Gamma radiation as a tool for remedial conservation: 50 years’ experience in ARC-Nucléart, Grenoble, France

Abstract

Remedial conservation of cultural heritage consist in arresting ongoing damaging processes, when items deteriorate at dangerous rate, or in reinforcing their structure when they are in too much fragile condition.

Among the available techniques, the so-called “nuclear” techniques, mainly gamma radiation processing, can be of very suitable helps. Indeed, thanks to its penetration power, gamma ray based techniques offer the possibility to make ionizations in the whole volume of infested artefacts, ensuring very reliable biocidal effects to fight against bio-deterioration, the major vector of decay of those organic materials present in art-works, archives, and other artefacts of our heritage. Ionizations can also triggers and pilots co-polymerization by cross-linking of radio-curable resin used to consolidate the weakest artefacts made of porous material.

ARC-Nucléart implements those techniques from 50 years and have treated thousands of artefacts since that time. Examples of treatments will be presented during this seminar, including treatments of wooden art-works and historic or archaeologic items, as well as more exotic treatments of mummies or similar.

https://videoconf-colibri.zoom.us/j/82726221024?pwd=QmE3elhQeUlJGeU91d1dheXkdIMvZz09