

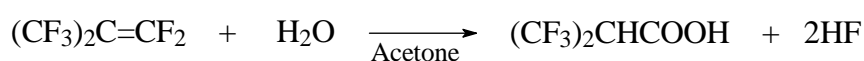


Yuriy Aleksandrovich Cheburkov, a famous specialist in organofluorine chemistry, former member of the laboratory for organofluorine compounds of INEOS RAS, passed away on 25<sup>th</sup> of January in Los Angeles , just one month before his 88<sup>th</sup> birthday.

Yuriy Cheburkov was born on 28<sup>th</sup> of February 1931 in Moscow. After school he entered the D.I. Mendeleev University, and in 2 years he transferred to Lomonosov Moscow State University, faculty of chemistry.

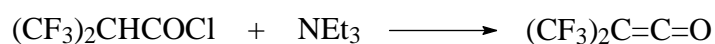
In summer 1954 three graduates from Faculty of Chemistry of Lomonosov Moscow State University- Y. A. Cheburkov, B.L. Dyatkin, L. C. German were invited to the audition to the academic I. L. Knunyants. He offered them a work in the field of fluorine containing organic compounds. One can say that, this was a starting point for systematic research works in the field of organofluorine compounds in the Academy of Science of USSR.

The first successful reaction of Y. Cheburkov in the laboratory of I. L. Knunyants in INEOS RAS was the reaction of preparation of hexafluoroisobutyric acid from perfluoroisobutylene.



A lot of research works and publication of members of I. L. Knunyants were devoted to perfluoroisobutylene. In 1963 Cheburkov together with E.I. Mysov and I.

L. Knunyants published an article, devoted to preparation of bistrifluoromethylketene (Russ. Chem. Bull., 1963, 1570).

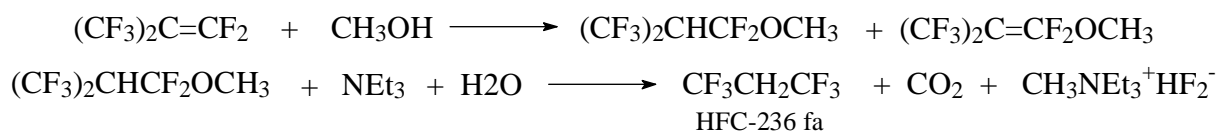


Fluoroketenes became the theme of his doctoral dissertation, which was defended in 1967.

Yurij Aleksandrovich worked in the laboratory for organofluorine compounds of INEOS RAS from 1954 to 1976. In this period he worked over preparation and studying the properties of fluoroolefines, F-carboxylic acid and their derivatives, fluoroketenes and allenes. He and his co-workers obtained hexafluoroacetone oxime—a solvent for nylons and other polyamides, worked under modification of cellulosic materials for modification of their properties through grafting of fluoromonomers. Yurij Aleksandrovich initiated the works on studying the properties of higher internal perfluoroolefines— dimers and trimers of hexafluoropropylene. In 1971 Yurij Cheburkov took up the project on usage of biologically inert organofluorine compounds as components of artificial blood substitutes. In the connection with this project, methods of synthesis and purification of fluorocarbons and fluoroethers for the biomedical application were studied.

The milestone in the scientific life of Cheburkov was his internship in the Durham University, Great Britain under the supervision of Prof. W. K. R. Musgrave and Prof. R. D. Chambers in 1968. He worked in the field of chemistry of fluoroaromatic heterocyclic compounds; synthesis of perfluoropyridazines and their isomerisation in perfluoropyrimidines and perfluoropyrazines.

In 1991 Cheburkov emigrates with his family from USSR in USA. As he told himself, he was lucky to be in the right place and the right time with his experience in working with perfluoroisobutylene. At this time a new factory of 3M-Daikin was built in Alabama. Perfluoroisobutylene was a dangerous intermediate in the factory and Yurij Cheburkov had some proposals on its utilization.



In 1995 the first 13 MT of the effective flame suppressor HFC-236fa were sold to “qualified” consumers. His following work on 3M was devoted to the study of practically useful conversions of perfluoroisobutylene and isomers of hexafluoropropylene dimer. Later, he was engaged in reactions of fluoroolefines with oleum and different perfluoroalkyl sulfoderivatives. He published 16 research works (articles and patents) during 11 years of working at 3M. It must be noted that he was engaged into experimental work all these years! In 2007 Yurij Cheburkov wrote an article about Ivan Knunyants, which was mostly autobiographic (Journal of Fluorine Chemistry, 128 (2007), 693–698).

For sure, Yuriy Aleksandrovich Cheburkov was an outstanding scientist and man. These type of people leave a considerable mark in the science and remain in our memory.