Material Research Strategy and Structural Materials in Japan

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Japan started strategic research promotion leaded by government, which was based on the science and technology basic law launched in 1995. Based on this law, named basic plans are launched in every five years. Four research fields were selected as the prioritized research fields. Nanotechnology/materials was one of them

. Last year, new government established three prioritized fields in science and technology such as Health, Energy and Social infrastructure. Health field includes bio-material. Energy field emphasizes the important materials for batteries, fuel cells, solar cells, hydrogen related technology and critical materials. Also energy field promotes structural materials such as ultra- light and heat resistant from the view point of transportation vehicles. Social Infrastructure field is directly related to structural materials.

So two big projects for structural Materials are now starting in Japan. In these projects, in addition to the development of innovative new materials (high strength steel, Ti alloy, Al alloy, Mg alloy and CFRP), establishment of computational materials integration (materials informatics in structural materials) are planned.

Materials Research in Japan has started to establish a research system reform, such as a network building program of nanotechnology platform and Tsukuba innovation arena genn(TIA)

Finally materials research for future will be discussed.

Keyword: Science and Technology Basic Plan. Materials for Energy. Structural Materials, Materials Integration. Materials Research in Future