

Comprehensive studies of cultural heritage objects in NRC kurchatov institute

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Extensive use of natural science techniques for research of cultural heritage is one of the main world trends. It significantly expands the information about different artifacts, exploring their elemental and phase composition, degree of preservation, internal structure and so on. It is very effective for supporting of the traditional methods of extracting historical information from written and archaeological sources, which didn't lost relevance, but largely exhausted their limits. It is also crucially important for the determination of the optimal methods for restoration, preservation, storage and demonstration of museum exhibits.

In 2015 a laboratory of Natural Science Technology for Cultural Heritage (NSciTeCH Lab) was established at NRC Kurchatov Institute. Since the studies of museum artifacts with using a variety of synchrotron and neutron techniques as well as electron microscopy, chromatometry, gen-analysis and etc. at NRC Kurchatov Institute were significantly strengthened and expanded. Currently we carry out a joint research in the field of historical material science with the State Historical Museum, Pushkin State Museum of Fine Arts, Institute of Archaeology RAS, V.I. Vernadsky Crimean Federal University and others. The range of objects under study is extremely wide: Egyptian mummies, Italian ceramics and marbles, organic decoration from bronze age wood artifacts, metal samples and tools from the different eras, etc.

In this paper we present the results of the research of some artifacts, which were carried out at the Kurchatov Institute.

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