

**METHODI UTENDI NOVIS MATERIIS IN INDUSTRIA CHEMICA ET
TECHNICAE ARTIS INTRODUCTIONIS IN AGROS**

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ABSTRACT

The exposition will be located in the pavilions of the Expocentre Fairgrounds, which is known as the leading organization for holding such events. The participants and guests of the event will be the best representatives of the chemical industry from all CIS countries and Eastern Europe. High-quality goods from reliable global manufacturers will be presented here

Keywords: Modern specialists, The operational characteristics . This raw material is necessary for the production of blade technology, rocket and space equipment. It is characterized by a mosaic hydrophilic-hydrophobic surface, carbon and fluorine-containing coating

INTRODUCTION

The chemical industry is one of the heavy industries, with various types of chemical products: mining and chemical raw materials, basic chemical products (ammonia, inorganic acids, alkalis, mineral fertilizers, soda, chlorine and chlorine products, liquefied gases, etc.), plastic and manufactures synthetic resins, including caprolactam, cellulose acetates, chemical fibers and yarns, plastic and glass-plastic materials and products, lacquer materials, synthetic paints, chemical reagents, photochemical products, household chemical goods, etc. The transformation of the chemical industry into an independent industry is connected with an industrial revolution. The first factories for the production of sulfuric acid were established in 1740 in Great Britain (Richmond), in 1766 in France (Rouen), in 1805 in Russia (Moscow province), in 1810 in Germany (near Leipzig).

With the development of the textile and glass-glass industry, factories producing soda were built. Such enterprises - soda factories were built in France in 1793 (near Paris), in Great Britain in 1823 (Liverpool), in Germany in 1843 (in Shonebek district

on the Elbe), in Russia in 1864 (Barnaul). From the middle of the 19th century, factories producing artificial fertilizers began to work in Great Britain (1842), Germany (1867), and Russia (1892). In the USA K.s. Compared to European countries, it appeared later, but by 1913, chemical products i.ch. took first place in the world in terms of volume.

Examples of new technologies

Technologies of new materials are necessary for the development, synthesis and extraction of initial data in the industrial production of the most important chemical products.

Today, the most rapid improvement of consumer properties of goods is carried out. There is a reduction in production costs, and indicators of environmental safety of products increase.

New technologies and materials in microelectronics are used to create modern electronic computers. Systems are being developed that ensure the transfer of energy over any distance, it becomes possible to control the course of precise technological processes.

Modern household electronic equipment, national economic and defense equipment are manufactured. A highly sensitive technique is emerging, which is necessary for monitoring the surrounding world and controlling the level of radiation.

New building materials are actively used in the construction of buildings. They are also used in furniture, engineering, automotive and other industries.

The high quality of modern materials guarantees a long service life of structures, cars and trucks, special technical equipment, etc. Their use helps to avoid corrosion, deformation of objects and structures.

Modern ceramic materials have become very popular in the engineering, space and tool industries. They are used to produce: heat-stressed elements of engines; wear-resistant friction pairs; filters; bandages; thread guides; thermocouple covers; blade; stamp; measuring instruments, etc.

Ceramic products are associated with the production of bioimplants, military equipment and personal protective equipment.

The creation of new materials with special properties is the discovery of soft magnetic amorphous, nanocrystalline and microcrystalline alloys. These include electrical steels, magnetostrictive compounds based on iron.

Scientists are also busy obtaining wear-resistant powder alloys that retain heat. These materials are used:

space industry; electrical engineering; metallurgy; mechanical engineering; instrumentation; medical industry, etc.

Development of new materials for the chemical industry

The development of new materials involves the production of heavy-duty raw materials. Modern specialists produce devices with the help of which high hydrostatic

pressures are created. Scientists determine the conditions for the synthesis of ultra-strong and ultra-hard material and its optimization, investigate the physical, mechanical and chemical properties of the synthesized raw materials, which depend on the conditions of its extraction. The operational characteristics of the new material are established and the areas of its most productive application are identified.

Professionals in the chemical industry are engaged in the organization of pilot and serial production of superhard and ultrahard objects using fullerenes. These new quality materials are actively used in the manufacturing industry and in the production of drilling machines. This raw material is necessary for the production of blade technology, rocket and space equipment.

The creation of new materials in chemistry includes the development of biocompatible raw materials, the main difference of which is its improved medical and technical properties. It is characterized by a mosaic hydrophilic-hydrophobic surface, carbon and fluorine-containing coating. This also includes a hybrid material, which was created using biological structures, such as molecules and cells. The scope of the considered raw materials are medicine, food and petrochemical industries.

The use of new materials in chemistry involves the use of catalysts, which are: heterogeneous; homogeneous;

biocatalysts. With the help of their application, experts are trying to solve the issue of saving resources and energy.

Any industry uses the considered raw materials:

chemical, oil refining, pharmaceutical, food, energy, etc.

With their help, intermediates, monomers, fertilizers, medicines, vitamins, plant care products, etc. are produced. Catalysts are needed when gaseous and liquid emissions from production, energy, and transport systems are cleaned.

Chemistry and new materials are indispensable for the existence and work of modern society. Today, membranes are used to treat and purify water. With their help, the separation of liquid and gaseous media occurs. There are processes:

microfiltration; ultrafiltration; nanofiltration; reverse osmosis; gas separation; electrodialysis; hemodialysis; dialysis; pervaporations.

Membranes are actively used in the chemical industry. Thanks to them, chlorine and caustic are produced, chemicals are concentrated, the process of regeneration and purification of the solvent, washing solution and oil takes place. In the food industry, raw materials are used in the manufacture of dairy products, wines, various juices, etc. They are involved in clarification and desalination. Biotechnology and the medical industry resort to the use of membranes in the sterilization of various solutions, in genetic engineering, in the process of oxygenation of blood, etc.

To date, data banks of modern structures and properties that are characteristic of chemical product classes are being formed. Molecular and supramolecular structures

are being constructed, the synthesis process and technological features of production work are being developed and optimized.

New materials in the chemical industry at the exhibition

In autumn, the international exhibition "Chemistry" will be held in the center of Moscow. The exposition will be located in the pavilions of the Expocentre Fairgrounds, which is known as the leading organization for holding such events. The participants and guests of the event will be the best representatives of the chemical industry from all CIS countries and Eastern Europe. High-quality goods from reliable global manufacturers will be presented here. The event is an annual event dedicated to the chemical industry and science.

Anyone who receives an invitation card can become a guest of the Chemistry exhibition. To do this, you must fill out an electronic application on the official website of the organizer.

Also here is all the contact information. If any questions arise, a potential visitor of the exposition has the opportunity to contact representatives of the Expocentre administration.

This international exhibition is dedicated to the products of the chemical industry. It is worth visiting for everyone who wants to develop in this direction. Business owners who arrived in Moscow this September will find reliable foreign partners, which will allow them to bring their companies to the world market. Thus, it is possible to significantly increase the volume of manufactured and sold goods and increase the profit of the organization.

In addition to the pavilions, where a wide range of modern materials will be presented, there are several dozens of modern halls on the territory of the Expocentre, where seminars, symposiums and press conferences are held. Their visit is a great chance to get a lot of new professional knowledge.

Leading experts of the chemical industry come to the event to exchange invaluable experience.

Visiting the exhibition gives young entrepreneurs the opportunity to develop their business in the right direction. This is a good way to find reliable, responsible suppliers of first-class products. Expocentre's doors are always open for both regular and new guests.

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