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Thoughts on the development of new material technology

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Abstract. Materials play an irreplaceable role in the continuous forward development of society, which can guide the progress of society and provide necessary material basis and guarantee for the progress of society. With the development of economy and science and technology, new material technology is in a good development momentum. Apart from the development status of the industry itself, another important reason is the promotion of new demands proposed by traditional industries. For a long time, China has paid much attention to the research and development of new materials, which can be reflected in the national development policies. Once the technology of new materials has been developed for a long time, it can provide guarantee for the overall rapid development of national economy and the improvement of people's living standards. Under this background, we need to strengthen the research on new materials technology.

Keywords: new materials; Technological development; thinking

1. Introduction

The technology related to new materials affects the development of some important industries, which decides that the development of this technology will bring great influence on the gross national product of the national economy and further affect the progress of society and the improvement of people's living standards. In order to achieve the goal of social development, we are required to make corresponding scientific analysis and data statistics on the development of new materials science and technology to achieve the goal of promoting development. On the basis of elaborating the important status of the development of new material science and technology, a forecast analysis of relevant trends is made, and relevant measures to promote the further development of science and technology is analysed, so as to achieve the overall improvement of new material science and technology and the rapid development of national economy.

2. The importance of new materials technology

New materials generally refer to the latest special materials, which have greater advantages over traditional materials in terms of performance and wider application range. In the scientific research of new materials, the comprehensive research of new technology and new methods is indispensable. What we can see is that the emergence and development of new materials effectively promoted the emergence and development of the industrial revolution and further promoted social change. Apart from the impact of macro aspects, the application of new materials has also effectively brought about changes in people's



life, including lifestyle, living habits and other aspects. In addition, the development of new material technology can effectively promote the development of emerging industries, and new material itself is actually a part of emerging industries, which is of strategic significance for the realization of the overall socialist cause of China. From this, we can see that in the process of modernization, the development of science and technology related to new materials has an irreplaceable position in the overall national economy, and it can also achieve the goal of reform and complete the evolution and progress of the social stage.

3. The future of new material technology

First of all, new materials, as a kind of emerging industry, is developing faster and faster with the support of the state. In the background of reform and open, the new material industry has great development prospects in terms of market potential and export potential, and the further exploitation of these potential will greatly promote social development. To promote the faster and better development of new materials, we need to conduct a comprehensive and complete analysis of a series of contents related to new materials technology. In terms of classification, new materials generally include two categories, one is structural materials, and the most important characteristic of this kind of materials is mechanical properties, which are mainly used in the manufacture of various structures. The other big category is functional materials, which generally have some special functions, such as liquid crystal materials that can be used as display materials. These two types of new materials are important for promoting the development of social economy and are being applied in various fields. In the process of research on the development of new materials finishing, the most important ones generally include several categories, such as nano-functional materials technology. These technical industries will also promote the development of downstream enterprises to a great extent, which can change the mode and status of traditional industrial competition and further improve the overall efficiency of enterprises. At present, China's new materials are gaining momentum.

Secondly, as a kind of leading industry, new materials must speed up the pace of development and play a leading role. In the development policy of China's emerging industries, the emerging industries must have clear goals in their development process, and their development must depend on new material technology to a certain extent. At present, the tendency of coordination and cooperation in the development trend of China's new material industry has become more and more obvious. This kind of cooperative approach will largely promote the economic development and realize the optimization and upgrading of industrial structure in several places.

In order to realize the faster and better development of new material science and technology, it is necessary to apply the high and new technology of information technology and other aspects to it. Only in this way can it meet the requirements of social development at the present stage. At the present stage, the proportion of new materials industry in China's emerging industry has reached about 11-15% of the total proportion of the industry, and is growing at a high speed. This development momentum has always been carried out around the environment of green and environmental protection, and the overall upgrading of the industrial chain has been achieved constantly. If new materials are properly used in environmental protection, energy conservation and effective allocation of resources will be realized, and the requirements of social and economic sustainable development will be further met, so as to reduce environmental pollution and alleviate energy shortage problems.

4. Measures for the development of new materials science and technology

To realize the continuous development of science and technology of new material, we have to find and implement appropriate measures correctly, have to carry on the analysis from various angles to several aspects, such as policy, financing, the final purpose of these measures is the optimization of industrial structure, and the reasonable adjustment, and finally realize the shaping of technology-intensive industry, get rid of the resource intensive industrial characteristics before, this requests us to make some innovation in technology development, at the same time should also follow the relevant national policies, make the development of the final results conform to the state parties in the face of the requirements and

standards. To realize the further development of this technology, external support systems such as financing systems are also needed to be improved. The establishment and improvement of this system can provide financial guarantee. At the same time, there should be a complete management mechanism to prepare for the healthy development of new materials. In addition to objective factors, we should also have high-quality talents, strengthen the cultivation of comprehensive quality of related talents, promote the improvement of innovation ability, and finally realize the scientific research and development of new materials.

4.1. Give full play to the guiding role of the market

Marketing demand can determine the overall production level to a certain extent, providing the producer with the direction of quantity and quality. Only in this way can professional talents be cultivated, and with the joint efforts of talents, the development of new materials and the prosperity of emerging industries can be realized, and economic development and social progress can be promoted. However, the current situation of the development of new materials in China is that the market demand survey is not complete. Relevant personnel do not have the practical experience of specific market survey, but only use historical literature to obtain relevant information. However, this is far from enough and will lead to wrong orientation for the development of new materials. This tells us that if we want to promote the development of new materials, we must give full play to the leading role of the market and produce new materials that the society really needs.

4.2. Expand the depth and breadth of science and technology

The development of new material science and technology should not only consider the research and development and innovation, but also pay attention to the further development of existing technology, that is, the breadth and depth of existing new material science and technology, which requires us to be good at integrating and learning relevant knowledge. At present, China's new materials mainly focus on the research and development and innovation, but lack of the development of extended industries such as processing and application, which results in the achievement transformation fault. A great deal of practical experience tells us that only when scientific and technological theories of new materials are truly transformed into achievements required by society can science and technology be truly transformed into productive forces, which can meet the market demand and further promote the comprehensive, coordinated and sustainable development of the national economy. This requires us to constantly expand the research breadth and depth of new material technology, make use of existing resource advantages and science and technology, realize the real combination of theory and practice, and further promote the development and prosperity of new material industry and emerging industry.

4.3. Promote the opening of the system and realize the flow of talents

Because the development of new materials science and technology involves many aspects of joint efforts, it determines that the different conditions of each factor will have an important impact on its development. In order to achieve the biggest goal of the development of new material industry, we should make full use of the advantages of these factors and realize the optimization of resource allocation. This requires the establishment of an overall open system, the establishment of a communication platform between the new material industry and other industries, the rational integration and exchange of knowledge, and the promotion of the overall development and progress of the industry. At the same time, it is also necessary to strengthen the communication among researchers, learn about relevant support from other disciplines, and finally achieve the general goal of common development.

5. Conclusion

At present, new material technology has achieved good development in China, mainly involving the environment, energy and other aspects, but there are still many imperfections in the development process. In short, it is still in the stage of growth and development. This tells us that we need to constantly improve the overall level of new material technology, and at the same time, strengthen research and

learning in key areas, strengthen investment in the cultivation of scientific researchers, and finally achieve the overall goal of improving the development level of new material science and technology.

References

- [1] Yuan Lin, Xu Jianxian, Luo Zhenli, et al. Analysis of macro trends and investment and financing strategies of new materials development [J]. *New materials industry*, 2013,23 (19) : 131-132.
- [2] Department of Raw Material Industry, Ministry of Industry and Information Technology of the People's Republic of China. Annual development report of China's new material industry [M]. Beijing: electronic industry press,2014.
- [3] China Academy of Electronic Information Industry Development. White paper on China's new materials industry map (2012) [R]. Beijing,2012.