

APRIL 17, 1999



**NANOTECHNOLOGY  
AND INDUSTRIAL DEVELOPMENT**

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**Fondazione EL.B.A.**

**MONTEDISON**

UNDER THE AEGIS OF THE MUNICIPALITY OF MILAN

# NANOTECHNOLOGY AND INDUSTRIAL DEVELOPMENT

Nanotechnology is related to the development of technological capabilities to manipulate matter at the atomic scale, in order to assemble, under controlled conditions, complex structures of dimensions within the range of 100 nm.

It is an interdisciplinary field, where physics, chemistry, biology and engineering play a growing role and contribute actively to the production of nanoscale objects, ranging from molecular assemblies to molecular devices and nano architectures.

The materials utilized are both organic, like proteins, DNA, synthetic and natural polymers, organometallic compounds, and inorganic, like silicon, metals and ceramics. The possibility of combining them to create new materials or complex nano-objects is very attractive. The potential areas of application include electronics, nonlinear optics, photonics, information processing and storage, physico-chemical sensing, robotics, pharmacology and medicine.

In the field of nanotechnology, the most significant opportunities will be produced by technological efforts focused on establishing the most effective methodologies, and developing the best processes for the production of nano-objects and the manipulation of new materials.

## 9.30 WELCOME

Gabriele Albertini  
*Mayor of Milan*  
Lucio Bianco  
*President of Consiglio Nazionale Ricerche*

## 9.50 INTRODUCTORY REMARKS

Enrico Bondi  
*Chief Executive Officer of Montedison*

## 10.10 KEYNOTE ADDRESSES ON NANOTECHNOLOGY

Claudio Nicolini  
*President of Fondazione ELBA*  
Heinrich Rohrer  
*Nobel Prize Winner, IBM (Switzerland)*  
Federico Capasso  
*Lucent Technologies (USA)*

## 11.20 COFFEE BREAK

## 11.30 THE INDUSTRIAL OUTLOOK

Kostantin Skryabin  
*Russian Biotechnology Business (Russia)*  
Enrico Villa  
*ST Microelectronics*  
Neil Jacobstein  
*Teknowledge and IMM (USA)*

## 12.00 QUESTION AND ANSWER PERIOD

with the participation of  
Enrico Bernasconi (*Antibioticos*)  
Gianni Fabri (*Ministry of University and Scientific and Technological Research*)  
Luigi Rossi Bernardi (*University of Milan*)  
Claudio Serracane (*Edison*)  
Orazio Svelto (*Consiglio Nazionale Ricerche*)  
Riccardo Tubino (*University of Milan*)  
Mario Visca (*Ausimont*)  
Giuseppe Zerbi (*Polytechnic of Milan*)

## 13.00 CLOSING REMARKS

Ortensio Zecchino  
*Italian Minister of University and Scientific and Technological Research*  
Mikhail Kirpichnikov  
*Russian Minister of Science and Technology*