

Update on Japan Nanotech Budget Trend for 2004

The Japanese government continues its commitment to strengthening Nanotech R & D. According to the Japanese government data, the Nanotechnology and Materials Program R & D budget for 2003 is about USD 900 million (using the exchange rate of 100 yen to a dollar) which is about 11.5% of the total S & T budget for the 4 priority areas (Life Science, IT, Environment and Nanotechnology). If include the other 3 priority areas programs which contains Nanotechnology topics, the total budget for Nanotech is about USD 1.49 billion with supplementary budget included.

The budget request for 2004 released end of Aug. 2003 indicates that Japanese government may increase Nanotech R & D budget for 2004 by over 20% compared with that in 2003. The following table summarizes the budget comparison between Ministry of Economy, Trade and Industry (METI) and the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The exchange rate is assumed 100 yen to a dollar. The unit is in million USD.

Japanese main government funding agency budget for Nanotechnology and Materials Program R & D for 2003 and 2004:

| Government Agency | 2003 Budget USD million | 2004 Budget Request USD million | Note |
|-------------------|----------------------------|------------------------------------|--------------------------------|
| METI | 372 | 379 | R & D only |
| MEXT | 246.34 | 333.44 | Excluding JST and JST projects |
| MHLW | 18 | 28 | |
| Others | 268 | | |

Note:

METI- Ministry of Economy, Trade and Industry

MEXT- Ministry of Education, Culture, Sports, Science and Technology

MHLW- Ministry of Health, Labour and Welfare

100 yen = 1USD

The total budget request of Nanotechnology including both R & D and infrastructure support programs from METI for 2004 is about USD 679 million compared with USD 537 million for 2003. The increase in the budget request is largely contributed by the increase in infrastructure building and support program.

The METI Nanotech Program R & D with total budget request of USD379 million for 2004 include the following (all numbers are in the unit of USD million):

| Project Category | Budget (USD million) |
|---|----------------------|
| NanoMaterials and Processing Technology | 47.13 |
| Nano Processing and Measurement Technology | 17.77 |
| MEMS Technology | 41.58 |
| Fusion of Nanotech with IT, Biology and Environment | 258 |
| Fusion of Nanotech with IT, Biology and Environment | 14.75 |

METI Nanotech Infrastructure and Capacity Building Program with total budget request of USD 300 million for 2004 are the following and it is about 44% of the total METI nanotech budget:

1. Support for Research Application and Commercialisation
2. Management of Technology (MOT) and Human Resource Training
3. Nanotech Industry and Market Study

The MEXT total budget for 2003 on Nanotechnology main projects is USD 671 million and they consist of Nanotechnology and Materials (USD246.34m), the Japan Science and Technology Corporation (JST) Strategic and Creation Research Fund (USD50m), the Japan Society for the Promotion of Science (JSPS) Grant-in- Aid Program (USD190m), the JST competitive fund (this includes the Special Coordination Fund for Promotion Science and Technology) and MEXT national institutes special research fund (USD185m). The additional Nanotechnology budget coming from the Secondary fields/projects of USD 87m, consists of projects in the field of Life Science, Information Technology, Environment which related to Nanotechnology. The total of USD 758 million from MEXT is contributed to the total Japan Nanotech funding for 2003 of USD1.49 billion mentioned in the beginning of this article.

In 2004 budget request, the MEXT Nanotech and Materials Program is requesting for USD 333 million for the following projects:

| Project Category | Project Breakdown | New Project | Budget |
|---|-------------------|---|--------|
| Promotion of Application and Industrialization of Advanced and Innovative R & D | Leading Project | Application of the Most Advanced Nano Measurement and Processing Technology Project | 52 |
| National Institutes R & D Support | | Innovative Nano Carrier Materials for Drug Delivery System (DDS) R & D | 252 |
| Nanotech Supporting Project | | | 29.5 |

The Japan Science and Technology Corporation (JST), although under independent administration from MEXT, its budget comes from MEXT. The Virtual Lab Program is requesting for USD 512 million for 2004 compared with USD 446 million in 2003. The related nanotech areas may consists about 10% of that total budget. Total Nanotech funding request from MEXT for 2004 is not known yet as the amount from JSPS and other additional programs is not yet fixed.

In summary, the budget request from Japanese major funding agencies on Nanotechnology is about USD 740 million which does not include related nanotech projects from other priority areas such as IT, Life Science and Environment.