

65 YEAR CONGRATULATION



Dr. Tofik K. Khanmamedov was born in 1945 in Baku, Azerbaijan SSR and raised in the family of esteemed Prof. of wood science K. M. Khanmamedov, mother – Maria, teacher. Dr. Tofik K. Khanmamedov has very unique scientific background. He graduated from Azerbaijan Institute of Oil and Chemistry in Baku with diploma of technologist in 1967.

In 1968 he started to work on his Ph.D. thesis in the Institute of Petrochemical Synthesis named after A. V. Topchiev of Academy of Sciences of USSR in Moscow. In 1971 he successfully completed research in the field of asymmetric catalysis with dissertation “Asymmetric migration polymerization of β -phenylvinylketones by Michael reaction” under supervision of laureate of Lenin Prize, Prof. B. A. Krentsel.

Then, he worked in Academy of Sciences of Azerbaijan for 12 years and did some unique research in the fields of special monomers and polymers, chemistry and catalysis of heterocyclic compounds and obtained numerous inventors’ certificates. While in Academy of Sciences of Azerbaijan he went to the University of the Manchester (UK) and did research as a postdoctoral research fellow.

In 1983 he earned position of the Manager of “Sulphur Recovery Technology” in All-Union Research and Project Design Institute for Natural Gas Treatment (VNIPIGaz) of Gazprom in Baku. Since that time he was engaged in the development of new technologies and processes for gas industry. For very short time in collaboration with Boreskov Institute of Catalysis (Siberian Branch of Academy of Sciences of USSR, Novosibirsk) he has developed new catalysts and technology for incineration of tail gases of sulphur recovery units (Claus) and Ti dioxide based catalysts for Claus unit and hydrogen sulphide oxidation to sulphur.

He managed pilot tests for new catalysts and technologies in Ryzan plant (Russia) and finally commercialized catalytic incineration process in two gas plants – Orenburg (Russia) and Mubarek (Uzbekistan). He successfully tested new Ti dioxide based catalyst in the commercial reactor of Claus unit in Orenburg gas plant. For the first time in sulphur field he proposed new paths of formation of S_6 and S_8 on the surface of the catalysts of hydrogen sulphide oxidation to sulphur and developed new kinetic models.

He is the one who demonstrated for the first time a complicated thermodynamic of Claus process in 3d formats. He has also worked in R&D involving development of promoted and flameless catalytic combustion of acid gas and technologies and environmental emission abatement processes for oil, gas and petrochemical industries, heterogeneous catalysis, new polymers development, for photoactive applications and CH_4 - H_2S - CO_2 separation membranes.

Dr. Tofik K. Khanmamedov defended his Doctor of Science dissertation in Moscow Institute of Oil and Gas and was the first chemical engineer-scientist in the former Soviet Union, who was granted highest D.Sc. (Chem. Eng.) scientific degree in the field of sulphur recovery technology (Claus). He has gained an international reputation in the field of acid gas removal, sulfur recovery and tail gas treatment processes technology. He was a distinguished member of Scientific Counsel at the State Committee of Science and Technique in Moscow, USSR.

After presentation his paper at SULPHUR-90 (Mexico, Cancun) Dr. Tofik K. Khanmamedov received invitation to work for engineering Company in USA that was specialized in sulphur related technologies, and he emigrated from Azerbaijan SSR with his family in 1991. Since that time he worked for several companies in USA, developed and patented several new technologies for acid gas removal, tail gas treatment and sulphur recovery.

He founded TKK TECHNOLOGY COMPANY (d.b.a. TKK COMPANY, www.tkkcompany.com) incorporated in Houston, Texas and markets his new patented technologies as the family of HIGHSULF™ processes, SHIFT-CLAUS® and TCT™ processes. He holds US and Canadian patents that cover his new technologies and published numerous articles and presentations in different Magazines of USA, UK, Russia and others, and is a frequent presenter at industry events.

Dr. Tofik K. Khanmamedov has developed an original theory of oil, gas, coal and water origin, and he is continuing to develop new technologies. His portfolio includes some new technologies that might reshape ideology of oil refineries and gas processing plants.

Dr. Tofik K. Khanmamedov is a member of American Chemical Society and proudly enjoys devoting his spare time with Fort Bend Symphony Orchestra as a violinist (www.fbso.org).

We wish him good health, new achievements in all his endeavors and very good luck.

Colleagues