

*move under various conditions, and produce a visual representation of all these images that the human mind can grasp. **Second** is the desirability of funding research in the fields that benefit from the atomic level visualization and control of functional matter. They fall into the two categories of organic and inorganic. We call them biotechnology and nano-technology. ... Both areas receive priority in the President's budget. **Third**, there is the very serious problem of the inadequacy of resources to exploit all the new opportunities that now lie before us along the vast frontier of complexity. The richness of possibility is immense, and we simply cannot afford to explore it all at once. Choices must be made. Not only must we choose among the new opportunities in bio- and nano- technology, but we must also choose between these and expanding investments at the traditional frontiers of large and small – or more generally between the issue-oriented sciences that clearly address societal needs, and the discovery-oriented sciences whose consequences are more a matter of conjecture. We need both, but how much of either?"*

The US has new priority areas of S&T in which federal funding, if appropriated in FY 2003, will increase the focus. With National Security being an obvious topic of great concern, it may be easy to overlook some of the issues that were prominent before September 11th. The energy crisis of California in the summer of 2001 had been pushed aside until concerns over weakening US-Middle East relations brought the US need for oil from the Middle East into question. The issues of a sustainable environment and global climate issues that made headlines when President Bush pulled out of the Kyoto Protocol have just recently regained some of their former media attention. The US could look to focus on the following issues, using the new technologies mentioned above to solve problems, supported by leading edge science and process changes, all requiring workforce education (recycling workers) and changes in the K-12 education system:

**National Security Issues: terrorism, biological and chemical warfare.**

**Environmental Issues: climate change, air and water quality.**

**Energy Issues: development of alternative energy sources, and conservation.**

**Education: furthering research and encouraging studies in math and science.**

**Future Opportunities for Collaboration with the European Union.**

**Societal Outcomes of R&D and Public Accountability.**

**New Science and New Facilities.**

A brief overview of how the US is proposing to solve these problems, gives us insight into the future of S&T in the US:

**National Security Issues: terrorism, biological and chemical warfare.**

There are areas in which R&D has been inadequate. Areas in which the US hopes to make great improvements include the following.

- increase computer security
- improve technical capabilities of law enforcement agencies
- enable better intelligence-gathering
- assess and improve the security of drinking water supplies