

Constantin Daniel Negut

(IFIN-HH)

Constantin Daniel Negut received his PhD in Physics from the University of Bucharest, Bucharest, Romania, in 2011, with a thesis on Electron Paramagnetic Resonance spectroscopy study of gamma radiation induced defects in solids. In 2003, he joined IRASM Radiation Processing Department of HORIA HULUBEI National Institute of Physics and Nuclear Engineering, Magurele, Romania. His main area of research is related to the various applications of gamma irradiation effects on materials, such as dosimetry, material properties enhancement, detection of irradiated food, or disinfection of artefacts. He was involved in many national and international research projects related to the use of ionizing radiation for the investigation and preservation of artefacts, such as COST Action IE0601 "Wood Science for Conservation of Cultural Heritage" or IAEA CRP F23032 "Developing Radiation Treatment Methodologies and New Resin Formulations for Consolidation And Preservation of Archived Materials and Cultural Heritage Artefacts." His research activity has been focused on the effect of irradiation on the functional and decorative properties of the artefacts and the postirradiation effects of radiation induced free radicals in sensitive materials such as paper. In a series of experiments, he showed that at absorbed doses (lower than 10 kGy) used for the treatment of bio-deteriorated paintings, colour changes induced by gamma irradiation are insignificant for historical pigments and binders.