

The world goes nano. 51 countries in Nanotechnologies in 2004. The race is on.

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Total Research and Development spending are up to 12 billion US\$ worldwide. High increase in defence and security projects. Public awareness under 15 percent. Markets up 180 billion US\$.

hkc22.com is monitoring the world markets for nanotechnologies since more than 3 years and reporting every 6 month. The latest results show a strong increase in investments with more than 25 percent to 12 billion US \$ for Research and Development in 51 countries for private and government. 4000 Research and Development projects count for the amount but 40 percent are parallel in many research institutes and companies. That means in many countries scientist research on the same kind of projects.

Military, defence and security projects show the highest increase followed by “semi” defence and security projects and space. Information and Life sciences with health, food, water and energy on third position. Automotive and neural industries on the run. In 2004 is a growth of more than 30 percent for investments expected. The countries are more and more clear that nanotechnology and converging markets influence economy, employment and the societies wealth and development.

The markets reach 180 billion US \$ worldwide and expected to grow with 30 percent in 2004 . Electronics and materials count for more than 65 percent.

USA is still the overall leader followed by Japan and china but soon

Japan and China will take leadership in different market segments. The same seems to happen with other countries. Europe and the main countries in Europe are losing their positions and relevance if the trend goes on like this. Smaller countries enter very aggressively the market and research and development scene. More than 4000 companies are directly and indirectly in this market today with over 150 000 jobs. 190 companies are on the stockmarkets worldwide by applications. 200 IPO's are expected for the next years. The markets will increase to more than 891 billion US \$ until 2015 and create about 12 million new Jobs. But nanotechnology only can be successful in converging markets with nano-bio-cogno-info and improve existing products and create new products and processes. The competitive ability of countries, regions and companies in the next 15 years will be dramatically influenced by the ability to realize these 'converging technologies'. The new potentials of employment are spreading to all branches and are extremely great. However, the risk of losses is also great because many branches are changing and possible adaptations are neglected or realized too late.

There are a new market developing very silently from the general public with high conflict and change potentials for the societies. Less than 15 percent public awareness of nano- science and nanotechnology and the developments will lead to ethical and acceptance problems of several applications in food and health mainly. Several companies promote the knowledge for the science and technology to universities and schools worldwide. hkc22.com for example is offering for free 100 000 books explaining the technologies and market developments, the chances and risks over 450 pages called "Another World" by the author Helmut Kaiser, to universities and schools .

The aim is to create awareness and start a dialogue with young people about the chances and risks , the prospective public, consumer and those who are affected. To start discussions to develop global rules and and harmonize cultural, ethical, technical and legal regulatories.

For more information please see also
www.hkc22.com/nanomarkets.html and
www.hkc22.com/molecularindustry.html
and homepage www.hkc22.com

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