

Analysis on the Current Development of Polymer Chemical Materials in China

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Abstract: With the continuous development of science and technology, the technology of polymer chemical industry is gradually being innovated, and the application of polymer chemical materials in various fields of life is also getting more and more attention. Therefore, the author analyzed the development of polymer chemical materials in China, and introduced the application of polymer chemical materials in different fields. Studies have shown that in China, the continuous development of science and technology and economy has made China's polymer chemical materials have obvious development and progress. Polymer chemical materials have been widely used in many fields.

1. Introduction

With the rapid development of science and technology, the development speed of the chemical industry has gradually become faster, and the research and development and application of polymer chemical materials have been paid more and more attention [1]. It is an important direction for the research on the related issues of polymer chemical materials [2] to improve its performance, expand its application range, and solve the bottlenecks encountered in its development process [2]. Aerstart Company of the United States has developed a more efficient and stable continuity and mixing extruder to solve to some extent the problems that other types of extruder molding processes cannot avoid [3]. After the material is split, it can be divided into a variety of substances. During the development process, these substances will be converted into new energy sources [4]. It can be seen that the application of macromolecule in the field of scientific research is inevitable, which can also be said to be for scientific research in the green development [5]. According to the use of materials and products, macromolecule chemical industry can be divided into synthetic rubber industry, rubber industry, plastics industry, chemical fiber industry, etc. [6]. The emergence and application of polymer chemical materials have effectively improved this situation and provided more available materials for industrial production [7]. Therefore, this paper will focus on the development and practical application of polymer chemical materials, in order to provide some suggestions and opinions for the application of polymer chemical materials [8].

2. Methodology

At present, China's science and technology level continues to rise, and the trend has also promoted the rapid development of China's industry. Under the current situation, the natural resources in China's industrial production have been short [9]. China's rare earth ore is dominated by light rare earth components, and as China's demand for medium and heavy rare earths increases, China's mining and application of rare earths is extremely unbalanced. Studies have found that light rare earths are a good catalytic material. [10]. This makes China's rare earth resources have new uses, rare earth catalytic materials rich in resources, low production cost, superior performance, high production process, so that it has higher research and utilization value than the precious metal catalytic materials. During the development period, investigations and studies have shown that the application of polymers is becoming more and more widespread during the development of high-score materials. In the process of re-manufacturing plastics, rubber and fiber materials, the most widely used polymers are used. And this new type of energy has played an obvious role in industry and construction industry. Under this, it also provides a lot of convenience for people's

daily life. Polymer chemical materials will contribute to the development of our economy. China is rich in rare earth resources, but the application of rare earth resources is insufficient, and the exploitation of rare earth resources is not paid enough attention, which is very harmful to the development of rare earth resources in China, and results in the development of polymer chemical materials, rare earth catalyst materials are not valued.

In order to understand what polymer chemical materials are, the concept of polymer compounds should be clarified first. However, this technology is still in its infancy in China. The most important processing technology of macromolecule materials is the mechanical equipment for the polycondensation reaction of plastics. At this time, the rise of polymer chemical materials in recent years perfectly solved the current dilemma, timely alleviated the huge materials needed for industrial production. Rare earth catalysts, as a highly efficient polymer chemical material, have the advantages in performance, which makes it possible for them to be widely used. At present, most of what people call "green production" refers to pollution-free production. It can also ensure the "reuse" of energy. On the basis of protecting the environment, industrial production must use non-polluting resources for production and reduce pollution of the environment by pollution sources. Subsequent research on rare earth catalytic materials is getting deeper. Its use in energy is also becoming more widespread. Rare earth perovskite catalytic materials are often used to make environmentally friendly catalysts because of their simple preparation, high temperature resistance and high anti-toxic properties. It can also be used to catalyze the reaction of hydrocarbon recombination in the petrochemical industry and the photocatalytic decomposition of water to produce hydrogen. Currently, perovskite-type rare earth catalytic materials are mainly used as composite oxide catalysts.

3. Result Analysis and Discussion

In the 1960s, the Changchun Institute of Applied Chemistry of the Chinese Academy of Sciences developed a new type of catalyst, which is mainly composed of rare earth compounds and can be used in rubber and diene collection and other related reactions. The relevant figures indicate that the speed of using materials has been increasing in the past 40 years of development. Among the synthetic materials, plastics, rubber, fiber and other materials also show great advantages in the application process. The new materials have a very obvious improvement in industrial production, construction and agriculture in this process. In such a situation, it also brings great convenience to people's normal work and life, which has become a very important factor in China's economic development. In addition, industrial pollution should also be controlled. Nowadays, in the course of industrial development, reducing the emission of pollution sources and strengthening the utilization of renewable resources contribute to environmental protection. All of these need to be further explored, if not to solve the problem, it will have a certain impact on the environment. At present, polyethylene materials are mainly synthesized by metal catalysts, and alloys synthesized by polyethylene materials are widely used in automobile manufacturing, track laying and so on.

At present, China's industrial production pollutes the ecological environment most seriously. Although industrial production plays a very important role in people's daily life, if industrial production always endangers people's surrounding environment, it will not be worth the loss. Polyethylene, as a kind of macromolecule chemical material, is mainly produced by ethylene through intensified reaction. Therefore, a very important task in practical work is to find a resource that can play the same role as oil, and to effectively adjust the atomic and molecular ratios of matter entering. At the same time, it is necessary to make effective analysis and Research on the micro and macro characteristics of matter itself. For example, in industrial production, molecular sieve rare earth catalytic materials and cerium solid melt catalytic materials, which are composed of light rare earth, play a very important role. Their high temperature resistance makes it possible for them to be widely used in other fields. It is believed that as long as China adheres to the direction of green and high-end product development and strengthens international market development, the transformation of polymer materials industry can be successfully completed and the trend of healthy and rapid development can be maintained.

4. Conclusions

In summary, with the development of the world economy and science and technology, the demand for materials is increasing year by year because materials are the basis of technological progress. The low price and abundant resources of polymer chemical materials have made the state pay more and more attention to the research and development and application of polymer chemical materials, providing opportunities for the development of polymer chemical materials. Since the beginning of the world, polymer materials have been vigorously researched and developed, and the performance of various aspects of polymer materials has been refined, so that polymer materials can exert their advantages in various fields, and thus can be widely applied. Polymer chemical materials can not only promote energy conservation and emission reduction, meet the needs of social development, but also promote the development of high-tech industry and improve the overall level of industry development. Polymer materials are advancing in the direction of high performance and multi-function. They are constantly adapting to the rapid development of today. A lot of polymer materials with very strong functions and widely used have emerged. Since the emergence of synthetic organic macromolecule materials, human beings have been constantly studying and exploring, hoping to find new materials which can be widely used in a series of fields such as computers, biology, oceans and so on.

References

- [1] Zhai Y, Dou Y, Zhao D, et al. ChemInform Abstract: Carbon Materials for Chemical Capacitive Energy Storage. Cheminform, 2015, 43(2):4828-4850.
- [2] Li Y, Shi J. Hollow-Structured Mesoporous Materials: Chemical Synthesis, Functionalization and Applications. Advanced Materials, 2014, 26(20):3176-3205.
- [3] Chauvel C, Bureau S, Christèle Poggi. Comprehensive Chemical and Isotopic Analyses of Basalt and Sediment Reference Materials. Geostandards & Geoanalytical Research, 2015, 35(1):125-143.
- [4] Wei Y, Jin D L, Wei G, et al. Novel organic–inorganic chemical hybrid fillers for dental composite materials. Journal of Applied Polymer Science, 2015, 70(9):1689-1699.
- [5] Glow discharge techniques in the chemical analysis of photovoltaic materials. Progress in Photovoltaics Research & Applications, 2014, 22(3):371-382.
- [6] Massiot D, Messinger R J, Cadars S, et al. Topological, Geometric, and Chemical Order in Materials: Insights from Solid-State NMR. Accounts of Chemical Research, 2013, 46(9):1975-1984.
- [7] Yin X, Liu Z, Wang D, et al. Bioinspired Self-Healing Organic Materials: Chemical Mechanisms and Fabrications. Journal of Bionic Engineering, 2015, 12(1):1-16.
- [8] Uhlmann D R, Boulton J M, Teowee G. New optical materials by wet chemical processing. Journal of Non-Crystalline Solids, 1996, 196(none):0-36.
- [9] Walsh J J, Bond A M, Forster R J, et al. Hybrid Polyoxometalate Materials for Photo(electro-) chemical Applications. Coordination Chemistry Reviews, 2016, 306:217-234.
- [10] Wise S A, Emons H. Reference materials for chemical analysis. Analytical and Bioanalytical Chemistry, 2015, 407(11):2941-2943.