

How is the Recent Nanotech Funding in Asia Pacific Countries?

The Asia Pacific (AP) region is advancing to becoming one of the most ambitious and dynamic nanotechnology places in the world. There have been significant changes in the Science and Technology policy making in AP countries since the announcement of the US National Nanotechnology Initiative (NNI) in Jan. 2000. Governments in the AP region started to plan and have placed Nanotechnology as one of the priority areas in S & T planning. The budget for nanoscience and technology R & D has been increased substantially and more strategically allocated. The total public spending in the AP region exceeds US\$1b for 2002 and more to be spent for the coming years. The appreciation of the importance of Nanotechnology R & D has been growing in various industries and businesses in the region.

Japan, one of the most technologically advanced countries, has been investing in nanoscience and technology since the mid 80s with various national programs (typically with a period of 5-10 year). Its government funding for nanotechnology per capita has been the highest in the AP region and the world. Its funding for 2002 has been increased about 20-30% from 2001. Countries such as P.R. China, South Korea and Taiwan have increased drastically their Nanotechnology spendings since 2001.

China has planned to spend 2 to 2.5 billion RMB (USD250-300 Million) within the current five-year plan (2001-2005). More aggressive initiatives are about to launch. The National Nanotech R & D Center is currently being built near the Beijing Univ., TsingHua Univ., and The Chinese Academia of Sciences (CAS) and is expected to finish in 2 years. The Nanotech Industry Base is currently being built in Tianjin (about 100km east of Beijing) that is expected to be fully operational by mid 2003.

South Korea has committed 2.391 Trillion won (USD 2 Billion) over 10-year period (2001-2010). The increase in the government spending in nanotechnology for 2002 compared with 2000 is about 400%. One of the goals of its National Nanotechnology Initiative is to make Korea No.1 in the world in certain competitive areas and to develop niche market for industry growth. Korea has clear focus on a number of `Core Technologies` such as Tera-level Integration of Electronic Devices. The `Year 2002 Plan for Implementing Nanotechnology Development` was launched and together with two new Frontier Research Programs, `Development of Nanostructured Materials Technologies`, and `Development of Nanoscale Mechatronics & Manufacturing Technologies`. Each of the programs is funded with 100 million for the next 10 years. In addition to the Frontier Research Programs for Nanotechnology, Korean government has launched `Core`, `Basic`, and `Fundamental` nanotechnology research programs whose total research budget is about 20 million dollars every year for the next 6 to 9 years. As for `Establishment of R&D Infrastructure`, a nanofabrication center was established this year with the main purpose of nanoscale device fabrication. The `Nanotechnology Development Promotion Act` is expected to pass very soon by the congress. The aim of this Act is to prepare a solid research basis for nanotechnology and for encouraging industrialization of matured nanotechnology. Korean government also allocated USD380million (19% of the total nanotech spending) on National Nano Industrialization Program including Industrial R & D Fund and Venture Capital Fund.

Taiwan`s National Initiative on Nanoscience & Technology is a 5-year plan with a total spending

of USD600 Million from 2002 to 2007. Other countries in AP region such as Australia, Hong Kong, Singapore and Malaysia have launched their nanotechnology national programs/initiatives although detailed funding information is not yet available., Some focused programs, such as the Australian Institute of Bio-Engineering and Nanotechnology was launched early this year with government investment of about USD30Million.

Countries such as Thailand, India, and Vietnam have also identified Nanoscience and technology as an important area in their S & T planning and are in the process of preparing for better coordinated and strategic national programs.

In the business sector, the two top trading houses in Japan, Mitsubishi Corporation and Mitsui & Co have established new nanotech business division since a year ago and are actively engaging in nanotech R & D, facilitating commercialization and investment in nanotechnology. The Japanese top industries such as NEC, Hitachi, Fujitsu, NTT, Toshiba, Sony, Sumitomo Electric, Fuji Xerox and others are continuing Nanotech R & D effort and taking more aggressive measures to accelerate the commercialization of their R & D. The Korean Samsung, LG groups and other Korean industries are aggressively investing their effort in nanotech R& D and commercialization.

Overlooking at the AP region, governments, industries and business sectors have indicated the strong ambition and effort in pushing their countries into the Nano-future. The Asia Pacific region is becoming an exciting place to global partnerships and business opportunities in the nano space.

Figure below shows the global nanotech funding comparison in 2001, 2002 and 2003.

