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About TIPS RAS

Some facts:
TIPS RAS is recognized academic Institute (entity: non-profit public body) and belongs to Russian Academy of Sciences (employees: ca.400). TIPS RAS was founded in 1934 as Institute of Fossil Fuel.

Strategy:
Combination of multidisciplinary background and high skilled scientists with academic and industrial experience that ensures research towards innovative solutions of every challenging task and needs of modern society and industry.

Core areas:
Petrochemistry and Oil refinery, Polymers and Material science (incl. nanocomposites), Membranes and membrane technology.
TIPS RAS: education and journals

Education for bright future:
TIPS RAS has established 8 Research and Education Centers (REC) with leading Russian Universities in corresponding areas as well as 2 International Laboratories and 1 Centre of Excellence together with European partners that allows to sustain leading positions in world academic society by attraction and education of high-skilled and motivated young scientists.

Scientific journals:
The editorial boards of 3 scientific journal of Russian Academy of Sciences are also based at TIPS RAS:
+ Petroleum Chemistry
+ Polymer Science (Series A,B,C,D)
+ Membranes and membrane technologies
TIPS RAS traditionally promotes knowledge exchange and fruitful discussions in scientific community by organizing of conferences and seminars in core areas.

**Conferences:**

+ Actual Challenges of Petrochemistry (1 in 4 years)
+ Young Scientist School on Petrochemistry (1 in 4 years)
+ Membranes (1 in 3 years)
+ Rheology Symposium (1 in 2 years)

**Seminars:**

+ Petrochemistry (part of Scientific Council of RAS)
+ Obtaining, research and application of low-temperature plasma n.a. L.S. Polak (monthly since 1956)
+ G.V. Vinogradov Rheological Society (periodic meetings)
+ Membranes and membrane technologies (monthly; part of Mendeleev Russian Chemical Society).
More than 75 years expertise in Petrochemistry and Oil refinery:

- Fluid Catalytic cracking
  9 industrial units in the world

- Visbreaking of heavy residue
  4 industrial units in the world

- Catalytic dewaxing
  2 industrial units in Russia

- Acid-catalyzed homogeneous alkylation processes
  15 industrial units in the world

- Alkylation process based on zeolite catalysts
  1 industrial unit

New core area: **Biorefinery**
More than 35 years of expertise in membrane science and membrane technology.

New area, *membrane catalysis*, was created by Prof. M.V. Gryaznov in TIPS RAS.

Deep expertise in development of novel membrane materials (e.g. high permeable glassy polymer) *1970th*: first industrial gas separation membranes based on PVTMS.
More than 45 years of expertise in polymer science (novel polymers for different applications).

Significant contribution in theory of macromolecular reactions and polymer modification.

Polymer processing: rheology and introduction of nanocomposites.

Biomedical polymers and drug delivery systems.

Composite materials.

Product commercialization (e.g. adhesives for biomedical applications).