

Physics in Ukraine

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As a sovereign nation, Ukraine appeared in Europe during the Middle Ages and was well known under the name of Kyivan Rus'. Since then, parts of it were ruled by various neighboring powers -- the Golden Horde, Lithuania, Poland, and the Austro-Hungarian and Russian Empires.

One of the first known Ukrainian scholar born the city of Drohobych, Yuriy Kotermak -- philosopher, astronomer, physician – at the end of the 15th century became the rector of the University of Bologna in Italy.

At the edge of the 16th and the 17th centuries, the first academic centers appeared in Ukraine. These were the Ostrozhsky College and the Kyiv-Mohyla Academy. In 1661 university was founded in Lviv, the principal city of Polish-ruled Western Ukraine. In Russian-ruled Ukraine, in 1805 a University in Kharkiv was established, in 1834, a University was inaugurated in Kyiv. The opening of universities stimulated the formation of scientific societies.

The Ukrainian Academy of Sciences was born during the turbulent years of revolution and wars of national liberation. It was created in November 1918 under the independent Ukrainian government of Hetman Pavlo Skoropadsky.

The turmoil of ongoing revolution and civil war resulted in a wave of emigration of Ukrainian intelligentsia. For example, among the personalities from Ukraine who ended up in the United States of America were such well known luminaries as the following:

- Theoretical physicist George Gamow, born in Odesa in 1904, who was the first to provide a quantum mechanical explanation of alpha radioactivity, professor at the George Washington University
- One of the founders of the discipline of strength of materials, Stephan Timoshenko, born in the village of Shpotivka, Sumy District of Ukraine in 1878, was professor at Stanford University.
- Igor Sikorsky, who was born in Kyiv in 1889, became world famous as a designer of airplanes and helicopters.

In spite of these and many other losses, in spite of the permanent pumping of the Ukrainian talents to Moscow and other Russian Universities and Academic institutes, such cities as Kyiv, Kharkiv, Donetsk, Lviv at the end of XX century were the important scientific research centers. The names of Lev Landau, Mykola Bogolyubov, Lev Shubnikov, Ilya Lifshitz are written forever to the history of science.

The fall down of the Berlin wall, formation of Ukraine as the independent state, the non-simple integration of Ukrainian science in European and the world scientific communities resulted in complex processes of the brain-drain, decay of some fields of research and birth of the new modus operandi.

Today, Ukrainian science is being devastated by Russian aggression with its barbaric bombardments of Kharkiv, Kyiv and other universities and research facilities, lengthening every day the martyrologue of Ukrainian scientists who died defending their Patria.

This more than five century story I will review in my talk.