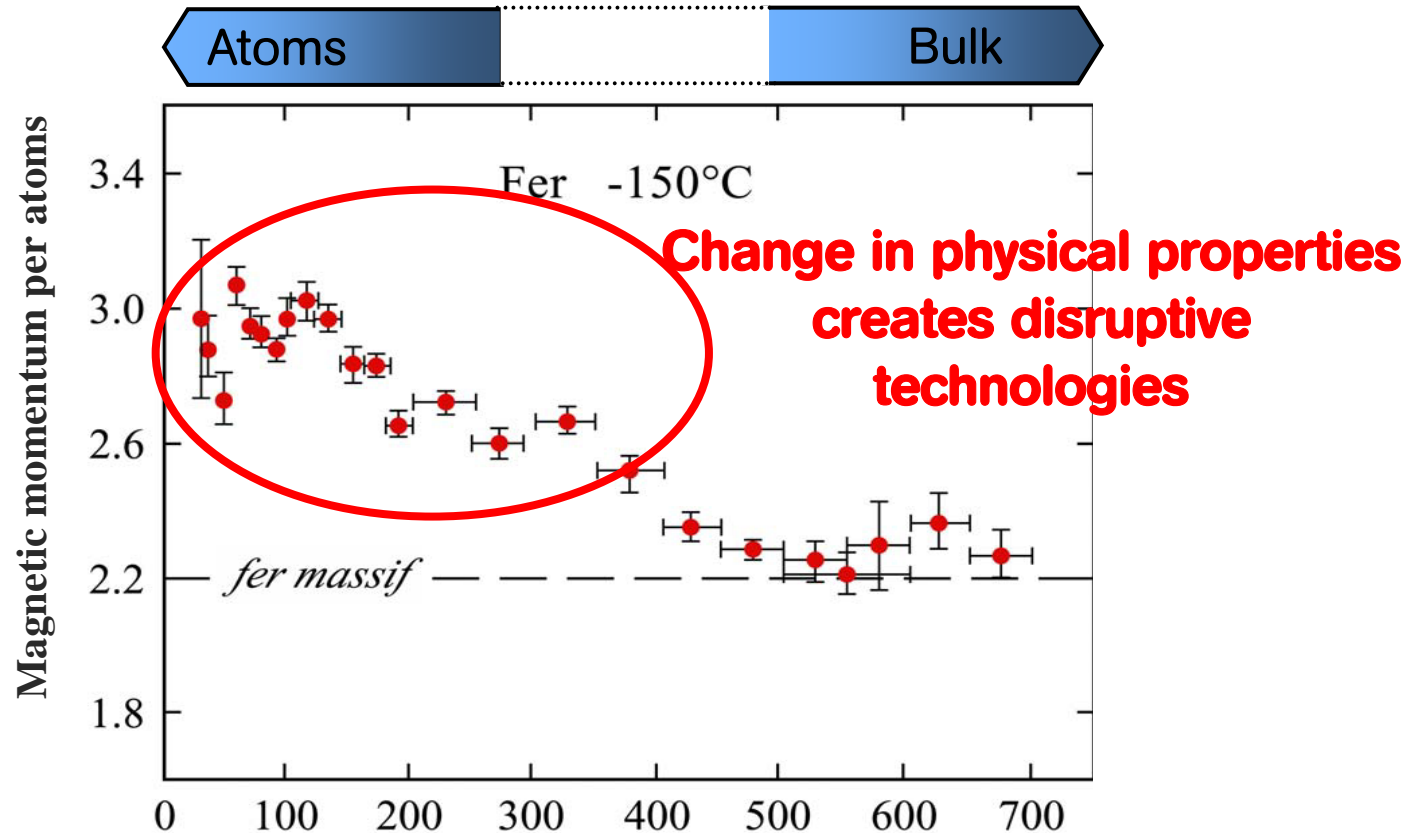
Size matters! Physical properties are size dependent - Example: Colors



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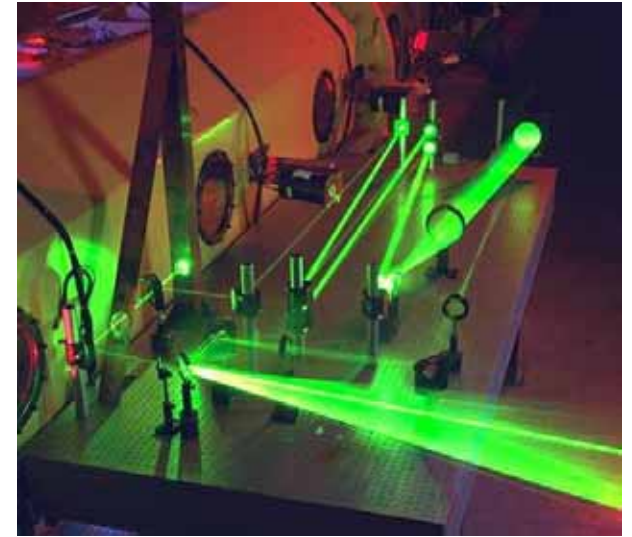
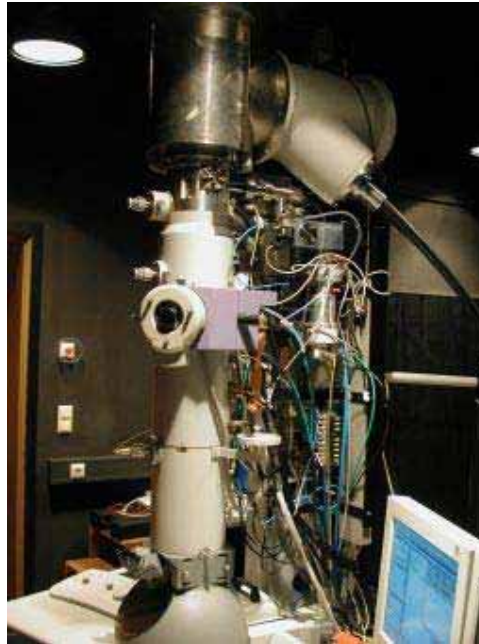
Size matters! Physical properties are size dependent - Example: Magnetic Properties



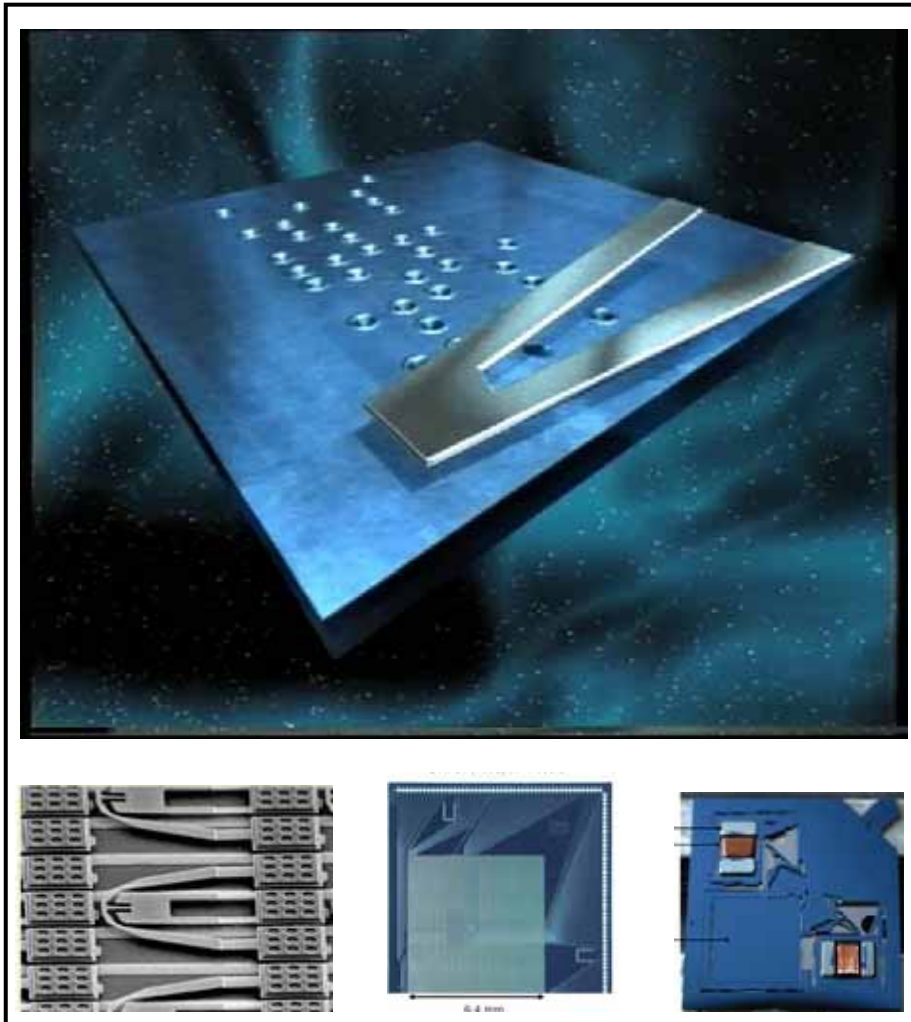
Nanotechnology in the past: Chartre Cathedral stained-glass window of the 12th century



Nanotechnology today: different enablers to reach and manipulate atoms and molecules



Nanotechnology for IT/Electronics: Data storage - “Millipede”



Benefits

- **High density** memory: 1'000 [Gigabits/inch²] (\sim 25 DVDs)
- **Non volatile** memory

Relevant Market

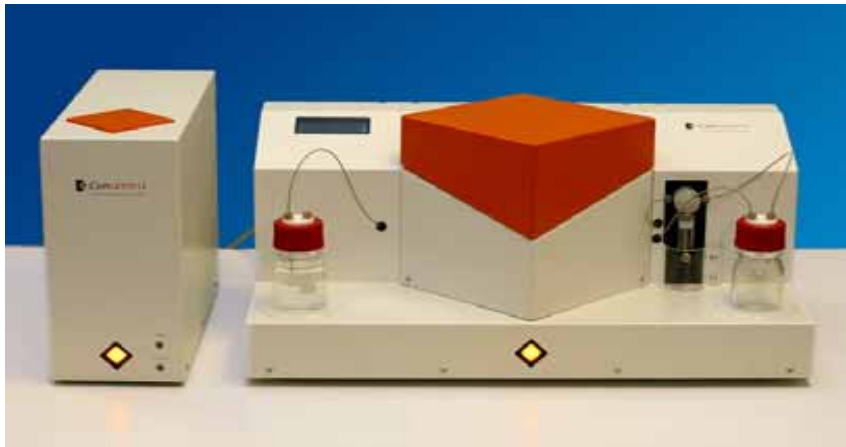
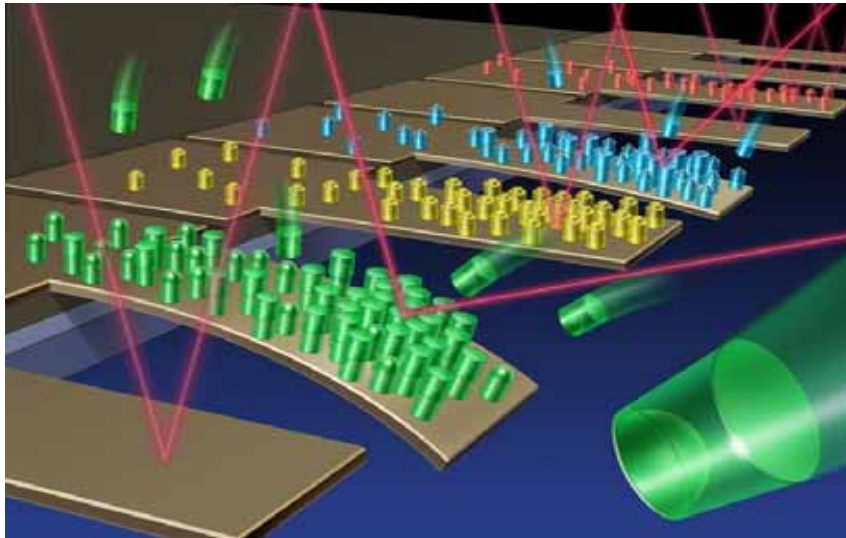
- USD 3-5 B
- Growth: 8% p.a.

Commercialization Schedule

- Prototypes available
- Market availability within 5 years

Courtesy of IBM

Nanotechnology for Life Sciences: Biosensors



Benefits

- Direct method with **superior detection sensitivity**, not requiring any amplification systems or agents
- Significantly **lower costs**
- **Ease of use**

Relevant Market

- Size (in 2005): USD 2 B
- Growth: 15-20% p.a

Commercialization Schedule

- Currently available

Nanotechnology for Life Sciences: Diagnostics



Benefits

- Significantly **higher sensitivity** (~100'000 more sensitive)
- Significantly **lower costs** (20-50 times cheaper)

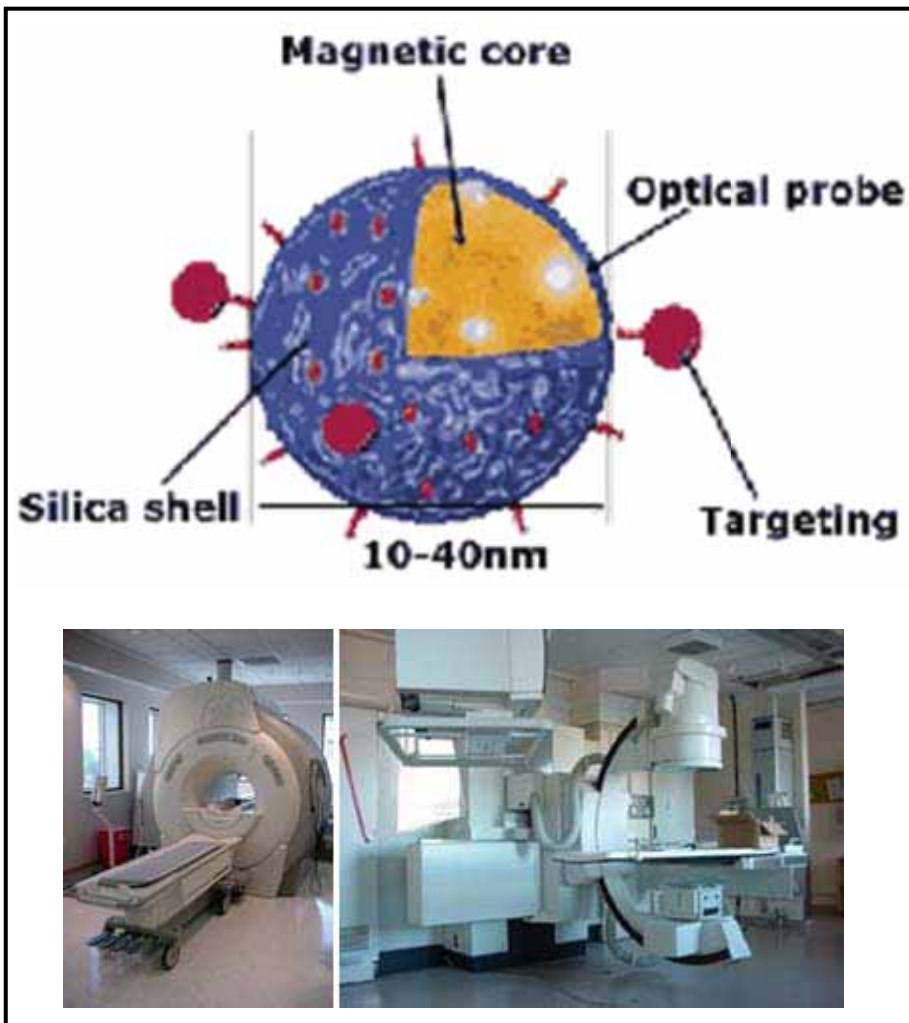
Relevant Market

- Size (2005): USD 2 B
- Growth: 15-20% p.a.

Commercialization Schedule

- Prototypes available
- Market availability within 18 months

Nanotechnology for Life Sciences: Cancer treatment



Benefits

- **Physical effect** avoiding bio/chemical resistance
- **In situ control of therapeutic activity**
- **On/off therapy**
- **No chronic administration**

Relevant Market

- Size (in 2005): USD 11 bio*
- Growth: 21% p.a.

Commercialization Schedule

- Pre-clinical testing
- Market availability within 3-5 years

Nanotechnology for Energy: Solar cells



Benefits

- Clean and renewable source of energy
- Significantly lower cost/watt
(→ 1 USD/Watt)

Relevant Market

- Size (in 2010) USD 11 B
- Growth: 14% p.a.

Commercialization Schedule

- Low efficiency: currently available
- High efficiency: 3-5 years

Nanotechnology for Materials: Catalysts



Benefits

- Lower costs due to less platinum
- Better durability & performance
- Increased recyclability

Relevant Market

- USD 7B
- Growth: 12% p.a.

Commercialization Schedule

- Currently available