

Institute of Petroleum Refining and Petrochemistry

CENTER OF PROTOTYPING
IN THE FIELD OF PETROCHEMISTRY

2020

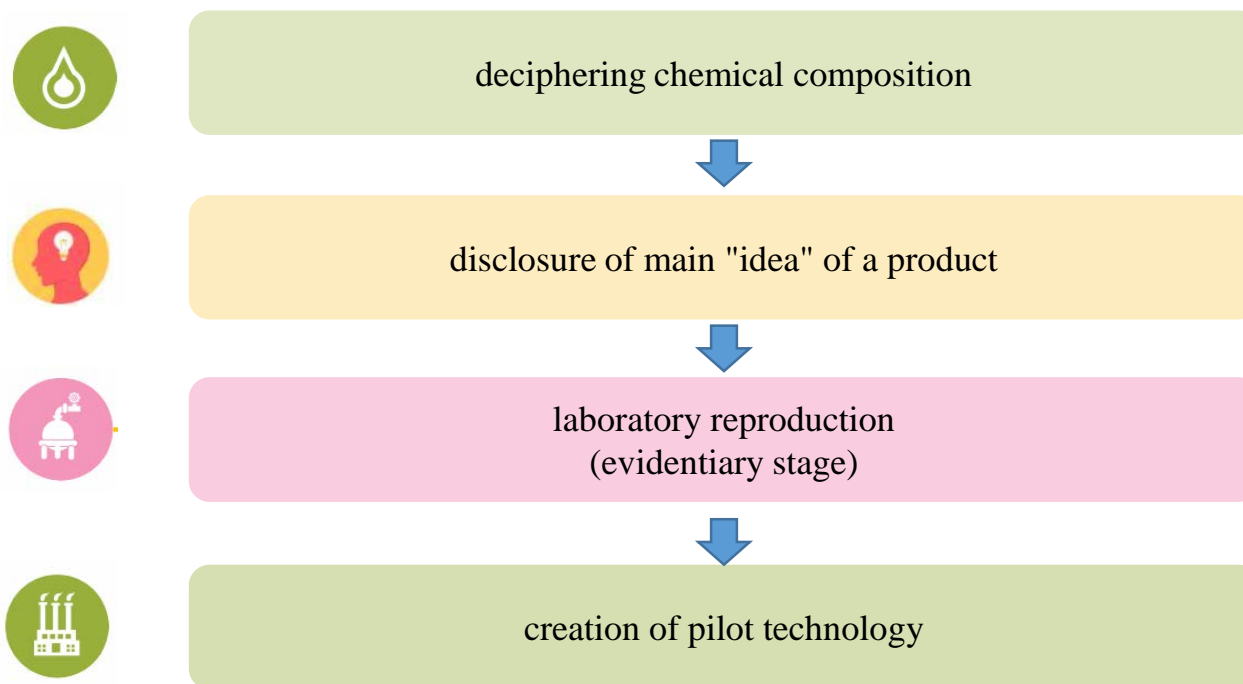
OPPORTUNITIES:

- 50 laboratories located on the area of 10 thousand sq. meters
- 270 units of the hi-tech equipment
- More than 300 highly skilled engineers and designers
- Possibility of carrying out unique research and development

TYPES OF ACTIVITY:

- Physical and chemical analysis of raw materials and pilot models of products
- Practices of prototypes of new products
- Probes and development of pilot models of processes, technologies and petrochemical products
- Experimental and pilot run for carrying out chemical syntheses of research and pilot level

PROTOTYPING STAGES



Examples of the developed prototypes



Packages of additives to engine oils (USA)



Synthetic Cooling Liquid (SCL)
It is applied to drawing of a copper wire
(Germany)



Paint protector of electromagnetic radiation.
It is applied to protection against electromagnetic radiation (Germany)

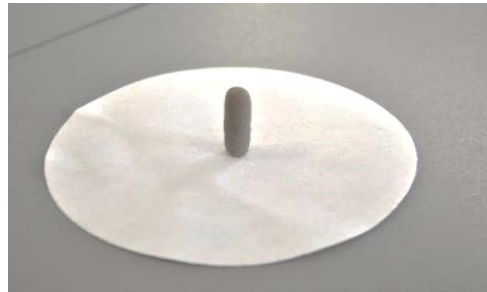
Examples of the developed prototypes



Mastic for pasting of rubber with a concrete surface.

It is applied to pasting and a waterproofing of seams of rings at construction of tunnels for the subway, prevents vibration destruction, keeping tightness of a surface (Austria)

Examples of the developed prototypes

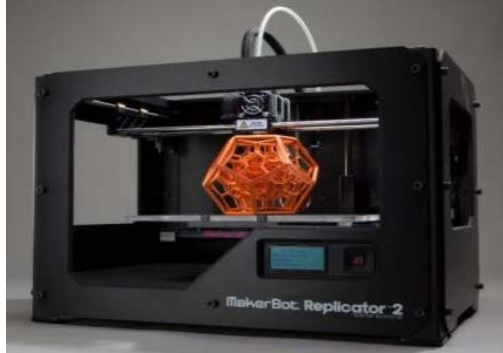


Kinetic sand for children's creativity (molding) and development of motility.
Safe analog of plasticine (Sweden)



Disinfectant for application in agriculture
(Germany)

Examples of the developed prototypes



The photopolymeric, hardening under the influence of light liquid composition for 3D - the printer (Great Britain)



Photopolymer from domestic raw materials is applied in 3D - printers by production of different products on Ufa Engine Industrial Association

Examples of the developed prototypes



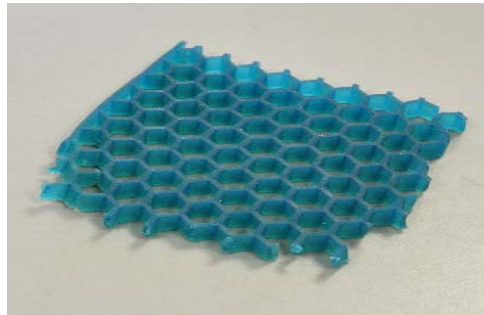
Development of a domestic analog of "strengtheners of soil" (USA)



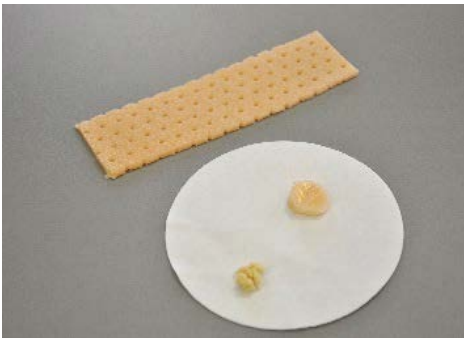
The structure represents an emulsion of polymer of the acrylic nature with block architecture

It is applied by preparation of "road pie" on roads of the highest category and also to preparation of dirt temporary roads expeditious (within a day) for the movement of tractors and other heavy machinery on almost impassable sections of roads

Examples of the developed prototypes



"PU gel" for soft medical antidecubital mattresses (China)

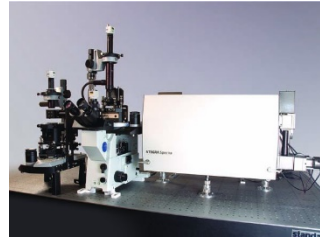


The Bezgipsovy Turbocast orthosis for fixing of the injured parts of the body at fractures, stretchings and dislocations (Holland)

Analytical providing physical and chemical methods of researches



System for a preparative chromatography of Sepacore Flash System



The automated scanning probe microscope Ntegra Spectra C



Nuclear magnetic resonance spectrometer of Bruker AVANCE III 400 MHz



Gas chromatomass-spectrometer of GCMS QP2010SE



Complex of the dielectric analysis Concept 50 Novocontrol



Optical emission spectrometer with inductive and coherent plasma ICPE-9000

270 units of the unique hi-tech equipment