

NANO:

*The Essentials*

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*Understanding Nanoscience and Nanotechnology*

*Chapter - 1*

**INTRODUCTION**



Figure 1: Faraday's gold preserved in Royal Institution.

From the site, <http://www.rigb.org/rimain/heritage/faradaypage.jsp>



Figure 2. The Lycurgus Cup made from glass appears red in transmitted light and green in reflected light. The glass contains 70 nm particles as seen in the transmission electron micrograph. The cup itself is dated to 4th century AD, but the metallic holder is a later addition. From the site, <http://www.thebritishmuseum.ac.uk>.

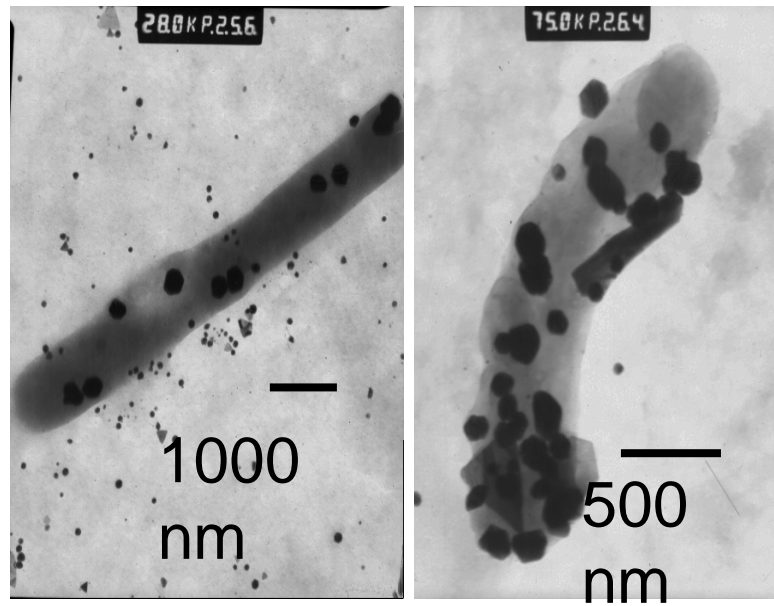


Figure 3. Gold nanoparticles within the *Lactobacillus* contour. This transmission electron microscopic image shows large particles of more than 200 nm diameter. However, smaller particles are also made (from the Author's work).

<b>Name</b>	<b>Date</b>	<b>Transistors</b>	<b>Microns</b>	<b>Clock speed</b>
8080	1974	6,000	6	2 MHz
8088	1979	29,000	3	5 MHz
80286	1982	134,000	1.5	6 MHz
80386	1985	275,000	1.5	16 MHz
80486	1989	1,200,000	1	25 MHz
Pentium	1993	3,100,000	0.8	60 MHz
Pentium II	1997	7,500,000	0.35	233 MHz
Pentium III	1999	9,500,000	0.25	450 MHz
Pentium 4	2000	42,000,000	0.18	1.5 GHz
Pentium 4 "Prescott"	2004	125,000,000	0.09	3.6 GHz